

Print Version  
2017-2018 Houston  
Community College  
Catalog Content

ARCHIVE



HOUSTON COMMUNITY COLLEGE

# HCC Catalog January 2017

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# Welcome to Houston Community College

## History of HCC

The Houston Community College District (HCCD) was created under the governance of the Houston Independent School District (HISD) as the result of a public referendum on May 18, 1971. In August of that year, more than 5,700 students enrolled.

By 1977, HCC had an enrollment of more than 24,000 students and had earned full accreditation by the Southern Association of Colleges and Schools (SACS). In 1989, HCC established its own Board of Trustees. Also in 1989, the Stafford Municipal School District was annexed. State legislation in 1995 designated the "service area" of HCC to include the Houston, Alief, Katy, Spring Branch and North Forest school districts, as well as the Stafford Municipal School District. HCC also serves parts of the Fort Bend Independent School District.

HCC passed a successful bond election in 2003 that resulted in the expansion, renovation, and expansion of multiple facilities. Currently, HCC consists of six colleges with 22 campuses with its primary Administrative Center located at 3100 Main Street, Houston, TX 77002.

In November 2008, voters in the Alief ISD approved annexation to the HCC taxing district. In the following November of 2009, voters in the North Forest ISD did the same. Today, HCC serves over 70,000 students each semester.



## Message from the Chancellor

Houston Community College is committed to helping all students who enter our doors pursue their fullest potential. Whether you choose to transfer to a four-year university or decide to enter the workforce, a degree or certificate from HCC will provide you with the knowledge and skills to compete in today's technological and global economy. Our vision is to become the nation's most relevant community college because we provide unlimited opportunity to the communities and students we serve. To us, that means our faculty and staff are here to help each student obtain the knowledge and skills essential for success. We believe that what is good for you is also good for our community and the region. My personal commitment is to make your educational experience at HCC meaningful and rewarding. We are determined to serve our community by being the best, most affordable, highest quality institution in the region we can be. Congratulations on choosing Houston Community College and taking the next step in your educational journey with us.

*HCC is committed to providing an educational climate that is conducive to the personal and professional development of each individual. Students should be aware that discrimination and/or other harassment based upon race, color, religion, sex, gender identity, gender expression, national origin, age, disability, sexual orientation and veteran status is prohibited by HCC policy. HCC designates. (6/27/2014)*

# HCC Mission, Vision, and Values

## Mission

Houston Community College is an open-admission, public institution of higher education offering a high-quality, affordable education for academic advancement, workforce training, career development, and lifelong learning to prepare individuals in our diverse communities for life and work in a global and technological society.

## Values

- Freedom - The essence of education is the cultivation of an open environment that promotes a rigorous, untiring life-long pursuit and expression of truth, and free exchange of ideas.
- Accountability - A responsible individual is committed to doing one's duty and taking the right actions.
- Community-Mindedness - The bonds of our community are care, open communication, cooperation, and shared governance.
- Integrity - Personal and community well-being demands a commitment to honesty, mutual respect, fairness, and empathy in all situations. It means doing the right thing at all times.
- Excellence - Our will and spirit is to achieve the best in teaching, learning, community building, and stewardship.

## Vision

Houston Community College will be a leader in providing high quality, innovative education leading to student success and completion of workforce and academic programs. We will be responsive to community needs and drive economic development in the communities we serve.

## Goals

Our goals are those things that we must execute at a consistently high level to accomplish our vision. Our goals are associated with:

- Effective Leadership
- Student Success
- Resource Development and Enhancement
- Global Perspective
- Effective Communication
- Accountability and Strategic Decision-Making

*Board approved, September 2007*

## Accreditation

The Houston Community College is accredited by the Commission on Colleges of the Southern Association of Colleges and Schools to award the associate degree.

Contact the Commission on Colleges at 1866 Southern Lane, Decatur, Georgia 30033-4097 or call 404-679-4500 for questions about the accreditation of Houston Community College. Or one may call the HCC Director of Accreditation Compliance by dialing 713.718.8605.

To review individual program accreditation, approval, and licensing documents, the department chairperson's office for the particular program may be contacted. (See catalog or class schedule for telephone numbers.)

## Approvals

The Texas Higher Education Coordinating Board has approved college/university parallel offerings and programs in technical education. The Texas Workforce Commission has approved programs for veteran education benefits. Senior colleges and universities in Texas and surrounding regional states accept credits earned at Houston Community College System.

## Regulations Policy

The regulations and provisions in this Catalog are based upon present conditions and are subject to changes necessitated by College or legislative actions. The provisions of this Catalog are subject to change without notice and do not constitute an irrevocable contract, expressed or implied, between any applicant, student, or faculty member and HCC. The College reserves the right to cancel classes when necessary.

## Equal Educational/ Employment Opportunity

The information contained in this publication is intended as a guide for students and prospective students. Based on Board approval, Houston Community College reserves the right to change or modify its rules and regulations, the schedule of classes, fees, tuition and other charges without notice.

HOUSTON COMMUNITY COLLEGE  
BOARD OF TRUSTEES

Eva Loreda, M.Ed., Chair, District VIII

Carolyn Evans-sShabazz, Ed.D., Vice Chair, District IV

John P. Hansen, Ph.D., Secretary, District VI

Zeph Capo, District I

Dave Wilson, District II

adriana tamez, Ed.D., District III

Robert Glaser, District V

Neeta Sane, District VII

Christopher W. Oliver, District IX

The Board of Trustees is the official governing body of the Houston Community College District. The Board is composed of nine members who are elected from single-member districts and who serve without pay. Board members are elected to staggered six-year terms. The Board has final authority to determine and interpret the policies that govern the District.

As part of their duties, the Trustees maintain a full schedule of community service, public appearances, speaking engagements, and legislative affairs on behalf of the District. Board members represent an impressive mix of individual talents and professional backgrounds enabling them to provide governance of the highest quality.

## **District Administration**

Cesar Maldonado, Ph.D., P.E., Chancellor

Norma Perez, Ed.D., Interim Vice Chancellor, Instructional Services & Chief Academic Officer

Athos Brewer, Ph.D., Vice Chancellor of Student Services

Kurt Ewen, Ph.D., Vice Chancellor, Planning & Institutional Effectiveness

Melissa Gonzalez, Ph.D., Chief of Staff & Vice Chancellor

Edgar Ashley Smith, J.D., General Counsel

Teri Zamora, MACC, Senior Vice Chancellor, Finance & Administration

## **College Presidents**

Muddassir Siddiqi, Ed.D., Central College

Phillip Nicotera, M.D., Coleman College for Health Sciences

Margaret Ford-Fisher, Ed.D., Northeast College

Zachary Hodges, Ed.D., Northwest College

Irene Porcarello, Ed.D., Southeast College

Madeline Burillo, Ed.D., Southwest College

# Academic Calendars

*Please see [hccs.edu](http://hccs.edu) for the most current academic calendar*

ARCHIVE

# Instructional Locations

## Central

### Central Campus

1300 Holman 77004 .....713.718.6000  
Open: 8:00 a.m.-10:00 p.m. Monday-Thursday  
8:00 a.m.-4:30 p.m., Friday  
9:00 a.m.-1:00 p.m., Saturday

### South Campus

1990 Airport Blvd. 77051 .....713.718.6634  
Open: 8:00 a.m.-10:00 p.m., Monday-Thursday  
Closed Friday; 9:00 a.m.-1:00 p.m., Saturday

## Coleman College for Health Sciences

### Health Science Center

1900 Pressler Drive 77030 .....713.718.7400  
Open: 7:00 a.m.-10:00 p.m., Monday-Thursday  
7:00 a.m.- 6:00 p.m., Friday  
7:00 a.m.-4:00 p.m., Saturday 8:00 a.m. - 4:00 p.m.

### John P. McGovern Campus

Texas Medical Center  
2450 Holcombe Boulevard, 77021 .....713.718.7400  
Open: 7:00 a.m.-10:00 p.m., Monday-Thursday

## Northeast

### Automotive Technology Training Center

4638 Airline 77022 .....713.718.8100  
Open: 7:00 a.m.-10:00 p.m., Monday-Friday

### Northeast Campus

555 Community College Drive 77013 .....713.718.8300  
Open: 8:00 a.m.-8:30 p.m., Monday-Friday  
8:00 a.m.-4:30 p.m., Saturday and Sunday

### North Forest (NE)

7525 Tidwell 77028 .....713.635.0427  
Open: 8:00 a.m.-8:30 p.m., Monday-Friday

### Northline Campus

8001 Fulton 77022 .....713.718.8000  
Open: 8:00 a.m.-10:00 p.m., Monday-Friday  
8:00 a.m.-4:30 p.m., Saturday and Sunday

## Pinemont Center

1265 Pinemont 77018 .....713.718.8400  
Open: 8:00 a.m.-10:00 p.m., Monday-Friday  
8:00 a.m.-5:00 p.m., Saturday and Sunday

## Northwest

### Alief Campus

2811 Hayes Road 77082-2642 .....713.718.6870  
Open: 8:00 a.m.-10:00 p.m., Monday-Thursday  
8:00 a.m.-4:30 p.m., Friday

### Alief Continuing Education Center

13803 Bissonnet 77083-5916 .....713.718.5450  
Open: 8:00 a.m.-10:00 p.m., Monday-Thursday  
8:00 a.m.-4:30 p.m., Friday

### Spring Branch Campus

1010 W. Sam Houston Pkwy N. 77043 .....713.718.5700  
Open: 7:00 a.m.-10:00 p.m., Monday-Thursday  
7:00 a.m.-5:00 p.m., Friday;  
8:00 a.m.-3:00 p.m., Saturday

### Katy Campus

1550 Foxlake Drive 77084 .....713.718.5757  
Open: 7:30 a.m.-10:00 p.m., Monday-Thursday  
7:00 a.m.-4:30 p.m., Friday;  
8:00 a.m.-5:00 p.m., Saturday

### UH-Cinco Ranch Center

4242 South Mason Road. 77050 .....713.718.5700  
Open: 8:00 a.m.-10:00 p.m., Monday-Thursday  
*Please note there are no HCC staff officed at Cinco Ranch.  
Please visit Katy location for student services.*

## Southeast

### Eastside Campus

6815 Rustic 77087 .....713.718.7000/7100  
Open: 8:00 a.m.-10:00 p.m., Monday-Friday  
8:00 a.m.-5:00 p.m., Saturday  
8:00 a.m.-5:00 p.m., Sunday

### Felix Fraga Academic Campus

301 N. Drennan 77003 .....713.718.2800  
Open: 8:00 a.m.-10:00 p.m., Monday-Friday  
8:00 a.m.-5:00 p.m. Saturday

# Instructional Locations

## Southwest

### Gulfton Center

5407 Gulfton 77081.....713.718.7760  
Open: 8:00 a.m.-10:00 p.m., Monday-Thursday  
8:00 a.m.-4:30 p.m., Friday

### Missouri City Campus

5855 Sienna Springs Way 77459.....713.718.2900  
Open: 8:00 a.m.-10:00 p.m., Monday-Thursday  
8:00 a.m.-4:30 p.m., Friday, Saturday and Sunday

### Stafford Campus

9910 Cash Road, Stafford 77477.....713.718.7800  
Open: 8:00 a.m.-10:00 p.m., Monday-Thursday  
8:00 a.m.-4:30 p.m., Friday and Saturday

### West Loop Center

5601 West Loop South 77081.....713.718.7930  
Open: 7:00 a.m.-10:00 p.m., Monday-Friday  
7:00 a.m.-5:00 p.m., Saturday

## Adult Education Program

Adult Education courses are grant-supported and include GED preparation, basic skills improvement and English as-a-Second Language courses. A modest non-refundable registration fee may apply.

Accelerate Ed are grant-supported courses that prepare students for college and career readiness in Reading, Writing and Math. These students may or may not have already completed a high school diploma or GED. A modest non-refundable registration fee may apply.

*For information about Adult Education or Accelerate Ed, call the HCC Literacy Hotline, (713) 718-5400, or go to the HCC Adult Education website.*

Adult High School offerings are fee-based and are intended to act as a credit recovery option for high school students.

*For information about Adult High School courses, call (713) 718-7611 or go to the HCC Adult High School website.*

## Reduced Tuition for Adult Education Students

In some instances, students concurrently enrolled in career training programs that result in completion of a Level One Certificate and contextualized Accelerate Ed courses can receive as much as a two-thirds discount on the cost of their career courses.

*For more information, call (713) 718-2311 or go to the HCC Adult Education website.*

# Student Services Contact Information

## District Offices

Distance Education General Information.....	713-718-5275
International Students .....	713.718.8521
Registrar / Admissions.....	713.718.8500
Transcripts .....	713.718.8500/718-8518
Testing & Assessment (24 hr. service).....	713.718.8540
Transfe .....	713.718.8534
Veterans .....	713.718.8522

## Central College

Ability Services-Central .....	713.718.6164
Admissions-Central Campus.....	713.718.6111
Admissions-South Campus Campus.....	713.718.6507
Advising-Central Campus.....	713.718.6120
Advising-South Campus Campus .....	713.718.6737
Bookstore-Central Campus .....	713-528-0872
Business Office-Central Campus .....	713.718.6010
Business Office-South Campus Campus .....	713.718.6640
Career Planning & Job Placement- Central Campus.....	713.718.6174
Child Care Information-Central Campus .....	713.718.KIDS
Counseling-Central Campus .....	713.718.6174
Counseling-South Campus Campus .....	713.718.6737
Deaf and Hard-of-Hearing Support Services- Central Campus .....	713.718.6333
Financial Aid Office-Central Campus .....	713.718.6100
Financial Aid Office-South Campus Campus.....	713.718.6699
Fine Arts Box Office.....	713.718.6600
Learning Assistance - Center Campus.....	713.718.6070
Library-Central Campus.....	713.718.6133
Library-LHSB.....	713.718.6819
Library-South Campus Campus ERC .....	713.718.6639
New Student Orientation .....	713.718.6231
Registration-Central Campus.....	713.718.6111
Registration-South Campus Campus.....	713.718.6509
Student Activities-Central Campus.....	713.718.6401
Student Support Services-Central Campus .....	713.718.6330
Testing-Central Campus.....	713.718.6011
Testing-South Campus Campus.....	713.718.6471
Upward Bound-Central Campus. ....	713.718.6388
Recruitment-Central Campus.....	713.718.2534
Refugees, Asylees.....	713.718.6951

## Coleman College for Health Sciences

Admissions .....	713.718.7400
Advising.....	713.718.7400
Counseling.....	713.718.7400
Financial Aid .....	713.718.7400
Registration Office.....	713.718.7400

## Northeast College

Ability Services .....	713.718.8420
Admissions-Northeast Campus.....	713.718.8325
Admissions-Northline Campus.....	713.718.8088
Adult Education- ASE, ABE, ESL .....	713.718.5400
Adult High School.....	713.718.7611
Bookstore-Northeast Campus .....	713-670-0930
Bookstore-Northline Campus .....	713-692-1472
Cashier -Northeast Campus.....	713.718.8357
Cashier-Northline Campus.....	713.718.8031
Cashier-Pinemont Center.....	713.718.8425
Advising-Northeast Campus.....	713.718.8139
Counseling-Northeast Campus .....	713.718.8139
Advising-Northline Campus.....	713.718.8148
Counseling-Northline Campus .....	713.718.8148
Advising-Pinemont Campus .....	713.718.8447
Counseling-Pinemont Campus.....	713.718.8447
Financial Aid-Northeast Campus.....	713.718.8304
Financial Aid-Northline Campus .....	713.718.8080
Job Placement.....	713.718.5291
Learning Center-Pinemont Center .....	713.718.8033
Library-Codwell .....	713.718.8354
Library—Northline Campus.....	713.718.8045
Library—Pinemont ERC.....	713.718.8443
Recruitment-Northeast Campus.....	713.718.8305/8382
Registration-Northeast Campus.....	713.718.8323
Registration-Northline Campus .....	713.718.8088
Registration-Pinemont Center.....	713.718.8447
Testing-Northeast Campus.....	713.718.2105
Testing-Northline Campus.....	713.718.8073
Welcome Center-Northline Campus.....	713.718.8154

# Student Services Contact Information

## Northwest College

Ability (ADA) Support Services.....	713.718.5422
Admissions-Alief.....	713.718.6918
Admissions-Spring Branch Campus.....	713.718.5416
Admissions-Katy Campus.....	713.718.5808
Advising-Alief and Spring Branch Campus ..	713.718.5669
Advising-Katy Campus.....	713.718.5751
Bookstore-Alief Campus.....	713.218.6657
Bookstore-Katy Campus.....	281.492.7198
Bookstore-Spring Branch Campus.....	713.468.5300
Business Office-Spring Branch Campus.....	713.718.5418
Business Office-Katy Campus.....	713.718.5773
Counseling-Alief Campus.....	713.718.2838
Counseling-Katy Campus.....	713.718.5408
Counseling-Spring Branch.....	713.718.5422
Financial Aid-Alief.....	713.718.6027
Financial Aid-Spring Branch Campus.....	713.718.5713
Financial Aid-Katy Campus.....	713.718.5901
Job Placement-Spring Branch Campus.....	713.718.5423
Library-Alief ERC.....	713.718.6941
Library-Spring Branch Campus.....	713.718.5655
Library-Katy Campus.....	713.718.5747
Testing-Alief Campus.....	713.218.5996
Testing-Spring Branch Campus.....	713.718.5671
Testing-Katy Campus.....	713.718.5906
Teaching & Learning Center-Katy Campus ..	713.718.5774
Technical Learning Center-Katy Campus.....	713.718.5770

## Southeast College

Ability Services.....	713.718.8397
Admissions-Eastside Campus.....	713.718.7044
Adult High School-Eastside Campus.....	713.718.7611
Advising-Eastside Campus.....	713.718.7215
Bookstore-Eastside Campus.....	713-640-1441
Career Planning & Job Placement- Eastside Campus.....	713.718.6826
Cashier-Eastside Campus.....	713.718.7051
Career and Technology Education Programs.....	713.718.7079
Childcare Drop in Center.....	713.718.7995/7045
Community Outreach.....	713.718.7114
Counseling.....	713.718.7144
ESL (English as a Second Language).....	713.718.7204

Financial Aid-Eastside Campus.....	713.718.7011/7030
Library-Eastside.....	713.718.7084
Recruiter-Eastside Campus.....	713.718.7217
Student Activities-Eastside Campus.....	713.718.8477
Testing-Eastside Campus.....	713.718.7041
Testing Fraga Campus.....	713-718-8700
Tutoring Assistance Center-Eastside Campus.....	713.718.7202
Upward Bound-Eastside Campus.....	713.718.7004
Weekend College-Eastside Campus.....	713.718.7045
Writing Center-Eastside Campus.....	713.718.7023

## Southwest College

Ability Services.....	713.718.7910
Admissions - Missouri City Campus.....	713.718.2904
Admissions-Stafford Campus.....	713.718.7844
Admissions-West Loop Center.....	713.718.8920
Bookstore - Missouri City Campus.....	713.718.2907
Bookstore-West Loop Center.....	713.218.0391
Bookstore-Stafford Campus.....	281.499.6413
Cashier-Gulfton Center.....	713.718.7753
Child Care-Workforce.....	713.718.8268
Advising-Stafford Campus.....	713.718.7795
Counseling-Stafford Campus.....	713.718.7795
Advising-West Loop Center.....	713.718.7795
Counseling-West Loop Center.....	713.718.7795
Financial Aid-Stafford Campus.....	713.718.7785
Financial Aid-West Loop Center.....	713.718.7722
Job Placement.....	713.718.7718
Library - Stafford Campus.....	713.718.7824
Library -West Loop Center.....	713.718.7880
Omit-Testing- Stafford Campus.....	713.718.7993
Testing-West Loop Center.....	713.718.7717
Testing Stafford Campus.....	713.718.6735
Recruiter.....	713.718.7716
Student Life-Stafford Campus.....	713.718.7791
Student Life-West Loop Campus.....	713.718.7791

# HCC Student Organizations

## Central College

<b>Student Life Office</b> .....	713.718.6401
<b>Anime Re-Evolved Club</b>	
Jack Marshall .....	713.718.6671
<b>Anthropology Club</b>	
Scotty Moore .....	713.718.2333
<b>Association of Latin American Students</b>	
Carlos Villacis .....	713.718.6682
<b>Campus Crusade for Christ</b>	
Margaret Eomurian.....	713.718.6678
<b>Eagles Club</b>	
Sue Moraska .....	713.718.6832
Co- advisor Brigid Wilson	
<b>Economic Club</b>	
Charles Hackner .....	713.718.6293
<b>Financial Literacy Club</b>	
Dr. Mesfin Genanaw.....	713.718.6481
<b>Future Teachers Association</b>	
Dr. Pamela Norwood .....	713.718.6235
<b>I-Design</b>	
Kevin Hamby .....	713.718.6213
<b>Interpreter Student Association</b>	
Dr. Michael Lee .....	713.718.7616
<b>Information Technology Club</b>	
Scott Hillman .....	713.718.6465
<b>Latin@ Students Association</b>	
Dr. Lydia French .....	713.718.6622
<b>Men of Honor</b>	
Kendrick Gibson.....	713.718.2560
<b>Out Student and Allies</b>	
Stacey Higdon.....	713.718.6671
<b>Phi Theta Kappa</b>	
Darin Baskin.....	713.718.8471
<b>Science Club</b>	
Dalton Mc Whinney.....	713.718.6050
<b>Student Chamber of Commerce</b>	
Janet Parr.....	713.718.6481
<b>Student Government Association</b>	
Sonya Sneed.....	713.718.6401
<b>Student Library Advisory Council</b>	
Erica Hubbard.....	713.718.6139
<b>TRIO Student Leadership Association</b>	
Dr. LaTonya Jones .....	713.718.6330
<b>Veterans Student Organization</b>	
Donny Leveston .....	713.718.6139

## Coleman College

<b>Student Life Office</b> .....	713.718.7438
<b>Histotechnology Student Association</b>	
Lawrence Wall .....	713.718.7642
<b>HCC Student Diagnostic Medical Sonographers</b>	
Elizabeth Ho .....	713.718.7345
<b>Human Services Technology Student Association</b>	
Anthony Pascarella .....	713.718.5550
<b>Medical Assistant Student Association</b>	
Cynthia Lundgren .....	713.718.7361
<b>Medical Laboratory Student Association</b>	
Robbe Hallmark .....	713.718.7637
<b>Pharmacy Technician Student Association</b>	
Liz Johnson Wilroy .....	713.718.7352
<b>Physical Therapist Assistant Student Association</b>	
Jan Myers .....	713.718.7386
<b>Respiratory Therapy Student Association</b>	
Teddy Tovar .....	713.718.7385
<b>Radiography Student Association</b>	
Roger Bumgardner .....	713.718.7649
<b>Student Government Association</b>	
Cameron Cox .....	713.718.7438
<b>CVT Student Organization</b>	
Mary Oliver .....	713.718.7438
<b>Surgical Technologist Student Association</b>	
Vikki K. Davis-Littleton .....	713.718.7438
<b>Nuclear Medicine Technologist Student Association</b>	
Bobby Greenwood .....	713.718.7492
<b>Undergraduate Nurses in Training (U.N.I.T.)</b>	
Deborah Johnson .....	713.718.7438
<b>Vocational Nursing Student Association</b>	
Deborah Johnson .....	713.718.7438
<b>Northeast College</b>	
<b>Student Life Office</b> .....	713.718.8373
<b>Student Government Association</b> .....	713.718.8373
<b>Petroleum Engineering Technology Student Association</b>	
John Galitos .....	713.718.5534

# HCC Student Organizations

## Northwest College

<b>Student Life Office</b>	713.718.5702
<b>Anthropology Club</b>	
Ann Bragdon	713.718.5642
<b>Aspiring Engineers</b>	
Bharat Sutaria	713.718.6160
<b>Baptist Student Ministry</b>	
Aubrey Tucker	713.718.5606
<b>Beta Beta Beta</b>	
Anna Koshy	713.718.5659
<b>Chess Club</b>	
Aubrey Tucker	713.718.5606
<b>Creative Writing Club (Katy)</b>	
Jennifer Vacca	713.718.5787
<b>Creative Writing Club (Spring Branch)</b>	
Michael Sofranko	713.718.5680
<b>Financial Futures</b>	
Rosalyn Crain	713.718.5235
<b>History Club</b>	
Christopher Patke	713.718.5818
<b>Horticulture Club</b>	
Jeff Koch	713.718.6329
<b>International Student Organization</b>	
Marilyn Douglas Jones	713.718.5686
<b>Logistics &amp; Supply Club</b>	
Steve Woodland	713.718.5832
<b>MEISA</b>	
Aubrey Tucker	713.718.5606
<b>Movie Makers</b>	
Rick Harrington	713.718.5999
<b>National Society of Collegiate Scholars</b>	
Nathan Smith	713.718.7258
<b>Northwest Reading Club</b>	
Montez Hines	713.718.5433
<b>Phi Theta Kappa</b>	
Gisela Ables	713.718.5779
<b>Philosophy Club</b>	
Dan Flores	713.718.7465
<b>Political Science Club</b>	
Gary LeBlanc	713.718.5842
Rosalyn Crain	713.718.5235
<b>Psi Beta</b>	
Linda Whitney	713.718.5687
Joanne Hsu	713.718.5626
<b>Rotaract Club</b>	
Melba Martin	713.718.5656
April Hall	713.718.5689

## STEM Club

Jennifer O'Neil ..... 713.718.5875

## Sociology Club

Michael Fonge ..... 713.718.5827

## Society of Leadership & Success

Tiffany Driver ..... 713.718.5702

## Student Association

Tiffany Driver ..... 713.718.5702

## Talk-A-Holics

Ritu Raju ..... 713.718.5614

## Underground Events

Cindy Belmar ..... 713.718.5849

Steve Wolfe ..... 713.718.5467

## Veterans Student Organization

Mahnaz Kolaini ..... 713.718.5667

## Vietnamese Student Association

Francis Ha ..... 713.718.5544

## Voices Without Borders

Michael Sofranko ..... 713.718.5680

## Southeast College

**Student Life Office** ..... 713.718.8152

**Student Government Association** ..... 713.718.7293

## Mexican American Latino Student Association (MALSA)

Grisel Cano ..... 713.718.7207

James Ross-Nazzal ..... 713.718.7131

## History Club

James Ross-Nazzal ..... 713.718.7131

## e+ Math Club

Jackie Gascon ..... 713.718.7149

## Chess Club

Cheng Ting ..... 713.718.7299

## Phi Beta Lambda

Cheyli Pleasant ..... 713.718.7079

## Gender Studies Organization

Antrece Baggett ..... 713.718.7253

# HCC Student Organizations

## Southwest College

<b>Student Life Office</b> .....	713.718.7791
<b>Student Government Association</b> .....	713.718.7791
<b>Broadcast Technology Student Association</b> .....	713.718.6725
<b>Campus Crusade for Christ</b>	
Augie Sanchez/Linda Leauvano .....	713.718.7802
<b>Delta Psi Omega Honor Society</b>	
John Corley .....	713.718.6361
<b>Digital Arts Club</b>	
Reginald Leathers .....	713.718.7891
<b>Math Club</b>	
Eunice Kallarackal .....	713.718.7800
<b>Developers Revolution Gaming Unit</b>	
Reni Abraham .....	713.718.5728
<b>Gender Studies Club</b>	
Marie Dybala/Amy Tan .....	713.718.7814
<b>Pakistan Student Association</b>	
Larry Gonzalez .....	713.718.7780
<b>Psychology Club</b>	
Eileen Mello .....	713.718.7777
<b>Fine Arts Student Association</b>	
Cynthia Mills .....	713.718.7700
<b>Forensic Society</b>	
Bill Ferreira .....	713.718.5478
<b>Writers Club</b>	
Helen Jackson .....	713.718.2223
<b>District</b>	
<b>United Student Council</b>	
Shantay Grays .....	713.718.5043
<b>Organization of Latin American Students (OLA)</b> .....	713.718.5409
<b>Phi Theta Kappa</b>	
Gisela Ables .....	713.718.5779
<b>Turkish American Student Association</b>	
Rigoberto Garcia .....	713.718.7991

# Program Contact Information

## Academic Departments

<b>Accounting</b> .....	713.718.7905
(CE).....	713.718.6481
(NW).....	713.718.5701
(SE).....	713.718.7079
(SW).....	713.718.7911
(NE).....	713.718.8316
<b>Agricultural Sciences</b> .....	713.718.5591
<b>American Sign Language</b> .....	713.718.6846
<b>Anthropology</b>	
(CE).....	713.718.6860
(NE).....	713.718.8054
(NW).....	713.718.5625
(SE).....	713.718.7508
(SW).....	713.718.7778
<b>Art</b>	
(CE).....	713.718.6600
(NE).....	713.718.8328
(NW).....	713.718.5620
(SE).....	713.718.7204
(SW).....	713.718.7700
<b>Biology</b>	
(CE).....	713.718.6050
(NE).....	713.718.8049
(NW).....	713.718.5435
(SE).....	713.718.7056
(SW).....	713.718.7775
<b>Chemistry</b>	
(CE).....	713.718.6052
(NE).....	713.718.8049
(NW).....	713.718.5435
(SE).....	713.718.7056
(SW).....	713.718.7773
<b>Communication</b>	
(CE).....	713.718.6600
(NW).....	713.718.5785
(SW).....	713.718.7820

<b>Computer Science</b> .....	713.718.5294
(CE).....	713.718.6457
(NE).....	713.718.2449
(NW).....	713.718.5731
(SE).....	713.718.5224
(SW).....	713.718.6776
<b>Criminal Justice</b> .....	713.718.8319
(SE).....	713.718.7508
(NW).....	713.718.8319
(SW).....	713.718.7846
<b>Dance</b>	
(CE).....	713.718.6600
(NW).....	713.718.5620
<b>Developmental English</b>	
(CE).....	713.718.6678
(NE).....	713.718.8328
(NW).....	713.718.5410
(SE).....	713.718.7109
(SW).....	713.718.6362
<b>Developmental Math</b>	
(CE).....	713.718.6441
(NE).....	713.718.8049
(NW).....	713.718.5511
(SE).....	713.718.7056
(SW).....	713.718.7770
(DE).....	713.718.5275
<b>Drama</b>	
(CE).....	713.718.6600
(NE).....	713-718-2655
(NW).....	713.718.5620
(SE).....	713.718.7204
(SW).....	713.718.6361
<b>Economics</b>	
(CE).....	713.718.6860
(NE).....	713.718.8501
(NW).....	713.718.5776
(SE).....	713.718.7508
(SW).....	713.718.7776

# Program Contact Information

## Education

(CE).....713.718.6303  
 (NE).....713.718.8051  
 (SE).....713.718.7508  
 (SW).....713.718.7810

## English

(CE).....713.718.6671  
 (NE).....713.718.8328  
 (NW).....713.718.5785  
 (SE).....713.718.7109  
 (SW).....713.718.7814

## English as a second language (Academic ESL & Intensive English)

(CE).....713.718.6678  
 (NE).....713.718.8181  
 (NW).....713.718.5410  
 (SE).....713.718.7204  
 (SW).....713.718.7750

## Foreign Languages

(CE).....713.718.6678  
 (NE).....713.718.8181  
 (NW).....713.718.5410  
 (SE).....713.718.7204  
 (SW).....713.718.7815

## Geography

(CE).....713.718.6063  
 (NE).....713.718.8501  
 (NW).....713.718.5781  
 (SE).....713.718.7068  
 (SW).....713.718.7777

## Geology

(CE).....713.718.6052  
 (NE).....713.718.8049  
 (NW).....713.718.5435  
 (SE).....713.718.7508  
 (SW).....713.718.7771

## Government

(CE).....713.718.6063  
 (NE).....713.718.8501  
 (NW).....713.718.5776  
 (SE).....713.718.7508  
 (SW).....713.718.7846  
 (SW).....713.718.7776

## Guided Studies

(CE).....713.718.6070  
 (NE).....713.718.8051  
 (NW).....713.718.5410  
 (SE).....713.718.7109  
 (SW).....713.718.6362

## History

(CE).....713.718.6063  
 (NE).....713.718.8501  
 (NW).....713.718.5781  
 (SE).....713.718.7068  
 (SW).....713.718.7777

## Humanities

(CE).....713.718.6671  
 (NE).....713.718.8328  
 (NW).....713.718.5785  
 (SE).....713.718.77508  
 (SW).....713.718.7814

## Mathematics

(CE).....713.718.6441  
 (NE).....713.718.8049  
 (NW).....713.718.5511  
 (SE).....713.718.7056  
 (SW).....713.718.7770

## Music

(CE).....713.718.6600  
 (NW).....713.718.5620  
 (SE).....713.718.7204  
 (SW).....713.718.6372

# Program Contact Information

## Nutrition

(CE).....713.718.6050  
(NE).....713.718.8049  
(SE).....713.718.7056  
(SW).....713.718.7775

## Philosophy

(CE).....713.718.6063  
(NE).....713.718.8328  
(NW).....713.718.5785  
(SE).....713.718.7508  
(SW).....713.718.8777

## Physical Education

(CE).....713.718.6084  
(NE).....713.718.8049  
(NW).....713.718.5435  
(SW).....713.718.7776

## Physics

(CE).....713.718.6052  
(NE).....713.718.8049  
(NW).....713.718.5435  
(SE).....713.718.7056  
(SW).....713.718.7773

## Psychology

(CE).....713.718.6860  
(NE).....713.718.8054  
(NW).....713.718.5625  
(SE).....713.718.7508  
(SW).....713.718.7777

## Sociology

(CE).....713.718.6860  
(NE).....713.718.8055  
(NW).....713.718.5625  
(SE).....713.718.7068  
(SW).....713.718.7776

## Speech

(CE).....713.718.6600  
(NE).....713.718.8328  
(NW).....713.718.5620  
(SE).....713.718.7204  
(SW).....713.718.6360

# Career and Technology Education Programs

*Accounting .....	713.718.7905	Instrumentation and Controls	
Air Conditioning/Refrigeration .....	713.718.6856	Engineering Technology .....	713.718.5534
*Audio Recording and Filmmaking .....	713.718.5602	*Interior Design.....	713.718.6038
*Automotive Technology .....	713.718.8100	International Business .....	713.718.5873
Biotechnology.....	713.718.5534	Interpreting/Sign Language .....	713.718.6845
*Business Management .....	713.718.6478	Logistics and Global Supply Chain	
*Business Technology .....	713.718.7808	Management .....	713.718.5832
Chemical Engineering Technology .....	713.718.5534	Machining Technology.....	713.718.6822
Chemical Laboratory Technology .....	713.718.5534	Manufacturing Engineering Technology .....	713.718.6805
*Child Development.....	713.718.6303	*Marketing Management and Research.....	713.718.6478
Cisco Academy.....	281.491.9358	*Medical Assistant .....	713.718.7361
*Computer Science Technology .....	713.718.5294	Medical Laboratory Technician.....	713.718.5518
Computed Tomography .....	713.718.7650	Music Arranging, Composition and	
Construction Technology .....	713.718.6898	Production .....	713.718.5620
Cosmetology .....	713.718.7501	Music Business .....	713.718.5620
*Criminal Justice.....	713.718.8361	Music in Performance .....	713.718.5620
Culinary Arts and Pastry Arts.....	713.718.6152	*Nuclear Medicine Technology .....	713.718.7356
Dental Assisting.....	713.718.7356	Nursing (RN) .....	713.718.7230
Dental Hygiene.....	713.718.7356	Occupational Therapy Assistant.....	713.718.7392
Diagnostic Medical Sonography.....	713.718.7356	Paralegal Technology .....	713.718.5404
Digital Communication .....	713.718.7895	Petroleum Engineering Technology.....	713.718.5534
Digital Gaming and Simulation.....	713.718.7895	*Pharmacy Technician.....	713.718.7356
*Drafting and Design Engineering		*Physical Therapist Assistant .....	713.718.7391
Technology .....	713.718.5219	Process Technology .....	713.718.5534
Electronics Engineering Technology .....	713.718.5251	Radiography .....	713.718.7650
*Emergency Medical Services.....	713.718.7694	*Real Estate .....	713.718.7905
*Fashion Design .....	713.718.6158	*Respiratory Therapist.....	713.718.7381
*Fashion Merchandising.....	713.718.6158	Surgical Technology .....	713.718.7362
*Finance (Banking).....	713.718.5404	Travel and Tourism.....	713.718.6072
Filmmaking .....	713.718.5602	Veterinary Paramedic.....	713.718.5519
*Fire Protection Technology .....	713.718.5236	Vocational Nursing .....	713.718.7331
Geographic Information Science (GIS) .....	713.718.5294	Welding Technology .....	713.718.6899
Health and Physical Education/Fitness.....	713.718.6084		
Health Information Technology.....	713.718.7347		
Heating, Air Conditioning, Refrigeration .....	713.718.6856		
Heavy Vehicle and Truck Repair .....	713.718.8100		
Histologic Technician.....	713.718.7642		
Horticulture .....	713.718.5853		
Hotel/Restaurant Management .....	713.718.6072		
Human Service Technology .....	713.718.5539		
Industrial Electricity .....	713.718.6898		

*\* Named Exemplary Programs by the Texas Higher Education Coordinating Board*

# Admissions

## General Criteria

A comprehensive community college system, HCC offers many programs designed to meet the needs of students according to their backgrounds and interests. As an open admissions two-year, lower-division undergraduate institution, HCC has an "open door" admissions policy; all individuals who have at least one of the following qualifications are welcome to enroll:

- Accredited High School diploma, or
- General Education Development (GED) certificate, or
- College-level hours earned at other accredited colleges or universities, or
- International students who meet college and state requirements.

Admission to HCC does not guarantee admission to all programs. HCC utilizes the ACT COMPASS test to assess the level of students' reading, writing, and math skills. Based upon their assessment results and program objectives, students may be required to take developmental and/or prerequisite courses. In addition, special admission requirements have been established for programs that require students to possess previously learned skills and knowledge. Applicants may obtain additional admission information from the Office of Admissions and Records, counselors, and campus offices.

## Individual Approval

Students who have not graduated, but are at least 18 years old, may be admitted to HCC with appropriate assessment scores.

## High School Students

### Admissions

Currently enrolled high school or home-schooled students who have completed their sophomore year may enroll for a maximum of two HCC courses each semester. In general, students must have a 'B' average, satisfy the Texas Success Initiative (TSI) requirements, and not require remediation in the subject area in which they are enrolling. Students must furnish a high school transcript, TSI scores (or documentation of exemption from TSI requirements), and approval from their high school. Students must maintain a "C" average to continue taking courses at HCC while still attending high school.

HCC credits earned prior to high school graduation may not transfer to some senior colleges. High school students may take HCC courses for college credit only or for dual (high school and college) credit.

## Special Admissions

Students who have not completed their sophomore year in high school may petition for admission. Students must present evidence of their ability to benefit from college classes. Requirements include an application, a letter of interest from the student, a letter of approval from the high school principal, high school transcripts, three letters of recommendation, test scores from an approved assessment, and an interview. Interested students should contact the appropriate instructional dean at the college one month prior to start of classes.

## Dual Credit Course Admissions

### Dual Credit Course

To be eligible for any dual credit course, the student must at least be in 11th grade; complete an HCC admission application and submit an official high school transcript indicating TAKS, SAT, and/or ACT test scores (or bring the official test score report if test scores do not appear on the high school transcript).

### Academic Dual Credit Course

To be eligible for academic dual credit courses, high school students must pass the applicable areas of a Texas Success Initiative test (TSI) such as THEA, ASSET, or COMPASS. The student may be exempt from state-mandated TSI testing if he/she meets the qualifying standards on applicable areas of the SAT, ACT, or the 11th Grade TAKS tests. The student may be waived from state-mandated TSI testing while in high school if he/she meets the qualifying standards on applicable areas of the 10th Grade TAKS test. Students may take college-level courses related to the area(s) of the test they pass. The student must also meet institutional course prerequisites.

# Admissions

## Workforce Dual Credit Courses

To be eligible for workforce dual credit courses, high school students must achieve at least the minimum high school passing standard on the Mathematics section and/or the English Language Arts with writing sample section on the Grade 10 or Grade 11 TAKS test. High school students who do not meet the high school passing standard of the Grade 10 or Grade 11 TAKS test will be limited to appropriate workforce Tech Prep program courses. Students may only enroll in those workforce education dual credit courses for which they have demonstrated eligibility related to the area(s) of the test they pass. However, students must also meet institutional course prerequisites. Further assessment of college-level skills will be conducted, if relevant, during the first semester of enrollment.

- The class load of a high school student shall not exceed two dual credit courses per semester (fall, spring, and summer). However, under special circumstances that indicate a student with exceptional academic abilities is capable of additional college-level work, HCC academic deans may grant exceptions to this requirement.
- All dual credit students are responsible for purchasing their own textbooks and other required course materials.
- All dual credit course instruction and materials, including HCC-approved textbooks, must be at the equivalent level of the instruction and materials used for the identical courses taught on HCC campuses.
- If taught in the high school, the dual credit class must be composed solely of dual credit, advanced placement (AP), and/or college credit students, not regular high school students.
- For dual credit courses, grading criteria must allow faculty the opportunity to award high school only or high school and college credit depending upon student performance.

For further information, contact any HCC counselor/advisor at any of the college locations.

## Tech-Prep Students

HCC provides an educational and training structure that is sensitive to the transition of high school students to college. The process that facilitates an orderly progression through programs of instruction is commonly referred to as "articulation." Articulation agreements have been developed between HCC and school districts within the service area. These articulation agreements allow students to successfully

complete certain Career and Technical Education (CTE) courses in high school to receive college credits, contingent upon enrollment in a similar Career and Technical Education program at HCC and successful completion of nine semester credit hours. For further information, go to: <http://www.hccs.edu/hccs/business-community/instructional-initiatives>. Students can also obtain additional information by visiting [www.techpreptexas.org](http://www.techpreptexas.org). HCC also participates in the Advanced Technical Credit (ATC) program (commonly known as statewide articulation). Students who successfully complete certain Career and Technical Education courses designated as ATC while in high school may be eligible for college credit at HCC and many other community and technical colleges in Texas. Students can obtain further information by visiting [www.atctexas.org](http://www.atctexas.org). Students interested in majoring in Career and Technical Education programs who want to know if they qualify for articulated credit under a Tech Prep or Advanced Technical Credit agreement should contact an HCC counselor/advisor, the appropriate program department chair, or the Director of Career and Technology Education Program Initiatives, Dr. Freddie Wade at 713.718.7596 or e-mail [freddie.wade@hccs.edu](mailto:freddie.wade@hccs.edu). Students may apply for additional placement credit for no more than 18 semester credit hours. Credit for more than four courses in any one subject area requires special approval.

## Early College High School Students

Early college high school provides high school-age students with a "seamless" pathway from high school to college. Housed on HCC campuses, with articulated sharing of space and staff, ECHS allows the high school student to gradually integrate into college course work through his or her traditional high school degree plan. This integration requires dual enrollment, with an additional year for concentrated college coursework and with the student having to show mastery of the knowledge and skills necessary for success. After tackling this rigorous course of study, students graduate high school and many earn an associate's degree or up to 61 college credits, transferable to the post-secondary institution of their choice. ECHS provides strong support to each student and the family in obtaining entrance to, and success in, higher education. HCC partners with the Houston Independent School District (HISD) in the operation of the Challenge Early College High School on the West Loop Campus of Southwest College, North Houston Early College High School located at HCC Northeast Northline campus, East Early College High School

# Admissions

on Southeast College's Felix Fraga Campus and the Houston Academy for International Studies High School (HAIS) near Central College. The Alief Early College High School, located on the Alief Campus of HCC Northwest, is the product of a partnership between HCC and Alief ISD.

## Health Sciences Students

All applicants to the Health Sciences Programs must contact the Health Sciences Department Admissions Office (1900 Pressler Dr., Houston, TX 77030, 713.718.7400) directly for formal application procedures, pre-entrance examination schedules, and general admission information. Also, see the Health Sciences section or go to [coleman.hccs.edu](http://coleman.hccs.edu)

## Transfer students

Transfer students are students who have previous college work and plan to pursue a certificate or degree at HCC. Transfer students are required to send official transcripts from each previously attended college or university. Transfer work is evaluated within the first semester of attendance. Students are encouraged to meet with an HCC counselor prior to registration but no later than their first semester of enrollment to complete their degree plan. Transfer students should follow the basic procedures for admission.

## Non-Degree Seeking Students

A non-degree-seeking student is one who is taking course work for personal enrichment and is not seeking a degree or certificate. In many cases, these students might be referred to continuing education. These students are limited to an accumulation of 15 semester credit hours before they must visit with a counselor or advisor to confirm their status as non-degree seeking. These students are not eligible for state or federal financial aid. Non-degree-seeking students may still need assessment testing in order to meet institutional course prerequisites.

Another example of a non-degree-seeking student is the student who is regularly enrolled in another college or university but wishes to attend HCC summer or mini-terms and then return to his/her home school. The students must provide documentation (unofficial transcripts are acceptable in this instance) verifying enrollment during the preceding semester. If an unofficial transcript is accepted for advising and enrollment, the student should be informed that a hold will be put on his/her record until an official transcript is sent or presented.

However, non-degree-seeking students may still need assessment testing in order to meet institutional course prerequisites.

## International Students

Houston Community College (HCC) considers students holding a nonimmigrant visa to be an international student. Prospective students maintaining any other type of visa status, except F-2 and B (visiting) visas, may enroll at HCC as permitted by U.S. federal law. The student should call the college of choice for admission instructions and meet the published application deadline.

International students who want to study in the U.S. with an F-1 status must obtain a Student and Exchange Visitor Information System (SEVIS) Certificate of Eligibility, also referred to as a SEVIS Form I-20, from HCC. HCC has been approved by the U.S. Department of Homeland Security (DHS) to issue SEVIS Form I-20's required to obtain F-1 student visa status. The individual must then use the SEVIS Form I-20 to apply for an F-1 student visa (if outside the United States) or a change of nonimmigrant classification to F-1 (if inside the United States). U.S. federal regulations require all applicants to provide certain documentation and information to the college issuing the SEVIS Form I-20 before it can be issued to a student. To apply for a SEVIS Form I-20, please refer to the "International Students" section of the HCC website and follow the outlined application guidelines.

An international student under the age of 18 who wishes to gain admission to HCC must provide documentation proving that he/she has achieved the equivalency of a U.S. high school diploma in his/her country by completing a transcript evaluation with an approved evaluation agency.

F-1 international students must maintain full-time status, which is defined as being enrolled in a minimum of 12 semester credit hours for the spring and fall semesters or a minimum of 9 semester credit hours for the summer term, if summer is the initial semester of enrollment at HCC.

International Student Advisors/ Designated School Officials (ISA/DSO) report all changes pertaining to F-1 internationals (both students and alumni) to DHS as required by U.S. federal law.

# Admissions

F-1 international students must adhere to the U.S. federal regulations governing their nonimmigrant status while studying in the United States. Non-compliance could jeopardize

an F-1 international student's ability to remain in the United States and complete his/her studies at HCC. F-1 international students who have violated the U.S. federal regulations governing their nonimmigrant status are encouraged to schedule an appointment with the Office of International Student Services & Study Abroad (OISS&SA) to discuss their options.

## **Concurrent Enrollment for F-1 International Students**

An F-1 student maintaining his/her F-1 status at another educational institution and wishing to be concurrently enrolled at HCC must obtain a letter from the ISA/DSO at his/her parent institution confirming permission to take classes at HCC under the F-1 status. F-1 students maintaining status at other educational institutions are not eligible to work on the HCC campus until the student has received a SEVIS Form I-20 from HCC and approval to work on campus from an HCC ISA/DSO.

## **Summer International Transient Students**

Students who are attending another college or university and wish to take summer classes at HCC must provide a letter from the ISA/DSO at their parent institution that indicates they are maintaining their F-1 status and have been given permission to enroll at HCC.

## **English Proficiency and Course Placement**

International students planning to enroll in academic programs must demonstrate English language proficiency. This can be accomplished by taking one of the following exams: TOEFL, CELSA, IELTS, SAT, ACT, or an approved Texas Success Initiative (TSI) test. Students who have not taken an English language proficiency test will be administered the COMPASS ESL test by HCC to determine the student's English language proficiency. Scores on the exams must meet state and institutional requirements for placement into college-level classes. Students who do not meet these requirements will be required to enroll in the Intensive English program.

## **Transfer Students**

A transfer student is any student who has previous college work and plans to pursue a certificate or degree at HCC. HCC admits transfer students who already have established F-1 status while attending other colleges and universities. A transfer student admitted to either an academic program or the Intensive English program. Students planning to transfer to HCC must submit a complete application to the OISS&SA. For more information, please refer to the International Students section of the HCC website and click on "Transfer Student".

## **Transfer Credit from Foreign Institutions**

Students petitioning to receive transfer credit from foreign institutions must first have their transcripts evaluated by an approved evaluation agency. For a list of approved evaluation agencies, students can refer to the HCC website, search term: transcripts and foreign credential evaluations

## **Application Deadline**

International students intending to enroll in HCC should visit the "International Student" section of the HCC website or contact the OISS&SA at (713)718-8521 to determine the application deadline that applies to them.

# Admissions

## Special Program Admissions

### Upward Bound

Upward Bound is a federally-funded program intended to help students transition from high school to college. It is a culturally diverse enrichment program conducted at HCC Central and HCC-Southeast. The program consists of Saturday activities throughout the academic year and a six-week summer session. High school students at both colleges participate in a variety of educational learning experiences, through advising, academic instruction, and tutoring in basic high school subjects. Field trips, seminars and cultural enrichment activities also are a part of the program. Students in Upward Bound broaden their own horizons. With the help of individuals working in various careers, the students learn about jobs that may offer new opportunities in today's workforce. Visits to colleges and universities, museums, and cultural events also contribute to new experiences for the students. These activities are balanced by personal experiences to help students think and feel better about themselves. Through role models, leadership training, interviewing skills and a wide range of group experiences, students not only improve their self-images but also become more confident and knowledgeable.

### The Student Support Services Program (TRIO)

This Central College program is designed to provide support and enrichment activities to low-income, first-generation college students. The program aims to assist students in retention, graduation, and transferring to 4-year universities. Thus, declared majors should be working toward the AA or AS degree plan. TRIO is a federal program funded by the U.S. Department of Education. It provides one-on-one tutoring, individualized advising, university field trips, student leadership, workshops/seminars on a variety of pertinent topics, a supplemental grant to Pell-eligible students, and much more. There is a 200 - student limit, so qualified students are selected on a first-come, first-served basis. Early fall semester application is recommended. Dr. LaTonya Jones, Director. 713.718.6330.

### VAST Academy (Vocational Advancement and Skills Training )

The VAST Academy offers comprehensive transition programs and services which provide workforce certificates, meaningful credentials, pre-college courses and support services to individuals with intellectual and/or learning disabilities from 2nd through the 8th grade level and beyond. VAST offers certificates in Occupational Life Skills,

Career Readiness and Office Skills Training. Pre-college and freshman success-bridge courses for "credit" and "non-credit," give students a chance to enhance their basic academic, computer and independent living skills, assist with successful transition into college credit certificate programs and/or learn to live more independently in the community. The Office Skills Training Certificate offers 8 courses and a 200-hour internship preparing students for entry level positions in Office Occupation fields such as: Office Assistants, data entry, administrative/clerical, filing and mail-center clerks. Plans are underway to develop more "marketable skills" certificates in various career areas to better prepare our students for the workforce. A new residential option is now available in partnership with "The Center."

VAST Academy is part of the Career & Technology Education Division of Central College, with a satellite program at Northwest College, Spring Branch Campus. VAST was awarded a \$2.5 million TPSID Grant from the U.S. Dept. of Education, one of 27 Grantees across the nation to expand its existing programs and services. For more information on the TPSID grants go to [www.thinkcollege.net](http://www.thinkcollege.net), the national coordinating center of the TPSID Grants and for all the latest information on post-secondary education for students with intellectual disabilities.

For more information contact Sue Moraska, Director, 713.718.6833, [sue.moraska@hcss.edu](mailto:sue.moraska@hcss.edu) or Ms. Sammy Leaston, NW VAST Program Manager , 713.718.5034, [sammy.leaston@hccs.edu](mailto:sammy.leaston@hccs.edu) or view our website at [central.hccs.edu/vast](http://central.hccs.edu/vast).

# Admissions

## Procedures for Admission

### Basic Procedures for Admission

- Submit an application at any HCC Admissions Center or apply online at <http://www.hccs.edu>. Students may also complete the Texas Common Application for 2 year Institutions, however will need to allow extra processing time before registration. [www.applytexas.org](http://www.applytexas.org).
- Calculate tuition based on residency. (See Residency section and Tuition and Fees)
- Participate in a college success course, required for all new students with fewer than 15 semester credit hours. (See current Class Schedule for additional details.)
- Provide official transcripts from ALL previously attended colleges and/or universities. (Unofficial copies may be used for advisement.) It is highly recommended that transcripts be sent electronically from the transferring institution to expedite processing. Transcripts may also be mailed to the following address if electronic submission is not available: Office of Student Records, P.O. Box 667517 Houston, TX 77266-7517
- Complete an HCC assessment exam (COMPASS) or other approved TSI instrument, or provide documentation supporting a TSI Exemption or Waiver. (See current Class Schedule for TSI requirements.)
- Provide ACT, SAT, or TAKS scores to claim TSI exemption. (Unofficial copies may be used for advising and placement purposes, but official copies are needed for a TSI exemption.)
- Participate in further assessment if necessary for course placement.
- Meet with a counselor/advisor for course guidance .
- Declare a certificate or degree plan.

### Procedures for Readmission

#### After Absence

Students who have not enrolled for two or more consecutive regular semesters (fall, spring) must complete the core residency questions and satisfy all applicable requirements for residency again prior to registration.

#### After Suspension/Academic Withdrawal

Students seeking readmission after being placed on enforced Academic Withdrawal or Suspension at HCC must petition the appropriate academic or workforce dean at the college they attend. Students may be required to enroll in courses specified by the dean and/or have their course load limited.

### Academic Fresh Start

State law (Educ. Code, Sec. 51.931) allows students with academic credits earned 10 or more years prior to the starting date of the semester, in which they seek admission to any public institution of higher education, to have those credits or grades not considered in the admission decision. If admitted under this Academic Fresh Start provision, the students may not receive any course credit for courses undertaken 10 or more years prior to enrollment. Students must complete a Fresh Start petition prior to admission to HCC.

## Residency Requirements

### Basic Residency Requirements

For tuition purposes, according to Texas Education Code 54.075 and Texas Higher Educational Coordinating Board Rules 21.727, all students must answer a complete set of core residency questions within the admissions application. These questions will be used by the institution to determine if the person is a resident. The following persons shall be classified as Texas Residents and entitled to pay resident tuition at all institutions of higher education:

- A person who was enrolled at a Texas public institution during a fall or spring semester within the previous twelve months and was classified as a Texas resident for tuition purposes.
- A person who (a) graduated from a public or accredited private high school in this state or as an alternative to high school graduation received the equivalent of a high school diploma in this state, AND (b) maintained a residence continuously in this state for the 36 months immediately preceding the date of graduation or receipt of the diploma equivalent as applicable and the 12 months preceding the census date of the academic semester in which the person enrolls.
- A person or a dependent whose parent established a domicile in this state not less than 12 months before the census date of the academic semester in which the student enrolls in an institution AND maintained a residence continuously in the state for the 12 months immediately preceding the census date of the academic semester in which the person enrolls in an institution.

# Admissions

## Establishing Residency

HCC is required by state law to determine the residency status of all students for tuition purposes. All new students must provide the institution with answers to a set of core residency questions and provide substantiating documentation to affirm their residence. Students who have not enrolled for two or more consecutive regular semesters (Fall & Spring) must complete the residency core questions and satisfy all applicable requirements to establish residency. Additional documentation may be requested at any time following registration.

Residency is determined at the time of registration, either by a student's current address or by the address of a parent or legal guardian, if the student is being claimed or is eligible to be claimed as a dependent for federal income tax purposes. A post office box can be used for a mailing address but cannot be used to establish residency. It is the responsibility of the student to register under the correct residency classification. A complete set of rules and regulations for determining residency is available at each Admissions Office.

For tuition purposes, a student will be classified according to the following guidelines. The Registrar is the final authority on all questions of residency.

### In-District Residency

- Students who have met the basic Texas residency requirements and live in the HCC district (Alief, Houston ISD, North Forest ISD, Stafford MSD, and part of Missouri City).
- Students who have a street address in the district. Post office boxes and dormitory addresses cannot be used.

### Out-of-District Residency

- Students who have met the basic Texas residency requirements and live outside the HCC district (Alief, Houston ISD, North Forest ISD, Stafford MSD, and part of Missouri City).

### Out-of-State Residency

- A student who has not resided in Texas for 12 months immediately preceding registration.
- A non-resident student classification is presumed to be correct as long as the residence in the state is primarily used for the purpose of attending school. To be reclassified as a resident (after one or more years of residency), the student must show proof of intent to establish Texas as his/her permanent legal residence.

*A non-resident who marries a Texas resident must establish his/her own residency.*

## Undocumented Students

Undocumented students who do not qualify for resident tuition under the Basic Residency Requirements are eligible for admission to HCC according to the following guidelines. All other undocumented students may be admitted but will be charged out-of-state tuition.

- Those who have resided within part of a taxing district (school district of Alief, Houston, North Forest or Stafford, and part of the city of Missouri City) for one year immediately preceding registration and who attended or graduated from an in-state middle school or high school qualify for in-district tuition and fees..
- Those who have resided within the state of Texas for one year immediately preceding registration and who attended or graduated from an in-state middle school or high school qualify for out-of-district tuition and fees.

*Documentation of residency and proof of school attendance must be submitted.*

## Change of Residency

Change from out-of-district residency to in-district residency must be made at the time of registration. Any address change which results in a change to in-district status must be accompanied by adequate documentation. Changes to in-district status made after registration will be effective the following semester.

A student who qualifies for a change from out-of-state to in-state residency status for tuition purposes may file a petition for change of residency. The petition must be filed by the Official Day of Record for the regular term in order to receive any refund of tuition paid for that term.

## Penalties

Any student who provides false information or withholds information for proper determination of residency is subject to any or all of the following penalties:

- Withdrawal from all classes with no refund.
- Dismissal from the institution.
- Payment of the difference in fees within 30 days.
- Loss of credit earned while under incorrect residency status.

# Admissions

## **Additional Requirements for Non U.S. Citizen Students**

A non U.S. citizen who is living in the U.S. under permanent resident status, an appropriate visa, or who has filed an I-485 application for permanent residency and has been issued a notice of action from USCIS showing the I-485 has been approved has the same privilege of qualifying for resident status, for tuition purposes, as a U.S. citizen. Anyone permitted by Congress to adopt the United States as their domicile while living in this country is afforded the same privilege as citizens and permanent residents to establish Texas residency for tuition purposes. A list of visas eligible for establishing domicile is available at each college center.

## **New Student Information**

### **New Student Orientation**

Every first-time college or transfer student with less than 15 semester hours who is enrolling in HCC credit courses should complete an orientation session at one of the HCC campuses. This will explain degree programs, how to enroll, apply for financial aid and other useful procedures. Students should contact the Student Success Center at any of the colleges to find dates and times.

### **Student Success Courses**

Through research and experience, Houston Community College has determined that many life and career management skills are necessary for students to make the most of their college investment. The Student Success courses are designed to prepare students for the demands of college and for success in the world of work.

The courses emphasize the theories and strategies for effective learning, including setting priorities, time management, listening, note-taking, concentration techniques and test taking skills. This course also incorporates modules that are designed to facilitate the use of library databases in conducting research, planning and setting educational objectives, lifelong career assessment, decision-making, financial aid, tutoring and student support services, enabling the student to maximize the use of college resources.

All first-time HCC students, who have achieved less than 12 college level hours, will be required to take a Student Success course their first term.

We have four career-focused Student Success courses. ENGR 1201, Introduction to Engineering is a Student Success course which focuses on careers in the engineering and the engineering technology fields. HPRS 1201, Introduction to Health Professions focuses on the health profession fields as well as student success. EDUC 1200, Careers in Education focuses on occupations in the public and private settings and LEAD 1200, Workforce Development with Critical Thinking is designed for Career and Technology students..

### **The Texas Success Initiative**

During the 2003 session, the Texas Legislature created the Texas Success Initiative (TSI). The TSI requires assessment of all new students, individualized success plans for those students whose skills are not at college level, and minimum state standards indicating students' college readiness for pursuit of certain certificate and all degree programs. Each college is required to report on the academic success of its students and the effectiveness of its developmental education programs.

A major emphasis of TSI is to ensure that all students be tested to determine if they are college ready in reading, writing, and mathematics. Testing is mandatory and must be completed prior to one's first enrollment at HCC (or no later than the end of the first semester for some workforce students) unless it is determined that the student has been waived or exempted from TSI requirements.

A student will be considered as college ready when all institutional and state requirements have been met. Students still need to meet any course prerequisites as determined by an institution. Students who are not considered to be college ready are encouraged to work closely with a counselor/ advisor. New students who are not college ready must meet with an HCC counselor or advisor prior to or during registration to initiate an individualized HCC Student Success Plan. The Plan will record student scores, educational objectives, and declaration of major, direct students to support services, provide benchmarks for tracking success, including the developmental education course sequence and retesting as necessary, and specify the requirements for achieving a degree or certificate. For a complete description of the HCC Texas Success Initiative plan, please refer to the HCC TSI Plan online.

# Admissions

## General TSI Information

- Official verification of TSI test scores, exempt or waived status, must be provided prior to enrollment.
- Students are responsible for payment of all test fees associated with assessment testing.
- Students waived from TSI requirements will be monitored to determine continued eligibility. (This includes all Workforce Level 1 certificate programs and non-degree-seeking students.)
- Students with disabilities may apply for special testing accommodations.

For a detailed explanation of policies governing TSI, see your counselor/advisor prior to enrollment. Note: All policies associated with the TSI are subject to change by the Texas Legislature.

## Placement Testing

A variety of assessment instruments are used to determine placement into programs and courses at HCC. Meeting minimum passing standards as required by TSI does not preclude HCC from using a local assessment to determine placement in programs or courses. In addition, diagnostic assessment may be administered within the classroom. Students with disabilities who need to request special testing accommodations should contact their college testing office prior to testing.

## Developmental Education

HCC offers courses in basic skills. Students who have deficiencies in reading, writing and mathematics are required to enroll in these designated courses. In addition, HCC offers courses designed to improve study habits and enhance the ability to succeed in college. Students should explore these opportunities with advisors and counselors during registration.

The Learning Assistance Center at each of the six colleges offers a variety of services during the regular semester, including courses in writing, reading, and math. Some courses are offered through flexible entry. Students should obtain specific information from counselors/advisors.

## Continuous Remediation

All HCC programs and courses have set pre-requisite levels for reading, math, and writing skills. Students not testing at pre-requisite levels will be required to enroll continuously and complete the sequence of developmental education courses providing them the required skills. The order of developmental education courses, as needed, will be Developmental Reading first, Developmental Math second, and Developmental English (writing) third

## Accelerate Ed

Accelerate Ed is a group of courses designed to improve students' college and career readiness proficiencies in Reading, Writing and Math. Students enrolled in Accelerate Ed courses may have already completed a high school diploma or be preparing for the GED tests. Accelerate Ed courses are not-for-credit and are offered through the HCC Adult Education Program.

Math Integrated Education and Training (MIET) and Reading Integrated Education and Training (RIET) are co-requisite courses and are contextualized to support students enrolled in associated career training courses. In some cases, students enrolled in MIET and RIET are eligible for reduced tuition and fees for their career courses.

Math College and Career Readiness (MCCR) and Reading College and Career Readiness (RCCR) and courses designed to improve college readiness proficiencies for students and are not contextualized to career training courses. Students enrolled in MIET and RIET do not receive reduced tuition.

## Directory Information

The following is considered directory information by HCC:

- Name
- Address
- Telephone
- Date of birth
- Degrees earned and dates
- Major field of study
- Dates of attendance
- Enrollment status
- Number of hours completed and in progress
- Student classification
- Name of most recent previous institution attended

HCC directory information is managed in compliance with the Texas Open Records Law. If you do not want this information released, you must complete a confidentiality request form at the college campus and submit to the Registrar's Office.

# Cost/Refund Information

## 2015-2016 Semester credit hour (SCH) tuition and fees

### In-District

Tuition	\$31 per hour (\$50 minimum)
General Fee	\$25.50 per hour
Technology Fee	\$10.00 per hour
Student Activity/Services Fee	\$1.00 per hour (\$12.00 maximum)
<b>Total</b>	<b>\$67.50 per hour</b>
Recreation Fee	\$6.00 per semester

### Out-of-District

Tuition	\$31 per hour (\$50 minimum)
Tuition Out-of-District	\$64 per hour
General Fee	\$25.50 per hour
General Fee Out Of District	\$8.00 per hour
Technology Fee	\$10.00 per hour
Student Activity/Services Fee	\$1.00 per hour (\$12.00 maximum)
<b>Total</b>	<b>\$139.50 per hour</b>
Recreation Fee	\$6.00 per semester

### Out-of-State

Tuition	\$31 per hour (\$50 minimum)
Tuition Out of State minimum)	\$64 per hour (\$190 minimum)
General Fee	\$25.50 per hour
General Fee Out of State	\$24.50 per hour
Technology Fee	\$10.00 per hour
Student Activity/Services Fee	\$1.00 per hour (\$12.00 maximum)
<b>Total</b>	<b>\$156.00 per hour</b>
Recreation Fee	\$6.00 per semester

General fees include all registration, student services matriculation, and other administrative fees to cover general classroom use, library and student services facilities, etc. The fee is charged to all students, on or off campus.

Laboratory fee and Distance Education fee are not included. Check course listing for additional fees in some cases.

HCC charges a higher tuition rate to students registering for the third or subsequent time for certain courses.

Students who enroll for most credit and CEU classes for a third or more time will be charged an additional \$50 per

semester credit hour and \$3.00 per contact hour, except for courses exempted by The Texas Higher Education Coordinating Board..

Parking Fees are not part of the published standard Tuition & Fee rates. Therefore, the Parking Fees will be billed separately from these established rates.

Tuition, fees, and the refund policy listed in this catalog are accurate at the time of printing. HCC reserves the right to change its tuition and fees and refund policy structure wholly or in part during the year covered by this catalog.

### Distance Education Course Fees

In addition to tuition, there is a \$32 fee for each distance education course.

### Dual Credit Course Tuition Waivers

HCC waives tuition on several academic and workforce dual credit courses in participating area high school districts. Students residing in the districts of Alief, Houston, North Forest, Stafford, and parts of Missouri City ISDs pay nothing. Students residing out-of-district, including those within the HCC service area of Fort Bend, Katy, and Spring Branch Independent School Districts, pay tuition out-of-district, general fee out-of-district and distance education fee. The dual credit courses count toward both a student's high school graduation requirements and a college-level certificate or degree.

### Flexible-Entry Course Fees

The cost of courses taken in the flex-entry term is the same as for regular semester-hour courses.

### Laboratory/Supply Fees

Laboratory supply fees, which help defray the cost of materials used in lab classes, vary. Certain programs have program-specific fees. Check course listings for additional fees in some classes.

### Continuing Education Unit Course Tuition and Fees

Continuing Education Unit (CEU) course tuition and fees are based on the expenses unique to each course. Therefore, each course is priced individually. For a schedule of classes and for more information on tuition and fees and refunds, contact the School of Continuing Education. For more information 713.718.5303.

# Cost/Refund Information

## **Adult and Community Service Programs Tuition and Fees**

### **Community Service (Non-State Funded)**

Community Service course fees are based on total hours of instruction and maximum class size. Courses which require limits to class size in order to provide additional individual attention have larger fees. Students are expected to furnish materials necessary for the course.

### **Adult Education**

Adult Education classes are granted supported through the Texas Workforce Commission. Adult Education courses are grant-supported and include GED preparation, basic skills improvement and English as-a-Second Language courses. In certain cases, a modest nonrefundable registration fee may apply.

### **Accelerate Ed**

Accelerate Ed are grant-supported courses that prepare students for college and career readiness in Reading, Writing and Math. These students may or may not have already completed a high school diploma or GED. A modest non-refundable registration fee may apply.

### **Adult High School**

A non-refundable tuition is charged for each half-credit course. Go to [hccs.edu/ahs](http://hccs.edu/ahs) for tuition and fee information. Forms of payment are check, money order or credit card.

### **Senior Citizen Waiver**

HCC waives \$10 per semester hour or \$10 per CEU course for adults 55 years and older.

## **Tuition Rebate Program**

Students who graduate with a baccalaureate degree from a Texas public university may qualify to receive \$1,000 from the baccalaureate-granting institution if they meet the following criteria:

- Must have enrolled in a Texas public institution of higher education in fall 1997 or thereafter;
- Must have been a resident of Texas and entitled to pay in-state tuition at all times while pursuing the degree;
- Must have received a baccalaureate degree from a Texas public university;
- Must have attempted no more than three hours in excess of the minimum number of semester hours required to complete the degree in the catalog under which one graduated. Hours attempted include transfer credits, course credits earned exclusively by examination, courses that are dropped after the official census date. Hours attempted shall not include: Course credit that is earned to satisfy requirements for a ROTC program but that is not required to complete the degree program; course credit, other than course credit earned exclusively by examination, that is earned before graduating from high school; and courses dropped for reasons that are determined by the institution to be totally beyond the control of the student.

Students are encouraged to consult advisors to plan their course of study at the community college to maximize their chances of qualifying for this rebate when they transfer and graduate from a university with a baccalaureate degree.

# Cost/Refund Information

## Tuition and Fees Payment

All HCC students are expected to pay or make payment arrangements at the time of registration. To avoid losing your place in class, be sure to pay based on the time lines allowed under the registration procedures either at a designated registration site or online.

Students who fail to make payments according to the registration process guidelines may be dropped from some or all classes and will be required to register again. Section availability cannot be guaranteed.

It is the student's responsibility to pay all charges arising from registration/enrollment including those arising from reduction of financial aid award(s) due to change in enrollment and/or eligibility status.

Students with delinquent accounts at the end of the term will be referred to a collection agency and will be responsible in paying collection fees which maybe based on a percentage at a maximum of 24% of the debt, and all costs and expenses, including reasonable attorney's fees, incur in such collection efforts.

### Pay Online

HCC uses Secure Sockets Layer (SSL) encryption to protect your personal information when using the Internet.

### Have ready

- Your Web User ID and Password or your Social Security number and birth date to obtain your Web User ID and Password.
- Master Card, Visa, Discover, American Express number, expiration date and cardholder's billing address or Checking account and routing numbers.
- Student e-mail address.

### Go to: [hccs.edu](http://hccs.edu)

- On the home page, go to "Student System Sign In".
- Enter your Web User ID and Password or follow the instructions to obtain your Web User ID and Password.
- When you sign on, verify your address and phone data. If no changes are necessary, click on "continue".
- On the Student's Center, click "Make a Payment or Set up a Payment Plan".
- Select "Click here to make a payment" or "Enroll in Payment Plan". Complete the payment plan enrollment as directed.

- Enter credit card/checking account information. Enter student e-mail address.
- Review information.
- Submit payment.
- Receive confirmation that payment has been accepted.

If credit card/check payment is declined, you may repeat the process using a different credit card or checking account or pay in person on campus.

### Pay in Person

Pay in person when you register by check, cash, or money order. Students who are receiving tuition waivers or students whose tuition is billed to a company or agency must pay in person. The remaining balance should be paid in full or a Payment Plan must be set up.

### Installment Payment Plan

Tuition installment payment plans are available for all terms. Details, including due dates and percentage of required payments, are available online. Students must accept Terms & Conditions online when setting up a payment plan.

## Tuition and Fee Payment Dates

### Tuition Bills are Not Mailed

All HCC students are expected to make arrangements to initiate payment at the time of registration. This includes all classes: 16-Week, Second Start, Mini Term and Flex Entry classes. To avoid losing your place in class, be sure to make a payment either at a designated registration site or online of the day you register.

Students not paying according to above guidelines will be dropped and be required to register again.

Section availability cannot be guaranteed.

Students who are dropped from a course for nonpayment and request reinstatement after the official day of record for that class will be charged an additional \$75.00 per course reinstatement fee.

# Cost/Refund Information

## Refunds and Credit Balance

### Refund of Financial Aid Residual

The Financial Aid Office determines the schedule of refunds in accordance with the requirements of the Department of Education.

### HCC Eagle Card

Houston Community College partners with Higher One Inc. to issue an HCC Eagle Card to all credit hour students.

Students are issued HCC Eagle Card free of charge initially. Any replacement due to failure of delivery because of wrong or incomplete address shall be the responsibility of the student. Card replacement fee is \$10.00.

Through HCC Eagle Card, students may choose their refund method preferences through One Account tied in with the card or through ACH to a bank account with another bank (Direct Deposit).

### Credit Balances & Refunds

Credits generated as a result of withdrawal shall be refunded after the official date of record or earlier upon student request. Credits resulting from credit card payments shall be refunded to the same credit card used for initial payment as the first option. However, if it is not practicable, HCC may refund it through HCC Eagle Card.

Amount of refunds for withdrawals are determined in accordance with the Drop and Withdrawal Refund Schedule based on total semester fees. If the student has established a payment plan, any remaining installment payments due are deducted from the refund amount. Any reduction in the balance due to a withdrawal will be adjusted on the remaining installments.

Course withdrawal does not release the student from the obligation to pay any balance owed to the College. One hundred percent (100%) refund before class begins of ALL tuition and fees will be made ONLY when a class does not make or a college error is involved.

### Delinquent Student Account Balances

Students are responsible for payment of all outstanding account balances including those arising from reduction or adjustments of financial aid awards due to change in enrollment and/or eligibility status. Holds will be placed on the student record preventing registration, grades, transcripts

and other college services as the account balance becomes delinquent. Balances not settled may be forwarded to a collection agency. It is the students responsibility to pay collection fees, which may be based on a percentage at a maximum of 24% of the debt, and all costs and expenses, including reasonable attorney's fees, incur in such collection efforts.

Notification of the outstanding student account balance is delivered by email to the student's college email address and/or by mail to the current mailing address on record. Students can always view the balance and details online. It is the responsibility of the students to update their email and mailing addresses each time there is a change. Notifications sent by the college thru any of these addresses are considered delivered.

There may be other costs incurred by students with delinquent balances as defined in their payment plans or indicated in services used.

# Cost/Refund Information

## Schedule for Drop and Withdrawal Refunds Schedule:

100% Refund Dates on Drops/Withdrawals are listed on the schedule.\*

Class Length	Last Day for 70% Refund *	Last Day for 25% Refund*
2 or less wks.	2nd day	n/a
3 wks.	3rd day	4th day
4 wks.	4th day	5th day
5 wks.	5th day	6th day
6 wks.	5th day	7th day
7 wks.	7th day	9th day
8 wks.	8th day	10th day
9 wks.	9th day	11th day
10 wks.	9th day	12th day
11 wks.	10th day	14th day
12 wks.	12th day	15th day
13 wks.	13th day	16th day
14 wks.	13th day	17th day
15 wks.	14th day	19th day
16 wks. or more	15th day	20th day

\*A \$15.00 Change of Schedule Fee is deducted after computing the percentage refund. All non-refundable fees (see catalog) will be deducted before the percentage for refund is applied.

### Returned Checks

Returned check payments shall be immediately recorded in the student account. A \$25 returned check fee shall be assessed.

## Non-Refundable Fees

NOTE: HCC will not refund the following fees for any reason other than that the class fails to make.

Drop/Add Fee .....	\$15
Returned Check Fee .....	\$25
Stop Payment Fee .....	\$25
Payment Plan Enrollment Fee.....	\$30
Payment Plan Late Fee.....	\$10
International Application Fee.....	\$75
International Orientation Fee.....	\$50
Deferment/Reproduction Fee.....	\$50
(one-time charge for F, M, or J Visas only)	

### Graduation Fees:

Diploma or Certificate.....	\$10
Back-Dated Diploma.....	\$15
Transcript Fee .....	\$5*
Transcript Fee for Overnight Express or Fax .....	\$15
Fee for Advanced Standing Examination for College Credit (per course).....	\$25
Fee for Advanced Standing Credit (per evaluation) .....	\$25

A student is not registered for any course until the full amount is paid or an installment contract is executed. For students enrolling in a Health Sciences program, see the Health Sciences section.

\*An additional service provider fee is required if transcript is requested by phone or Web.

## Change of Schedule: Drop/Add/Swap

After classes begin, students can make a class change online through the drop/add/swap period listed in the academic calendar (see page 2). Approval of requests for changes will be based on the availability of space in the class to which you wish to transfer. A fee of \$15.00 per transaction will be assessed for each request for change.

Deadline for changing schedule or adding courses is as follows:

- Fall and Spring regular term - first two days of class
- 5 and 6-week summer terms - first day of class.
- 10 and 12-week summer terms - first two days of class.

Any fee amounts quoted above are subject to change.

# Cost/Refund Information

## Adding/Swapping Courses

Students may add classes but only through the drop/add/swap period. Payment of course fees must be made at the time of the change. If a class is full, consider taking the course at a different time, location, via Distance Education, or in the second start session.

## Dropping Courses

Students should make sure they are aware of penalties regarding financial aid, additional tuition costs, etc. before withdrawing from course.

It is the responsibility of the student to officially drop or withdraw from a course. Failure to officially withdraw may result in the student receiving a grade of "F" in the course. A student may officially withdraw in any of the following ways:

- Drop online.
- Send a letter requesting withdrawal to:

**Registrar**  
**Houston Community College**  
**P. O. Box 667517**  
**Houston, TX 77266-7517**

The withdrawal will be effective the date of postmark.

- Fax a letter of withdrawal to 713.718.2111.

A student who officially withdraws from a course before the Official Date of Record will not receive a grade and the course will not appear on the student's permanent record. A student withdrawing from a course after this period and prior to the deadline designated in the HCC calendar will receive a grade of "W."

## Limitation/Costs of Course Withdrawals

Under Section 51.907 of the Texas Education Code "an institution of higher education may not permit a student to drop more than six courses, including any course a transfer student has dropped at another institution of higher education." This statute was enacted by the State of Texas in the Spring 2007 and applies to students who enroll in a public institution of higher education as a first - time freshman in fall 2007 or later. Any course that a student drops is counted toward the six - course limit if "(1) the student was able to drop the course without receiving a grade or incurring an academic penalty; (2) the student's transcript indicates or will indicate that the student was enrolled in the course; and (3) the student is not dropping the course in order to withdraw from the institution." High school students enrolled in HCC Dual Credit and Early

College are waived from this requirement until they graduate from high school. All college-level courses dropped after the official day of record are included in the six-course limit unless the student demonstrates to an appropriate college official that one of the following events occurred to the student during the semester or summer session:

- A severe illness or other debilitating condition that affects the student's ability to satisfactorily complete the course.
- The student's responsibility for the care of a sick, injured, or needy person if the provision of that care affects the student's ability to satisfactorily complete the course.
- The death of a person who is considered to be a member of the student's family or who is otherwise considered to have a sufficiently close relationship to the student that the person's death is considered to be a showing of good cause.
- The active duty service as a member of the Texas National Guard or the armed forces of the United States of either the student or a person who is considered to be a member of the student's family and such active duty interferes with the student's ability to satisfactorily complete the course.
- The change of the student's work schedule that is beyond the control of the student and that affects the student's ability to satisfactorily complete the course.
- Other personal or family reason that is considered catastrophic or beyond the control of the student and interferes with the student's ability to satisfactorily complete the course (as determined by the college official).
- Total withdrawal of all courses for the whole semester (i.e. fall, spring, summer). HCC students affected by this statute that have attended or plan to attend another institution of higher education should become familiar with that institution's policies on dropping courses.

# Financial Aid

## Types of Financial Aid

Houston Community College provides a comprehensive student financial aid program to eligible students seeking financial assistance to enroll in college. Financial aid is a secondary source of funding when family resources are insufficient to meet educational costs. Most of these programs are available to anyone who demonstrates financial need and qualifies academically.

### Grants

Grants are gift aid, which do not need to be repaid, from the federal and state government. They are awarded to students on the basis of need. The Federal PELL Grant is the primary grant program. For additional information on the state aid available at HCC, please view the College for Texans web site at: [www.collegefortexans.com](http://www.collegefortexans.com).

### Loans

Loans must be repaid. Repayment begins after you complete your educational program or once you are no longer enrolled at least half-time, whichever occurs first. The Federal Stafford Loans (Subsidized and Un-subsidized) are two of the major loan programs at HCC.

### Emergency Loans

A limited amount of money is available as Emergency Loans to those who need help to pay for tuition, mandatory fees, and textbooks. These loans are available on a first-come, first-served basis and must be repaid within 30 days. You must show financial need to receive an Emergency Loan and provide proof of your ability to repay the loan.

### College Work/Study Programs

The College Work-Study Programs (CWS) provide jobs for undergraduate and graduate students with financial need, allowing them to earn money to help pay education expenses. The program encourages community service work and work related to the course of study. The College offers the Federal College Work-Study (FCWS) and Texas Work-Study (TXCWS) Programs.

## Eligibility and Application Information

### Am I Eligible?

Generally, to be eligible you must:

- Have a financial need, except for some loan programs.
- Have a high school diploma or a General Education Development (GED) Certificate, or meet other standards the state establishes that are approved by the U.S. Department of Education, or complete a high school education in a home school setting approved under state law. Be enrolled or accepted for enrollment as a regular student working toward a degree or certificate in an eligible program.
- Be a U.S. citizen or eligible non-citizen.
- Have a valid Social Security Number.
- Meet satisfactory academic progress standards set by the postsecondary school you are or will be attending.
- Sign a statement on the Free Application for Federal Student Aid (FAFSA) certifying that you will use federal student aid for educational purposes
- Sign a statement on the FAFSA certifying that you are not in default on a federal student loan and that you do not owe money back on a federal student grant.
- You must comply with Selective Service registration, if required.
- Not have eligibility suspended or terminated due to a drug-related conviction.

### How Do I Apply?

- First, obtain your Personal Identification Number (PIN) to sign your Free Application for Federal Student Aid (FAFSA) and to make corrections to your Student Aid Report (SAR). You can apply for a PIN at [www.pin.ed.gov](http://www.pin.ed.gov).
- Submit the Free Application for Federal Student Aid (FAFSA) – either through the Internet (using FAFSA on the Web at [www.fafsa.ed.gov](http://www.fafsa.ed.gov)) or by completing a paper FAFSA or Renewal FAFSA. There are advantages to using FAFSA on the Web: (1) it identifies potential errors right away and prompts you to make on-the-spot corrections, (2) you get online instructions for each question, and you can “chat” live online with a customer service representative if you have further questions (There’s no charge for this help.), (3) the Department’s Central Processing System will process your application quickly, in three to five days, provided

# Financial Aid

you (and your parents, if applicable) have provided electronic signatures.

- When you receive your Student Aid Report (SAR), review the information to make certain it is correct. Use your PIN to make corrections to your SAR (using FAFSA on the Web at [www.fafsa.ed.gov](http://www.fafsa.ed.gov)).
- Submit any required documents to the financial aid office.
- Check your Student Self-Service account on the HCC web site for the status of your financial aid.
- When you receive the Electronic Financial Aid Notification (EFAN), log on to your Student Self-Service account to “Accept” or “Decline” your financial aid offer(s).

## When Should I Apply?

Students should apply for financial aid each year on or after January 1. At HCC, April 15th is the Priority Deadline date for student aid applications. Students, who meet the deadline date and qualify, may be awarded aid in time to register and purchase books. Any balance remaining from the student's award will be disbursed after the official date of record for the last session in which a student is enrolled to the student's Higher One Eagle Card or to the student's bank account via direct deposit. The deadline for submitting an application for a federal student loan for the fall only semester is November 15th. The deadline for submitting an application for a federal student loan for the fall and spring semesters and the spring only semester is March 4th. Financial aid applications are accepted after the Priority

Deadline, however, financial aid awards may not be available to pay for tuition, fees and books at the time of registration. Students who submit a financial aid application after the Priority Deadline must be prepared to make other arrangements to pay for books, tuition and fees. The Installment Payment Plan is available through the college cashier's office.

## Return of Title IV Funds

The Financial Aid Office is required by federal statute to recalculate federal financial aid eligibility for students who withdraw, drop out, are dismissed, or take a leave of absence prior to completing 60% of a payment period or term. The Federal Title IV financial aid programs must be recalculated in these situations. Refunds are allocated in the following order: Direct Un-Subsidized Stafford Loans, Direct Subsidized Stafford Loans, and Direct PLUS Loans, Federal Pell Grants, Federal Supplemental Educational Opportunity Grant, and other aid.

All financial aid recipients who withdraw after the 60% point in their enrollment period must have their financial aid award reviewed and revised, if necessary, according to HCC or the Federal Return of Title IV Funds Calculation. All financial aid recipients should contact their College Financial Aid Office prior to withdrawing from any or all courses. This notification is mandatory because all financial aid awards have certain enrollment requirements that must be met to maintain eligibility for these funds. For additional information on the financial aid program, visit your College Financial Aid Office or the HCC Financial Aid web site at [www.hccs.edu/financialaid](http://www.hccs.edu/financialaid).

## Financial Aid Calendar

The staff of the Financial Aid Office is pleased to provide this calendar to assist you with the financial aid process. The calendar has been designed to help you keep track of your progress as you go through the application process, so please feel free to print it for future reference.

## Financial Aid Priority Deadline for HCC is April 15th for all students.

If you submit your FAFSA after the priority deadlines, your financial aid funds may not be available to pay for the classes at the time of registration. You will be required to make other arrangements to pay for your classes.

### Application/Process

Free Application for Federal Students Aid (FAFSA) - **June 30**

Federal Stafford Loan Fall Semester - **Nov. 15**

Federal Stafford Loan Spring Semester - **April 15**

Federal Stafford Loan Fall and Spring Semester **April 15**

**Student Aid Report (SAR)** - *Aug. 15 or the last date of student's enrollment period.*

**Accept Financial Aid Offer** - *Within 30 days of receiving the Financial Aid Notification.*

**Verification** - *Within 30 days of being notified your SAR was selected for verification.*

# Financial Aid

## Scholarship Information

### Scholarships

Scholarships are gift funds, based on high academic achievement or special talents that do not have to be repaid. HCC coordinates a variety of institutional, foundation, and private scholarships. You should apply as early as possible, since awarding scholarships involves deadlines.

### HOPE Scholarship

The passage of the Taxpayer Relief Act of 1997 provides HOPE Scholarship tax credit for certain eligible students. Students with little income or tax liability may benefit more from increases in Pell Grant awards than from HOPE Scholarship tax credits. Please consult your tax advisor to determine how the HOPE Scholarship tax credit may benefit you.

### About the HCC Foundation

The Houston Community College System Foundation supports Houston Community College in its efforts to attract and educate Houston-area students with the desire and the dedication to learn—including many non-traditional students and those facing barriers to higher education. The Foundation's mission is to enhance the quality of life of our community and of our fellow citizens through fundraising efforts that improve access to higher education, support workforce training, and advance student learning at Houston Community College. In addition to raising money for scholarships, the HCCS Foundation provides financial assistance to selected Houston Community College capital projects and provides grants to faculty projects that have the potential to advance student learning at Houston Community College. For information about donating to the HCCS Foundation, please visit our Web site at [www.hccsfoundation.org](http://www.hccsfoundation.org)

### HCC Foundation Scholarships

Some people think that only students with perfect academic success can receive a scholarship. In fact, HCC offers hundreds of scholarships for students from all kinds of academic and personal backgrounds pursuing a variety of career goals; many of these scholarships require enrollment in HCC and a minimum 2.0 GPA. Below are just a few examples of the scholarships available to HCC students:

- Scholarships for students of Hispanic, African-American, and Asian heritage
- Scholarships for those pursuing degrees or certification in specific fields, such as the fine arts, nursing, technology, or photography

- Scholarships for students attending a specific HCC college or who live in a designated community
- Scholarships for students who have overcome adversity or who can show economic hardship. These scholarships have been established by generous donors who support Houston Community College and its students. For a full list of scholarships available to HCC students, please visit [www.hccsfoundation.org](http://www.hccsfoundation.org).

### Applying for a Scholarship is Easy

HCC students can apply for all available HCC scholarships through ONE online application at [www.hccsfoundation.org](http://www.hccsfoundation.org). Applicants will be considered for every scholarship for which they appear eligible. To complete the application, you will need to provide information in the following areas:

- Personal information (name, social security number, citizenship, etc.)
- Financial aid (Pell grants, other information)
- Personal references
- Job experience
- High school or college grade point average
- Awards and honors

You will also be asked to share your academic and career goals and discuss any financial needs you may have. Scholarships are awarded once a year in the spring for the following fall and spring semesters.

*For more information about HCC scholarships, please visit [www.hccsfoundation.org](http://www.hccsfoundation.org) or call the HCCS Foundation scholarship specialist at 713.718.8595*

# Financial Aid

## Opportunity 14

Opportunity 14 is a bold program that will change our community's expectations about higher education and remove the financial barriers that prevent so many of Houston's children from going to college. Kindergarten through 12th grade—plus a minimum two years of college: This is the Opportunity 14 expectation. The Opportunity 14 Scholarship also makes a promise to Houston's high school seniors. If you can't pay for your tuition, your community will help you attend a college founded to meet your needs: Houston Community College.

## More Information

For additional information on HCC loans, grants and scholarships, see a financial aid associate at any HCC campus or visit our Web site, [www.hccs.edu/financialaid](http://www.hccs.edu/financialaid)

Financial Aid-System .....	713.718.8490
Financial Aid-Central Campus .....	713.718.6100
Financial Aid-South Campus .....	713.718.6699
Financial Aid-Coleman .....	713.718.7400
Financial Aid-Northeast Campus .....	713.718.8304
Financial Aid-Northline Campus .....	713.718.8080
Financial Aid-Spring Branch Campus .....	713.718.5713
Financial Aid-Katy Campus .....	713.718.5901
Financial Aid-Eastside Campus .....	713.718.7011/7030
Financial Aid-Stafford Campus .....	713.718.7785
Financial Aid-West Loop Center .....	713.718.7722

## Tax Credit Information

### Tuition Tax Credits

Through the Taxpayer Relief Act of 1997, HCC students may claim tax credits to help them pay for tuition and fees. Under the Hope Scholarship tax credit, students may claim credit for 100 percent of the first \$1,000 in tuition and fees and 50 percent of the second \$1,000 (or \$1,500) for enrollment during the first two years of college.

Students must be enrolled for at least half-time in a degree or certificate program and have no felony convictions that are drug related. The Taxpayer Relief Act also establishes a Lifetime Learning Tax Credit equal to 20 percent of the first \$5,000 (increasing to \$10,000 in 2003) for tuition and related expenses. The credit can be used for undergraduate and graduate education as well as education to acquire or improve job skills. Students should consult with a qualified professional for detailed information concerning the Tax Relief Act of 1997.

*For further information, consult the Hope Scholarship website. [www.ed.gov/offices/OPE/PPI/HOPE/](http://www.ed.gov/offices/OPE/PPI/HOPE/)*

*NOTE: Students with little income or tax liability may benefit more from Pell Grant awards than from the Hope Scholarship tax credits.*

# Transfer Information and Credit

## HCC Policy on Transfer

Transfer of academic credit is a public policy issue for several reasons:

- an increase in student mobility,
- the proliferation of distance learning programs and common acceptance of their legitimacy,
- the economics of expending public money twice for the same course, and
- consumer protection from expending private money twice for the same course

HCC analyzes credit accepted for transfer in terms of level, content, quality, comparability, and degree program relevance. Transfer of credit from one institution to another involves at least three considerations:

- the educational quality of the learning experience which the student transfers;
- the comparability of the nature, content, and level of the learning experience to that offered by the receiving institution; and
- the appropriateness and applicability of the learning experience to the programs offered by the receiving institution, in light of the student's educational goals.

### Accreditations Accepted in Transfer

HCC accepts college level credit in transfer from colleges and universities accredited by any of the six regional accreditation bodies: Middle States Association of Colleges and Schools, New England Association of Colleges and Schools, North Central Association of Colleges and Schools, Northwest Commission on Colleges and Universities, Southern Association of Colleges and Schools, and the Western Association of Colleges and Schools.

In addition, HCC accepts college level credit in transfer from colleges and universities by any of the following national accreditation bodies: Association of Biblical Higher Education, Association of Theological Schools in the US and Canada, Accrediting Bureau of Health Education Schools, Accrediting Commission of Career Schools and Colleges of Technology, Accrediting Council for Independent Colleges and Schools, Council on Occupational Education, and Distance Education and Training Council.

## Students Transferring to HCC from other colleges/universities

Transfer students are students who have previous college work and plan to pursue a certificate or degree at HCC. HCC evaluates, accepts, and awards credit for transfer course work, experiential learning, advanced placement, and professional certificates that is consistent with the HCC mission and for which we can ensure that the course work and learning outcomes are at the collegiate level and comparable to HCC certificate and degree programs. Transfer students are required to send official transcripts from each previously attended college or university. Transfer work is evaluated within the first semester of attendance.

### Advanced Standing/Placement Credit

Instructional programs may award credit for specialized educational training or experience. Each program will supply information on the types of supporting documents required to demonstrate how the training and experience meets the program learning outcomes. The appropriate department will evaluate the training or experience. The dean may approve a maximum of 21 semester hours in specific courses related to the training or experience. The student must complete at least 12 semester hours at HCC and must be currently enrolled in the technical program for which the courses are applicable. Advanced-standing credit will become an official part of the student's permanent record once the student has completed HCC coursework. The fee per evaluation is \$25.

### Credit for Military Course Work/Training

Advanced standing credit is awarded for military course work equivalent to courses at HCC. Official military transcripts with ACE evaluations (i.e., AARTS or SMART transcript) should be submitted to the Registrar. These will be forwarded to the appropriate instructional department for final evaluation and recommendations. The fee per evaluation is \$25.

# Transfer Information and Credit

## Credit by Examination

HCC awards credit for qualified scores on nationally standardized examinations for the following instruments:

College Board Advanced Placement (AP) Examinations, the College Level Examination Program (CLEP), International Baccalaureate (IB) higher level exams, and the Defense Activity for Non-Traditional Education Support (DANTES) subject exams. A maximum of 24 semester hours credit may be earned through Credit by Exam. Credit earned through these examinations will be recorded by the Registrar only after the student has completed six semester hours at HCC. Official test scores must be sent from the testing agency to the HCC Office of Admissions and Records. Contact the Testing Office for examination schedules and availability of the CLEP. Questions regarding credit received for the above national exams should be directed to the Transfer Office website (<http://sites.hccs.edu/transfers>).

## Credit by Departmental Examination

Credit by departmental examination may be allowed in career and technology courses for which examinations have been developed and approved by the appropriate career and technology dean. The examinee must have completed six semester hours at HCC and must be currently enrolled in the career and technology program for which the courses are applicable. Students desiring to take examinations for credit should speak to the program chair or the Career and Technology Dean for information, schedules, and arrangements. The fee per examination is \$25.

## Students Transferring from HCC to other colleges/universities

- Meet with a counselor/advisor at your community college campus to discuss your academic goals, plans, and questions. Consider completing an associate degree before transferring. Some universities give preferential treatment in admission decisions, if a student transfers after completing his/her associates degree. Research indicates that students who have completed the associate degree perform better after transfer than those who did not complete the associate degree.
- If you need to transfer to another institution before the completion of your HCC associate degree, you may be able to “transfer back” to HCC your college credits from another institution in order to fulfill your associate degree requirements. In most cases, a student can “transfer back” up to 42 college-level semester hours of credit within three years of leaving HCC to complete

his/her associate degree requirements. (Note: all graduation requirements must be fulfilled. See HCC catalog for more information.)

- Obtain a transfer plan from your HCC counselor/advisor. A transfer plan lists the university-required courses which can be taken at HCC toward your university bachelor degree major. If you are undecided about your choice of university or your choice of major, see a HCC career counselor for more help.
- Apply for university admission and financial aid early before the university's deadlines. Most universities have application fees. An admission application is not considered complete until all official documents are in and all fees are paid. (Note: applying early for financial aid can have a big impact on the aid you receive.) If housing is needed, application must also be made to the university's Housing Office.
- All academic transcripts and TSI scores/status must be sent to your university of choice by the university's admission deadline. To have your HCC transcript sent to your university, see the HCC Office of Student Records web page on ordering information. Transcripts can be sent electronically or by mail. It is highly recommended that transcripts be sent electronically to expedite processing. (Note: Universities require an academic transcript from every institution attended. HCC cannot send copies of transcripts from other schools. We can only send an academic transcript of HCC course work.)
- Financial Aid transcripts are also required to be sent to your university of choice. Stop by your HCC Financial Aid office to fill out a Financial Aid Transcript Request Form.

# Transfer Information and Credit

## Transfer Dispute Resolution

If a student is informed by a Texas public college or university that it will not accept the transfer of any HCC academic course credit, the student may have a case for a transfer dispute which will ultimately be resolved by the Texas Higher Education Coordinating Board (THECB). Students should be cautioned that workforce course credits may or may not be transferable, depending upon the program and articulation agreements between HCC and the college or university involved. In addition, no institution of higher education shall be required to accept in transfer, or apply toward a degree program, more than sixty-six (66) semester credit hours of lower-division academic credit. Institutions of higher education, however, may choose to accept additional credit hours by agreement. If the student wishes to transfer credit later to work on a bachelor's degree, the student should consult with an HCC program advisor or counselor. Rules and procedures for the resolution of transfer disputes regarding lower-division courses have been formulated by the THECB as follows:

- If an institution of higher education refuses to accept course credit earned by a student at another institution of higher education, the receiving institution shall provide written notice to the student and to the sending institution that transfer of course credit has been denied, along with the reasons for denial. Students may dispute the denial of transfer credit by contacting a designated official at either the sending or receiving institution.
- The two institutions and the student shall attempt to resolve the dispute in accordance with THECB rules and guidelines.
- If the transfer dispute is not resolved to the satisfaction of the student or the sending institution within 45 days of the date the student received written notice of denial, the institution denying the course credit transfer shall notify the Commissioner of Higher Education of the unresolved dispute and the reasons for the continued denial of course credit transfer.
- The Commissioner or a designee shall make the final determination in an unresolved dispute concerning the transfer of course credit and provide written notice of the determination to the involved student and institutions.

## Transfer Limitation

Students who intend to transfer to baccalaureate degree programs should be aware of possible limitations on lower division course work. Universities will generally not accept in transfer more than 66 semester credit hours of lower division academic credit.

# General Academic Information

## Numbering of Courses

A course number has four digits. The first digit identifies the level of the course: “0” indicates a developmental level, “1” indicates freshman level, and “2” indicates sophomore level. The second digit indicates the semester credit hour (SCH) value of the course. The third and fourth digits distinguish the courses within a program area. For example: English 1301 is a freshman level (01), three semester-hour course (3), part one (1). HCC numbering course coincides, with the Texas Common Course Numbering System (TCCNS) for academic transfer courses. All public colleges and universities in Texas either use the TCCNS or crosswalk courses to the TCCNS. For workforce education courses, higher education institutions in Texas utilize the Workforce Education Course Manual (WECM). These common numbering systems help colleges articulate courses and provide students with greater ease of course credit transfer.

## Course Load

A semester credit hour (SCH) student is full-time if the student is enrolled in 12 or more semester hours and part time if enrolled in fewer than 12 hours. Half-time is six hours. To be considered full-time during the summer, a student must enroll in both summer terms or the ten-week session for a total of nine or more semester hours. A student is considered part-time if enrolled in only one summer session or for less than nine hours. During the fall and spring terms, students wishing to enroll in more than 18 credit hours must have special approval by a counselor. During each short summer session, students may schedule a maximum of seven semester hours or two academic courses. Students taking a long summer session only (10 or 11 weeks) or a combined long session and a six- or five-week session may schedule no more than 13 semester hours or four academic courses for the summer. During mini sessions, students are limited to one course. The Physical Education (PHED) Department limits enrollment in the number of physical activity classes per semester to two classes. Generally, a student in academic courses needs two hours of preparation outside of class for each hour of classroom instruction. Consequently, a student who is employed while attending college should consider the total demands on time from work, classes, and activities when deciding on a course load. Students who overload themselves may have scholastic difficulties.

## Instructional Formats at HCC

### Traditional

All instruction is carried out in the classroom or lab as appropriate, via face-to-face instruction.

### Learning Communities

Research has demonstrated that students learn more and persist at greater rates when they participate in Learning Communities. A Learning Community is one in which two or more classes are offered in combination, with the same students enrolling in the same courses and the faculty working together to align learning outcomes and activities. For a current list of Learning Communities at your campus, please ask at the Counseling/Advising Office or consult the HCC Class Schedule.

### Service Learning

Service learning combines community service with academic instruction to provide students an opportunity to apply what they have learned while positively impacting the community. Students participate in a service learning experience within a participating community agency. Following completion of the service learning component of the course, students reflect upon their experience. There will be a service learning notation on the transcript for the course in which a student has completed a minimum of fifteen (15) hours of service.

### Hybrid

Hybrid courses meet half the time in a traditional face-to-face classroom environment and deliver the remainder of the course presentation, interaction, activities, and exercises through various electronic means (online, Eagle Online, podcasts, online video and audio formats, and new technologies as they become available). Instructors and students should be prepared to spend as much time engaged in course activities as in a traditional class, even though they will not be physically present in the classroom for all of it. In addition, the electronic and face-to-face portions of hybrid classes will be apportioned weekly so that every week during the semester the students will have 50% face-to-face instruction and 50% electronic instruction.

# General Academic Information

## Distance Education

### HCC Distance Education Department

Houston Community College offers a variety of degrees and certificates via distance education as well as individual online courses. HCC Distance Education (DE) has removed the barriers of location and time, making a college education accessible and affordable for every student at any age.

### What is Distance Education (DE)?

Distance Education courses offer one to four semester hours of credit and are equivalent to on-campus courses in terms of transferability (no distinction is made on college transcripts). Courses take place via the Internet, through a learning management system called Eagle Online. Although there are no special requirements for these courses, an extra amount of motivation, self-discipline, and computer access and proficiency are required. For more information about DE offerings and services, visit [de.hccs.edu](http://de.hccs.edu).

### Who are the DE Instructors?

HCC faculty develop and teach each course. They communicate on a regular basis with students online, providing personalized attention.

### How is Testing Managed?

Testing is conducted either online or on campus, depending on the course. Convenient times and locations are provided. Testing services are also provided for students out of the HCC service area.

### What Degrees are Available Through HCC Distance Education?

- Associate in Arts (AA) Degree
- Associate in Science (AS) Degree
- Core Curriculum Certificate
- Associate in Applied Science (AAS) Degree and Certificates with specializations in:
  - Real Estate
  - Accounting

New DE courses are continually being developed. Cooperative education courses contain special requirements. Contact the Distance Education counselors/advisors for information regarding specific program availability and degree planning.

## Class Meetings and Attendance

Prior to class beginning, all DE students are required to complete an orientation session, nearly all which are online. In the orientation, you'll receive a course syllabus with information on textbooks and other important course information. Exam reviews are also held by many DE faculty. Students are expected to log in to DE course(s) and participate on a frequent and continual basis.

### How Much Do Distance Education Courses Cost?

They cost the same as on-campus courses, with the addition of a \$32 fee.

### How Do I Get Started?

DE counselors/advisors are on staff to assist students. Fill out the AskDECounseling Online Help Form for assistance with any DE advisement and counseling related questions or concerns.

**Important note:** Due to authorization requirements, HCC is not able to accept Distance Education (fully online courses) students who live in the following states: Arkansas, District of Columbia, Indiana, Iowa, Kansas, Kentucky, Maryland, Minnesota, Missouri, Montana, Oregon, Utah, Wisconsin, and Wyoming

### Departments currently providing Distance Education Courses include:

Accounting	History
Anthropology	Human Services
Art	Humanities
Biology	Interior Design
Biotechnology	Marketing
Business Administration	Mathematics
Business Technology	Mathematics, Developmental
Chemical Laboratory Tech.	Music
Chemistry	Philosophy
Child Development	Physical Ed. and Health
Computer Science Tech.	Physics
Criminal Justice	Process Technology
Dance	Psychology
Digital Communication	Real Estate
Economics	Safety and Environmental
English	Technology
English, Developmental	Sociology
Environmental Pollution	Spanish
Fashion Design	Teacher Education
Fashion Merchandising	
Fire Protection Technology	
French	
Geography	
Geology	
Government	
Guided Studies	

# General Academic Information

## Flex - Entry Courses

Flex-entry courses are semester hour courses offered at dates other than the regular term. They begin after the Official Date of Record for the term and may be held for varying numbers of weeks, but total instructional hours are the same as those in regular terms. Grades earned in flex-entry courses become part of the cumulative GPA.

## Class Attendance

Students are expected to attend classes regularly. Students are responsible for material covered during their absences, and it is the student's responsibility to consult with instructors for makeup assignments. Class attendance is checked daily by instructors. Although it is the responsibility of the student to drop a course for non-attendance, the instructor has the authority to drop a student for excessive absences. A student may be dropped from a course for absenteeism after the student has accumulated absences in excess of 12.5 percent of the hours of instruction (including lecture and laboratory time). For example:

- For a three credit-hour lecture class meeting three hours per week (48 hours of instruction), a student may be dropped after six hours of absences.
- For a four credit-hour lecture/lab course meeting six hours per week (96 hours of instruction), a student may be dropped after 12 hours of absences. Certain departments or programs may be governed by accrediting or certification standards that require more stringent attendance policies.

*NOTE: IT IS THE RESPONSIBILITY OF THE STUDENT TO WITHDRAW OFFICIALLY FROM A COURSE.*

Administrative drops are at the discretion of the instructor. Failure of a student to withdraw officially could result in the student receiving a grade of "F" in the course. For the deadline for course withdrawal, check the current course Schedule.

## Religious Holidays

A student who is absent from classes for the observance of a religious holiday may take an examination or complete an assignment scheduled for that day within a reasonable amount of time after the absence. The student must notify the instructor in writing at least two weeks prior to the anticipated absence. A "religious holiday" is a holiday observed by a religion whose place of worship is exempt from property taxation under Section 11.20, Tax Code.

## Requirement of English Competence

Any student who, in the determination of the instructor and counselor/advisor, cannot be expected to benefit from a class because of the student's limited command of the English language will be advised to withdraw from the class. The student will be advised to enroll in Intensive English (ESOL 0349-0356), non-intensive academic ESL (ESOL 0351, 0354, ENGL 0349), Continuing Education (COMG 1004, 1005, 1007, 1008 1015, 1091) or the free Adult Basic Education program.

## Semester Credit Hours (SCH)

Academic credit is expressed in semester credit hours (SCH). Generally, one class lecture hour per week for the semester earns one SCH. A class meeting three lecture hours a week, therefore, has three SCH. Two to four hours of laboratory work per week for a 16-week semester are equivalent to one SCH.

## Continuing Education Unit Credit (CEU)

Continuing Education Units (CEU) measure completion of segments in non-credit programs. One CEU represents 10 contact hours of participation. These units are not substitutes for college credits but a means of reporting continuing education activities. HCC, as an institution accredited by the Southern Association of Colleges and Schools, will award and note on a student's transcript CEUs for all workforce-related Continuing Education courses. Many professional associations and industries require and recognize CEUs as an indication of an individual's professional growth and development. CEU courses completed at HCC may be eligible to have those courses applied as semester hour credit upon approval of the Career and Technical Education Dean. The student must complete at least 12 semester hours at HCC and must be currently enrolled in the workforce program for which the courses are applicable. Applied credit will become a part of the student's permanent record only after the student meets all other institutional and program requirements. The fee for CEU conversion is \$25.

# General Academic Information

## HCC Grading System

HCC uses the following grading system:

A (90-100/Excellent) .....	4 points per semester hour
B (80-89/Good).....	3 points per semester hour
C (70-79/Fair).....	2 points per semester hour
D (60-69/Passing*).....	1 point per semester hour
F (Failing) .....	0 points per semester hour
FX (Failure due to non-attendance)	0 points per semester hour
IP (In Progress) .....	0 points per semester hour
W (Withdrawn).....	0 points per semester hour
I (Incomplete) .....	0 points per semester hour
AUD (Audit) .....	0 points per semester hour

IP (In Progress) is given only in certain developmental courses. The student must re-enroll to receive credit. COM (Completed) is given in non-credit and continuing education courses.

To compute grade point average (GPA), divide the total grade points by the total number of semester hours attempted. The grades "IP", "W", "AUD", "COM", and "I" do not affect the GPA.

*\*A grade of "D" is not a passing grade in developmental courses.*

### Incompletes

The grade of "I" (Incomplete) is conditional. A student receiving an "I" must arrange with the instructor to complete the course work within six months of the end of the incomplete term. After the deadline, the "I" becomes an "F." Upon completion of the coursework, the grade will be entered as I/grade on the student transcript. All "I"s must be changed to grades prior to graduation.

### Health Sciences Grading System

See the Health Sciences section for those programs' grading system.

## Non - Credit Audit

During the first week of classes, an individual may register to audit most academic courses in the Humanities, Mathematics/ Natural Sciences or Social Sciences program areas. The audit provides the usual learning opportunities without the course requirements such as attendance, written work, and tests. An audit cannot be changed to credit or credit to audit after the close of the Add/Drop period. Audit courses will be noted on the student's permanent record as "Audit". Students receiving financial aid, Social Security, or veterans benefits may not be eligible for benefits for audit courses. Computer Science Technology courses, Commercial Music, Physical Education, private instruction, and all other workforce courses may not be audited.

## Grade Changes/Student Appeals

Questions regarding errors in grades should be directed to the Admissions and Records Office. Clerical errors will be corrected immediately by the Admissions and Records Office. Other grade changes must be initiated by the instructor through the appropriate academic dean. A change of grade request must be received within one year after the grade was issued to ensure any necessary corrections. (See [www.hccs.edu/students](http://www.hccs.edu/students), Student Course Grade Appeal Procedure.) A \$20 research fee will be charged for any request made after one year.

## General Instructional Complaints

Whenever a student has a complaint about an instructor or instructional issues, the students should first seek to resolve the issue by making an appointment with the instructor. If the student feels that the issue has still not be addressed, the student should make an appointment to talk with the Department Chair who serves as the Instructor's direct supervisor. For more information, please consult the HCC Student Handbook, available online at: [www.hccs.edu](http://www.hccs.edu).

## General Continuing Education Complaints

When a student wishes to file a complaint related to a continuing education matter, the student should first discuss concerns with the faculty member. If the student is still dissatisfied he/she may appeal to the Program Director of the content area.

# General Academic Information

## General Student Services Complaints

When a student wishes to file a complaint related to a student services matter, the student should bring the issue to the attention of the department manager. If after having spoken with the department manager a resolution is not reached to the student's satisfaction, the student may present the issue to the dean of student services. The dean's decision is final. Complaints must be made within the semester in which the issue arose.

*For more information, please consult the HCC Student Handbook, available online at: [www.hccs.edu](http://www.hccs.edu)*

## Repetition of Courses

If a student repeats a course in which a grade (A-F) has been received, the highest grade received is the permanent grade for the course and will be used in computing the grade point average. All grades earned in a given course will be entered on the transcript. Other colleges may compute the GPA differently than HCC.

## Honors

Each fall and spring semester, full-time students who complete 12 or more semester hours with a grade point average of 3.5 or better are named to the Dean's List. Students with 12 or more semester hours with a grade point average of 3.0 to 3.49 will be included on the Honor List. A student eligible for a Dean's List certificate should contact the Dean of Student Development Office.

Students who complete 12 or more semester hours with a GPA of 3.5 or better are eligible to join Phi Theta Kappa, the national honor society of American two-year colleges. Initiation into the society is held each October and March. Further information regarding Phi Theta Kappa may be obtained through the office of the Dean of Student Development.

HCC also operates an Honors Program at each of the HCC colleges. Students may choose to join the HCC Honors Program or may elect to take individual course sections for Honors credit. For more information, see your college Honors Director listed in the HCC Course Schedule or refer to the Honors Program Web site.

The HCC Honors College is located at Central College. It offers high-achieving students the opportunity for enriched instruction, leadership development, and the opportunity for study/travel abroad. The program is designed for full-time students beginning their college experience or with limited HCC credit hours (under 15). Qualified students can receive scholarships and textbook assistance. Students must have a 3.7 high school GPA or 3.5 HCC GPA and college-ready scores on TAKS, SAT or COMPASS. For more information, contact the Honors College Dean at 713.718.6081

## Requirements for Academic Progress

A student's academic progress will be evaluated for the first time after a minimum of nine attempted semester hours. Each status is defined with the required action.

- **Status** - Good Standing  
**Definition** - Cumulative GPA of 2.0 or above  
**Action Required** - None
- **Status** - Probation  
**Definition** - Cumulative GPA below 2.0  
**Action Required** - Must register for SLIP and work with a counselor prior to enrolling in classes.
- **Status** - Continued Probation  
**Definition** - Cumulative GPA below 2.0 and Term GPA 2.0 or above  
**Action Required** - Continue to work with the counselor from a previous semester.
- **Status** - Suspension  
**Definition** - Previous term status of probation or continued probation and Term GPA below 2.0  
**Action Required** - Must register for SLIP and work with a counselor prior to enrolling in classes.

# General Academic Information

Students on probation, continued probation and/or suspension are required to attend a Successful Learning Intervention Program (SLIP) session prior to re-enrollment in order to meet with their designated counselor. The counselor will stipulate conditions of enrollment, including but not limited to, maximum hours and/or specific courses. It is important to note that a student on an Academic Suspension may be unable to enroll in classes for one semester. An Academic Suspension may be appealed by completing the necessary paperwork in the counseling office.

Students enrolled in multiple summer sessions will have their entire summer's work evaluated for determination of their academic status.

Students in certain Health Sciences programs are required to maintain a grade of "C" in all courses in order to continue in the program. Students not meeting these standards may continue to enroll at HCC in other programs as long as they maintain minimum HCC requirements.

Students are responsible for knowing whether they have passed the minimum standards for continuation in college. Ineligible students who register will be subject to dismissal with forfeiture of all tuition and fees.

## **Requirements of Satisfactory Progress For Veterans**

In order to be eligible for continued veterans benefits, a veteran who is placed on academic probation/ suspension must attain a cumulative GPA of 2.0. If a veteran falls below a 2.0 GPA, the veteran should visit the Veterans Affairs Office or contact the Veterans Call Center at 713.718.8522 to schedule an appointment.

## **Requirements of Satisfactory Progress for Financial Aid Students**

Financial aid students must meet the following satisfactory progress requirements:

- Must maintain a term GPA of 2.0
- Must complete at least 67% percent of attempted courses for the academic year
- Must enroll in courses leading to an HCC degree or certificate

Students who do not maintain the standards listed above will be ineligible to receive financial aid. A student may appeal a suspension of financial aid by submitting a written request to the college Financial Aid Office. A detailed description of the financial aid standards of progress requirement is available in the college Financial Aid Office.

## **Grade Reports**

Grades are available online within one week of the end of the course.

## **Transcripts of College Work**

A transcript of college credits is an official copy of the student's permanent record bearing the HCC seal and the signature of the Registrar. Students may request a transcript at [www.hccs.edu/transcript](http://www.hccs.edu/transcript). Requests may also be made at any HCC campus. It is highly recommended that transcripts be sent electronically to colleges and universities to expedite processing. There is a charge for transcript processing. All admissions information must be on file and all holds cleared before a student's record will be released. A student should allow a week for delivery following the transcript request. Additional time should be allowed at the close of a semester. Students should request transcripts of work completed at another institution from that institution.

# General Academic Information

## Graduation Information

### Application for Graduation

Prior to graduation, students must have official transcripts of credits transferred from other institutions sent to the Office of Admissions and Records. A candidate for any degree or certificate must meet the graduation requirements in the catalog for the year of initial enrollment unless the student elects to graduate under the requirements of a more recent catalog. The candidate must indicate the catalog of choice when filing for graduation. A student who does not enroll at HCC for a period of more than one calendar year is required to graduate under the catalog requirement for the year of readmission.

To be considered as a candidate for the AA degree, AS degree, AAT degree, AAS degree, or Certificate of Completion, a student must submit a formal application for graduation at the time of registration for the final semester or not later than the graduation application deadline. There is a \$10 fee for those students requesting a printed diploma. If the student is not approved for graduation during the semester or instructional period in which the application is filed, HCC will retain the diploma fee for one year and apply it when approval for graduation is granted.

Students who are unable to complete their degree plan on file at HCC may transfer up to 42 semester hours of equivalent courses from an accredited institution. These courses must be completed within three years of their last semester of enrollment at HCC. However, all other graduation requirements must be satisfied, including the residency requirement that 18 semester hours of a student's degree must be completed at HCC.

### Priority Application Deadlines:

- **Fall - October 15**
- **Spring - February 15**
- **Summer - June 15**

A candidate for a degree or certificate is not required to purchase a diploma. A student may request their records be reviewed at the conclusion of their course work so the appropriate degree or certificate will be recorded on the student's transcript.

### Graduation Honors

Graduation honors will be awarded to students pursuing an associates with superior cumulative GPAs. The following classifications of honors will be recognized on the student's transcript and diploma:

<b>Highest Honors</b>	<b>GPA 3.80 or above</b>
<b>High Honors</b>	<b>GPA 3.60 to 3.79</b>
<b>Honors</b>	<b>GPA 3.35 to 3.59</b>

HCC will use the following guidelines to compute honors eligibility:

- The student must complete at least 18 semester credit hours at HCC.
- The student must complete requirements for the AA, AS, AAT or AAS degree.
- The grades in all HCC courses will figure in the cumulative GPA (developmental courses are excluded from the degree GPA).
- Courses taken through the preceding fall semester will be used in computing the GPA for the ceremony. The student must have completed 75 percent of the course work for the degree at that time.

### Participation in the Graduation Exercises

HCC holds one student graduation ceremony each year in May. Candidates for degrees and certificates are encouraged to attend the graduation ceremonies. Students who completed course requirements the previous December, or who plan to complete course requirements the following August, may participate in the May ceremony.

# Library and Learning Resources

## HCC Libraries

The library system consists of 11 libraries and 2 electronic resource centers (ERCs). Librarians are available to show you how to use the library and help you locate the resources you need. The HCC Library System maintains a large database of electronic resources as well as collections of books, magazines, newspapers, and audiovisual materials covering a wide variety of subjects. A complete description of the resources and library services is found in the online and print versions of the HCC Student Handbook. The portal to the libraries' online resources and services is the HCCS library web page at <http://library.hccs.edu>.

### How Do I Find What I Want?

The library system's online catalog is available in all campus libraries and ERCs and is accessible from many remote sites, including your home computers. This offers an easy to use, up-to-date source for finding books at HCC and other libraries as well as access to HCC's extensive list of full-text electronic resources and to the Internet.

### What If It Isn't At My Campus?

Books at every HCC Campus library can be requested by students and will be delivered to any other campus library. When you find a book you want, simply click on the "Request" button and follow the easy to read instructions. Periodical and newspaper articles are available through the extensive list of electronic subscriptions maintained by HCC. You can access these databases from any HCC Computer or from your home or work computer, if you have Internet access. You will need an HCC Library card number to access the databases from non-HCC Computers. If you don't have an I.D. card or library card, go to the libraries' catalog and click on "Get My Barcode" at <http://librus.hccs.edu>.

### How Do I Check Out What I Need?

Use your HCC I.D. or get an HCC library card to checkout materials from any HCC library or to access electronic resources from your home computer. Your HCC I.D. will allow you to check out materials at any HCC Library. If you don't have an HCC I.D., you can request an HCC library card at any library or go to <http://library.hccs.edu> and click on "Get My Barcode." You will need to present a picture I.D. and proof of registration. Either card will allow you to check out materials and give you access to all of the libraries' electronic resources. Present your student I.D. card with the books you wish to borrow at the check-out desk. A book can be checked

out for two weeks. You can renew it twice by telephone or the library website. Use of periodicals and audiovisual materials is limited to your college library.

### Overdue Books

The card inside your books shows when it is to be returned. If you fail to return it, a "hold" status is reported and reflected on your student record and will affect your ability to register for additional courses or obtain a transcript. Also, you will be blocked from further borrowing until the materials due are returned to the library.

### What About Other Libraries?

Your HCC library card, along with a TexShare library card that you can obtain from any HCC library site, enables you to check out materials from any other TexShare member library. This TexShare list includes most state-supported libraries, including all campuses of the University of Houston System and other community colleges in the Gulf Coast area. If you have questions, your campus librarian can direct you to other TexShare Libraries in the area. Remember, you will be subject to the loan rules of each individual institution—both as to the number of items you may check out and how long you may keep them out. You will also be responsible for returning the books to the lending library and for any overdue fines or lost book fees that particular library may charge.

## Tutorial Assistance

All HCC Colleges provide free tutorial assistance to students, particularly in regard to reading, writing, and math assistance. Please check in the Counseling Office or check the information on the HCC Web site under Current Students for current information about live as well as on-line tutoring opportunities.

# Student Services

## Academic Advising

Academic advising entails assisting students with their academic planning from a prospective student through graduation. Advisors assist students with the interpretation of policies and procedures and teach students how to take ownership of their education by accessing college resources and support services. For general information, you may visit your College Counseling/Advising Office. HCC requires that new students take a Student Success Course in their first semester to help them determine their major and plan their degree path. Once you have selected your "major," instructors who teach the courses in that field (e.g., accounting, computer science, history, etc.) will be your best academic advisors. If you plan to transfer to complete a baccalaureate degree, it is important to determine your major and your transfer institution as soon as possible, because different universities may have different requirements. For more specific information, visit the Transfer Office web site on [www.hccs.edu](http://www.hccs.edu).

## Student Information Services

Student Information Services provides online information and service to future, current and returning Houston Community College students. Students may email inquiries online to [student.info@hccs.edu](mailto:student.info@hccs.edu) or chat live with knowledgeable associates regarding registration, admissions, academic and student services. Information, answers to frequently asked questions, and a video library can be found 24 hours a day, 7 days a week at <http://www.hccs.edu/hccs/current-students/student-information-services>.

## Alumni Association

The HCC Alumni Association was organized to advance the growth and development of the college; promote the personal, educational, and professional development of alumni; and establish and maintain a scholarship fund for individuals who would not otherwise be able to pursue a college education. Membership is offered to all who have successfully completed any course at HCC as well as to outstanding persons who possess the principles and ideals of the Association.

## Child Care

HCC-Central offers childcare for all HCC full- and part-time students at the HCC Child Development Lab School. The center serves children 6 weeks - 5 years of age, Monday thru Friday, 7:00 am - 5:30 pm. Lab school staff follow the guidelines of developmentally appropriate practice and state minimum. For more information call 713.718.KIDS or visit 3214 Austin Street for enrollment.

Childcare assistance information is also available from the Counseling/Advising Dept. at each college or call:

Coleman College for Health Sciences.....	713.718.7348
Northeast.....	713.718.8066
Northwest.....	713.718.5422
Southeast.....	713.718.7045
Southwest.....	713.718.8618

## Cooperative Education

Cooperative Education gives students the opportunity to integrate their classroom study with practical experience by working full- or part-time in a field related to their career goals.

*For more information, please contact the Counseling/Advising Office.*

## Counseling

HCC maintains a staff of professional counselors to assist students. Specific counseling services are detailed in the HCC Student Handbook.

# Student Services

## Ability Support Services

Houston Community College does not discriminate on the basis of disability in the recruitment, admission and retention of students or the operation of any of its programs and activities. The designated officer for compliance with the Americans with Disabilities Act (ADA) and Section 504 of the Rehabilitation Act of 1973 is the System's Affirmative Action/ Compliance officer, 713.718.8606. The College System will make its campuses and programs accessible to individuals with disabilities. Where it is unreasonable to modify a specific area to make it accessible, the College System will provide an accessible alternative.

The point of contact for students seeking services under the ADA is the ADA Counselor located at each HCC Campus. Contact an ADA Counselor at the college you plan to attend. ADA Counselors for each of the six colleges may be reached at the following numbers:

Central College.....	713.718.6164
Coleman College for Health Sciences.....	713.718.7082
Northeast College.....	713.718.8322
Northwest Spring Branch .....	713.718.5422
Northwest Katy.....	713.718.5758
Southeast College.....	713.718.78397
Southwest College .....	713.718.7910
Interpreting Services. ....	713.718.6333

The Ability Support Services Office assists students with documented physical, learning, or emotional disabilities in developing independence and self-reliance. Services include adaptive equipment and reasonable accommodations for programs and services available to all HCC Students. Interpreting services is provided for students who are deaf/hard of hearing, and assistive technology devices are provided on a case-by-case basis. Students should request interpreting services as soon as possible or no less than 30 days prior to each academic semester they plan to attend HCC. The Ability Services Office cannot guarantee that services will be in place if insufficient student notice is provided.

Houston Community College is committed to compliance with the Americans with Disabilities Act (ADA) and the Rehabilitation Act of 1973 (Section 504). Students with special needs or disabilities, that may affect their ability to succeed in college classes or participate in college programs/activities, should contact the ADA Counselor located at each college.

The following guidelines must be followed to receive accommodations. It is recommended that the student start this process at least 30 days in advance of registration dates.

- The student contacts the ADA Counselor at his/her college and makes an appointment.
- The ADA Counselor informs the student what documentation to bring to the intake meeting on the appointment date.
- The ADA Counselor advises the student whether the disability is a qualifying disability under the ADA.
- If it is, the ADA Counselor reviews the [documented] information the student has presented and makes an evaluation as to the proper accommodations.
- The ADA Counselor gives the Accommodation Letter to the student. It is the student's responsibility to present the letter as soon as possible to their professor, testing department, etc. in order to receive accommodations outlined in the Letter.
- The ADA Office will retain a copy of the accommodations letter in the student's folder.

## Health Services

As a commuter institution, HCC does not operate a Student Health Center; however, HCC is concerned about the health and welfare of its students and provides important health information to students. The Student Handbook provides a description of health services.

### Health Insurance

For information about purchase of student health insurance, <http://www.hccs.edu/hccs/current-students/student-health-insurance>

### Important Information About Bacterial Meningitis

This information is being provided to all new college students in the state of Texas. Bacterial meningitis is a serious, potentially deadly disease that can progress extremely fast – so take utmost caution. It is an inflammation of the membranes that surround the brain and spinal cord. The bacteria that cause meningitis can also infect the blood. This disease strikes about 3,000 Americans each year, including 100-125 on college campuses, leading to 5-15 deaths among college students every year. There is a treatment, but those who survive may develop severe health problems or disabilities.

# Student Services

## **Meningococcal (Bacterial Meningitis) Vaccine Requirement for All HCC Students Entering in January 2012 and Thereafter**

Texas Senate Bill 1107, passed in May 2011, requires that new HCC students and former HCC students returning after an absence of at least one fall or spring semester who are under the age of 22 are required to present a physician-signed certificate showing they have been vaccinated against bacterial meningitis.

The meningitis vaccine must have been received within the last five years. If it has been more than 5 years from the date that you took the vaccine, it has expired. Please check with your doctor to see if you need another vaccine. If you do not need another vaccine, please have your doctor give you a written notice.

The meningitis vaccine must be administered at least 10 calendar days before the start date of the session in which you are enrolling, regardless of your actual first day of class.

You can also take your proof of meningitis to the campus you are attending or allow 24 hours for processing by faxing it to 713-718-2882. However, if your information is urgent, please take it to the campus you are attending for processing.

### **Exemptions:**

#### **You are exempt if you:**

- Will be 22 years old on the first day of class (no documentation required). For classes that begin after January 1, 2014, the exemption age requirement has been lowered to 22 years old.
- Cannot take the vaccine for medical reasons. You must submit a HCC Meningitis Vaccination Verification Form and an affidavit or a certificate signed by a physician who is duly registered and licensed to practice medicine, and in which it is stated that, in the physician's opinion, the vaccination required would be injurious to the health and well-being of the student.
- Decline the vaccine due to reasons of conscience, including a religious belief. You must complete an Exemption from Meningococcal Vaccination Requirements for Reasons of Conscience Form available online at [collegevaccinerequirements.com](http://collegevaccinerequirements.com).
- Are a dual-credit student attending on a high school campus (no documentation required).

## **Required Documentation**

- The signature or stamp of a physician or his/her designee or public health personnel on a form which shows the month, day and year the vaccination dose or booster was administered. Also, it must show your name and date of birth to be valid. Documentation must be in English and submitted with the HCC Meningitis Vaccination Verification Form.
- An official immunization record generated from a state, local health authority or the medical proof from the institution you are currently attending. Documentation must be in English and submitted with the HCC Meningitis Vaccination Verification Form.
- An official record received from school officials, including a record from another state.
- Affidavit or a certificate signed by a physician who is licensed to practice medicine which states that in the physician's opinion the meningococcal vaccine would be injurious to your health and well-being. Documentation must be in English and submitted with the HCC Meningitis Vaccination Verification Form.
- A completed Exemption from Meningococcal Vaccination Requirements for Reasons of Conscience Form available online at [collegevaccinerequirements.com](http://collegevaccinerequirements.com). Documentation must be submitted with the HCC Meningitis Vaccination Verification Form.
- Can the disease be treated?
- Antibiotic treatment, if received early, can save lives and chances of recovery are increased. However, permanent disability or death can still occur.

## **Submitting Documentation**

Documentation must be in English. Write your name, HCC Student ID, and date of birth on each page you submit. Submit your documentation:

- At any HCC campus
- By email: Scan your documentation and attach it to an email to [vaccine@hccs.edu](mailto:vaccine@hccs.edu)
- Fax: 713-718-2882
- Mail: Houston Community College, Admissions & Records – MC 1136, P.O. Box 667517, Houston TX 77266-7517

# Student Services

## Where to get vaccinated

You can get the meningococcal vaccine at most doctors' offices and private clinics, many large pharmacy chains, and some minor emergency centers or medi-clinics. Call in advance to see whether they offer the vaccine, require an appointment.

- If you have Medicaid or CHIP (Children's Health Insurance Plan), please contact your established healthcare provider as your first option.
- If you are 18 or younger, you might qualify for the Texas Vaccines for Children Program. Call the United Way's referral helpline, by dialing 211, to find healthcare providers in your area who participate in this program.
- Many Texas city/county health departments offer free or low-cost meningococcal vaccine as part of children and adult immunization programs. Call to confirm that they offer the meningococcal vaccine for someone your age and in your circumstances. These services are ONLY for those without insurance or whose insurance does not cover the cost of the vaccine.

## About Meningococcal Disease

Meningococcal Disease (meningitis) is easily spread by direct contact, or by droplets of respiratory secretions (coughing, sneezing, kissing, and mouth-to-mouth resuscitation). Bacterial meningitis is an inflammation of the membranes that surround the brain and spinal cord. The bacterium can also infect the blood. Symptoms include fever, headache, a stiff neck, and often nausea, vomiting, and mental awareness changes.

Meningitis is often lethal because people associate early symptoms with the common flu, and don't consult a physician. However, symptoms can progress rapidly, sometimes leading to death in 24-48 hours. Following the initial symptoms, the disease can result in joint infection, pneumonia, organ system failure, and shock.

Among those who survive Meningococcal Disease, approximately 20 percent live with severe health problems and permanent disabilities, including brain damage, kidney failure, learning disabilities, hearing loss, blindness, limb damage which may require amputation, and mental retardation.

## For more information, visit:

- Centers for Disease Control and Prevention
- City of Houston Health and Human Services Department

## Student Identification Card

Student identification (ID) cards are available once a student has registered and paid for classes. The card will be needed for library and computer lab usage, admission to college activities, and voting in campus elections. ID cards are nontransferable and are to be held only by the students to whom they were issued. Students are required to be in possession of their ID card at all times. All ID cards are the property of HCC and must be shown when requested by a representative of the College District. If students lose their ID cards, they should report it to the police by calling 713.718.8888 as soon as it is discovered as missing. To obtain a replacement initiate the process at the college campus you attend. A nominal fee will be charged for the replacement of lost ID cards.

# Student Services

## International Initiatives

Modern global communication, transportation, and commerce have shaped a new interdependent world-wide economy. Education and training institutions must develop students capable of competing in an international workforce. The Office of International Initiatives coordinates and supports a variety of international programs for students and faculty and collaborates with foreign institutions abroad through partnerships.

### Training Programs:

- Training courses developed by college instructional programs teach participants specific occupational skills. They may be taught in a participant's first language or in conjunction with the English-as-a-Second-Language program.
- Language Programs: Second-language programs developed for concentrated total immersion in a foreign language.

### Career Area:

- Overview of business/industry and education serving that profession in the host country.
- Study Abroad Programs: Traditional higher education in regular school classes abroad.
- Cooperative Education Exchange: Students are placed in paying jobs related to their career area and attend scheduled college co-op classes in the host country.
- Cultural Exchange: Faculty/student groups participate in program activities that provide general knowledge concerning family life, culture, economy, working conditions, and education in the host country.

Interested students should contact the Office of International Initiatives at 3100 Main, 713.718.5058.

## Career Planning and Resources

The Student Job Placement Office assists current and former students in finding full-time, part time, and cooperative education employment. Students can also build resumes and search for employment opportunities online at [jobs.hccs.edu](http://jobs.hccs.edu). Workshops are provided for those making career choices and developing job search skills. Specific services are outlined in the HCC Student Handbook.

## Student Life and Recreational/ Sports

The Student Development Office offers activities and programs that extend students' personal and intellectual growth. Some of the activities include: student government; student associations; clubs and organizations relating to student interests; honor societies; student publications (The Egalitarian and organization newsletters); recreational sports; and cultural, social, and educational activities.

## Testing

HCC Testing Centers and counselors use a variety of tests to assist students in determining special abilities, aptitudes, study habits, values, career interests, and personality traits. Testing Centers in each college within the District offer COMPASS, ASSET, CELSA, TABE and GED tests according to established schedules. Please contact the Test Center that you plan on going to for times, schedule, and assessments offered at that location. The complete description of testing services is in the HCC Student Handbook.

# Student Services

## Veterans

The District Office of Veteran Affairs offers services for veterans requesting educational benefits while enrolled in HCC. To apply for veterans' benefits, call the Veterans Call Center at 713-718-8522. Eligible veterans or dependents include:

- Chapter 30 Veterans who entered the military after July 1, 1985 and contributed to the educational program.
- Chapter 1606 (Selected Reserves) Reservists who entered the Selected Reserves after July 1, 1985.
- Chapter 31 Veterans who have a service connected disability which creates an employment problem.
- Chapter 35 (Dependents) Spouses or children of deceased or service-connected disabled veterans (100 percent).
- Chapter 33 (Post 9/11 GI Bill) Veterans who served on active duty after 9/10/01 for an aggregate of at least 90 days or at least 30 continuous days and received a disability discharge.
- Chapter 1607 (REAP)-This is an educational program for members of the Selected Reserves call to active duty.
- HAZLEWOOD ACT Veterans who entered the service from Texas and have exhausted their veteran benefits and wish to continue college work cannot be in default of a student loan.
- Tuition Assistance - Military Tuition Assistance is a benefit paid to eligible members of the Army, Navy, Marines, Air Force, and Coast Guard. Congress has given each service the ability to pay up to 100% for the tuition expenses of its members.
- The Military Spouse Career Advancement Accounts (MYCAA) - program provides up to \$4,000 (over 2 years) of Financial Assistance for military spouses who are pursuing degree programs, licenses or credentials leading to employment in portable career fields

## Activated Reservists

An HCC student who is attending classes and is called to active duty during a semester may elect to do one of the following:

- Receive a refund of the tuition and fees paid for the semester from which the student withdraws.
- Receive an incomplete grade in all courses by designating "withdrawn" on the transcript.
- Request instructor to assign an appropriate final grade or credit if the student has satisfactorily completed a substantial amount of course work and demonstrated sufficient mastery of the course material.

# HCC Guarantee of Educational Excellence

The Houston Community College District is committed to excellence in education. As an expression of this commitment, HCC guarantees its graduates both transfer credit and entry-level job skills. Such guarantee is a statement of confidence in the administration, faculty, and staff as well as a commitment to our educational mission to empower students so they may achieve their highest potential.

This guarantee is expressly subject to and limited to special conditions identified in the following sections on job competency and transfer credit. The HCC obligation under this guarantee is limited to providing additional courses under the conditions prescribed in these sections.

## Transfer Credit

HCC guarantees to those students earning the Associate in Arts, Associate of Arts in Teaching and the Associate in Science degrees that their required courses will transfer to all public-supported Texas colleges and universities. If these courses are rejected by the senior institution of the student's choice, HCC will offer the student an alternate tuition-free course that will transfer.

Transferability means the acceptance of HCC credit toward a specific major and degree at a specific institution, as defined by the student's transfer/degree plan. However, no institution of higher education shall be required to accept in transfer, or apply toward a degree program, more than sixty-six (66) semester credit hours of lower-division academic credit. Institutions of higher education, may choose to accept additional credit hours by agreement. The transfer guarantee of academic courses is subject to the following conditions:

- The student must file a written transfer/degree plan by the time he/she has completed 12 semester hours or the equivalent at HCC. The transfer/degree plan must include the following: (a) the specific institution to which the student plans to transfer, (b) the bachelor's degree and major the student plans to pursue, and (c) the date such decision was made.
- Courses must be identified by the receiving institutions as transferable and applicable toward a specific major. The receiving institution determines the following:
  - Total number of credits accepted for transfer

- Grades required
- Relevant grade point average
- Duration of transferability
- Required courses must have been taken at HCC no earlier than three years before the attempt to transfer.

If the above terms and conditions have been met and courses are not accepted by a receiving institution in transfer, the following terms and conditions are applicable:

- The student must submit to HCC a Notice of Transfer Credit Denial from the receiving institution (within 10 days of denial) so the resolution process may begin.
- If transfer credit denial is not resolved, tuition-free transfer courses (semester hour for semester hour) must be taken within a one-year period.
- Although courses are tuition-free, students will be responsible for any fees or course-related expenses, other than the course-required books that HCC is responsible for providing at no cost to the student.

# HCC Guarantee of Educational Excellence

## Job Competency Guarantee

HCC guarantees that graduates earning workforce certificates or degrees will possess the job skills required for entry-level employment in the occupational field for which they have been trained. (This guarantee does not imply the graduate will pass any licensing or qualifying examination for a particular career.)

Any HCC workforce program certificate or degree graduate whom the employer determines is lacking in the technical or general educational skills necessary for entry to the position shall be provided up to nine tuition-free credit hours. A program of instruction must be designed to meet specific occupational competencies identified in technical courses which are competency-based and emphasize the acquisition of the skills necessary for immediate employment and/or career advancement. Program competencies are identified in the course syllabus provided to each student.

- This guarantee applies only to certificates and degrees of at least 30 semester hours or 360 contact hours.
- All course work in question must have been taken at HCC and taught by HCC instructors.
- The graduate must have earned the AAS or certificate in a workforce program listed in the HCC catalog no earlier than one year prior to the beginning date of the employment in question.
- The graduate must have completed the degree within a five-year period beginning at the point of first enrollment.

- The graduate must be employed full-time within 12 months of graduation and in a position directly related to the specific program completed at HCC.
- Within 90 days of the graduate's initial date of employment, the employer must certify in writing that the graduate lacks entry-level skills identified by HCC as program-exit competencies. The employer must specify the areas of deficiency.
- The employer, graduate, and HCC personnel will develop a written retraining plan. The retraining will be limited to nine credit hours or 360 contact hours related to the identified skill deficiency.
- The retraining must be completed within one calendar year from the time the plan is agreed upon.
- Although retraining is tuition-free, the graduate (or employer) is responsible for the cost of insurance, uniforms, fees, and any other course-related expenses. HCC is responsible for the cost of books required for the course work.

# Academic Degrees

The Associate in Arts, the Associate of Arts in Teaching, and the Associate in Science degrees can give you a good start before transferring to a four-year university. These academic degrees provide a solid foundation through a traditional liberal arts education. Studies include the humanities and fine arts, social sciences, communication, teacher education, mathematics, and science. The liberal arts develop critical and analytical skills demanded by constantly changing environments. After transfer to a four-year university, you may concentrate in a major area of study during your junior and senior years.

## Associate in Arts (AA)

The Associate in Arts is intended primarily for students planning on transferring to a senior college or university to receive a baccalaureate degree in the following areas: communication, business, social sciences, humanities, and fine arts. Commencing the fall of 1999, all Associate in Arts academic core curriculum courses taken at HCC are guaranteed to transfer and count toward the core curriculum at all Texas public higher educational institutions.

In addition, if a student successfully completes any part of a field of study (FOS) curriculum developed by the Texas Higher Education Board, the FOS courses will be transferred to a Texas public higher educational institution and must be substituted for that institution's lower division requirements in the degree program containing the field of study. The student shall receive full academic credit for the transferred FOS courses in the related university degree program. HCC has developed specialized transfer plans for specific majors and for specific universities. Students should obtain appropriate transfer plans including FOS courses from a counselor. Students also need to be aware that universities often have limitations on the amount of credit that can transfer from community colleges to universities. That limit is usually around sixty-six semester hours taken at community colleges.

### Associate in Arts Required Academic Core\*

#### FIRST YEAR

##### First Semester

EDUC 1300	Learning Framework.....	3
ENGL 1301	Composition I.....	3
HIST #3##	American History Elective (May choose from HIST 1301, 1302, 2301, 2327, 2328, 2381).....	3
XXXX #3##	Transferable Elective.....	3
MATH #3##	Approved Mathematics Elective (May choose MATH 1314, MATH 1332, MATH 1342).....	3
<b>Semester Total</b>		<b>15</b>

#### Second Semester

ENGL 1302	Composition II OR	
ENGL 2311	Technical and Business Writing.....	3
HIST #3##	American History Elective (May choose from HIST 1301, 1302, 2301, 2327, 2328, 2381).....	3
XXXX #3##	Transferable Elective.....	3
XXXX #3##	Life & Physical Sciences Elective <sup>A</sup> .....	3
XXXX #3##	Creative Arts Elective <sup>B</sup> .....	3
<b>Semester Total</b>		<b>15</b>

#### SECOND YEAR

##### First Semester

XXXX #3##	Language, Philosophy, & Culture <sup>C</sup> .....	3
GOVT 2305	Federal Government.....	3
XXXX #3##	Component Area Option Elective <sup>E</sup> .....	3
XXXX #3##	Life & Physical Sciences Elective <sup>A</sup> .....	3
XXXX #3##	Social & Behavioral Sciences Elective <sup>D</sup> .....	3
<b>Semester Total</b>		<b>15</b>

##### Second Semester

GOVT 2306	Texas Government.....	3
XXXX #3##	Transferable Elective.....	3
XXXX #3##	Transferable Elective.....	3
XXXX #3##	Transferable Elective.....	3
XXXX #3##	Transferable Elective.....	3
<b>Semester Total</b>		<b>15</b>
<b>Program Total</b>		<b>60</b>

\* No one course may be used to fulfill more than one core category.

The student must earn a minimum 2.0 GPA on sixty (60) total college-level semester hours, must complete a minimum eighteen (18) hours of coursework in Houston Community College, must complete TSI requirement unless exempt, and must have an application to graduate on file in the Registrar's office in order to graduate.

<sup>A</sup> Life & Physical Sciences: May choose from: ANTH 2301, ASTR 1303, 1304, 1403, 1404, BIOL 1308, 1309, 1322, 1406, 1407, CHEM 1305, 1405, 1411, 1412, GEOG 1301, GEOL 1305, 1345, 1347, 1403, 1404, PHYS 1305, 1401, 1402, 2325, 2326.

<sup>B</sup> Creative Arts: May choose from: ARTS 1301, 1303, 1304, COMM 2366, DANC 2303, DRAM 1310, 2361, 2366, HUMA 1301, 1311, MUSI 1306, 1310.

<sup>C</sup> Language, Philosophy, & Culture: May choose from: ENGL 2322, 2323, 2327, 2328, 2332, 2333, 2342, 2343, 2351, HIST 2311, 2312, 2321, 2322, HUMA 1305, 2319, 2323, PHIL 1301, 1304, 2306, 2307, 2316.

<sup>D</sup> Social & Behavioral Sciences: May choose from: ANTH 2346, 2351, ECON 1301, 2301, 2302, GEOG 1302, 1303, PSYC 2301 2314 2316, 2319, SOCI 1301, 1306, 2336.

<sup>E</sup> Component Area Option: May choose from: ANTH 2101, 2301, 2302, 2346, 2351, ARAB 1411, 1412, ARTS 1301, 1303, 1304, ASTR 1303, 1304, 1403, 1404, BIOL 1308, 1309, 1322, 1406, 1407, (2301, 2302 - Restricted to Engineering, Science, and Health Science majors), CHEM 1305, 1405, 1411, 1412, CHIN 1411, 1412, COMM 1307, 2311, 2366, COSC 1436, DANC 2303, DRAM 1310, 2361, 2366, ECON 1301, 2301, 2302, EDUC 1300, ENGL 1301, 1302, 2311, 2322,

# Academic Degrees

2323, 2327, 2328, 2332, 2333, 2342, 2343, 2351, FREN 1411, 1412, GEOG 1301, 1302, 1303, 1305, 1345, 1347, 1403, 1404, GERM 1411, 1412, HIST 1301, 1302, 2301, 2311, 2312, 2321, 2322, 2327, 2328, 2381, HUMA 1301, 1305, 1311, 2319, 2323, JAPN 1411, 1412, KORE 1411, 1412, MATH 1314, 1316, 1324, 1325, 1332, 1342, 1350, 1351, 2318, 2320, 2412, 2413, 2414, 2415, MUSI 1306, 1310, PHED 1304, 1306, PHIL 1301, 1304, 2303, 2306, 2307, 2316, PHYS 1305, 1401, 1402, 2125, 2126, 2325, 2326, PSYC 2301, 2314, 2316, 2317, 2319, SOCI 1301, 1306, 2301, 2336, SPAN 1411, 1412, SPCH 1311, 1315, 1318, 1321, TECA 1354.

## Associate of Arts in Anthropology

Anthropology is the study of human variation over space and time. This allows us to study living cultures from around the world (Cultural Anthropology) as well as ancient ones (Archaeology). We also study human biological development and variation (Physical Anthropology). Anthropology is unique because it provides a holistic view of the human experience (both nature and nurture) and it prepares students to be successful in an increasingly interconnected global society.

### Required Academic Core

#### FIRST YEAR

##### First Semester

EDUC 1300	Learning Framework.....	3
ENGL 1301	English Composition I.....	3
HIST #3##	American History Elective.....	3
May choose from HIST 1301, 1302, 2301, 2327, 2328, 2381		

##### BA Transfer Specialization Choose

XXXX 1411	Beginning Foreign Language I.....	4
All foreign language courses must be in one language.		
May choose from: FREN 1411, 1412; GERM 2311, 2312; SPAN 1411, 1412, 2311, 2312, 2313, 2315		

##### BS Transfer Specialization Choose

ANTH 2346	General Anthropology.....	3
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##### Second Semester

ENGL 1302	English Composition II. OR	
ENGL 2311	Technical & Business Writing.....	3
HIST #3##	American History Elective.....	3
May choose from HIST 1301, 1302, 2301, 2327, 2328, 2381		
ANTH 2301	Physical Anthropology.....	3
ANTH 2101	Physical Anthropology Lab.....	1

#### BA Transfer Specialization

XXXX 1412	Beginning Foreign Language II.....	4
All foreign language courses must be in one language.		
May choose from: FREN 1411, 1412; GERM 2311, 2312; SPAN 1411, 1412, 2311, 2312, 2313, 2315		

#### BS Transfer Specialization

PSYC 2301	Introduction to Psychology.....	3
MATH #3##	Mathematics Elective.....	3
Choose: MATH 1314, MATH 1332, or MATH 1342		

#### SECOND YEAR

##### First Semester

XXXX #3##	Language, Philosophy & Culture.....	3
See HCC approved core list.		
GOVT 2305	Federal Government.....	3
ANTH 2351	Cultural Anthropology.....	3
BIOL #3##	Biology Elective OR	
Choose from: BIOL 1308, 1411 or 1413.		
CHEM #3##	Chemistry Elective.....	3
Choose from: CHEM 1305, 1405, or 1411.		

##### BA Transfer Specialization Choose

XXXX 2311	Intermediate Foreign Language I.....	3
All foreign language courses must be in one language.		
May choose from: FREN 1411, 1412; GERM 2311, 2312; SPAN 1411, 1412, 2311, 2312, 2313, 2315		

##### BS Transfer Specialization Choose

MATH #3##	Mathematics Elective.....	3
Choose: MATH 1314, MATH 1332, or MATH 1342.		

##### Second Semester

XXXX #3##	Creative Arts Elective.....	3
See HCC approved core list.		
GOVT 2306	Texas Government.....	3
SOCI 1301	Introduction to Sociology.....	3

##### BA Transfer Specialization Choose

XXXX 2312	Intermediate Foreign Language II.....	3
All foreign language courses must be in one language.		
May choose from: FREN 1411, 1412; GERM 2311, 2312; SPAN 1411, 1412, 2311, 2312, 2313, 2315		
ANTH 2302	Introduction to Archaeology OR	
ANTH 2346	General Anthropology.....	3

##### BS Transfer Specialization Choose

XXXX #3##	Approved Elective.....	3
Choose from: GEOG, HIST, ENGL LIT, PSYC or SOCI.		
Cannot use PSYC 2301 or SOCI as a Liberal Arts Elective. Cannot use ANTH courses for this plan.		
ANTH 2302	Introduction to Archaeology.....	3

Capstone\*\*

The student must earn a minimum 2.0 GPA on sixty (60) total college-level

# Academic Degrees

semester hours, must complete a minimum eighteen (18) hours of coursework in the Houston

Community College, must complete TSI requirement unless exempt, and have an application to graduate on file in the Registrar's office in order to graduate.

## Associate of Arts in Business

### Required Academic Core

#### FIRST YEAR

##### First Semester

EDUC	1300	Learning Framework.....	3
BCIS	1405	Business Computer Applications .....	3
ENGL	1301	Composition I.....	3
ECON	2301	Principles of Macroeconomics .....	3
XXXX	#3##	Life & Physical Sciences Elective <sup>A</sup> .....	3
<b>Semester Total</b>			<b>15</b>

##### Second Semester

ACCT	2301	Principles of Accounting I.....	3
ENGL	1302	Composition II.....	3
GOVT	2305	Federal Government.....	3
HIST	#3##	American History Elective <sup>C</sup> .....	3
MATH	1324	Mathematics for Business & Social Sciences .....	3
<b>Semester Total</b>			<b>15</b>

#### SECOND YEAR

##### First Semester

ACCT	2302	Principles of Accounting II.....	3
ECON	2302	Principles of Microeconomics .....	3
HIST	#3##	American History Elective <sup>C</sup> .....	3
MATH	1325	Calculus for Business & Social Sciences.....	3
PHIL	2306	Introduction to Ethics.....	3
<b>Semester Total</b>			<b>15</b>

##### Second Semester

GOVT	2306	Texas Government.....	3
PSYC	2301	Introduction to Psychology OR	
SOCI	1301	Introduction to Sociology.....	3
SPCH	1315	Public Speaking OR	
SPCH	1321	Business and Professional Communication.....	3
XXXX	#3##	Creative Arts Elective <sup>B</sup> .....	3
XXXX	#3##	Life & Physical Sciences Elective <sup>A</sup> .....	3
<b>Semester Total</b>			<b>15</b>
<b>Program Total</b>			<b>60</b>

<sup>A</sup> Life & Physical Sciences: May choose from: ANTH 2301, ASTR 1303, 1304, 1403, 1404, BIOL 1308, 1309, 1322, 1406, 1407, (2301, 2302 Restricted to Engineering, Science, and Health Science Majors), CHEM 1305, 1405, 1411, 1412, GEOG 1301, GEOL 1305, 1345, 1347, 1403, 1404, PHYS 1305, 1401, 1402, 2325, 2326

<sup>B</sup> Creative Arts: May choose: ARTS 1301, 1303, 1304, COMM 2366, DANC 2303, DRAM 1310, 2361, 2366, HUMA 1301, 1311, MUSI 1306, 1310.

<sup>C</sup> American History: May Choose: HIST 1301, 1302, 2301, 2327, 2328, 2381.

The student must earn a minimum 2.0 GPA on sixty (60) total college-level semester hours, must complete a minimum eighteen (18) hours of coursework in the Houston

Community College, must complete TSI requirement unless exempt, and have an application to graduate on file in the Registrar's office in order to graduate.

## Associate of Arts in Communication

Excellent communication skills can lead to a multitude of job options. The ability to express yourself is a necessary skill, whether you are writing a resume, interviewing for a job, drafting a report, or speaking to a supervisor or a colleague. Improving your communication skills will also open doors to new careers such as Advertising, Public Relations, Journalism and Radio & Television Broadcasting, among others. The Associate of Arts in Communications is intended primarily for students seeking to transfer to a four-year university to obtain a Bachelor's degree in Communication. These courses will help prepare you for jobs requiring highly developed writing skills and speaking properly with clarity. Specialization focus areas within this program include Advertising / Public Relations, Journalism / Mass Communication (Media), Radio & Television Broadcasting, and Speech Communication.

### Concentrations:

**A. Advertising/Public Relations <sup>A</sup>**

**B. Journalism/Mass Communication <sup>B</sup>**

**C. Radio/Television Broadcasting <sup>C</sup>**

**D. Speech Communication <sup>D</sup>**

### Suggested 2 year plan

#### FIRST YEAR

##### First Semester - Fall

EDUC	1300	Learning Framework.....	3
ENGL	1301	Composition I.....	3
HIST	#3##	American History Elective <sup>I</sup> .....	3
XXXX	1411	Beginning Foreign Language I.....	4
MATH	1332	Contemporary Mathematics OR	
MATH	1342	Elementary Statistical Methods.....	3
<b>Semester Total</b>			<b>16</b>

# Academic Degrees

## Second Semester - Spring

ENGL 1302	Composition II OR	
ENGL 2311	Technical and Business Writing .....	3
HIST #3##	American History Elective I .....	3
XXXX 1412	Beginning Foreign Language II .....	4
XXXX #3##	Life & Physical Sciences Elective <sup>E</sup> .....	3
XXXX #3##	Creative Arts Elective <sup>F</sup> .....	3
<b>Semester Total</b>		<b>16</b>

## SECOND YEAR

### First Semester - Fall

XXXX #3##	Language, Philosophy, & Culture Elective .....	3
GOVT 2305	Federal Government .....	3
LANG 2311	Intermediate Foreign Language <sup>I</sup> .....	3
XXXX #3##	Life & Physical Sciences Elective <sup>E</sup> .....	3
XXXX #3##	Social & Behavioral Sciences Elective <sup>H</sup> .....	3
<b>Semester Total</b>		<b>15</b>

### Second Semester - Spring

COMM 1307	Introduction to Mass Communication <sup>A</sup> .....	3
COMM 1307	Introduction to Mass Communication <sup>B</sup> .....	3
COMM 1307	Introduction to Mass Communication <sup>C</sup> .....	3
SPCH 1311	Introduction to Speech Communication <sup>D</sup> .....	3
COMM 2305	Editing and Layout <sup>A</sup> .....	3
COMM 2305	Editing and Layout <sup>B</sup> .....	3
COMM 1335	Introduction to Electronic Media <sup>C</sup> .....	3
SPCH 1315	Public Speaking <sup>D</sup> .....	3
COMM 2327	Introduction to Advertising <sup>A</sup> .....	3
COMM 2311	Media Writing <sup>B</sup> .....	3
COMM 2331	Radio/Television Announcing <sup>C</sup> OR	
COMM 1336	Video Production I <sup>C</sup> .....	3
SPCH 1321	Business and Professional Communication <sup>D</sup> .....	3
COMM 2330	Introduction to Public Relations <sup>A</sup> .....	3
COMM 2315	News Reporting <sup>B</sup> .....	3
COMM 2332	Radio/Television News <sup>C</sup> OR	
COMM 1337	Video Production II <sup>C</sup> .....	3
SPCH #3##	Speech Elective <sup>D</sup> .....	3
<b>Semester Total</b>		<b>15</b>
<b>Program Total</b>		<b>62</b>

<sup>D</sup> Speech Elective (choose one) SPCH 1146,, 1318, 1342, 2333, 2335, 2341.

<sup>E</sup> Life & Physical Sciences  
Choose from: ANTH 2301; ASTR 1303, 1304, 1403, 1404; BIOL 1308, 1309,1322, 1406, 1407, (2301, 2302 Restricted to Engineering, Science, and Health Science Majors); CHEM 1305,1405,1411,1412; GEOG 1301; GEOL 1305,1345,1347,1403,1404; PHYS 1305, 1401, 1402, 2325, 2326.

<sup>F</sup> Creative Arts (choose one)  
ARTS 1301, 1303, 1304; COMM 2366; DANC 2303; DRAM 1310, 2361, 2366; HUMA 1301, 1311; MUSI, 1306,1310.

<sup>G</sup> Language, Philosophy, & Culture (choose from)  
ENGL 2322, 2323, 2327, 2328, 2332, 2333, 2342, 2343, 2351, HIST 2311, 2312, 2321, 2322, HUMA 1305, 2319, 2323, PHIL 1301, 1304, 2306, 2307, 2316.

<sup>H</sup> Social & Behavioral Sciences (choose one)  
ANTH 2346, 2351, ECON 2301, 2302, GEOG 1302, 1303, PSYC 2301 2314 2316, 2319, SOCI 1301, 1306, 2336, TECA 1354.

<sup>I</sup> American History Elective (choose one)  
HIST 1301, 1302, 2301, 2327, 2328, 2381.

The student must earn a minimum 2.0 GPA on sixty (60) total college-level semester hours, must complete a minimum eighteen (18) hours of coursework in the Houston Community College, must complete TSI requirement unless exempt, and have an application to graduate on file in the Registrar's office in order to graduate.

## Associate of Arts in Computer Information Systems

Associate of Science - Computer Science degree is intended for students planning on transferring to a senior college or university to receive a baccalaureate degree. The degree accomplishes the completion of seven of the nine Foundational Component Area (FCA) and all of the Computer Science Field of Study (FOS) Curriculum as outlined by the Texas Higher Education Coordinating Board (THECB).

### Suggested 2 year plan

#### FIRST YEAR

##### First Semester - Fall

EDUC 1300	Learning Framework .....	3
ENGL 1301	Composition I .....	3
MATH 1324	Mathematics for Business & Social Sciences .....	3
BCIS 1405	Business Computer Applications OR	
BCIS 1305	Business Computer Applications .....	3
HIST #3##	American History Elective <sup>D</sup> .....	3
<b>Semester Total</b>		<b>15</b>

##### Second Semester - Spring

ENGL 1302	Composition II .....	3
MATH 1325	Calculus for Business & Social Sciences .....	3
COSC 1436	Programming Fundamentals I .....	4
XXXX #3##	Life & Physical Sciences Elective <sup>A</sup> .....	3
HIST #3##	American History Elective <sup>D</sup> .....	3
<b>Semester Total</b>		<b>16</b>

## SECOND YEAR

### First Semester - Fall

MATH 1342	Elementary Statistical Methods .....	3
COSC 1437	Programming Fundamentals II .....	4
ECON 2301	Principles of Macroeconomics OR	
ECON 2302	Principles of Microeconomics .....	3
GOVT 2305	Federal Government .....	3
XXXX #3##	Creative Arts Elective <sup>B</sup> .....	3
<b>Semester Total</b>		<b>16</b>

# Academic Degrees

## First Semester - Fall

ACCT 2301	Principles of Financial Accounting .....	3
COSC 2425	Computer Organization.....	4
XXXX #3##	Language, Philosophy, & Culture Elective *** <sup>C</sup> .....	3
GOVT 2306	Texas Government.....	3
<b>Semester Total</b>		<b>13</b>
<b>Program Total</b>		<b>60</b>

*\*Even though you only need 60 credit hours to graduate, students might choose to complete a 3 credit hour course that satisfies the Creative Arts FCA requirement rather than a 2 hour elective.*

*\*\* If you have not already taken the Creative Arts FCA course in conjunction with the "Elective" credit; the Language, Philosophy, & Culture FCS course may be substituted with a Creative Arts FCA course.*

<sup>A</sup> Life & Physical Science Elective (lab optional) 3 hrs

ANTH 2301, ASTR 1303, 1304, 1403, 1404, BIOL 1308, 1309, 1322, 1406, 1407, (2301, 2302 Restricted to Engineering, Science, and Health Science Majors), CHEM 1305, 1405, 1411, 1412, GEOG 1301, GEOL 1305, 1345, 1347, 1403, 1404, PHYS 1305, 1401, 1402, 2325, 2326

<sup>B</sup> Creative Arts Elective (choose one) 3 hrs

ARTS 1301, 1303, 1304; COMM 2366; DANC 2303; DRAM 1310, 2361, 2366; HUMA 1301, 1311; MUSI 1306, 1310.

<sup>C</sup> Language, Philosophy, & Culture Elective (choose one) 3 hrs

ENGL 2322, 2323, 2327, 2328, 2332, 2333, 2342, 2343, 2351; HIST 2311, 2312, 2321, 2322; HUMA 1305, 2319; 2323; PHIL 1301, 1304, 2306, 2307, 2316.

<sup>D</sup> American History (choose two) 6 hrs

Choose one from HIST 1301, 1302, 2301, 2327, 2328, 2381

## Associate of Arts in Drama

The Drama Program at Houston Community College provides excellent classroom instruction in theatre arts, develops intensive individualized learning and artistic relationships with students and professional artistic staff, and creates performance opportunities (on stage and in all technical and design areas) for the widest number of interested students. The Drama Program also identifies and selects play and productions that reflect the ethnic and social diversity of our community while challenging our student actors and entertaining and educating our audience members. Additionally, the Drama Program continues to develop collaborative partnerships with local theaters and universities to promote student employment and successful transfers to four year schools.

The study of Drama provides students with wide-reaching skills in communication, organization and efficacy. Students with a degree in Drama have the ability to pursue careers as performers, playwrights, directors, producers, stage managers, dramaturgs, theatre educators, drama

therapists, and a number of arts management positions.

The number of working actors, directors, playwrights, and other theatrical practitioners in the Houston area is over 1600 based on 2015 Bureau of Labor statistics.

Students who complete the Associates of Arts in Drama will find that course transfer directly and fulfill requirements of their ultimate degree plan at a university or college attended.

## Program Outcomes

A student who completes the Associates of Arts in Drama degree plan will be able to:

- View theatrical works of art and provide critical analysis of its effectiveness
- Identify technical theatre components, including costumes, lights, sets, props, sounds, and makeup
- Analyze the creative roles of theatrical production and experience, including the actor, audience, playwright, and the director.
- Apply theatrical techniques as part of a theatrical event.

## Suggested course of study:

### FIRST YEAR

#### First Semester

EDUC 1300	Learning Framework.....	3
ENGL 1301	Composition I .....	3
HIST #3##	American History Elective (May choose from HIST 1301, 1302, 2301, 2327, 2328, 2381).....	3
MATH 1332	Contemporaray Mathematics OR	
MATH 1342	Elementary Statistical Methods.....	3
DRAM 1310	Introduction to Theatre.....	3
<b>Semester Total</b>		<b>15</b>

#### Second Semester - Spring

ENGL 1302	Composition II.....	3
HIST #3##	American History Elective (May choose from HIST 1301, 1302, 2301, 2327, 2328, 2381).....	3
DRAM 1351	Acting I.....	3
DRAM 1120	Theatre Practicum I.....	1
XXXX #3##	Social & Behavioral Sciences Elective <sup>B</sup> .....	3
<b>Semester Total</b>		<b>13</b>

# Academic Degrees

## SECOND YEAR

### First Semester - Fall

XXXX #3##	Language, Philosophy, & Culture Elective <sup>C</sup>	3
XXXX #3##	Life & Physical Sciences Elective <sup>A</sup>	3
GOVT 2305	Federal Government	3
DRAM 1322	Stage Movement	3
DRAM 1121	Theatre Practicum I	1
DRAM 1330	Theatre Practice I	3

**Semester Total 16**

### Second Semester - Spring

XXXX #3##	Life & Physical Sciences Elective <sup>A</sup>	3
GOVT 2306	Texas Government	3
DRAM 1352	Acting II	3
DRAM 1341	Makeup	3
DRAM 2120	Theatre Practicum III	1
DRAM 2361	History of the Theatre I	3

**Semester Total 16**

**Program Total 60**

The student must earn a minimum 2.0 GPA on sixty (60) total college-level semester hours, must complete a minimum eighteen (18) hours of coursework at Houston Community College, must complete TSI requirement unless exempt, and must have an application to graduate on file in the Registrar's office in order to graduate.

<sup>A</sup> Life and Physical Sciences - Choose from: ANTH 2301, ASTR 1303, 1304, 1403, 1404, BIOL 1308, 1309, 1322, 1406, 1407, (2301, 2302 - Restricted to Engineering, Science, and Health Science majors), CHEM 1305, 1405, 1411, 1412, GEOG 1301, GEOL 1305, 1345, 1347, 1403, 1404, PHYS 1305, 1401, 1402, 2325, 2326.

<sup>B</sup> Social & Behavioral Sciences: - Choose from: ANTH 2346, 2351, ECON 1301, 2301, 2302, GEOG 1302, 1303, PSYC 2301, SOCI 1301, 1306, 2336, TECA 1354.

<sup>C</sup> Language, Philosophy, & Culture - Choose from: ENGL 2322, 2323, 2327, 2328, 2332, 2333, 2342, 2343, 2351, HIST 2311, 2312, 2321, 2322, HUMA 1305, 2319, 2323, PHIL 1301, 1304, 2306, 2307, 2316.

## Associate of Arts in English

The Houston Community College English Program offers a wide range of courses, including Composition I and II, dedicated to teaching college level writing, Literature courses on all genres and periods, Creative Writing courses that explore multiple genres, and Technical Writing courses that examine writing in technological and business fields. While the emphasis is on written communication, students learn about visual, oral, and aural communication-necessary skills in the 21st Century. Sophomore level English courses are shaped in various intriguing and creative ways to introduce students to a love of reading, to the study of other cultures and ways of thinking, to political, social, and philosophical movements, and ultimately toward a recognition of Self in this complex world.

The Associate of Arts is intended primarily for students planning on transferring to a senior college or university to receive a baccalaureate degree. Students may choose between two English specializations: Creative Writing or Literature. Many English majors choose education and pursue a teaching career in public schools or post-secondary education. However, graduates in literature and writing have successful careers in law, publishing, politics, technical writing, management, advertising, college administration, and electronic journalism. Students who earn an AA in Creative Writing or Literature will be prepared to enter any career or academic program that demands the essential skills of critical thinking, analysis, and writing. Additionally, these degree earners gain invaluable insight into diverse cultural viewpoints, time periods, and literary arts from disparate cultures.

### Program Outcomes

Students will be able to:

- Write in appropriate genres using varied rhetorical strategies.
- Write in appropriate genres to explain and evaluate rhetorical and/or literary strategies employed in argument, persuasion, and various genres.
- Analyze various genres of writing for form, method, meaning, and interpretation.
- Employ research in academic writing styles and use appropriate documentation style.
- Communicate ideas effectively through discussion.

### Required Academic Core

#### FIRST YEAR

##### First Semester

EDUC 1300	Learning Framework <sup>A</sup>	3
ENGL 1301	Composition I	3
HIST #3##	American History Elective <sup>B</sup>	3
XXXX #3##	Life & Physical Sciences Elective <sup>C</sup>	3
MATH #3##	Mathematics Elective <sup>D</sup>	3

**Semester Total 15**

##### Second Semester

ENGL 1302	Composition II	3
HIST #3##	American History Elective <sup>B</sup>	3
XXXX #3##	Life & Physical Sciences Elective <sup>C</sup>	3
XXXX #3##	Social & Behavioral Sciences Elective <sup>E</sup>	3
XXXX #3##	Liberal Arts Elective <sup>F</sup>	3

**Semester Total 15**

# Academic Degrees

## SECOND YEAR

### First Semester

ENGL 2342	Forms of Literature I OR	
ENGL 2343	Forms of Literature II.....	3
ENGL 23##	English Literature/Creative Writing Elective <sup>G</sup> .....	3
ENGL 23##	English Literature/Creative Writing Elective <sup>G</sup> .....	3
GOVT 2305	Federal Government.....	3
LANG 1411	Beginning Foreign Language I <sup>H</sup> .....	4

**Semester Total 16**

### Second Semester

ENGL 23##	English Literature/Creative Writing Elective <sup>G</sup> .....	3
LANG 1412	Beginning Foreign Language II <sup>H</sup> .....	4
GOVT 2306	Texas Government.....	3
XXXX #3##	Creative Arts Elective <sup>I</sup> .....	3
XXXX #1##	Transferable Elective <sup>J</sup> .....	1

**Semester Total 14**

**Program Total 60**

<sup>A</sup> *Student Success Course: Students who have completed more than 12 hours upon enrollment at HCC may substitute a three-hour transferrable elective for EDUC 1300 in order to meet the 60-hour requirement for associate degrees.*

<sup>B</sup> *American History: Choose from: HIST 1301, 1302, 2301, 2327, 2328, or 2381.*

<sup>C</sup> *Life & Physical Sciences: Choose from: ANTH 2301, ASTR 1303, 1304, 1404, BIOL 1308, 1309, 1322, 1406, 1407, (2301 and 2302 - restricted to Engineering, Science, and Health Sciences majors), CHEM 1305, 1405, 1411, 1412, GEOG 1301, GEOL 1305, 1345, 1347, 1403, 1404, PHYS 1305, 1401, 1402, 2325, or 2326. Students who successfully complete a four-hour course should consult with an advisor to apply the additional hour toward the one-hour transferrable elective requirement.*

<sup>D</sup> *Mathematics: Recommended: MATH 1332 or 1342. Students may also choose any other Mathematics course included in the HCC Core Curriculum.*

<sup>E</sup> *Social & Behavioral Sciences: Choose from: ANTH 2346, 2351, ECON 1301, 2301, 2302, GEOG 1302, 1303, PSYC 2301, 2314, 2316, 2319, SOCI 1301, 1306, 2336, or TECA 1354.*

<sup>F</sup> *Liberal Arts: Choose from: ANTH (not 2301, 2101), GEOG (not 1301), HIST, HUMA, PHIL (not 2303), PSYC (not 2317), SOCI, or TECA 1354.*

<sup>G</sup> *English Literature/Creative Writing: Choose from: ENGL 2307, 2322, 2323, 2327, 2328, 2332, 2333, 2342, 2343, 2351, or 2389.*

<sup>H</sup> *Foreign Language: Both foreign language courses must be in the same language. Upon transfer, students will be required to achieve intermediate proficiency in the same foreign language. Students should consult with an academic advisor or transfer specialist to ensure that the transfer institution offers a two-semester sequence of the same foreign language at the intermediate level before selecting any foreign language other than French or Spanish. Recommended for those pursuing additional foreign language courses at HCC: FREN 1411, 1412, SPAN 1411, 1412. Students may also choose from: ARAB 1411, 1412, CHIN 1411, 1412, GERM 1411, 1412, JAPN 1411, 1412, or KORE 1411, 1412. Students may fulfill the foreign language requirements for this program (8 hours) via CLEP, Advanced Placement (AP), or International Baccalaureate (IB) credit options. Students wishing to substitute foreign language courses at the intermediate level should consult with an advisor about course substitution policies and procedures.*

<sup>I</sup> *Creative Arts: Recommended: ARTS 1301, 1303, 1304, HUMA 1301, 1311. Students may also choose: COMM 2366, DANC 2303, DRAM 1310, 2361, 2366, MUSI 1306, or 1310.*

<sup>J</sup> *Transferrable Elective: Students may choose any one-hour course included in the Academic Course Guide Manual. Students who consult with an academic advisor and take SPAN 2313 and 2315 (Spanish for Native/Heritage Speakers I and II) in lieu of the beginning foreign language sequence will need to take a three-hour course to fulfill the 60-hour degree requirement. Taking the four-hour version (or the lecture/laboratory combination) for one of the Life & Physical Sciences electives will fulfill this requirement.*

*Community College, must complete TSI requirement unless exempt, and have an application to graduate on file in the Registrar's office in order to graduate.*

## Associate of Arts Government/Pre-Law

The government curriculum aims to educate students by emphasizing broad preparation, diversity and flexibility for a lifetime of learning. With an education in political science, students obtain the vital intellectual skills that qualify them to be employed in a great number of occupations and be informed and active citizens. With this foundation, our students possess the tools to educate themselves continually, throughout their lives.

The Associate of Arts degree in Government / Pre-Law is intended primarily for students planning on transferring to a senior college or university to receive a baccalaureate degree in Political Science or other Liberal Arts major with the intention of applying to Law School. This degree provides a sequential course of study which prepares students for transfer to four-year institutions in career fields which emphasize diverse cultures and global issues as well as critical thinking and research skills.

All courses offered by the Government Department at Houston Community College will transfer to four-year universities. The two basic Government courses, 2305 and 2306, are required for all bachelor's degrees issued by public universities in the state of Texas. Some students may have credit from Government 2301 or 2302 (old course numbers). No one with the old course numbers will lose any credit.

Since all bachelor's degrees issued by public universities in Texas generally require both Government 2305 and 2306, a student should complete both of these courses at Houston Community College.

*It is important to note that the courses are not sequential, which means that you do not have to take Government 2305 before you take Government 2306. Both courses may be taken in the same semester if the student wishes to do so.*

### Program Outcomes

- Identify the structure, functions and nature of the institutions of the American national government. (2305)

# Academic Degrees

- Identify the structure, functions and nature of the institutions of government in Texas. (2306)
- Understand and describe the development, purpose and attributes of the US Constitution (2305)
- Understand and describe the development, purpose and attributes of the Texas Constitution (2306)
- Identify the policy making process and comprehend the outcomes of foreign and domestic policy in the United States. (2305)
- Identify the policy making process and comprehend the outcomes of state and local policy in Texas. (2306)
- Understand how political values and ideas are developed and expressed and the means through which one may engage in the political system. (2305/2306)
- Comprehend how media, interest groups, parties and the structure of the political system influence political participation. (2305)
- Comprehend how interest groups, parties and the structure of the political system influence political participation. (2306)

## Required Academic Core

### FIRST YEAR

#### First Semester

EDUC 1300	Learning Framework.....	3
ENGL 1301	Composition I.....	3
HIST 1301	United States History I.....	3
XXXX 1411	Beginning Foreign Language I <sup>A</sup> .....	4
MATH 1332	Contemporary Mathematics OR	
MATH 1342	Elementary Statistical Methods.....	3
<b>Semester Total</b>		<b>16</b>

#### Second Semester

ENGL 1302	English Composition II OR	
ENGL 2311	Technical and Business Writing.....	3
HIST 1302	United States History II.....	3
XXXX #3##	Social & Behavioral Sciences Elective <sup>B</sup> .....	3
XXXX 1412	Beginning Foreign Language II.....	4
XXXX #3##	Liberal Arts Elective <sup>C</sup> .....	3
<b>Semester Total</b>		<b>15</b>

### SECOND YEAR

#### First Semester

		<b>Credits</b>
XXXX #3##	Language, Philosophy, & Culture <sup>D</sup> .....	3
XXXX #3##	Liberal Arts Elective <sup>C</sup> .....	3
XXXX 2311	Intermediate Foreign Language I <sup>A</sup> .....	3
GOVT 2305	Federal Government.....	3
XXXX #3##	Life & Physical Sciences Elective.....	3
<b>Semester Total</b>		<b>15</b>

#### Second Semester

GOVT 2304	Introduction to Political Science.....	3
XXXX #3##	Life & Physical Sciences Elective.....	3
XXXX 2312	Intermediate Foreign Language II <sup>A</sup> .....	3
GOVT 2306	Texas Government.....	3
XXXX #3##	Creative Arts Elective <sup>F</sup> .....	3
<b>Semester Total</b>		<b>15</b>
<b>Program Total</b>		<b>62</b>

<sup>A</sup> Foreign Language All foreign language courses must be in one language. (May choose from): FREN 1411, 1412; SPAN 1411, 1412, 2311, 2312, 2313, 2315. May test out of freshman-level foreign language through CLEP/AP credit.

1. Foreign Language I: (May choose): FREN 1411, SPAN 1411.
2. Foreign Language II: (May choose): FREN 1412, SPAN 1412.
3. Foreign Language III: (May choose): FREN 2311, SPAN 2311 or 2313.
4. Foreign Language IV: (May choose): FREN 2312, SPAN 2312 or 2315.

<sup>B</sup> Social & Behavioral Sciences (Recommended to choose from):

ANTH 2346, 2351; ECON 1301, 2301, 2302; GEOG 1302, 1303; PSYC 2301, 2314, 2316, 2319; SOCI 1301, 1306, 2336; TECA 1354

<sup>C</sup> Liberal Arts: (Choose Two):

1. Choose from HCC's Social & Behavioral Sciences Core List: ANTH 2346, 2351, ECON 1301, 2301, 2302, GEOG 1302, 1303, PSYC 2301 2314 2316, 2319, SOCI 1301, 1306, 2336, TECA 1354.
2. Choose from HCC's Creative Arts Core List: ARTS 1301, 1303, 1304, COMM 2366, DANC 2303, DRAM 1310, 2361, 2366, HUMA 1301, 1311, MUSI 1306, 1310.
3. Choose from HCC's Language, Philosophy, & Culture Core List: ENGL 2322, 2323, 2327, 2328, 2332, 2333, 2342, 2343, 2351, HIST 2311, 2312, 2321, 2322, HUMA 1305, 2319, 2323, PHIL 1301, 1304, 2306, 2307, 2316.

<sup>D</sup> Language, Philosophy & Culture (Recommended to choose from):

ENGL 2322, 2323, 2327, 2328, 2332, 2333, 2342, 2343, 2351, HIST 2311, 2312, 2321, 2322, HUMA 1305, 2319, 2323, PHIL 1301, 1304, 2306, 2307, 2316.

<sup>E</sup> Life & Physical Sciences: (Recommended to choose from): ANTH 2301, BIOL 1308, GEOG 1301, or GEOL 1305.

<sup>F</sup> Creative Arts (Recommended to choose from): HUMA 1301; ARTS 1301, 1303, or 1304.

The student must earn a minimum 2.0 GPA on sixty (60) total college-level semester hours, must complete a minimum eighteen (18) hours of coursework in the Houston

Community College, must complete TSI requirement unless exempt, and have an application to graduate on file in the Registrar's office in order to graduate.

# Academic Degrees

## Associate of Arts in Humanities/Interdisciplinary Studies

The Humanities encompasses the creative fields such as art, literature, and music as well as academic fields such as philosophy, history, sociology, anthropology, law, and literary studies. Courses in the Humanities take an interdisciplinary approach to the study of culture, viewing creative expression and the arts as deeply interwoven with history, politics, civil society, religion, and even science and technology. The HCC Humanities and Interdisciplinary Cultural Studies Program offers students the opportunity to explore, question, and challenge the interwoven threads that form the tapestry of human experience. Recognizing and interrogating the connections among discrete aspects of the human condition—such as the relationship between art and science or literature and politics—builds the critical thinking, communication, problem-solving, and social responsibility skills necessary for success in 21st century civil society.

The Humanities and Interdisciplinary Cultural Studies Program takes an interdisciplinary approach to the study of culture, viewing human artistic and intellectual creation as deeply interwoven with history, politics, civil society, and religion, as well as science and technology. Through study across disciplines, students explore, question, and productively engage the interwoven threads that form the tapestry of human experience, thus building the critical thinking, communication, problem-solving, and social responsibility skills necessary for success in 21st century civil society.

The Associate in Arts is intended primarily for students planning on transferring to a senior college or university to receive a baccalaureate degree. Any student who majors in Humanities and Interdisciplinary Cultural Studies will select from one of the following transfer specializations: Mexican American/Latino Studies, Africana/African American Studies, Women and Gender Studies, and Global Studies. Students pursuing other academic or professional degrees can also increase their professional marketability with a 12 credit hour academic institutional certificate in one of these area specializations.

### Program Outcomes

#### Students will:

- Recognize a variety of works in the arts and humanities.

- Evaluate how those works express individual and human values within a historical and social context.
- Develop an informed subjective response to works in the arts and humanities.
- Critique works in the arts and humanities using systematic methods.

### Transfer Specializations: Choose One

1. Mexican-American Studies
2. Africana/African American Studies
3. Global Studies
4. Women & Gender Studies

### Required Academic Core

#### FIRST YEAR

##### First Semester

EDUC	1300	Learning Framework *	3
ENGL	1301	Composition I	3
HIST	1301	United States History I	3
XXXX	1411	Foreign Language <sup>A</sup>	3
SPAN	1411	Beginning Spanish I OR	
SPAN	2313	Spanish for Native Speakers I	4
MATH	1332	Contemporary Mathematics OR	
MATH	1342	Elementary Statistical Methods	3
<b>Semester Total</b>			<b>16</b>

##### Second Semester

ENGL	1302	English Composition II	3
XXXX	#3##	Life & Physical Sciences Elective <sup>B</sup>	3

#### For: Mexican-American Studies 16

SPAN	1412	Beginning Spanish II OR	
SPAN	2313	Spanish for Native Speakers II	4
HIST	2327	Mexican-American History I OR	
HIST	2328	Mexican-American History II	3
HUMA	1311	Mexican-American Fine Art Appreciation	3

#### For: Africana/African American Studies 16

XXXX	1412	Beginning Foreign Language II <sup>A</sup>	4
HIST	2381	African-American History	3
ARTS	1304	Art History II	3

#### For: Global Studies 16

XXXX	1412	Beginning Foreign Language II <sup>A</sup>	4
HIST	1302	United States History II	3
HUMA	1301	Introduction to Humanities	3

#### For: Women & Gender Studies 16

XXXX	1412	Beginning Foreign Language II <sup>A</sup>	4
HIST	1302	United States History II	3
ARTS	1304	Art History II	3

**Semester Total 16**

# Academic Degrees

## SECOND YEAR

### First Semester

GOVT 2305	Federal Government .....	3
XXXX 2311	Intermediate Foreign Language I <sup>A</sup> .....	3

**For: Mexican-American Studies 15**

XXXX #3##	Life & Physical Sciences Elective <sup>B</sup> .....	3
ENGL 2351	Mexican - American Literature .....	3
ANTH 2351	Cultural Anthropology.....	3

**For: Africana/African American Studies 15**

XXXX #3##	Life & Physical Sciences Elective <sup>B</sup> .....	3
ENGL 2328	American Literature II OR	
ENGL 2343	Forms of Literature II.....	3
SOCI 1306	Social Problems.....	3

**For: Global Studies 15**

ENGL 2332	World Literature I OR	
ENGL 2333	World Literature II .....	3
GEOG 1302	Cultural Geography.....	3
GEOG 1301	Physical Geography.....	3

**For: Women & Gender Studies 15**

XXXX #3##	Life & Physical Sciences Elective <sup>B</sup> .....	3
ENGL 2343	Forms of Literature II OR	
HUMA 2319	American Minority Studies .....	3
SOCI 1306	Social Problems.....	3

**Semester Total 15**

### Second Semester

GOVT 2306	Texas Government.....	3
XXXX 2312	Intermediate Foreign Language I <sup>A</sup> .....	3

**For: Mexican-American Studies 15**

HUMA 1305	Introduction to Mexican-American Studies .....	3
HUMA 2319	American Minority Studies .....	3
HUMA 2323	World Cultures OR	
GOVT 2311	Mexican-American Politics.....	3

**For: Africana/African American Studies 15**

HUMA 2323	World Cultures .....	3
SOCI 2319	Minority Studies I .....	3
HUMA 2319	American Minority Studies .....	3

**For: Global Studies 15**

ANTH 2351	Cultural Anthropology.....	3
HIST 2322	World Civilizations II.....	3
PHIL 1304	Introduction to World Religions OR	
HUMA 2323	World Cultures .....	3

**For: Women & Gender Studies 15**

PSYC 2306	Human Sexuality.....	3
SOCI 2301	Marriage and the Family .....	3
HUMA 2319	American Minority Studies .....	3

**Semester Total 15**

**Program Total 62**

The student must earn a minimum 2.0 GPA on sixty (60) total college-level semester hours, must complete a minimum eighteen (18) hours of coursework in the Houston Community College, must complete TSI requirement unless exempt, and have an application to graduate on file in the Registrar's office in order to graduate.

\* Student Success Course

<sup>A</sup> Foreign Language: All foreign language courses must be in one language. May choose: FREN 1411, 1412, 2311, 2312; SPAN 1411, 1412, 2311, 2312, 2313, 2315.

<sup>B</sup> Life & Physical Sciences: May choose from: ANTH 2301, ASTR 1303, 1304, 1403, 1404, BIOL 1308, 1309, 1322, 1406, 1407, (2301, 2302 Restricted to Engineering, Science, and Health Science Majors); CHEM 1305, 1405, 1411, 1412, GEOG 1301, GEOL 1305, 1345, 1347, 1403, 1404, PHYS 1305, 1401, 1402, 2325, 2326.

## Humanities/Interdisciplinary Studies Academic Institutional Certificates

### Mexican American/Latino Studies Certificate

The Mexican American/Latino Studies Certificate is a 12 semester credit hour academic certificate designed to help you understand Mexican American/Latino culture from different perspectives. It provides a unique foundation for various majors and careers, including elementary education, social and behavioral sciences, criminal justice, and many others. Additionally, for those pursuing degrees or certificates in various workforce and applied science fields, the Mexican American/Latino Studies certificate enhances your familiarity and understanding of diverse cultures in preparation for employment in an increasingly multi-cultural region. (All courses are core curriculum courses and will transfer as core to all Texas public universities)

#### Required Foundation Course 1 (choose one course from the following) – 3 sch

HUMA 1305	Introduction to Mexican-American Studies OR	
ENGL 2351	Mexican-American Literature .....	3

\* These courses fulfill the Language, Philosophy, and Culture requirement

#### Required Foundation Course 2 – 3 sch

HIST 2328	Mexican-American History II .....	3
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\* This course fulfills 3 sch of the American History requirement

#### Choose two courses from the following categories – 6 sch

##### Creative Arts

HUMA 1311	Mexican-American Fine Art Appreciation	
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##### Government/Political Science

GOVT 2311	Mexican-American Politics	
<i>(pending approval in the core)</i>		

##### Component Area Option

HUMA 2323	World Cultures ( <i>Emphasis on Mesoamerica</i> )	
SPAN 1411	Beginning Spanish I OR	
SPAN 1412	Beginning Spanish II	

**Certificate Total 12**

# Academic Degrees

## Africana/African American Studies Certificate

The Africana/African American Studies Certificates is a 12 semester hour certificate program designed to help students understand Americana/African American culture and experience from various perspectives and viewpoints. It affords students the opportunity to examine “Blacks in the Diaspora”, and understand the diversity and complexities of these unique people. Upon graduation, students will be prepared for the following career and education choices: college/university transfer, majors such as education and liberal arts, the social and natural sciences, criminal justice, and the visual and performing arts. Additionally, for those pursuing degrees or certificates in various workforce and applied science fields, the Africana/African American Studies certificate enhances your familiarity and understanding of diverse cultures in preparation for employment in an increasingly multi-cultural region. *(All courses are core curriculum courses and will transfer as core to all Texas public universities.)*

### Foundation Courses (choose both) – 6 sch

ENGL 1302	Composition II.....	3
	<i>(Emphasis on Africana/African American Studies)</i>	
	<i>* Fulfills 3 sch of the Communication requirement</i>	
HIST 2381	African-American History.....	3
	<i>* Fulfills 3 sch of the American History requirement</i>	

### Choose one course from two of the following categories – 6 sch

#### Language, Philosophy, & Culture

HUMA 2319	American Minority Studies	
HUMA 2323	World Cultures	
	<i>(Emphasis on Africana/African American Studies)</i>	
ENGL 2328	American Literature II OR	
	<i>(Emphasis on Africana/African American studies)</i>	
ENGL 2343	Forms of Literature II	
	<i>(Emphasis on Africana/African American Studies)</i>	

#### Creative Arts

ARTS 1304	Art History II	
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#### Social & Behavioral Sciences

SOCI 1306	Social Problems	
	<i>(Emphasis on Africana/African American Studies)</i>	

#### Government & Political Science

GOVT 2305	Federal Government	
	<i>(Emphasis on Africana/African American Studies)</i>	

**Certificate Total 12**

## Global Studies Certificate

The Global Studies Certificate is a 12 semester hour academic certificate designed to aid students in understanding the complex interrelationships between

nations and their inhabitants. The program utilizes a cross disciplinary approach, encouraging students to embrace global issues from multiple perspectives. This certificate will provide a unifying framework to help students contribute to our increasingly interconnected world as responsible global citizens. It establishes a unique foundation for the pursuit of varied majors and careers, from liberal arts and social science to international business. *(All courses are core curriculum courses and will transfer as core to all Texas public universities)*

### Required Foundation Course 1 – 3 sch

HUMA 1301	Introduction to Humanities.....	3
	<i>* This course fulfills the Creative Arts requirement</i>	

### Required Foundation Course 2 (choose one course from the following) – 3 sch

ANTH 2351	Cultural Anthropology OR	
GEOG 1303	World Regional Geography.....	3
	<i>*These courses fulfill the Social &amp; Behavioral Sciences requirement</i>	

### Choose one course from each of the following categories – 6 sch

#### Language, Philosophy, & Culture

ENG 2332	World Literature I OR	
	<i>(The Ancient World to the 16th Century)</i>	
ENGL 2333	World Literature II OR	
	<i>(17th Century to Present)</i>	
HUMA 2323	World Cultures	
PHIL 1304	Introduction to World Religions.....	3

#### Component Area Option

Any 3-4 hour Foreign Language course chosen from ARAB, CHIN, FREN, GERM, JAPN, KORE, SPAN.....	3-4
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**Certificate Total 12-13**

## Women & Gender Studies Certificate

The WGS Certificate is a 12 semester credit hour academic certificate designed to help the student understand women’s and gender issues as a fundamental category of social and cultural analysis; to help the student link gender with class, race, ethnic, and sexual identification; and to help the student analyze the diversity of experiences concerning women and issues of gender identity and expression. It provides a unique foundation for various majors and careers, including education, social and behavioral sciences, criminal justice, math, engineering, and many others. *(All courses are core curriculum courses and will transfer as core to all Texas public universities.)*

# Academic Degrees

## Required Foundation Courses (take both) – 6 sch

ENGL 1302	Composition II	3
<i>(Emphasis on Women and Gender issues)</i>		
*Fulfills 3 sch of the Communication requirement		
HIST 1302	United States History II	3
<i>(Emphasis on Women and Gender issues)</i>		
*Fulfills 3 sch of the American History requirement		

## Choose one course from two of the following categories – 6 sch

### Language Philosophy & Culture

HUMA 2319	American Minority Studies OR
ENGL 2343	Forms of Literature II
<i>(Emphasis on Women &amp; Gender issues)</i>	

### Creative Arts

ARTS 1304	Art History II
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### Social & Behavioral Sciences

SOCI 1306	Social Problems
<i>(Emphasis on Women &amp; Gender issues)</i>	

**Certificate Total 12**

## Associate of Arts in Music

### Suggested 2 year plan

#### First Year

##### First Semester - Fall

EDUC 1300	Learning Framework	3
MUAP 12##	Applied Music Lesson	2
MUSI 1211	Music Theory I	2
MUSI 1216	Sight Singing & Ear Training I	2
MUSI 1181	Piano Class I	1
MUEN 11##	Ensemble	1
ENGL 1301	Composition I	3

**Semester Total 14**

##### Second Semester - Spring

ENGL 1302	Composition II	3
MUAP 12##	Applied Music Lesson	2
MUSI 1212	Music Theory II	2
MUSI 1217	Sight Singing & Ear Training II	2
MUSI 1182	Piano Class II	1
MUEN 11##	Ensemble	1
MUSI 11##	Ensemble, Improvisation, or Diction	1

**Semester Total 12**

#### Third Semester - Summer

HIST #3##	American History Elective <sup>A</sup>	3
GOVT 2305	Federal Government	3

**Semester Total 6**

#### Second Year

##### First Semester - Fall

MUAP 22##	Applied Music Lesson	2
MUSI 2211	Music Theory III	2
MUSI 2216	Sight Singing & Ear Training III	2
MUSI 2181	Piano Class III	1
MUSI 11##	Ensemble, Improvisation, or Diction	1
GOVT 2306	Texas Government	3
XXXX #3##	Life & Physical Sciences Elective <sup>B</sup> OR	3
XXXX #3##	Mathematics Elective <sup>C</sup>	3

**Semester Total 14**

##### Second Semester - Spring

MUAP 22##	Applied Music Lesson	2
MUSI 2212	Music Theory IV	2
MUSI 2217	Sight Singing & Ear Training IV	2
MUSI 11##	Piano Class IV	1
MUSI 11##	Ensemble, Improvisation, or Diction	1
MUSI 1307	Music Literature	3
XXXX #1##	Social & Behavioral Sciences Elective <sup>D</sup>	3

**Semester Total 14**

**Program Total 60**

<sup>A</sup> American History

May choose from: HIST 1301, 1302, 2301, 2327, 2328, 2381.

<sup>B</sup> Life & Physical Sciences

Choose from: ANTH 2301, ASTR 1303, 1304, 1403, 1404, BIOL 1308, 1309, 1322, 1406, 1407, (2301, 2302 Restricted to Engineering, Science, and Health Science Majors), CHEM 1305, 1405, 1411, 1412, GEOG 1301, GEOL 1305, 1345, 1347, 1403, 1404, PHYS 1305, 1401, 1402, 2325, 2326.

<sup>C</sup> Mathematics

Choose from: MATH 1314, 1316, 1324, 1325, 1332, 1342, 1350, 2318, 2320, 2412, 2413, PSYC 2317.

<sup>D</sup> Social & Behavioral Sciences

Choose from: ANTH 2346, 2351, ECON 2301, 2302, GEOG 1302, 1303, PSYC 2301 2314 2316, 2319, SOCI 1301, 1306, 2336, TECA 1354.

The student must earn a minimum 2.0 GPA on sixty (60) total college-level semester hours, must complete a minimum eighteen (18) hours of coursework in the Houston

Community College, must complete TSI requirement unless exempt, and have an application to graduate on file in the Registrar's office in order to graduate.

# Academic Degrees

## Associate of Arts in Studio Art

There are many successful working visual artists in Houston. HCC graduates exhibit their work in commercial galleries, alternative art spaces, juried exhibitions, and sell art work on-line.

In 2011, the economic impact of Houston's creative economy (nonprofit and commercial) was estimated by the Houston Arts Alliance to be \$9.1 billion.

A 2012 Creative Economy analysis by the Houston Arts Alliance reported 146,625 jobs in Houston's creative economy with a projected growth of 7% by 2016.

Our graduates also successfully transfer to Bachelor's Degree programs, such as the University of Houston, the Savannah College of Art and Design, and Kansas City Art Institute.

In general, the career opportunities in art are numerous and varied. Many graduates go on to teach studio art at all educational levels. In addition to exhibition and teaching opportunities, graphic artists, designers, art handlers, installers, and art directors may freelance or hold salaried positions in art handling businesses, design firms, publishers, ad agencies and many companies with in-house communications departments.

The goals of the Studio Art Program at Houston Community College are:

- To engender in all students an understanding of Art and its role in all societies.
- To offer high quality academic transfer courses to both ARTS majors and non-majors.
- To serve the college and the greater community as a resource and catalyst for collaborative projects.
- To provide space that showcases student works and other exhibits, functioning as a cross-discipline curriculum resource as well as introducing HCC to the community at large.
- To teach Art courses in work spaces that are exemplary for the Houston region and that demonstrate the latest technologies and advancements within the arts industry.

### Program Outcomes

A student who completes the Associate of Arts in Studio Art degree plan will be able to:

- Communicate effectively about art through the description, analysis, interpretation and judgement of art works
- Create original, display-ready, works of art using the studio skills taught
- Identify the formal Elements and Principles of Design
- Apply critical thinking when comparing works of art

### Suggested 2 year plan

#### FIRST YEAR

##### First Semester - Fall

EDUC 1300	Learning Framework.....	3
ENGL 1301	Composition I.....	3
HIST #3##	American History Elective (May choose from HIST 1301, 1302, 2301, 2327, 2328, 2381).....	3
ARTS 1311	Design I ( 2-D Design ) .....	3
ARTS 1316	Drawing I.....	3
<b>Semester Total</b>		<b>15</b>

##### Second Semester - Spring

ENGL 1302	Composition II.....	3
MATH #3##	Mathematics Elective (May choose MATH 1314, 1324, 1332, 1342) .....	3
HIST #3##	American History Elective (May choose from HIST 1301, 1302, 2301, 2327, 2328, 2381).....	3
ARTS 1303	Art History I.....	3
ARTS 1312	Design II ( 3-D Design ) .....	3
<b>Semester Total</b>		<b>15</b>

#### SECOND YEAR

##### First Semester - Fall

GOVT 2305	Federal Government.....	3
XXXX #3##	Life & Physical Sciences Elective <sup>A</sup> .....	3
XXXX #3##	Social & Behavioral Sciences Elective <sup>B</sup> .....	3
ARTS 1304	Art History II .....	3
ARTS 1317	Drawing II.....	3
<b>Semester Total</b>		<b>15</b>

##### Second Semester - Spring

GOVT 2306	Texas Government.....	3
XXXX #3##	Life & Physical Sciences Elective <sup>B</sup> .....	3
XXXX #3##	Language, Philosophy, and Culture Elective <sup>C</sup> .....	3
ARTS #3##	3-D Studio.....	3
ARTS #3##	2-D Studio.....	3
<b>Semester Total</b>		<b>15</b>
<b>Program Total</b>		<b>60</b>

<sup>A</sup> Life & Physical Sciences - May choose from: ANTH 2301, ASTR 1303, 1304, 1403, 1404, BIOL 1308, 1309, 1322, 1406, 1407, CHEM 1305, 1405, 1411, 1412, GEOG 1301, GEOL 1305, 1345, 1347, 1403, 1404, PHYS 1305, 1401, 1402, 2325, 2326.

# Academic Degrees

<sup>B</sup> *Social & Behavioral Sciences - May choose from: ANTH 2346, 2351; ECON 1301, 2301, 2302; GEOG 1302, 1303; PSYC 2301, 2314, 2316, 2319; SOCI 1301, 1306, 2336; TECA 1354.*

<sup>C</sup> *Language, Philosophy, & Culture - (May choose from: ENGL 2322, 2323, 2327, 2328, 2332, 2333, 2342, 2343, 2351, HIST 2311, 2312, 2321, 2322, HUMA 1305, 2319, 2323, PHIL 1301, 1304, 2306, 2307, 2316.*

<sup>D</sup> *3-D Studio - May choose from: ARTS 2311 (3-D), 2326, 2333, 2341, 2346, 2347.*

<sup>E</sup> *2-D Studio - May choose from: ARTS 2311 (2-D), 2313, 2314, 2316, 2317, 2323, 2356, 2357, 2366.*

*The student must earn a minimum 2.0 GPA on sixty (60) total college-level semester hours, must complete a minimum eighteen (18) hours of coursework in the Houston*

*Community College, must complete TSI requirement unless exempt, and have an application to graduate on file in the Registrar's office in order to graduate.*

## Associate of Arts in World Languages

### French Specialization or Spanish Specialization

The World Language Program at Houston Community College currently offers instruction in Arabic, Chinese, French, German, Japanese, Korean, and Spanish. Our courses are designed to help students develop basic communication skills in the target language. We provide our students with opportunities to practice and learn pronunciation patterns, essential vocabulary, and language structure. We also expose them to authentic reading texts, from simple ads to literary selections. In addition, we assist them in writing as they progress from sentences and short paragraphs in the early stages to longer essays at the intermediate level. Finally, an essential part of our language program includes the culture of the target language. Our students are introduced to the particular values and behaviors of speakers of the target language so that they develop an awareness of, and an appreciation for cultural differences. Vietnamese is no longer being offered.

The Associate of Arts in World Languages is intended primarily for students planning on transferring to a senior college or university to receive a baccalaureate degree in a World Language. This plan has two specializations, Spanish and French.

### Required Academic Core

#### FIRST YEAR

##### First Semester

EDUC 1300	Learning Framework.....	3
ENGL 1301	Composition I.....	3
HIST #3##	American History Elective <sup>A</sup> .....	3
XXXX 1411	Beginning Foreign Language I <sup>B</sup> .....	4
MATH 1332	Contemporary Mathematics OR	
MATH 1342	Elementary Statistical Methods.....	3

**Semester Total 16**

##### Second Semester

ENGL 1302	English Composition II.....	3
HIST #3##	American History Elective <sup>A</sup> .....	3
XXXX 1412	Beginning Foreign Language II <sup>C</sup> .....	4
XXXX #3##	Social & Behavioral Sciences Elective <sup>D</sup> .....	3
XXXX #3##	Life & Physical Sciences Elective <sup>E</sup> .....	3

**Semester Total 16**

#### SECOND YEAR

##### First Semester

XXXX #3##	Creative Arts Elective <sup>F</sup> .....	3
LANG 2311	Intermediate Foreign Language I <sup>G</sup> .....	3
GOVT 2305	Federal Government.....	3
XXXX #3##	Life & Physical Sciences Elective <sup>H</sup> .....	3
XXXX #3##	Language, Philosophy, & Culture <sup>I</sup> .....	3

**Semester Total 15**

##### Second Semester

LANG 2312	Intermediate Foreign Language II <sup>J</sup> .....	3
GOVT 2306	Texas Government.....	3
XXXX #3##	Social & Behavioral Sciences Elective <sup>D</sup> .....	3
XXXX #3##	Creative Arts Elective <sup>F</sup> .....	3
XXXX #3##	Language, Philosophy & Culture Elective <sup>I</sup> .....	3

**Semester Total 15**

**Program Total 62**

<sup>A</sup> *American History  
Choose from: HIST 1301, 1302, 2301, 2327, 2328, 2381.*

<sup>B</sup> *Beginning Foreign Language I  
All foreign language courses must be in one language. May choose from: FREN 1411, SPAN 1411. May test out of freshman-level foreign language through CLEP/AP credit.*

<sup>C</sup> *Beginning Foreign Language II  
May choose from: FREN 1412, SPAN 1412.*

<sup>D</sup> *Social & Behavioral Sciences  
(Recommended to choose from: ANTH 2346, GEOG 1303, or SOCI 2374), May also choose from: ANTH 2346, 2351; ECON 1301, 2301, 2302; GEOG 1302, 1303; PSYC 2301, 2314, 2316, 2319; SOCI 1301, 1306, 2336; TECA 1354.*

# Academic Degrees

## <sup>E</sup> Life & Physical Sciences

(Recommended to choose from: ANTH 2301, BIOL 1308, GEOG 1301), May also choose from: ANTH 2301, ASTR 1303, 1304, 1403, 1404, BIOL 1308, 1309, 1322, 1406, 1407, (2301, 2302 Restricted to Engineering, Science, and Health Science Majors), CHEM 1305, 1405, 1411, 1412, GEOG 1301, GEOL 1305, 1345, 1347, 1403, 1404, PHYS 1305, 1401, 1402, 2325, 2326.

## <sup>F</sup> Creative Arts

(Recommended to choose from: HUMA 1301, 1305; ARTS 1301, 1303, or 1304), May also choose from: ARTS 1301, 1303, 1304; COMM 2366; DANC 2303; DRAM 1310, 2361, 2366; HUMA 1301, 1311; MUSI 1306, 1310.

## <sup>G</sup> Intermediate Foreign Language I

May choose from: FREN 2311, SPAN 2311 or 2313 (Spanish Specialization only).

## <sup>H</sup> Life & Physical Sciences

May Choose From: ANTH 2301, ASTR 1303, 1304, 1403, 1404, BIOL 1308, 1309, 1322, 1406, 1407, (2301, 2302 Restricted to Engineering, Science, and Health Science Majors), CHEM 1305, 1405, 1411, 1412, GEOG 1301, GEOL 1305, 1345, 1347, 1403, 1404, PHYS 1305, 1401, 1402, 2325, 2326.

## <sup>I</sup> Language, Philosophy, & Culture

May Choose From: ENGL 2322, 2323, 2327, 2328, 2332, 2333, 2342, 2343, 2351; HIST 2311, 2312, 2321, 2322; HUMA 1305, 2319; 2323; PHIL 1301, 1304, 2306, 2307, 2316.

## <sup>J</sup> Intermediate Foreign Language II

May choose from: FREN 2312, (SPAN 2312 or 2315 Spanish Specialization only).

The student must earn a minimum 2.0 GPA on sixty (60) total college-level semester hours, must complete a minimum eighteen (18) hours of coursework at Houston Community College, must complete TSI requirement unless exempt, and must have an application to graduate on file in the Registrar's office in order to graduate.

## Recommended Transfer Advising Plans

### AA: Agricultural Sciences

#### FIRST YEAR

First Semester	Credits
ENGL 1301 English Composition I .....	3
American History Elective .....	3
Oral Communication Elective .....	3
MATH 1314 College Algebra .....	3
AGRI 1319 General Animal Science .....	3
<b>Semester Total</b>	<b>15</b>

#### Second Semester

ENGL 1302 English Composition II .....	3
American History Elective .....	3
Social & Behavioral Sciences Elective .....	3
BIOL 1413 General Zoology or 1411 General Botany .....	4
MATH 1324 Mathematics for Business & Social Sciences OR	
MATH 1342 Elementary Statistical Methods .....	3
<b>Semester Total</b>	<b>16</b>

### SECOND YEAR

#### First Semester

	Credits
Humanities .....	3
GOVT 2305 Federal Government .....	3
Cross Cultural Studies .....	3
CHEM 1411 General Chemistry I .....	4
AGRI 1131 The Agricultural Industry .....	1
<b>Semester Total</b>	<b>14</b>

#### Second Semester

	Credits
GOVT 2306 Texas Government .....	3
Fine Arts (3 hrs.) .....	3
AGRI Elective #3## (see department chair for advising) .....	3
AGRI Elective #3## (see department chair for advising) .....	3
AGRI Elective #3## (see department chair for advising) .....	3
<b>Semester Total</b>	<b>15</b>

### AA: Art Specialty Area

#### FIRST YEAR

##### First Semester

	Credits
ENGL 1301 English Composition I .....	3
American History Elective .....	3
ARTS 1311 Foundation Design I .....	3
ARTS 1316 Foundation Drawing I .....	3
MATH (College-level Math) .....	3
<b>Semester Total</b>	<b>15</b>

##### Second Semester

ENGL 1302 English Composition II .....	3
American History Elective .....	3
Social & Behavioral Science Elective .....	3
ARTS 1317 Foundation Drawing II .....	3
ARTS 1312 Foundation Design II .....	3
<b>Semester Total</b>	<b>15</b>

### SECOND YEAR

#### First Semester

	Credits
GOVT 2305 Federal Government .....	3
ARTS 1303 Art History I .....	3
Oral Communication Elective .....	3
Life & Physical Sciences Elective (Lab optional) .....	3
Transfer ARTS Elective (see Art Department chair for advising) .....	3
<b>Semester Total</b>	<b>15</b>

#### Second Semester

	Credits
Humanities .....	3
GOVT 2306 Texas Government .....	3
ARTS 1304 Art History II .....	3
Life & Physical Sciences Elective with Lab .....	3
Transfer ARTS Elective (see Art department chair for advising) .....	3
<b>Semester Total</b>	<b>15</b>

# Academic Degrees

## Dance

The Dance program at Houston Community College strives to develop well-rounded, culturally diverse, thinking dancers. Dance at HCC creates socially responsible dance professionals by introducing students to diverse technical practices that include a strong base in both western and non-western dance forms, as well as providing opportunities to perform, work with guest artists from across the globe, present choreography, and attend conferences and workshops at a national level. Students are encouraged to explore their leadership potential as they develop artistic excellence and integrity in preparing for careers and transfer opportunities in the dance field.

Houston is one of the great dance cities in that it supports many mid-sized dance companies, has a myriad of affordable studio and theater spaces available, offers dance in K-12 programs, and is home to a wide variety and number of private dance studios.

In general, the career opportunities in dance are numerous and varied. Many graduates go on to teach studio dance classes at all educational levels. Graduates also go on to work with many of the local dance companies Houston has to offer.

Dance program graduates also transfer to a number of Bachelor's degree programs, such as the University of Houston, Sam Houston State University, Texas Women's University, Stephen F. Austin University, Lamar University, Texas State University, and the University of North Texas

### Program Outcomes

Students will:

- Develop an understanding of dance as an art form within cultural and historical contexts.
- Demonstrate technical proficiency in dance technique and performance at the intermediate level.
- Develop individual creative voice through improvisational, compositional, and performance techniques.
- Demonstrate critical evaluation of dance works from a variety of dance genres.

For more information call 713.718.6585 or email [maggie.lasher@hccs.edu](mailto:maggie.lasher@hccs.edu).

### AA: Dance Specialty Area

#### FIRST YEAR

First Semester	Credits
ENGL 1301 English Composition I .....	3
American History Elective.....	3
DANC 2303 Dance Appreciation.....	3
DANC 1345 Modern Dance I .....	3
DANC 1347 Jazz Dance I.....	3
<b>Semester Total</b>	<b>15</b>

#### Second Semester

ENGL 1302 English Composition II .....	3
American History Elective.....	3
DANC 1346 Modern Dance II .....	3
DANC 2325 Anatomy and Kinesiology .....	3
DANC 1348 Jazz Dance II.....	3
<b>Semester Total</b>	<b>15</b>

#### SECOND YEAR

First Semester	Credits
Humanities .....	3
GOVT 2305 Federal Government.....	3
DANC 1301 Dance Composition.....	3
DANC 1305 World Dance I.....	3
DANC 1341 Ballet I.....	3
<b>Semester Total</b>	<b>15</b>

#### Second Semester

Second Semester	Credits
GOVT 2306 Texas Government.....	3
DANC 1342 Ballet II.....	3
Oral Communication Elective .....	3
DANC 1306 World Dance II .....	3
Social/Behavioral Science.....	3
<b>Semester Total</b>	<b>15</b>

#### Third Semester

MATH (College-Level Math .....	3
Life & Physical Sciences Elective with Lab .....	3
<b>Semester Total</b>	<b>6</b>

### AA: Drama Specialty Area

#### FIRST YEAR

First Semester	Credits
ENGL 1301 English Composition I .....	3
American History Elective.....	3
SPCH 1342 Voice and Diction .....	3
MATH(College-level Math) .....	3
DRAM 1310 Introduction to Theatre.....	3
<b>Semester Total</b>	<b>15</b>

# Academic Degrees

## Second Semester

ENGL 1302 English Composition II .....	3
American History Elective.....	3
Social/Behavioral Science .....	3
Life & Physical Sciences Elective (Lab optional).....	3
DRAM 1351 Acting I.....	3
<b>Semester Total</b>	<b>15</b>

## SECOND YEAR

### First Semester Credits

Humanities .....	3
GOVT 2305 Federal Government.....	3
DRAM 1352 Acting II.....	3
Life & Physical Sciences Elective with Lab .....	4
DRAM 1330 Theatre Practice I.....	3
<b>Semester Total</b>	<b>15</b>

### Second Semester Credits

GOVT 2306 Texas Government.....	3
DRAM 1322 Stage Movement.....	3
DRAM 2331 Theatre Practice II.....	3
DANC 2303 Dance Appreciation.....	3
DRAM 1341 Stage Makeup.....	3
<i>• See Drama department chair for advising</i>	
<b>Semester Total</b>	<b>15</b>

## AA: Music Specialty Area

### FIRST YEAR

#### First Semester Credits

ENGL 1301 English Composition I .....	3
MATH (College-level Math) .....	3
Major Instrument (FOS).....	1
Ensemble (FOS).....	2
MUSI 1211 Music Theory (FOS).....	2
MUSI 1216 Ear Training/Sight Training (FOS).....	2
<b>Semester Total</b>	<b>13</b>

#### Second Semester

ENGL 1302 English Composition II .....	3
Life & Physical Sciences Elective (Lab optional).....	3
Major Instrument (FOS).....	1
Ensemble (FOS).....	2
MUSI 1212 Music Theory (FOS).....	2
MUSI 1217 Ear Training/Sight Training (FOS).....	2
<b>Semester Total</b>	<b>13</b>

## SECOND YEAR

### First Semester Credits

Humanities .....	3
Major Instrument (FOS).....	1
Ensemble (FOS).....	2
MUSI 1308 Music Literature I (FOS).....	3
MUSI 2216 Ear Training/Sight Training (FOS).....	2
MUSI 2211 Music Theory (FOS).....	2
<b>Semester Total</b>	<b>13</b>

### Second Semester Credits

GOVT 2306 Texas Government.....	3
Major Instrument (FOS).....	1
Ensemble (FOS).....	2
MUSI 1309 Music Literature II .....	3
MUSI 2217 Ear Training/Sight Training (FOS).....	2
MUSI 2212 Music Theory (FOS).....	2
<i>See music department chair for advising</i>	
<b>Semester Total</b>	<b>13</b>

### Third Semester Credits

American History Elective.....	3
Oral Communication.....	3
American History Elective.....	3
Social & Behavioral Science (3 hrs.) .....	3
GOVT 2305 Federal Government.....	3
Life & Physical Sciences Elective with Lab .....	3
<i>See Music department chair for advising</i>	
<b>Semester Total</b>	<b>18</b>

## AA: Journalism/Mass Communication Specialty Area

### FIRST YEAR

#### First Semester Credits

ENGL 1301 English Composition I .....	3
American History Elective.....	3
COMM 1307 Mass Communication (FOS).....	3
MATH 1314 College Algebra.....	3
COMM 1335 Introduction to Radio/TV (FOS) .....	3
<b>Semester Total</b>	<b>15</b>

#### Second Semester

ENGL 1302 English Composition II .....	3
American History Elective.....	3
Social & Behavioral Science (3 hrs.) .....	3
Life & Physical Sciences Elective (Lab optional).....	3
COMM 2302 Principles of Journalism (FOS) .....	3
<b>Semester Total</b>	<b>15</b>

# Academic Degrees

## SECOND YEAR

### First Semester

	Credits
ENGL Literature 23##.....	3
GOVT 2305 Federal Government.....	3
SPCH 1318 (Cross Cultural Studies).....	3
Life & Physical Sciences Elective with Lab .....	4
COMM 2305 Editing and Layout (FOS) .....	3
<b>Semester Total</b>	<b>16</b>

### Second Semester

	Credits
GOVT 2306 Texas Government.....	3
Fine Arts (3 hrs.).....	3
COMM 2311 News Gathering and Writing I (FOS) .....	3
Transferable Elective #3##.....	3
Transferable Elective #3##.....	3
<i>See Communication department chair for advising.</i>	
<b>Semester Total</b>	<b>15</b>

## AA: Advertising Specialty Area

### FIRST YEAR

#### First Semester

	Credits
ENGL 1301 English Composition I .....	3
American History Elective.....	3
COMM 1307 Mass Communication .....	3
MATH 1314 College Algebra.....	3
COMM 2327 Advertising (FOS) .....	3
<b>Semester Total</b>	<b>15</b>

#### Second Semester

ENGL 1302 English Composition II .....	3
American History Elective.....	3
Social/Behavioral Science (3 hrs.).....	3
Life & Physical Sciences Elective (Lab optional).....	3
COMM 2330 Public Relations (FOS) .....	3
<b>Semester Total</b>	<b>15</b>

## SECOND YEAR

### First Semester

	Credits
ENGL Literature 23##.....	3
GOVT 2305 Federal Government.....	3
Cross Cultural Studies.....	4
Life & Physical Sciences Elective with Lab .....	3
COMM 2305 Editing and Layout (FOS) .....	3
<b>Semester Total</b>	<b>16</b>

### Second Semester

	Credits
GOVT 2306 Texas Government.....	3
Fine Arts (3 hrs.).....	3
COMM 2311 News Gathering and Writing I (FOS) .....	3
Transferable Elective #3##.....	3
Transferable Elective #3##.....	3
<b>Semester Total</b>	<b>15</b>

## AA: Radio and Television Broadcasting Specialty Area

### FIRST YEAR

#### First Semester

	Credits
ENGL 1301 English Composition I .....	3
American History Elective.....	3
COMM 1307 Mass Communication .....	3
MATH 1314 College Algebra.....	3
COMM 1335 Introduction to Radio/TV (FOS) .....	3
<b>Semester Total</b>	<b>15</b>

#### Second Semester

ENGL 1302 English Composition II .....	3
American History Elective.....	3
Social/Behavioral Science (3 hrs.).....	3
Life & Physical Sciences Elective (Lab optional).....	3
COMM 1336 TV Production I (FOS) .....	3
<b>Semester Total</b>	<b>15</b>

## SECOND YEAR

### First Semester

	Credits
ENGL 23## Literature .....	3
GOVT 2305 Federal Government.....	3
SPCH 1318 (Cross Cultural Studies).....	3
Life & Physical Sciences Elective with Lab .....	3
COMM 2311 News Gathering and Writing I (FOS) .....	3
<b>Semester Total</b>	<b>15</b>

### Second Semester

	Credits
GOVT 2306 Texas Government.....	3
Fine Arts (3 hrs.).....	3
COMM 2366 Introduction to Film .....	3
Transferable Elective #3##.....	3
Transferable Elective #3##.....	3
<i>See Communication or Broadcast department chair for advising.</i>	
<b>Semester Total</b>	<b>15</b>

## AA: General Communication Specialty Area

### FIRST YEAR

#### First Semester

	Credits
ENGL 1301 English Composition I .....	3
American History Elective.....	3
SPCH 1311 Intro to Speech Communication (FOS).....	3
MATH 1314 College Algebra.....	3
Major-Relater Elective #3##.....	3
<b>Semester Total</b>	<b>15</b>

#### Second Semester

ENGL 1302 English Composition II .....	3
American History Elective.....	3
Social/Behavioral Science (3 hrs.).....	3
Life & Physical Sciences Elective (Lab optional).....	3
SPCH 2333 Discussion and Small Group Communication (FOS).....	3
<b>Semester Total</b>	<b>15</b>

# Academic Degrees

## SECOND YEAR

<b>First Semester</b>	<b>Credits</b>
ENGL 23## Literature .....	3
GOVT 2305 Federal Government .....	3
SPCH 1318 (Cross Cultural Studies) (FOS) .....	3
Life & Physical Sciences Elective with Lab .....	3
Major Related Elective #3## .....	3
<b>Semester Total</b>	<b>15</b>

<b>Second Semester</b>	<b>Credits</b>
GOVT 2306 Texas Government .....	3
Fine Arts (3 hrs.) .....	3
Speech Performance Elective (SPCH 1315, 1321, 1342, 2335, or 2341) (FOS) .....	3
Major Related Elective #3## .....	3
Major Related Elective #3## .....	3
<i>See Speech department chair for advising.</i>	
<b>Semester Total</b>	<b>15</b>

## AA: Philosophy Specialty Area

### FIRST YEAR

<b>First Semester</b>	<b>Credits</b>
ENGL 1301 English Composition I .....	3
American History Elective .....	3
Oral Communication Elective .....	3
MATH 1314 College Algebra .....	3
Transferable Elective #3## .....	3
<b>Semester Total</b>	<b>15</b>

<b>Second Semester</b>	<b>Credits</b>
ENGL 1302 English Composition II .....	3
American History Elective .....	3
PHIL 2307 (Social/Behavioral Science) .....	3
Life & Physical Sciences Elective (Lab optional) .....	3
PHIL 1301 Introduction to Philosophy or 1303 .....	3
<b>Semester Total</b>	<b>15</b>

### SECOND YEAR

<b>First Semester</b>	<b>Credits</b>
PHIL 2316 Ancient/Medieval Philosophy .....	3
GOVT 2305 Federal Government .....	3
Foreign Language 1411 .....	3
Life & Physical Sciences Elective with Lab .....	4
PHIL 2303 Logic .....	3
<b>Semester Total</b>	<b>16</b>

<b>Second Semester</b>	<b>Credits</b>
GOVT 2306 Texas Government .....	3
Fine Arts (3 hrs.) .....	3
Foreign Language 1412 .....	3
PHIL 2306 Ethics .....	3
PHIL 2317 Modern/Contemporary Philosophy .....	3
<b>Semester Total</b>	<b>15</b>

## AA: Mexican-American Studies

### FIRST YEAR

<b>First Semester</b>	<b>Credits</b>
ENGL 1301 English Composition I .....	3
American History Elective .....	3
SPAN 1411 or SPAN 1412 (by coursework or by CLEP) .....	3
MATH 1314 or MATH 1332 or higher .....	3
HUMA 1305 Introduction to Mexican American Studies (FOS) .....	3
<b>Semester Total</b>	<b>15</b>

<b>Second Semester</b>	<b>Credits</b>
ENGL 1302 English Composition II .....	3
American History Elective .....	3
HUMA 2323 or PSYC 2370 .....	3
Life & Physical Sciences Elective (Lab optional) .....	3
GOVT 2311 Mexican American Politics (FOS) .....	3
<b>Semester Total</b>	<b>15</b>

### SECOND YEAR

<b>First Semester</b>	<b>Credits</b>
ENGL 2351 Mexican American Literature (FOS) .....	3
GOVT 2305 Federal Government .....	3
HUMA 2319 American Minorities (Mexican American) .....	3
Life & Physical Sciences Elective with Lab .....	4
SPAN 1412 (by coursework or by CLEP) .....	4
<b>Semester Total</b>	<b>17</b>

<b>Second Semester</b>	<b>Credits</b>
GOVT 2306 Texas Government .....	3
HUMA 1311 Mexican American Fine Art Appreciation (FOS) .....	3
HIST 2328 Mexican American History II (FOS) .....	3
SPAN 2311 or 2313 .....	3
SPAN 2312 or 2315 (FOS) .....	3
<b>Semester Total</b>	<b>15</b>

## AA: Liberal Arts Specialty Area

### FIRST YEAR

<b>First Semester</b>	<b>Credits</b>
ENGL 1301 English Composition I .....	3
American History Elective .....	3
Oral Communication .....	3
MATH (College-level Math) .....	3
Foreign Language 1411 (Cross Cultural Course) .....	3
<b>Semester Total</b>	<b>15</b>

<b>Second Semester</b>	<b>Credits</b>
ENGL 1302 English Composition II .....	3
American History Elective .....	3
Social & Behavioral Science (3 hrs.) .....	3
Life & Physical Sciences Elective (Lab optional) .....	3
Foreign Language 1412 .....	3
<b>Semester Total</b>	<b>15</b>

# Academic Degrees

## SECOND YEAR

First Semester	Credits
Humanities .....	3
GOVT 2305 Federal Government.....	3
Foreign Language 2311.....	3
Life & Physical Sciences Elective with Lab .....	4
Transferable Elective #3##.....	3
<b>Semester Total</b>	<b>16</b>

Second Semester	Credits
GOVT 2306 Texas Government.....	3
Fine Arts (3 hrs.).....	3
Foreign Language 2312 .....	3
Transferable Elective #3##.....	3
<b>Semester Total</b>	<b>12</b>

## AA: Criminal Justice Specialty Area

### FIRST YEAR

First Semester	Credits
ENGL 1301 English Composition I .....	3
American History Elective.....	3
Oral Communication.....	3
MATH (College-level Math) .....	3
CRIJ 1301 Introduction to Criminal Justice (FOS).....	3
<b>Semester Total</b>	<b>15</b>

Second Semester	Credits
ENGL 1302 English Composition II .....	3
American History Elective.....	3
PSYC 2317 Behavioral Statistics.....	3
Life & Physical Sciences Elective (Lab optional).....	3
CRIJ 1306 Courts and Criminal Procedures (FOS).....	3
<b>Semester Total</b>	<b>15</b>

## SECOND YEAR

First Semester	Credits
XXXX #3## Humanities Elective .....	3
GOVT 2301 American Government I.....	3
Cross Cultural Studies .....	3
Life & Physical Sciences Elective with Lab .....	4
CRIJ 2313 Correctional Systems and Practices (FOS).....	3
<b>Semester Total</b>	<b>16</b>

Second Semester	Credits
GOVT 2306 Texas Government.....	3
XXXX #3## Creative Arts .....	3
CRIJ 2328 Police Systems and Practices (FOS).....	3
CRIJ 1310 Fundamentals of Criminal Law .....	3
SOCI 2336 Criminology.....	3
<b>Semester Total</b>	<b>15</b>

## AA: Social/Behavioral Science Specialty Area

### FIRST YEAR

First Semester	Credits
ENGL 1301 English Composition I .....	3
American History Elective.....	3
Oral Communication.....	3
MATH 1314 College Algebra.....	3
Foreign Language #4## (B.A.) or Additional Math/Science (B.S.) .....	3
<b>Semester Total</b>	<b>15</b>

Second Semester	Credits
ENGL 1302 English Composition II .....	3
American History Elective.....	3
Foreign Language #4## (B.A.) or Additional Math/Science (B.S.) .....	3
BIOL #4## or CHEM #4##.....	4
PSYC 2301 General Psychology.....	3
<b>Semester Total</b>	<b>16</b>

## SECOND YEAR

First Semester	Credits
Humanities .....	3
GOVT 2301 Federal Government.....	3
SOCI 1301 Introduction to Sociology.....	3
BIOL #4## or CHEM #4##.....	3
Foreign Language 23## (B.A.).....	3
<b>Semester Total</b>	<b>15</b>

Second Semester	Credits
GOVT 2306 American Government.....	3
Fine Arts (3 hrs.) (050).....	3
Foreign Language 23## (B.A.) .....	3
ANTH #3## Elective .....	3
Social & Behavioral Science Elective #3##.....	3
<b>Semester Total</b>	<b>15</b>

## AA: Business Information Systems Specialty Area

### FIRST YEAR

First Semester	Credits
ENGL 1301 English Composition I .....	3
American History Elective.....	3
SPCH 1321 Business and Professional Speech .....	3
MATH 1314 College Algebra.....	3
BCIS 1405 Business Computer Applications (FOS).....	4
<b>Semester Total</b>	<b>16</b>

Second Semester	Credits
ENGL 1302 English Composition II .....	3
American History Elective.....	3
ECON 2301 Macroeconomics (FOS).....	3
Life & Physical Sciences Elective (Lab optional) .....	3
MATH 1324 Mathematics for Business & Social Sciences.....	3
<b>Semester Total</b>	<b>15</b>

# Academic Degrees

## SECOND YEAR

<b>First Semester</b>		<b>Credits</b>
Humanities .....		3
GOVT 2305 Federal Government.....		3
ACCT 2301 Principles of Accounting I (FOS).....		3
Life & Physical Sciences Elective with Lab .....		4
MATH 1325 Calculus with Applications (FOS).....		3
<b>Semester Total</b>		<b>16</b>

<b>Second Semester</b>		<b>Credits</b>
GOVT 2302 Texas Government.....		3
Fine Arts (3 hrs.).....		3
SOCI 1301 Introduction to Sociology.....		3
ACCT 2302 Principles of Accounting II (FOS).....		3
ECON 2302 Microeconomics (FOS).....		3
<b>Semester Total</b>		<b>15</b>

<b>Third Semester</b>		<b>Credits</b>
COSC 1436 Programming Fundamentals I.....		4
<b>Semester Total</b>		<b>4</b>

## AA: Pre-Nursing (AA to BSN) Specialty Area

### FIRST YEAR

<b>First Semester</b>		<b>Credits</b>
ENGL 1301 English Composition I .....		3
American History Elective.....		3
Oral Communication Elective .....		3
MATH 1342 or PSYC 2317 Statistics (FOS).....		3
BIOL 1322 Basic Nutrition (FOS).....		3
<b>Semester Total</b>		<b>15</b>

<b>Second Semester</b>		<b>Credits</b>
ENGL 1302 English Composition II.....		3
American History Elective.....		3
Social & Behavioral Science (3 hrs.).....		3
CHEM 1405 or 1411 or 1413 Chemistry (FOS).....		4
PSYC 2301 General Psychology (behavioral science, FOS).....		3
<b>Semester Total</b>		<b>16</b>

## SECOND YEAR

<b>First Semester</b>		<b>Credits</b>
Humanities .....		3
GOVT 2305 Federal Government.....		3
Cross Cultural Studies.....		3
BIOL 2301 Anatomy and Physiology I (FOS).....		3
BIOL 2101 Anatomy and Physiology I (FOS).....		1
PSYC 2314 Human Growth and Development: Lifespan (FOS).....		3
<b>Semester Total</b>		<b>16</b>

<b>Second Semester</b>		<b>Credits</b>
GOVT 2306 Texas Government.....		3
Fine Arts .....		3
BIOL 2302 Anatomy and Physiology II (FOS).....		3
BIOL 2102 Anatomy and Physiology II (FOS).....		4
BIOL 2320 Microbiology (FOS).....		3
BIOL 2120 Microbiology (FOS).....		1
<b>Semester Total</b>		<b>14</b>

## Associate of Arts in Teaching (AAT)

### Leading to Initial Texas Teacher Certification

The Associate of Arts in Teaching is a state-approved collegiate degree program consisting of lower-division courses intended for transfer to baccalaureate programs that lead to initial Texas teacher certification. The program is designed to provide opportunities for students to integrate knowledge from their core and concentration courses, to gain insight into the meanings of professionalism and professional practice, and to reflect on the norms of a discipline or profession.

Initially, there were three AAT curricula which included 60-66 semester credit (SCH) hours of coursework. However, due to changes in the state certification process beginning in fall 2009, there will only be one AAT degree that will be offered by Houston Community College. The AAT degrees can only be offered by Texas public community colleges and are fully transferable to any Texas public university offering baccalaureate degree programs leading to initial teacher certification. All AAT academic core curriculum courses taken at HCC are guaranteed to transfer and count toward the core curriculum at all Texas public higher educational institutions.

### General Requirements

If a student completes any part of an AAT Field of Study (FOS) curriculum as developed by the Texas Higher Education Board, the FOS courses will be transferred to a Texas public higher educational institution and must be substituted for that institution's lower division requirements in the degree program leading to initial Texas teacher certification. The student shall receive full academic credit for the transferred FOS courses in the related university degree program leading to initial Texas teacher certification.

# Academic Degrees

The following universities have approved the AAT plan below for transfer toward initial Texas teacher certification: Prairie View A&M University, Sam Houston State University, Texas A&M University, Texas Southern University, University of Houston, University of Houston-Downtown, University of Houston-Clear Lake, University of Houston-Victoria, University of St. Thomas and Texas Tech University.

To be eligible for an Associate in Arts (AA), an Associate of Arts in Teaching (AAT), or an Associate in Science (AS) degree from HCC, a student must successfully complete at least 60 semester hours of credit as follows:

- For the AA degree, 43 hours of required core courses and 17 hours of transferable electives, usually focusing on the student's transfer major
- For the AAT degree, 44 hours of required core courses plus 16-18 hours of required pre-teaching courses
- For the AS degree, 43 hours of required core courses plus six additional hours of mathematics, four additional hours of natural science, and 7 hours of transferable electives, usually focusing on the student's transfer major.

## Program Outcomes

Students will be able to:

- Explain the purposes of schooling and contexts of classrooms with an emphasis on the characteristics of exceptional students in the regular and special education classroom.
- Analyze and evaluate teacher preparation programs, effective teaching strategies, their own employability, and the role of educators as they decide whether teaching could be a satisfying career for them.
- Describe the characteristics of a specific type of exceptional learner including pre-referral interventions that should or could be used, modifications that must be made after referral, and legal implications.
- Explore, examine, and evaluate one of the current issues affecting the field of education today, such as instructional methods, learning, curriculum, students, teachers, families, administration, school policy, or school law.

## Associate of Arts in Teaching

Leads to teacher preparation for initial certifications in: Early Childhood-Grade 6; Grades 4-8; and Special Education.

### Suggested 2 year plan

TSI testing is required prior to first enrollment.

#### FIRST YEAR

<b>First Semester</b>		<b>Credits</b>
EDUC 1300	Learning Framework *	3
ENGL 1301	Composition I	3
HIST 1301	United States History I	3
EDUC 1301	Introduction to the Teaching Profession	3
BIOL 1308	Biology for Non-Science Majors I	3
BIOL 1108	Biology for Non-Science Majors I (Lab)	1
<b>Semester Total</b>		<b>16</b>

<b>Second Semester</b>		<b>Credits</b>
ENGL 1302	Composition II	3
HIST 2301	Texas History OR	
HIST 1302	United States History II	3
MATH 1314	College Algebra OR	
MATH 1332	Contemporary Mathematics OR	
MATH 1342	Elementary Statistical Methods	3
SPCH 1315	Public Speaking	3
CHEM #4##	Chemical Lab Science <sup>A</sup>	4
<b>Semester Total</b>		<b>16</b>

#### SECOND YEAR

<b>First Semester</b>		<b>Credits</b>
GOVT 2305	Federal Government	3
ENGL 23##	English Literature Elective <sup>B</sup>	3
MATH 1350	Mathematics for Elementary Teachers I	3
EDUC 2301	Introduction to Special Populations	3
XXXX #3##	Social & Behavioral Sciences Elective <sup>C</sup>	3
<b>Semester Total</b>		<b>15</b>

<b>Second Semester</b>		<b>Credits</b>
GOVT 2306	Texas Government	3
MATH 1351	Mathematics for Elementary Teachers II	3
XXXX #3##	Creative Arts Elective <sup>D</sup>	3
XXXX #4##	Physical Lab Science Elective <sup>E</sup>	4
<b>Semester Total</b>		<b>13</b>
<b>Program Total</b>		<b>60</b>

\* Student success course

<sup>A</sup> Chemical Lab Science: May choose from: CHEM 1305, 1411

<sup>B</sup> English Literature – May choose from: ENGL 2322, 2323, 2327, 2328, 2332, 2333, 2342, or 2343

<sup>C</sup> Social/Behavioral Science: May choose from: GEOG 1303; PSYC 2301; TECA 1354

<sup>D</sup> Creative Arts: May choose from: ARTS 1301, ARTS 1303, 1304; DANC 2303; DRAM 1310, 2361, 2366; ENGL 2307; HUMA 1301; MUSI 1301, 1306, 1310.

# Academic Degrees

<sup>E</sup> *Physical Lab Science: May choose from: ASTR 1403, 1404; GEOL 1403, 1404; PHYS 1401 or higher, ANTH 2301, 2101 (lecture & lab)*

## Additional Degree Requirements

A student who has received an associate degree or higher from an accredited institution must meet specific requirements to earn an additional degree from HCC.

The student must earn a minimum 2.0 GPA on sixty (60) total college-level semester hours, must complete a minimum eighteen (18) hours of coursework in the Houston Community College, must complete TSI requirement unless exempt, and have an application to graduate on file in the Registrar's office in order to graduate. Students should be aware that some four-year institutions require a minimum 2.50 GPA or higher for entrance into the teacher preparation program. Students should check with the transfer institution for specific requirements.

The above curriculum is recommended to give students the best preparation for success after transfer in a Teacher certification program. If a student has already taken other courses than the recommended ones above, the following options will also count toward the AAT and toward guaranteed transfer to the university offering the above certifications.

If a student has already taken core curriculum courses differing from the designated AAT courses above, then the student should follow the AA degree plan and the specific university's transfer plan leading to teacher certification.

*\* Bilingual certification also requires SPAN 2311-2312 (SPAN 2311 has course prerequisites).*

*\*\* English literature options: May choose from ENGL 2322, 2323, 2327, 2328, 2332, 2333, 2342, or 2343.*

*\*\* Mathematics options: May choose MATH 1314, 1332, 1342, or higher. Students should be aware that some four-year institutions require a specific math course. Students should check with the transfer institution for specific requirements.*

*Some four-year schools have course preferences. Check with the transfer institution before selecting courses.*

*Elective courses are college-level semester hour courses, taken to fulfill the HCC associate degree sixty (60) semester hour requirement. Prerequisite college-level courses taken to satisfy the required HCC course curriculum can count as course electives.*

## Associate of Science (AS)

The Associate of Science is intended primarily for students planning on transferring to a senior college or university to receive a baccalaureate degree in the following areas: computer science, engineering, health and natural sciences, or mathematics. (See counselor for Transfer plans). Commencing the fall of 1999, all Associate of Science

academic core curriculum courses taken at HCC are guaranteed to transfer and count toward the core curriculum at all Texas public higher educational institutions.

In addition, if a student successfully completes any part of a field of study (FOS) curriculum developed by the Texas Higher Education Board, the FOS courses will be transferred to a Texas public higher educational institution and must be substituted for that institution's lower division requirements in the degree program containing the field of study. The student shall receive full academic credit for the transferred FOS courses in the related university degree program. HCC has developed specialized transfer plans for specific majors and for specific universities. Students should obtain appropriate transfer plans including FOS courses from a counselor.

Students also need to be aware that universities often have limitations on the amount of credit that can transfer from community colleges to universities. That limit is usually around sixty-six semester hours taken at community colleges.

## Associate of Science

The Associate of Science is intended primarily for students planning on transferring to a senior college or university to receive a baccalaureate degree in the following areas: computer science, engineering, health and natural sciences, or mathematics.

### Core Curriculum

If a student successfully completes the 42-hour core curriculum at HCC, that block of courses must be substituted for a receiving institution's core curriculum when a student transfers. A student will receive academic credit for each of the courses transferred and may not be required to take additional core curriculum courses at the receiving institution, unless the receiving institution has a larger core. Students who transfer without completing the core curriculum will receive academic credit in the core curriculum of the receiving institution for each of the courses that the student has successfully completed in the core curriculum of the sending institution.

### Suggested Advising Plan

#### Required Academic Core

#### FIRST YEAR

##### First Semester

EDUC 1300	Learning Framework.....	3
ENGL 1301	Composition I.....	3
HIST #3##	American History Elective (May choose from HIST 1301, 1302, 2301, 2328, 2381).	3

# Academic Degrees

XXXX #3##	Transferable Elective	.....	3
MATH #3##	Mathematics Elective <sup>A</sup>	.....	3
<b>Semester Total</b>			<b>15</b>

## Second Semester

ENGL 1302	Composition II OR		
ENGL 2311	Technical and Business Writing	.....	3
HIST #3##	American History Elective (May choose from HIST 1301, 1302, 2301, 2328, 2381)	.....	3
MATH #3##	Mathematics Elective <sup>A</sup>	.....	3
XXXX #3##	Life & Physical Sciences Elective <sup>B</sup>	.....	3
XXXX #3##	Creative Arts Elective <sup>C</sup>	.....	3
<b>Semester Total</b>			<b>15</b>

## SECOND YEAR

### First Semester

XXXX #3##	Language, Philosophy, & Culture <sup>D</sup>	.....	3
GOVT 2305	Federal Government <sup>E</sup>	.....	3
MATH #3##	Mathematics Elective <sup>A</sup>	.....	3
XXXX #3##	Life & Physical Sciences Elective <sup>B</sup>	.....	3
XXXX #3##	Social & Behavioral Sciences Elective <sup>F</sup>	.....	3
<b>Semester Total</b>			<b>15</b>

### Second Semester

GOVT 2306	Texas Government <sup>E</sup>	.....	3
XXXX #3##	Component Area Option <sup>G</sup> OR		
XXXX #3##	Transferable Elective	.....	3
XXXX #3##	Life & Physical Sciences Elective with Lab <sup>B</sup>	.....	4
XXXX #3##	Transferable Elective	.....	3
XXXX #2##	Transferable Elective	.....	2
<b>Semester Total</b>			<b>15</b>
<b>Program Total</b>			<b>60</b>

<sup>A</sup> Mathematics May choose from: MATH 1314, 1316, 1324, 1325, 1332, 1342, 1350, 2318, 2320, 2412, 2413.

<sup>B</sup> Life & Physical Sciences: May choose: from ANTH 2301, ASTR 1303, 1304, 1403, 1404, BIOL 1308, 1309, 1322, 1406, 1407, CHEM 1305, 1405, 1411, 1412, GEOG 1301, GEOL 1305, 1345, 1347, 1403, 1404, PHYS 1305, 1401, 1402, 2325, 2326.

<sup>C</sup> Creative Arts: May choose ARTS 1301, 1303, 1304, COMM 2366, DANC 2303, DRAM 1310, 2361, 2366, ENGL 2307, 2308, HUMA 1301, 1311, MUSI 1301, 1306, 1310.

<sup>D</sup> Language, Philosophy, & Culture (3 hours) Choose One: ENGL 2322, 2323, 2327, 2328, 2332, 2333, 2342, 2343, 2351, HIST 2311, 2312, 2321, 2322, HUMA 1305, 2319, 2323, PHIL 1301, 1304, 2306, 2307, 2316.

<sup>E</sup> Government: May choose GOVT 2305, 2306.

<sup>F</sup> Social/Behavioral Science: May choose: ANTH 2346, 2351, ECON 2301, 2302, GEOG 1302, 1303, PSYC 2301 2314 2316, 2319, SOCI 1301, 1306, 2336.

<sup>G</sup> Component Area Option: ANTH 2101, 2301, 2302, 2346, 2351, ARAB 1411, 1412, ARTS 1301, 1303, 1304, ASTR 1303, 1304, 1403, 1404, BIOL 1308, 1309, 1322, 1406, 1407, (2301, 2302 - Restricted to Engineering, Science, and Health Science majors), CHEM 1305, 1405, 1411, 1412, CHIN 1411, 1412, COMM 1307, 2311, 2366, COSC 1436, DANC 2303, DRAM 1310, 2361, 2366, ECON 1301, 2301, 2302, EDUC 1300, ENGL 1301, 1302, 2311, 2322, 2323, 2327, 2328,

2332, 2333, 2342, 2343, 2351, FREN 1411, 1412, GEOG 1301, 1302, 1303, 1305, 1345, 1347, 1403, 1404, GERM 1411, 1412, HIST 1301, 1302, 2301, 2311, 2312, 2321, 2322, 2327, 2328, 2381, HUMA 1301, 1305, 1311, 2319, 2323, JAPN 1411, 1412, KORE 1411, 1412, MATH 1314, 1316, 1324, 1325, 1332, 1342, 1350, 1351, 2318, 2320, 2412, 2413, 2414, 2415, MUSI 1306, 1310, PHED 1304, 1306, PHIL 1301, 1304, 2303, 2306, 2307, 2316, PHYS 1305, 1401, 1402, 2125, 2126, 2325, 2326, PSYC 2301, 2314, 2316, 2317, 2319, SOCI 1301, 1306, 2301, 2336, SPAN 1411, 1412, SPCH 1311, 1315, 1318, 1321, TECA 1354.

The student must earn a minimum 2.0 GPA on sixty (60) total college-level semester hours, must complete a minimum eighteen (18) hours of coursework in the Houston Community College, must complete TSI requirement unless exempt, and have an application to graduate on file in the Registrar's office in order to graduate.

## Biology

The Biology area of study covers the smallest and simplest organisms (microbiology) to the largest and most complex organisms (human anatomy and physiology, zoology, botany). To study this wide variety of topics, we use the most up-to-date technology, equipment and teaching techniques.

### Program Mission:

"The Biology Program at Houston Community College provides a quality education that encourages students to understand and apply their knowledge in the field of biological sciences, prepares them to interpret and communicate scientific information, assist them to develop critical thinking skills, and helps them to advance into a variety of science, allied health, and general education programs."

### Program Outcomes:

Students will:

- Display an understanding of biological systems and evolutionary processes spanning all ranges of biological complexity, including atoms, molecules, genes, cells, and organisms.
- Integrate factual and conceptual information into an understanding of scientific data by written, oral and/or visual communication. (This may include successful completion of a course-specific research project or a case study module)
- Demonstrate proficiency and safe practices in the use of laboratory equipment and basic laboratory techniques.
- Apply principles of the scientific method to problems in biology in the collection, recording, quantitative measurement, analysis and reporting of scientific data.

# Academic Degrees

## Associate of Science in Biology

### Biology Majors and Pre-Medical Programs

The Associate of Science is intended primarily for students planning on transferring to a senior college or university to receive a baccalaureate degree in the following areas: computer science, engineering, health and natural sciences, or mathematics. (Biology Majors and Pre-Medical Programs)

The Biology area of study here at HCC covers the smallest and simplest organisms (microbiology) to the largest and most complex organisms (human anatomy and physiology, zoology, botany). To study this wide variety of topics, we use the most up-to-date technology, equipment and teaching techniques.

*(Biology majors and Pre-Professional programs such as Pre-Medical, Pre-Dental, Pre-Optometry, Physician's Assistant, Pre-Veterinary.)*

### Suggested 2 year plan

#### FIRST YEAR

##### First Semester - Fall

EDUC 1300	Learning Framework.....	3
ENGL 1301	Composition I.....	3
BIOL 1406	Biology for Science Majors I.....	4
MATH 2412	Pre-Calculus Math.....	4
CHEM 1411	General Chemistry I.....	4
<b>Semester Total</b>		<b>18</b>

##### Second Semester - Spring

ENGL 1302	Composition II.....	3
BIOL 1407	Biology for Science Majors II.....	3
MATH 2413	Calculus I.....	4
CHEM 1412	General Chemistry II.....	4
<b>Semester Total</b>		<b>15</b>

#### SECOND YEAR

##### First Semester - Fall

HIST #3##	American History Elective.....	3
(May choose from: HIST 1301, 1302, 2301, 2327, 2328, 2381.)		
GOVT 2305	Federal Government OR	
GOVT 2306	Texas Government.....	3
CHEM 2423	Organic Chemistry I.....	4
PHYS 1401	College Physics I.....	4
<b>Semester Total</b>		<b>14</b>

##### Second Semester - Spring

BIOL #4##	Biology Elective *.....	4
HIST #3##	American History Elective.....	3
(May choose from: HIST 1301, 1302, 2301, 2327, 2328, 2381.)		
CHEM 2425	Organic Chemistry II.....	4
PHYS 1402	College Physics II.....	4
<b>Semester Total</b>		<b>15</b>
<b>Program Total</b>		<b>60</b>

\* Biology Elective Option: Choose from BIOL 2406, 2416, 2421 or 2320/2120).

The student must earn a minimum 2.0 GPA on sixty (60) total college-level semester hours, must complete a minimum eighteen (18) hours of coursework in the Houston Community College, must complete TSI requirement unless exempt, and have an application to graduate on file in the Registrar's office in order to graduate.

## Associate of Science in Biology

### Health Science Professions

The Associate of Science is intended primarily for students planning on transferring to a senior college or university to receive a baccalaureate degree in the following areas: computer science, engineering, health and natural sciences, or mathematics. (Pre-Nursing, Pre-Radiologic Sciences, Pre-Clinical Laboratory Services)

### CONCENTRATIONS:

- Pre-Nursing <sup>A</sup>
- Pre-Radiologic Sciences <sup>B</sup>
- Pre-Clinical Laboratory Services <sup>C</sup>

### Suggested 2 year plan

#### FIRST YEAR

##### First Semester - Fall

EDUC 1300	Learning Framework.....	3
ENGL 1301	Composition I.....	3
BIOL 1406	Biology for Science Majors I.....	4
CHEM 1411	General Chemistry I.....	4
<b>Semester Total</b>		<b>14</b>

##### Second Semester - Spring

ENGL 1302	Composition II OR	
ENGL 2311	Technical & Business Writing.....	3
XXXX #3##	Language, Philosophy, & Culture Elective*.....	3
PSYC 2301	General Psychology.....	3
BIOL 2301	Anatomy and Physiology I <sup>A</sup> .....	3
BIOL 2101	Anatomy and Physiology I <sup>A</sup> .....	1
BIOL 2301	Anatomy and Physiology I <sup>B</sup> .....	3
BIOL 2101	Anatomy and Physiology I <sup>B</sup> .....	1
CHEM 1412	General Chemistry II <sup>C</sup> .....	
MATH 1342	Elementary Statistical Methods OR <sup>A</sup> .....	3
PYSC 2317	Statistical Methods in Psychology <sup>A</sup> .....	
MATH 2412	Pre-Calculus Math OR <sup>B</sup> .....	
MATH 2413	Calculus I <sup>B</sup> .....	
MATH 1314	College Algebra <sup>C</sup> .....	
<b>Semester Total</b>		<b>16-17</b>

# Academic Degrees

## SECOND YEAR

### First Semester - Fall

XXX #3##	American History Elective **	3
GOVT 2305	Federal Government	3
BIOL 2302	Anatomy and Physiology II <sup>A</sup>	3
BIOL 2102	Anatomy and Physiology II <sup>A</sup>	1
BIOL 2302	Anatomy and Physiology II <sup>B</sup>	3
BIOL 2102	Anatomy and Physiology II <sup>B</sup>	1
BIOL 1407	General Biology II <sup>C</sup> OR	
BIOL 2416	Genetics <sup>C</sup>	
BIOL 1322	Basic Nutrition <sup>A</sup>	3
PHYS 1401	College Physics I <sup>B</sup>	
CHEM 2423	Organic Chemistry I <sup>C</sup>	
PSYC 2314	Lifespan Growth & Development	3

**Semester Total 16-17**

### Second Semester - Spring

BIOL 2320	Microbiology <sup>A</sup>	3
BIOL 2120	Microbiology <sup>A</sup>	1
XXXX #1##	Elective <sup>A</sup>	1
PHYS 1402	College Physics II <sup>B</sup>	
CHEM 2425	Organic Chemistry I <sup>C</sup>	4
GOVT 2306	Texas Government	3
XXXX #3##	Creative Arts Elective ***	3
XXXX #3##	American History Elective	3

**Semester Total 13**

**Program Total 59-61**

<sup>A</sup> Pre-Nursing

<sup>B</sup> Pre-Radiologic Sciences

<sup>C</sup> Pre-Clinical Laboratory Services

\* Language, Philosophy, & Culture

May choose from: ENGL 2322, 2323, 2327, 2328, 2332, 2333, 2342, 2343, 2351, HIST 2311, 2312, 2321, 2322, HUMA 1305, 2319, 2323, PHIL 1301, 1304, 2306, 2307, 2316.

\*\* American History

May choose from: HIST 1301, 1302, 2301, 2327, 2328, 2381

\*\*\* Creative Arts

May choose from: ARTS 1301, 1303, 1304, COMM 2366, DANC 2303, DRAM 1310, 2361, 2366, HUMA 1301, 1311, MUSI 1306, 1310.

The student must earn a minimum 2.0 GPA on sixty (60) total college-level semester hours, must complete a minimum eighteen (18) hours of coursework in the Houston Community College, must complete TSI requirement unless exempt, and have an application to graduate on file in the Registrar's office in order to graduate.

## Associate of Science in Chemistry

The Associate of Science is intended primarily for students planning on transferring to a senior college or university to receive a baccalaureate degree in the following areas: computer science, engineering, health and natural sciences, or mathematics.

The mission of the chemistry discipline is to provide our students with a sound education and appreciation for the basic principles and practice of chemistry. Our emphasis is on the teaching and learning of chemistry with the goal of preparing our students for careers in various health care professions, engineering, and other fields requiring knowledge of chemistry. We also seek to provide an informative introduction to chemistry to non-science majors, whether they are taking chemistry simply to meet their degree requirements or to satisfy their desire to learn more about a subject which plays such an important role in our everyday lives.

### Program Outcomes

Students will be able to

- Demonstrate basic mastery of chemistry by writing formula and equations for chemical reactions, performing chemical calculations and recognizing the application of chemistry in our daily lives
- Demonstrate a mastery of introductory and intermediate level chemistry to promote success in higher level chemistry and other science programs in four year universities
- Demonstrate a mastery of General and Organic Chemistry in preparation for allied and professional health programs and engineering
- Conduct laboratory experiments by making measurements, performing chemical reactions and analyzing the results in a group or individual setting

### Suggested 2 year plan

#### FIRST YEAR

##### First Semester - Fall

EDUC 1300	Learning Framework	3
ENGL 1301	Composition I	3
XXXX #3##	American History Elective <sup>A</sup>	3
MATH 2413	Calculus I	4
CHEM 1411	General Chemistry I	4

**Semester Total 17**

# Academic Degrees

## Second Semester - Spring

ENGL 1302	Composition II	3
XXXX #3##	American History Elective <sup>A</sup>	3
MATH 2414	Calculus II	4
CHEM 1412	General Chemistry II	4
XXXX #3##	Social & Behavioral Sciences Elective <sup>D</sup>	3
<b>Semester Total</b>		<b>17</b>

## SECOND YEAR

### First Semester - Fall

XXXX #3##	Language, Philosophy, & Culture Elective <sup>B</sup>	3
GOVT 2305	Federal Government	3
CHEM 2423	Organic Chemistry I	4
PHYS 2325	University Physics I	3
PHYS 2125	University Physics Laboratory I	1
<b>Semester Total</b>		<b>14</b>

### Second Semester - Spring

XXXX #3##	Creative Arts Elective <sup>C</sup>	3
GOVT 2306	Texas Government	3
CHEM 2425	Organic Chemistry II	4
PHYS 2326	University Physics II	3
PHYS 2126	University Physics Laboratory II	1
<b>Semester Total</b>		<b>14</b>
<b>Program Total</b>		<b>62</b>

<sup>A</sup> American History - May choose from: HIST 1301, HIST 1302, HIST 2301, HIST 2327, HIST 2328, HIST 2381.

<sup>B</sup> Language, Philosophy, & Culture - May choose from: ENGL 2322, 2323, 2327, 2328, 2332, 2333, 2342, 2343, 2351; HIST 2311, 2312, 2321, 2322; HUMA 1305, 2319, 2323; PHIL 1301, 1304, 2306, 2307, 2316.

<sup>C</sup> Creative Arts - May choose from: ARTS 1301, 1303, 1304; COMM 2366; DANC 2303; DRAM 1310, 2361, 2366; HUMA 1301, 1311; MUSI 1306, 1310.

<sup>D</sup> Social & Behavioral Sciences - May choose from: ANTH 2346, 2351; ECON 2301, 2302, GEOG 1302, 1303, PSYC 2301 2314 2316, 2319, SOCI 1301, 1306, 2336, TECA 1354.

The student must earn a minimum 2.0 GPA on sixty (60) total college-level semester hours, must complete a minimum eighteen (18) hours of coursework in the Houston Community College, must complete TSI requirement unless exempt, and have an application to graduate on file in the Registrar's office in order to graduate.

## Associate of Science in Computer Science

The Associate of Science is intended primarily for students planning on transferring to a senior college or university to receive a baccalaureate degree in the following areas: computer science, engineering, health and natural sciences, or mathematics.

The degree accomplishes the completion of seven of the nine Foundational Component Area (FCA) and all of the Computer Science Field of Study (FOS) Curriculum as outlined by the Texas Higher Education Coordinating Board (THECB).

## Suggested 2 year plan

### FIRST YEAR

#### First Semester - Fall

EDUC 1300	Learning Framework	3
ENGL 1301	Composition I	3
MATH 2412	Precalculus	4
COSC 1436	Programming Fundamentals I	4
HIST #3##	American History Elective <sup>A</sup>	3
<b>Semester Total</b>		<b>17</b>

#### Second Semester - Spring

ENGL 1302	Composition II	3
MATH 2413	Calculus I	4
COSC 1437	Programming Fundamentals II	4
HIST #3##	American History Elective <sup>A</sup>	3
<b>Semester Total</b>		<b>14</b>

### SECOND YEAR

#### First Semester - Fall

MATH 2414	Calculus II	4
PHYS 2325	University Physics I	3
PHYS 2125	University Physics Laboratory I	1
COSC 2436	Programming Fundamentals III	4
GOVT 2305	Federal Government	3
<b>Semester Total</b>		<b>15</b>

#### Second Semester - Spring

PHYS 2326	University Physics I	3
PHYS 2126	University Physics Laboratory I	1
COSC 2425	Computer Organization	4
XXXX #3##	Social & Behavioral Sciences Elective <sup>* B</sup>	3
GOVT 2306	Texas Government	3
<b>Semester Total</b>		<b>14</b>
<b>Program Total</b>		<b>60</b>

<sup>\*</sup> The Social & Behavioral Sciences FCS course may be substituted with either a Language, Philosophy and Culture D FCA course or a Creative Arts C FCA course.

<sup>A</sup> American History May Choose from: HIST 1301, 1302, 2301, 2327, 2328, 2381

<sup>B</sup> Social & Behavioral Sciences Elective May Choose from: ANTH 2346, 2351, ECON 2301, 2302, GEOG 1302, 1303, PSYC 2301, 2314, 2316, 2319, SOCI 1301, 1306, 2336, TECA 1354.

The student must earn a minimum 2.0 GPA on sixty (60) total college-level semester hours, must complete a minimum eighteen (18) hours of coursework in the Houston Community College, must complete TSI requirement unless exempt, and have an application to graduate on file in the Registrar's office in order to graduate.

# Academic Degrees

## Associate of Science in Engineering Science

### Required Academic Core

#### First Year

##### First Semester

HIST #3##	American History Elective <sup>A</sup>	3
ENGL 1301	Composition I	3
MATH 2413	Calculus I	4
CHEM 1411	General Chemistry I	4
ENGR 1201	Introduction to Engineering	2

**Semester Total 16**

##### Second Semester

ENGR 1204	Engineering Graphics I	2
ENGL 1302	Composition II	
ENGL 2311	Technical & Business Writing	3
MATH 2414	Calculus II	4
PHYS 2325	University Physics I	3
PHYS 2125	University Physics I Laboratory	1
GOVT 2306	Texas Government OR	
GOVT 2305	Federal Government	3

**Semester Total 16**

#### Second Year

##### First Semester

ENGR 2304	Programming for Engineers	3
ECON 2301	Macroeconomics OR	
ECON 2302	Microeconomics	3
ENGR 2301	Engineering Mechanics - Statics	3
MATH 2415	Calculus III	4
PHYS 2326	University Physics II	3
PHYS 2126	University Physics II Laboratory	1

**Semester Total 17**

##### Second Semester

ENGR 2405	Electrical Circuit I	4
MATH 2320	Differential Equations	3
XXXX #3##	Engineering Elective <sup>B</sup>	3
XXXX #3##	Creative Arts Elective <sup>C</sup>	3
XXXX #3##	Language, Philosophy, & Culture Elective <sup>D</sup>	3

**Semester Total 16**

**Program Total 65**

<sup>A</sup> American History  
Choose from: HIST 1301, 1302, 2301, 2327, 2328, 2381.

<sup>B</sup> Engineering Elective  
Students interested in pursuing mechanical or civil engineering should take ENGR 2302: Engineering Mechanics—Dynamics as the engineering elective.  
Students interested in pursuing electrical engineering should take COSC 1436 Programming Fundamentals I as the engineering elective.

Students interested in pursuing industrial engineering should take ENGR 2308 Engineering Economics as the engineering elective. Note: Industrial engineering as a completion degree is not currently offered by UTT.

<sup>C</sup> Creative Arts Elective  
Choose from: ARTS 1301, 1303, 1304, COMM 2366, DANC 2303, DRAM 1310, 2361, 2366, HUMA 1301, 1311, MUSI 1301, 1306, 1310.

<sup>D</sup> Language, Philosophy, and Culture Elective  
Choose from: ENGL 2322, 2323, 2327, 2328, 2332, 2333, 2342, 2343, 2351, HIST 2311, 2312, 2321, 2322, HUMA 1305, 2319, 2323, PHIL 1301, 1304, 2306, 2307, 2316

## Associate of Science in Geology

Geoscientists study the physical aspects of the Earth, such as its composition, structure and processes to learn about its past, present and future. The study of geology is essential in our understanding of the environment, the source and supply of natural resources such as energy sources and water, and the daily exposure to geological hazards including earthquakes, volcanism, subsidence, flooding, and mass movement.

The HCC Geology Program is committed to providing:

- A variety of educational opportunities to students that can lead to their success in Geology courses.
- Instructional techniques and facilities are geared towards providing a solid foundation in the understanding of science, and the theories, methods, and technologies used to study Earth's composition, its processes of change, its history, and its resources.

### Program Outcomes

Students will be able to:

- Recognize scientific and quantitative methods.
- Evaluate the differences of scientific approaches and communicate these findings, analyses, and interpretations in oral and written communication.
- Demonstrate knowledge of the major issues and problems facing modern science, including issues that touch upon ethics, values, religion, and public policies.
- Demonstrate knowledge of the interdependence of science and technology and their influence on, and contribution to, modern culture.
- Identify and recognize the differences in competing scientific theories.

# Academic Degrees

## Required Academic Core

### First Year

#### First Semester

EDUC 1300	Learning Framework.....	3
ENGL 1301	Composition I.....	3
HIST #3##	American History Elective <sup>D</sup> .....	3
CHEM 1411	General Chemistry I *.....	4
<b>Semester Total</b>		<b>13</b>

#### Second Semester

ENGL 1302	Composition II OR	
ENGL 2311	Technical & Business Writing.....	3
HIST #3##	American History Elective <sup>D</sup> .....	3
CHEM 1412	General Chemistry II *.....	4
MATH 2413	Calculus I **.....	4
XXXX #3##	Social & Behavioral Sciences Elective A.....	3
<b>Semester Total</b>		<b>17</b>

### Second Year

#### First Semester

MATH 2414	Calculus II.....	4
GOVT 2305	Federal Government.....	3
PHYS 2325	University Physics I.....	3
PHYS 2125	University Physics I (Lab) *.....	1
GEOL 1403	Physical Geology *.....	4
<b>Semester Total</b>		<b>15</b>

#### Second Semester

XXXX #3##	Creative Arts Elective <sup>B</sup> .....	3
XXXX #3##	Language, Philosophy, & Culture Elective <sup>C</sup> .....	3
GOVT 2306	Texas Government.....	3
GEOL 1404	Historical Geology *.....	4
PHYS 2326	University Physics II.....	3
PHYS 2126	University Physics II (Lab) *.....	1
<b>Semester Total</b>		<b>17</b>
<b>Program Total</b>		<b>62</b>

\* Note: Universities also require the science labs.

\*\* Note: Precalculus does not transfer to the major but is needed as a prerequisite to Calculus.

<sup>A</sup> Social & Behavioral Sciences  
May choose from: ANTH 2346, 2351; ECON 1301, 2301, 2302; GEOG 1302, 1303; PSYC 2301, 2314, 2316, 2319; SOCI 1301, 1306, 2336; TECA 1354.

<sup>B</sup> Creative Arts  
May choose from: ARTS 1301, 1303, 1304; COMM 2366; DANC 2303; DRAM 1310, 2361, 2366; HUMA 1301, 1311; MUSI 1306, 1310.

<sup>C</sup> Language, Philosophy, & Culture  
May choose from: ENGL 2322, 2323, 2327, 2328, 2332, 2333, 2342, 2343, 2351; HIST 2311, 2312, 2321, 2322; HUMA 1305, 2319; 2323; PHIL 1301, 1304, 2306, 2307, 2316.

<sup>D</sup> American History Choose from: HIST 1301, 1302, 2301, 2327, 2328, 2381.

## Associate of Science in Mathematics

The Associate of Science is intended primarily for students planning on transferring to a senior college or university to receive a baccalaureate degree in the following areas: computer science, engineering, health and natural sciences, or mathematics.

Mathematics is a component of the academic branch of the college and serves as a major component of the core curriculum. Students pursuing Associate degrees are required to take prescribed core mathematics courses. Many of the students in certificate programs, along with those desiring to upgrade their skills, take mathematics courses as well.

### Suggested 2 year plan

#### FIRST YEAR

##### First Semester - Fall

EDUC 1300	Learning Framework.....	3
ENGL 1301	Composition I.....	3
CHEM 1411	General Chemistry I.....	4
MATH 2412	Pre-Calculus Math.....	4
<b>Semester Total</b>		<b>14</b>

##### Second Semester - Spring

ENGL 1302	Composition II.....	3
CHEM 1412	General Chemistry II.....	4
MATH 2413	Calculus I.....	4
XXXX #3##	American History Elective <sup>A</sup> .....	3
XXXX #3##	Language, Philosophy, & Culture Elective <sup>B</sup> .....	3
<b>Semester Total</b>		<b>17</b>

#### SECOND YEAR

##### First Semester - Fall

MATH 2414	Calculus II.....	4
GOVT 2305	Federal Government.....	3
XXXX #3##	Creative Arts Elective <sup>C</sup> .....	3
PHYS 2325	University Physics I.....	3
PHYS 2125	University Physics Laboratory I.....	1
<b>Semester Total</b>		<b>14</b>

##### Second Semester - Spring

GOVT 2306	Texas Government.....	3
XXXX #3##	American History Elective <sup>A</sup> .....	3
MATH 2415	Calculus III.....	4
XXXX #3##	Social & Behavioral Sciences Elective <sup>D</sup> .....	3
PHYS 2326	University Physics II.....	3
PHYS 2126	University Physics Laboratory II.....	1
<b>Semester Total</b>		<b>17</b>
<b>Program Total</b>		<b>62</b>

# Academic Degrees

## <sup>A</sup> American History

Choose Two: HIST 1301, HIST 1302, HIST 2301, HIST 2327, HIST 2328  
HIST 2381.

## <sup>B</sup> Language, Philosophy, & Culture

Choose One: ENGL 2322, 2323, 2327, 2328, 2332, 2333, 2342, 2343, 2351,  
HIST 2311, 2312, 2321, 2322, HUMA 1305, 2319, 2323, PHIL 1301, 1304,  
2306, 2307, 2316.

## <sup>C</sup> Creative Arts

Choose One: ARTS 1301, 1303, 1304, COMM 2366, DANC 2303, DRAM  
1310, 2361, 2366, HUMA 1301, 1311, MUSI 1306, 1310.

## <sup>D</sup> Social & Behavioral Sciences

Choose One: ANTH 2346, 2351, ECON 1301, 2301, 2302, GEOG 1302,  
1303, PSYC 2301 2314 2316, 2319, SOCI 1301, 1306, 2336, TECA 1354.

The student must earn a minimum 2.0 GPA on sixty (60) total college-level semester hours, must complete a minimum eighteen (18) hours of coursework in the Houston Community College, must complete TSI requirement unless exempt, and have an application to graduate on file in the Registrar's office in order to graduate.

## Associate of Science in Physics

The Associate in Science is intended primarily for students planning on transferring to a senior college or university to receive a baccalaureate degree in the following areas: computer science, engineering, health and natural sciences, or mathematics.

### Employment

Physicists are often employed in engineering or in computer science jobs.

TSI testing is required prior to first enrollment.

### Suggested 2 year plan

#### FIRST YEAR

##### First Semester - Fall

EDUC 1300	Learning Framework.....	3
ENGL 1301	Composition I.....	3
CHEM 1411	General Chemistry I.....	4
MATH 2412	Pre-Calculus Math.....	4
XXXX #3##	American History Elective <sup>A</sup> .....	3

**Semester Total 17**

##### Second Semester - Spring

ENGL 1302	Composition II.....	3
CHEM 1412	General Chemistry II.....	4
MATH 2413	Calculus I.....	4
XXXX #3##	American History Elective <sup>A</sup> .....	3
XXXX #3##	Language, Philosophy, & Culture Elective <sup>B</sup> .....	3

**Semester Total 17**

## SECOND YEAR

### First Semester - Fall

MATH 2414	Calculus II.....	4
GOVT 2305	Federal Government.....	3
XXXX #3##	Creative Arts Elective <sup>C</sup> .....	3
PHYS 2325	University Physics I.....	3
PHYS 2125	University Physics Laboratory I.....	1

**Semester Total 14**

### Second Semester - Spring

GOVT 2306	Texas Government.....	3
XXXX #3##	Social & Behavioral Sciences Elective <sup>D</sup> .....	3
PHYS 2326	University Physics II.....	3
PHYS 2126	University Physics Laboratory II.....	1
MATH 2415	Calculus III.....	4

**Semester Total 14**

**Program Total 62**

## <sup>A</sup> American History

May choose from: HIST 1301, 1302, 2301, 2327, 2328, 2381.

## <sup>B</sup> Language, Philosophy, & Culture

May choose from: ENGL 2322, 2323, 2327, 2328, 2332, 2333, 2342, 2343,  
2351, HIST 2311, 2312, 2321, 2322, HUMA 1305, 2319, 2323, PHIL  
1301, 1304, 2306, 2307, 2316.

## <sup>C</sup> Creative Arts

May choose from: ARTS 1301, 1303, 1304, COMM 2366, DANC 2303, DRAM  
1310, 2361, 2366, HUMA 1301, 1311, MUSI 1306, 1310.

## <sup>D</sup> Social & Behavioral Sciences

May choose from: ANTH 2346, 2351, ECON 1301, 2301, 2302, GEOG 1302,  
1303, PSYC 2301, 2314, 2316, 2319, SOCI 1301, 1306, 2336, TECA 1354.

The student must earn a minimum 2.0 GPA on sixty (60) total college-level semester hours, must complete a minimum eighteen (18) hours of coursework in the Houston Community College, must complete TSI requirement unless exempt, and have an application to graduate on file in the Registrar's office in order to graduate.

## Recommended Transfer Advising Plans

### AS: Computer Science Speciality Area

#### First Semester

ENGL 1301	English Composition I.....	3
	American History Elective.....	3
COSC 1436	Programming Fundamentals I (FOS).....	4
MATH 2413	Calculus I (FOS).....	4
	Oral Communication Elective.....	3

**Semester Total 17**

# Academic Degrees

## Second Semester

ENGL 1302	English Composition II	3
	American History Elective	3
	Social & Behavioral Science (3 hrs.)	3
COSC 1437	Programming Fundamentals II (FOS)	4
MATH 2414	Calculus II (FOS)	4
<b>Semester Total</b>		<b>17</b>

## SECOND YEAR

### First Semester

		Credits
Humanities		3
GOVT 2305	Federal Government	3
	Cross Cultural Studies	3
PHYS 2325	General Technical Physics (FOS)	3
PHYS 2125	General Technical Physics Lab (FOS)	1
COSC 2436	Programming Fundamentals III (FOS)	4
<b>Semester Total</b>		<b>17</b>

### Second Semester

		Credits
GOVT 2306	Texas Government	3
	Fine Arts (3 hrs.)	3
COSC 2325	Computer Organization and Machine Language (FOS)	3
PHYS 2326	General Technical Physics II(FOS)	3
PHYS 2126	General Technical Physics Lab II (FOS)	1
<b>Semester Total</b>		<b>13</b>

## AS: Science/Math Technology Speciality Area

### First Semester

		Credits
ENGL 1301	English Composition I	3
	American History Elective	3
CHEM 1411	General Chemistry I	4
MATH 2412	Pre-Calculus	4
	Oral Communication Elective	3
<b>Semester Total</b>		<b>17</b>

### Second Semester

		Credits
ENGL 1302	English Composition II	3
	American History Elective	3
	Social & Behavioral Science Elective (3 hrs.)	3
CHEM 1412	General Chemistry II	4
MATH 2413	Calculus I	4
<b>Semester Total</b>		<b>17</b>

## SECOND YEAR

### First Semester

		Credits
Humanities		3
GOVT 2305	Federal Government	3
	Cross Cultural Studies	3
PHYS 2325	General Technical Physics	3
PHYS 2125	General Technical Physics Lab	1
MATH 2414	Calculus II	4
<b>Semester Total</b>		<b>17</b>

## Second Semester

		Credits
GOVT 2306	Texas Government	3
	Fine Arts (3 hrs.)	3
MATH 2425	Calculus III	4
PHYS 2326	General Technical Physics II	3
PHYS 2126	General Technical Physics Lab II	1
<b>Semester Total</b>		<b>14</b>

## AS: Electrical/Electronics Engineering Technology Speciality Area

### First Semester

		Credits
ENGL 1301	English Composition I	3
	American History Elective	3
CHEM 1411	General Chemistry I (FOS)	4
MATH 2413	Calculus I (FOS)	4
	Oral Communication Elective	3
<b>Semester Total</b>		<b>17</b>

### Second Semester

		Credits
ENGL 1302	English Composition II	3
	American History Elective	3
	Social & Behavioral Science Elective (3 hrs.) (080)	3
CETT 1403	DC Circuits (FOS)	4
MATH 2414	Calculus II (FOS)	4
<b>Semester Total</b>		<b>17</b>

## SECOND YEAR

### First Semester

		Credits
Humanities (040)		3
GOVT 2305	Federal Government (070)	3
	Cross Cultural Studies (090)	3
PHYS 1401	Physics I (FOS)	4
CETT 1405	AC Circuits (FOS)	4
<b>Semester Total</b>		<b>17</b>

### Second Semester

		Credits
GOVT 2306	Texas Government (070)	3
	Fine Arts (3 hrs.) (050)	3
PHYS 1402	Physics II (FOS)	4
CETT 1425	Digital Fundamentals (FOS)	4
<b>Semester Total</b>		<b>14</b>

# Academic Degrees

## General Requirements (AA, AAT, and AS degrees)

To be eligible for an Associate of Arts (AA), an Associate of Arts in Teaching (AAT), or an Associate of Science (AS) degree from HCC, a student must successfully:

Complete at least 60 semester hours of credit as follows: (a) for the AA degree, 43 hours of required core courses and 17 hours of transferable electives, usually focusing on the student's transfer major (b) for the AAT degree, 44 hours of required core courses plus 16-18 hours of required pre-teaching courses (c) for the AS degree, 43 hours of required core courses plus six additional hours of mathematics, four additional hours of natural science, and 7 hours of transferable electives, usually focusing on the student's transfer major.

- Complete a minimum of 18 semester hours toward the degree in the Houston Community College System. These hours may not be satisfied through credit by exam.
- Have an overall 2.0 HCC grade point average.
- Satisfy TSI requirements.
- Resolve all financial obligations and return all College materials, including library books, to HCC prior to graduation.

Since the fall 2000 semester, HCC awards academic certificates for the following benchmarks of achievement:

- Certificate of Completion of the AA/AAT/AS Core Curriculum. To receive the Certificate of Completion for the AA/AAT/AS core curriculum, a student must complete 43 SCH of required course work in the following areas\*:

Communication .....	6
Oral Communication.....	3
Mathematics .....	3
Earth, Life & Physical Sciences.....	7
Humanities .....	3
Visual/Performing Arts .....	3
American History.....	6
Government .....	6
Social/Behavioral Science.....	3
Cross/Multicultural Studies.....	3
Total (Core Curriculum Certificate).....	43

\*No one course may be used to fulfill more than one core category.

- If a student successfully completes the 43-hour core curriculum at HCC, that block of courses must be substituted for a receiving institution's core curriculum when a student transfers. A student will receive

academic credit for each of the courses transferred and may not be required to take additional core curriculum courses at the receiving institution, unless the receiving institution has a larger core. Students who transfer without completing the core curriculum will receive academic credit in the core curriculum of the receiving institution for each of the courses that the student has successfully completed in the core curriculum of the sending institution.

- Certificate of Completion of Developmental Education
- Certificate of Completion of the Academic-English-as-a-Second-Language (AESL) Program
- Certificate of Completion of the Intensive English (ESOL) Program

### Advanced Dance Certificate

The Advanced Dance Certificate is a 21-semester hour academic certificate designed to give a professional credential demonstrating advanced Dance proficiency. This certificate is recognized by dance studios for instructional purposes.

DANC 1301 Dance Composition.....	3
DANC 1305 or 1306 World Dance I or II.....	3
DANC 2303 Dance Appreciation .....	3
DANC 2325 Anatomy & Kinesiology.....	3
DANC 2341 or 2342 Ballet III* or IV*.....	3
DANC 2345 or 2346 Modern Dance III* or IV*.....	3
DANC 2351 or 2352 Dance Performance III* or IV*.....	3

\*Department approval needed for advanced placement; otherwise prerequisites are needed for advanced levels of technique.

### African American Studies Certificate

The Africana African American Studies Certificate is a 15 semester hour certificate program designed to help students understand Africana/ African American culture and experience from various perspectives and viewpoints. It affords students the opportunity to examine "Blacks in the Diaspora", and understand the diversity and complexities of these unique people. Upon graduation, students will be prepared for the following career and education choices: college/university transfer, criminal justice, majors such as education and liberal arts, the social and natural sciences, criminal justices and the visual and performing arts.

### Foundation Courses (choose both; 6 hrs required)

ENGL 1302 Composition II (Emphasis on Africana/African American Studies).....	3
HIST 2381 African American History .....	3

# Academic Degrees

## Elective courses (choose 3 courses; 9 hrs required)

- Oral Communication (011)  
Spch 1315: Public Speaking (Emphasis on Africana/African American Studies)
- Humanities (Code 040)  
Engl 2328: American Literature since the Civil War (Emphasis on Africana/African American Studies)  
Engl 2336: Introduction to Multicultural Literature (Emphasis on Africana/African American Studies)  
Engl 2341: Literature and Film (Emphasis on Africana/African American Studies)  
Engl 2353: Women in Literature (Emphasis on Africana/African American Studies)
- Visual/Performing Arts (050)  
Arts 1301: Art Appreciation (Emphasis on Africana/African American Studies)  
Danc 1377, 1378
- Social/Behavioral Science (080)  
Geog 1302: Cultural Geography (Emphasis on Africana/African American Studies)  
Soci 2301: Marriage and the Family (Emphasis on Africana/African American Studies)  
Soci 2319: Minority Studies I (Emphasis on Africana/African American Studies)
- Cross Cultural Studies (091)  
Engl 2328: American Literature since the Civil War (Emphasis on Africana/African American Studies)  
Engl 2336: Introduction to Multicultural Literature (Emphasis on Africana/African American Studies)  
Engl 2341: Literature and Film (Emphasis on Africana/African American Studies)  
Engl 2353: Women in Literature (Emphasis on Africana/African American Studies)  
Geog 1302: Cultural Geography (Emphasis on Africana/African American Studies)  
Huma 2319: The Minority Experience in the US (Emphasis on Africana/African American Studies)  
Huma 2323: World Cultures (Emphasis on Africana/African American Studies)  
Soci 2319: Minority Studies I (Emphasis on Africana/African American Studies)

## Global Studies Certificate

The Global Studies Certificate is a 15-semester hour academic certificate designed to aid students in understanding the complex interrelationships between nations and their inhabitants. The program utilizes a cross disciplinary approach, encouraging students to embrace global issues from multiple perspectives. This certificate will provide a unifying framework to help students contribute to our increasingly interconnected world as responsible global citizens. It establishes a unique foundation for the pursuit

of varied majors and careers, from liberal arts and social sciences to international business. (All courses are core curriculum courses and will transfer as core to all Texas public universities).

## Required Foundation Course 1 (choose one course from the following)

SOCI 2374	Global Issues and Social Change.....	3
ECON 2311	Economic Geography .....	3
GEOG 2312	Economic Geography .....	3
HIST 2322	Modern World Civilizations: 1500-Presnt.....	3

## Required Foundation Course 2 (choose one course from the following)

Any 3-4 hour Foreign Language course chosen from ARAB, CHIN, FREN, GERM, JAPN, KORE, RUSS, SPAN, or VIET

## Choose any three courses from the following list:

- Oral Communication (011)  
ARAB 1411, 1412; CHIN 1411, 1412; FREN 1411, 1412; GERM 1411, 1412; JAPN 1411, 1412; KORE 1411, 1412; SPAN 1411, 1412; VIET 1411, 1412
- Earth, Life & Physical Sciences (030)  
ENVR 1301, 1401 (Note: Credit will not be given for both ENVR 1301 and 1401)
- Humanities (040)  
ENGL 2332, 2333, 2336
- Visual/Performing Arts (050)  
ARTS 1303, 1304, DANC 1305, 1306
- Social/Behavioral Science (080)  
ANTH 2302, 2346, 2351; ECON 2301, 2311; GEOG 1302, 1303, 2312; HIST 2311, 2312, 2321, 2322; PHIL 2307; SOCI 1301, 2374
- Cross/Multicultural Studies (091)  
ANTH 2302, 2346, 2351; ARTS 1303, 1304; ARAB 1411, 1412; CHIN 1411, 1412; FREN 1411, 1412; GERM 1411, 1412; JAPN 1411, 1412; KORE: 1411, 1412; SPAN 1411, 1412; VIET 1411, 1412; ECON 2311; ENGL 2332, 2333, 2336; GEOG 1302, 1303, 2312; HIST 2311, 2312, 2321, 2322; HUMA 1301, PHIL 1304, 2307 2316, 2317; PSYC 2370; SOCI 1301, 2374

## Mexican-American/Latino Studies Certificate

The Mexican-American/Latino Studies Certificate is a 15-semester hour academic certificate designed to help you understand Mexican-American/Latino culture from different perspectives. It provides a unique foundation for various majors and careers, including elementary education, social and behavioral sciences, criminal justice, and many others. (All courses are core curriculum courses and will transfer as core to all Texas public universities).

# Academic Degrees

## Required Foundation Courses (take both)

ENGL 2336	Multicultural Literature (Emphasis on Mexican-American and Latin-American Literature) .....	3
HUMA 2319	Minority Experience in the US. (Emphasis on Mexican-Americans / Latinos).....	3

## Choose any three courses from the following list:

- Oral Communication (011)  
SPAN 2311, 2312, 2313, 2315
- Social/Behavioral Science (080)  
GOVT 2301 (Emphasis on Mexican-American / Latino issues)  
HIST 2380 (Emphasis on Mexican-American / Latino issues)  
HIST 2328 (Mexican-American History)
- Cross/Multicultural Studies (091)  
HUMA 1305 Introduction to Mexican-American Studies  
HUMA 2323(Emphasis on Meso-American Pre-Hispanic Culture)

## Women & Gender Studies Certificate

The WGS certificate is a 15-semester hour certificate designed to help the student understand women's and gender issues as a fundamental category of social and cultural analysis; to help the student link gender with class, race, ethnic, and sexual identification; and to help the student analyze the diversity of women's experiences. It provides a unique foundation for various majors and careers, including education, social and behavioral sciences, criminal justices, math, engineering and many others. (All courses are core curriculum courses and will transfer as core to all Texas public universities.)

## Required Foundation Courses (take both)

Engl 1302	Composition II (Emphasis on women and gender issues)	3
Hist 1302	US History after 1877 (Emphasis on women and gender issues).....	3

## Choose any three courses from the following List:

- Oral Communication (011)  
SPCH 1311, 1315, 1318, 1321 (all need an emphasis on women and gender issues)
- Earth, Life & Physical Sciences (030)  
BIOL 1407 (focus on gender differences)
- Humanities (040)  
ENGL 2322, 2323, 2727, 2728, 2332, 2333, 2334, 2335, 2336, 2341, 2342, 2343, 2353 (all need an emphasis on women and gender issues)  
PHIL 1301, 1304, 2306, 2307, 2316, 2317 (women and gender issue focus)
- Visual/Performing Arts (050)  
ARTS 1301, 1303, 1304 (all need an emphasis on women and gender issues)
- Social and Behavioral Science (080)  
ANTH 2351 (emphasis on women and gender issues)

- GOVT 2301, 2302 (all need an emphasis on women and gender issues)
- HIST 1301, 2311, 2312, 2321, 2322, 2328, 2380, 2381 (all need an emphasis on women and gender issues)
- SOCI 1301, 1306, 2301, 2374 (all need an emphasis on women and gender issues)

## Cross/Multicultural Studies (091)

- ANTH 2302, HIST 2311, 2312, 2321, 2322, 2328, 2380, 2381 (all need an emphasis on women and gender issues)

- PSYC 2374, SOCI 1301, 1306, 2301, 2374 (all need an emphasis on women and gender issues)

- SPAN 2321, 2323 (all need an emphasis on women and gender issues)

## Additional WGS-related courses\*

- PSYC 2306, 2308, 2314 (all need an emphasis on women and gender issues)

*Note: Additional courses above are elective courses for degree purposes. They do not count in the core curriculum and may not apply to the university major in transfer. See counselor.*

## Additional Associate Degrees

A student who has received an associate degree or higher from an accredited institution must meet specific requirements to earn an additional degree from HCC.

- The student must complete a minimum of 18 semester hours at HCC for each additional degree. These hours may not repeat credit applied from a previous HCC degree. These hours may not be satisfied through credit by exam.
- All additional hours must be applicable toward the additional degree. If the student has prior credit in required courses, appropriate substitutions may be arranged.
- All courses required by the specific HCC program of the additional degree must be completed.
- A grade point average of at least 2.0 must be earned on all hours since the previous degree.
- Academic courses from previous degrees may be applied to an additional AAS degree required academic core where equivalent and appropriate, which waives the need for approval, except where program restrictions prevail.
- If the first degree was an Associate of Arts, an Associate of Arts in Teaching, Associate of Science, a bachelor degree, or higher degree from an accredited educational institution in the United States, the student will be considered to be "Core Complete", thus needing to complete only the requirement of

# Academic Degrees

18 additional semester hours at HCC toward a new associate degree.

- Each additional academic associate degree obtained from HCC must be of a different type. Thus, a student may only obtain one Associate in Arts, one Associate of Arts in Teaching, and/or one Associate in Science from HCC. For example, if one degree from HCC was an AA, then any additional degrees must be an AAT, AS, or AAS.
- Multiple Associate of Applied Science degrees may be earned from HCC if all AAS program requirements are met including earning at least 18 additional semester hours at HCC, 12 of which must be earned in the major program of the additional degree. In most cases, however, there is only one AAS degree allowable per workforce program. See counselor or program chair for clarification.
- Multiple workforce Certificates of Completion may be earned from HCC if all program requirements are met for each certificate including earning at least 9 additional unique semester hours at HCC toward the major program of the additional certificate.
- All other state and institutional graduation requirements, including TSI policies and financial obligations, must be met.

## Core Curriculum

The core curriculum is required of all AA, AAT, and AS graduates. In 1997, the 75th Texas Legislature passed Senate Bill 148, which required the Texas Higher Education Coordinating Board to adopt rules that include a statement of “the content, component areas, and objectives of the core curriculum”. Every public institution of higher education was required by law to adopt and implement by fall 1999, a core curriculum of no less than 42 semester hours that will be fully transferable and, if completed, will substitute for a receiving institution’s core curriculum.

In compliance with state recommendations and in the spirit of improving its educational service to students, HCC will require all students seeking an AA, AAT, or AS to complete the core curriculum. The purpose of the HCC core curriculum program is to provide the basic intellectual competencies and perspectives that help define the educated person. The exemplary educational objectives listed for the various courses included in the core will form the basis for assessing student performance and the effectiveness of the HCC core curriculum.

## Basic General Education Competencies in the HCC Core Curriculum

Essential to the learning process in any discipline are six basic general education competencies: reading, writing, speaking, listening, critical thinking, and computer literacy. These competencies should form the components of the HCC core curriculum and be woven into instructional practices throughout each course. Although certain courses address specific competencies, such as writing or speaking, the competencies of critical thinking or computer literacy may be included as specific objectives in many different courses. ***(While only AA, AS, and AAT degree seeking students complete a Core Curriculum, the AAS degree-seeking students must also complete the General Education Competencies listed below).***

**Reading:** Reading at the college level means having the ability to understand, analyze, and interpret a variety of printed materials: books, articles, and documents.

**Writing:** Writing at the college level means having the ability to produce clear, correct, and coherent prose adapted to a specific purpose, occasion, and audience. In addition to knowing how to use correct grammar, spelling, and punctuation, students should also become adept with the writing process, including how to determine a topic, how

to organize and develop it, and how to phrase it effectively for their audience. These abilities are acquired through practice and reflection.

**Speaking:** Effective speaking is the ability to communicate orally in clear, coherent, and persuasive language appropriate to purpose, occasion, and audience.

**Listening:** Listening at the college level means having the ability to understand, analyze, and interpret various forms of spoken communication.

**Critical Thinking:** Critical thinking embraces methods for applying both qualitative and quantitative skills analytically and creatively to subject matter in order to evaluate arguments and to construct alternative strategies. Problem solving is one of the applications of critical thinking used to address an identified task.

**Computer Literacy:** Computer literacy at the college level means having the ability to use computer-based technology in communicating, solving problems, and acquiring information. Core-educated students should have

# Academic Degrees

an understanding of the limits, problems, and possibilities associated with the use of technology and should have the tools necessary to evaluate and learn new technologies as they become available.

## Perspectives in the Core Curriculum

The HCC core curriculum will contain courses that help students:

- Establish broad and multiple perspectives on the individual in relation to the larger society and world in which we live and to understand the responsibilities of living in a culturally and ethnically diverse world.
- Develop a capacity to reflect upon and discuss individual, political, economic, and social aspects of life in order to determine ways in which to be a responsible member of society.
- Recognize the importance of maintaining health and wellness.
- Develop a capacity to use knowledge of how technology and science affect their lives.
- Develop personal values for ethical behavior.
- Develop the ability to make aesthetic judgments.
- Use logical reasoning in problem solving.
- Integrate knowledge and understanding of the interrelationships of the scholarly disciplines.

## Core Components and Related Exemplary Educational Objectives

### Summary Distribution Requirements:

Communication .....	9 Semester Hours
Mathematics .....	3 Semester Hours
Earth, Life & Physical Sciences.....	7 Semester Hours
Humanities and Arts Humanities .....	3 Semester Hours
Visual/Performing Arts .....	3 Semester Hours
Social/Behavioral Sciences	
American History .....	6 Semester Hours
Government .....	6 Semester Hours
Social Science .....	3 Semester Hours
Cross/Multicultural Studies.....	3 Semester Hours
Total .....	43 Semester Hours

## Communication - Nine Semester Hours

### Courses That Fulfill This Requirement:

*Written communication (take both):*

English 1301 Composition I.....3 Semester Hours

English 1302 Composition II.....3 Semester Hours

*Oral communication (choose one):*

ARAB 1411, 1412; CHIN 1411, 1412; FREN 1411, 1412

GERM 1411,1412; JAPN 1411, 1412; KORE 1411, 1412;

SPAN 1411,1412; SPCH 1311,1315, 1318, 1321, 1342, 2335, 2341

The objective of communication in the core curriculum is to enable the student to communicate effectively in a style appropriate to the subject, occasion, and audience.

### Exemplary Educational Objectives

- To understand and demonstrate writing and speaking processes through invention, organization, drafting, revision, editing, and presentation.
- To understand the importance of specifying audience and purpose and to select appropriate communication choices.
- To understand and appropriately apply modes of expression (descriptive, expository, narrative, scientific, and self-expressive) in written, visual, and oral communication.
- To participate effectively in groups with emphasis on listening, critical and reflective thinking, and responding.
- To understand and apply basic principles of critical thinking, problem solving, and technical proficiency in the development of exposition and argument.
- To develop the ability to research and write a documented paper and/or to give an oral presentation.

## Mathematics Three Semester Hours

### Courses That Fulfill This Requirement:

MATH 1314, 1316, 1324, 1325, 1332, 1342, 1350, 2318, 2320, 2412, 2413

The objective of mathematics in the core curriculum is to develop a quantitatively literate college graduate. Every college graduate should be able to apply basic mathematical tools in the solution of real-world problems.

# Academic Degrees

## Exemplary Educational Objectives

- To apply arithmetic, algebraic, geometric, higher-order thinking, and statistical methods to modeling and solving real-world situations.
- To represent and evaluate basic mathematical information verbally, numerically, graphically, and symbolically.
- To expand mathematical reasoning skills and formal logic to develop convincing mathematical arguments.
- To use appropriate technology to enhance mathematical thinking and understanding and to solve mathematical problems and judge the reasonableness of the results.
- To interpret mathematical models such as formulas, graphs, tables, and schematics and draw inferences from them.
- To recognize the limitations of mathematical and statistical models.
- To develop the view that mathematics is an evolving discipline, interrelated with human culture, and understand its connections to other disciplines.

## Earth, Life & Physical Sciences - Seven Semester Hours

### Courses That Fulfill This Requirement:

ANTH 2301, ASTR 1303, 1304, 1403, 1404, BIOL 1308, 1309, 1322, 1406, 1407, CHEM 1305, 1405, 1411, 1412, GEOG 1301, GEOL 1305, 1345, 1347, 1403, 1404, PHYS 1305, 1401, 1402, 2325, 2326

*(One course must have a laboratory component.)*

*Note: Earth, Life & Physical Sciences core course restrictions are as follows: BIOL 1308 and 1406 may not be taken in combination to fulfill the core requirements. Of the following CHEM courses (1305, 1405, 1411, and 1413), only one may be taken to fulfill the core curriculum requirement).*

The objective of the Life & Physical Science Electives in the core curriculum is to enable the student to understand, construct, and evaluate relationships in the Earth, Life & Physical Sciences and to enable the student to understand the basis for building and testing theories.

## Exemplary Educational Objectives

- To understand and apply methods and appropriate technology to the study of Life & Physical Science.
- To recognize scientific and quantitative methods and the differences between these approaches and other methods of inquiry and to communicate

findings, analyses, and interpretations, both orally and in writing.

- To identify and recognize the differences among competing scientific theories.
- To demonstrate knowledge of the major issues and problems facing modern science, including issues that touch upon ethics, values, and public policies.
- To demonstrate knowledge of the interdependence of science and technology and their influence on, and contribution to, modern culture.

*Note: In the following science course combinations, only one in each list may satisfy certificate or associate degree Earth, Life & Physical Sciences core requirements. The other courses, if additionally taken, may count as electives in the certificate or degree plan:*

- Only one of ENVR 1301 or ENVR 1401 may be taken as Life & Physical Science core.
- Only one of PHYS 1311, PHYS 1411, ASTR 1304, 1382, 1404, or 1482 may be taken as a Life & Physical Science core.
- Only one of PHYS 1312, PHYS 1412, ASTR 1303, 1403, 1381, or 1481 may be taken as a Life & Physical Science core.

## Humanities and Visual and Performing Arts – Six Semester Hours

### Courses That Fulfill This Requirement:

Three Hours of Humanities:

ENGL 2307, 2308, 2322, 2323, 2327, 2328, 2332, 2333, 2334, 2335, 2336, 2341, 2342, 2343, 2351, 2353, 2374; HUMA 2319; PHIL 1301, 2306, 2307, 2316 or 2317, 2321

Three Hours of Visual or Performing Arts:

ARTS 1301, 1303, 1304, 1311, 1312, 1316, 1317, 2316, 2317, 2323, 2324, 2326, 2327, 2333, 2334, 2341, 2342, 2346, 2347, 2348, 2349, 2356, 2357, 2366, 2367  
DANC 1112, 1113, 1210, 1211, 1301, 1305, 1306, 1341, 1342, 1345, 1346, 1347, 1348, 1349, 2112, 2113, 2210, 2301, 2303, 2325, 2341, 2342, 2345, 2346, 2347, 2351, 2352, 2389  
DRAM 1161, 1162, 1310, 1320, 1322, 1330, 1341, 1351, 1352, 2331, 2336, 2337, 2338, 2351, 2361, 2363, 2366, 2367, 2389  
MUAP 1101-2292 (Music Lessons)  
MUSI 1131, 1135, 1139, 1140, 1159, 1160, 1161, 1163, 1164, 1166, 1168, 1181, 1182, 1183, 1184, 1188, 1190, 1192, 1211, 1212, 1216, 1217, 1223, 1226, 1227, 1229, 1239, 1254, 1301, 1306, 1308, 1309, 1310, 1386, 2135, 2139, 2140, 2159, 2160, 2161, 2163, 2164, 2181, 2182, 2211, 2212, 2216, 2217, 2223, 2227, 2229, 2239, 2241, 2258, 2266, 2386

# Academic Degrees

The objective of the humanities and visual and performing arts in a core curriculum is to expand students' knowledge of the human condition and human cultures, especially in relation to behaviors, ideas, and values expressed in works of human imagination and thought. Through study in disciplines such as literature and the visual and performing arts, students will engage in critical analysis, form aesthetic judgments, and develop an appreciation of the arts and humanities as fundamental to the health and survival of any society. Students should have experiences in both the arts and humanities. Students must write a research essay demonstrating critical thinking skills using appropriate MLA or APA documentation.

## Exemplary Educational Objectives

- To demonstrate awareness of the scope and variety of works in the arts and humanities.
- To understand those works as expressions of individual and human values within a historical and social context.
- To respond critically to works in the arts and humanities.
- To engage in the creative process or interpretive performance and comprehend the physical and intellectual demands required of the author or visual or performing artist.
- To articulate an informed personal reaction to works in the arts and humanities.
- To develop an appreciation for the aesthetic principles that guide or govern the humanities and arts.
- To demonstrate knowledge of the influence of literature, philosophy, and/or the arts on intercultural experiences.

## Social and Behavioral Sciences 15 Semester Hours

### Courses That Fulfill This Requirement:

- Six Hours of American History: (choose two)  
choose one HIST 1301, 1302 and  
choose one from HIST 1301, 1302, 2301, 2328, 2371 or 2381
- Six Hours of Government: (take both)  
GOVT 2305, 2306
- Three Hours of Social/Behavioral Science: (choose one)  
ANTH 2302, 2346, 2351; ECON 2301, 2302, 2311;  
GEOG 1302, 1303, 2312; GOVT 2304; HIST 2389  
PHIL 2307; PSYC 2301, 2389; SOCI 1301, 1306, 2301,  
2319, 2336, 2374; TECA 1354

The objective of social and behavioral science in the core curriculum is to increase students' knowledge of how social and behavioral scientists discover, describe, and explain the behaviors and interactions among individuals, groups, institutions, events, and ideas. Such knowledge will better equip students to understand themselves and the roles they play in addressing the issues facing humanity.

## Exemplary Educational Objectives

- To employ the appropriate methods, technologies, and data that social and behavioral scientists use to investigate the human condition.
- To examine social institutions and processes across a range of historical periods, social structures, and cultures.
- To use and critique alternative explanatory systems or theories.
- To develop and communicate alternative explanations or solutions for contemporary social issues.
- To analyze the effects of historical, social, political, economic, cultural, and global forces on the subject of study.
- To comprehend the origins and evolution of U.S. and Texas political systems, with a focus on the growth of political institutions, the constitutions of the U.S. and Texas, federalism, civil liberties, and civil and human rights.
- To understand the evolution and current role of the U.S. in the world.
- To differentiate and analyze historical evidence (documentary and statistical) and differing points of view.
- To recognize and apply reasonable criteria for the acceptability of historical evidence and social research.
- To analyze, critically assess, and develop creative solutions to public policy problems.
- To recognize and assume responsibility as a citizen in a democratic society by learning to think independently, by engaging in public discourse, and gathering information through the news media and other appropriate sources about politics and public policy.
- To identify and understand differences and commonalities of diverse cultures.

# Academic Degrees

## Cross/Multi-Cultural Studies Three Semester Hours

### Courses That Fulfill This Requirement:

ANTH 2302, 2346, 2351; ARTS 1301, 1303, 1304  
DANC 2303; ECON 2311; EDUC 1325; ENGL 2322,  
2323, 2327, 2328, 2332, 2333, 2334, 2335, 2336, 2341,  
2342, 2343, 2353, 2374; GEOG 1302, 1303, 2312;  
HIST 2311, 2312, 2321, 2322, 2328, 2380, 2381;  
HUMA 1301, 1305, 2319, 2323; MUSI 1306, 1308, 1309;  
PHED 1304; PHIL 1301, 1304, 2307, 2321, 2316, 2317  
PSYC 2370, 2374; SOCI 1301, 2374; SPCH 1318  
Any Foreign Language 1411, 1412, 2311, 2312

The objective of cross/multi-cultural studies in the core curriculum is to introduce students to areas of study which enlarge their knowledge and appreciation of the multi-cultural and multi-racial world in which they live.

### Exemplary Educational Objectives

- To establish broad and multiple perspectives in relation to the larger society and world in which we live, and to understand the responsibilities of living in a culturally and ethnically diversified world.
- To demonstrate knowledge of those elements and processes that create and define culture.
- To understand and analyze the origin and function of values, beliefs, and practices found in human societies.
- To develop basic cross/multi-cultural understanding, empathy, and communication.
- To identify and understand underlying commonalities of diverse cultural practices.

# Career and Technology Education Degrees and Certificates

## Career and Technology Education Degrees and Certificates

Designed primarily for students seeking skills, knowledge, and training leading to employment in a specific field, the Associate in Applied Science degree is awarded in technical and occupational areas. Courses and programs are divided into thirteen clusters: Agriculture, Food, and Natural Resources; Architecture and Construction; Arts, Audio/Video Technology and Communications; Business; Education and Schools; Government and Public Service; Health and Medical Sciences; Hospitality and Tourism; Human Services and Social Sciences; Information Technology; Manufacturing; Science, Technology, Engineering and Mathematics; and Transportation, Distribution and Logistics. Degree requirements include general education courses and specific occupation-related courses.

### Associate in Applied Science (AAS)

The **Associate of Applied Science (AAS)** degree is intended primarily for students whose first priority is to acquire skills and knowledge needed for employment in a specific field.

To be eligible for an AAS degree from HCC, a student must successfully:

- Complete at least 60 semester hours of credit and the prescribed curriculum for a two-year career and technology education program (see AAS degree plans).
- Complete a minimum of 18 semester hours toward the degree at HCC, 12 semester hours of which must be in the career and technology education program the student is pursuing. These hours may not be satisfied by Credit by Examination or Advanced Standing Credit.
- Have an overall 2.0 HCC grade point average.
- Satisfy all TSI requirements.
- Resolve all financial obligations and return all materials to HCC prior to graduation.

Multiple Associate of Applied Science degrees may be earned from HCC if all AAS program requirements are met, including earning at least eighteen (18) additional semester hours at HCC. Twelve (12) of these hours must be earned in the major program of the additional degree. These hours may not be satisfied through credit by exam or advanced-standing credit. Though an AAS degree may have multiple specialization options, only one AAS degree can be earned

with one specialization per career and technical education program and/or discipline. For additional information, please contact the counseling office.

## General Education Competencies for AAS Degree Students

All AAS degree-seeking students will be expected to obtain the following general education competencies: Reading, Writing, Speaking, Listening, Critical Thinking, and Computer Literacy. These are the same general education competencies expected for all associate degree seeking students at HCC and are further defined on p. (69) of this Catalog. These competencies will be taught in many of the program-specific courses and in the General Education Elective Course Options below. Assessments of the general education competencies will be performed in Freshman Success Courses (computer literacy), program-specific courses (especially Capstone Courses), and in the general education elective courses.

## General Education Elective Course Options

In the various AAS Career & Technology Education degree plans, some general education electives are required. These courses will ensure that AAS degree-seeking students obtain the same general education competencies noted above as all AA, AS, and AAT degree-seeking students are expected to obtain. The following courses are approved:

CTE Humanities/Fine Arts Electives: Must choose three hours from ARTS, DANC, DRAM, ENGL Literature, Foreign Language 2311, 2312, HUMA, MUAP, MUSI, or any PHIL (except 2303).

Math/Science Electives: Must choose three hours from ANTH 2301, ASTR, BIOL, CHEM, DANC 2325, ENVR, GEOG 1301, GEOL, MATH, PHYS, or PSYC 2317.

Social & Behavioral Sciences Electives: Must choose three hours from ANTH (2302, 2346, or 2351), ECON, GEOG, GOVT, HIST, PSYC (except 2317), or SOCI.

*General Education Electives: Students must choose one course from each of the above areas.*

## Advanced Technical Certificate

An **Advanced Technical Certificate** is a certificate that has a defined associate or baccalaureate degree (or, in some circumstances, junior-level standing in a baccalaureate degree program) as a prerequisite for admission into the

# Career and Technology Education Degrees and Certificates

certificate program. It must consist of at least 16 and no more than 45 SCH. It must be focused, clearly related to the prerequisite degree, and justifiable to meet industry or external agency requirements. It is designed to provide a longer, more specialized, and advanced set of knowledge and skills in a particular area of expertise, e.g., Diagnostic Medical Sonography.

***An Advanced Technical Certificate attached to an AAS degree must be in the same program area as the AAS degree.***

## Enhanced Skills Certificate

An **Enhanced Skills Certificate** is an optional certificate associated with an AAS or AA degree program that is intended to provide advanced skills, identified by business and industry, which are not part of the degree. The associated AAS must be a prerequisite for the enhanced skills certificate. The certificate must be well focused, clearly related to the program, and justifiable. It must consist of at least six and no more than 12 SCH and may extend an AAS award to an overall total that shall not exceed 72 semester hours. It is intended to provide skills beyond career entry or where external mandates make it impossible for specified programs to meet the 60 SCH limit.

ESCs are awarded concurrently with a degree but may not be considered to be an intrinsic part of the degree or be used to circumvent the 60 SCH associate degree limitation.

To be eligible for an Enhanced or an Advanced Technical Certificate from HCC, a student must:

- Complete the related AAS degree.
- Successfully complete the prescribed curriculum.
- Have an overall grade point average of at least 2.0 in all credits applying to the certificate.
- Resolve all financial obligations to HCC and return all materials, including library books.

## Certificates of Completion

A **Level I Certificate** can be completed by a student in one calendar year or less. It must consist of at least 15 and no more than 42 semester credit hours. Students in all Level I certificates shall be subject to the requirements of the Texas Success Initiative (TSI).

A **Level II Certificate** must consist of at least 43 and no more than 59 semester credit hours. Students in all Level II certificates shall be subject to the requirements of the Texas Success Initiative (TSI).

A **Certificate** is awarded upon completion of a sequence of courses in an occupational field. Credits earned in a certificate typically apply to a related HCC Associate in Applied Science degree.

To be eligible for a Certificate of Completion from HCC, a student must successfully:

- Complete the prescribed curriculum for the certificate.
- Complete a minimum of nine hours in the specialization area toward the certificate at HCC. Hours may not be satisfied by Credit by Exam.
- Maintain an overall grade point average of at least 2.0 in all credits applying to the certificate.
- Present evidence of initial assessment testing on a state-approved instrument or evidence of TSI exemption.
- Resolve all financial obligations and return all materials, including library books, to HCC prior to graduation.

Multiple Certificates of Completion may be earned from HCC if all program requirements are met for each certificate, including earning nine (9) additional unique semester hours at HCC toward the major program of the additional certificate. These hours may not be satisfied through credit by exam or advanced-standing credit. Though a certificate may have multiple specialization options, only one certificate can be earned with one specialization per career and technical education program and/or discipline. For additional information, please contact the counseling office.

An **Occupational Skills Award (OSA)** is granted to students who complete a sequence of credit courses totaling 9-14 SCH. These awards meet the minimum standard for program length specified in the federal Workforce Investment Act (WIA) but are too short to qualify as certificate programs on the Texas Higher Education Coordinating Board program inventory. OSA credit awards are in the following programs: Automotive Technology, Banking, Fashion Design, Fashion Merchandising, Fire Protection Technology, Health and Human Services, Horticulture, International Business, and Interior Design. Credits earned in a OSA typically apply to a related HCC certificate or AAS degree.

For specific OSA career and technology education degree plans visit the web site @ <http://www.hccs.edu/district/students/gainful-employment/>.

# Career and Technology Education Degrees and Certificates

## Exemplary Programs

HCC's commitment to quality education in career and technology education was validated during the Texas Higher Education Coordinating Board (THECB) site visit in April, 2005. The THECB rigorously examined the HCC Career & Technology Education programs using statewide measures and standards for program effectiveness. Based on enrollment, graduates, placement of completers, industry involvement and quality of instruction, the following career and technology programs were rated "exemplary," the highest rating possible:

Accounting  
Audio Recording/Video Production  
Automotive Technology  
Broadcast Technology  
Business Administration  
Business Technology  
Child Development  
Computer Information Sciences  
Computer Programming  
Criminal Justice  
Drafting and Design Engineering Technology  
Emergency Medical Services  
Fashion Design  
Fashion Merchandising  
Finance (Banking)  
Fire Protection Technology  
Fire Science/Firefighting  
Interior Design  
Marketing, Management and Research  
Medical Assistant  
Nuclear Medicine Technology  
Pharmacy Technician  
Physical Therapist Assistant  
Real Estate  
Respiratory Therapist  
Technical Communication

# Agriculture, Food, Natural Resources

## Horticulture Technology (01.0601)

A Career Cluster is a grouping of occupations and broad industries based on commonalities. The Agriculture, Food, and Natural Resources career cluster is concerned with providing knowledge and skills related to production, processing, marketing, distribution, financing, and development of agricultural commodities and resources including food, fiber, wood products, natural resources, horticulture, and other plant and animal products/resources. This includes the following HCC programs: Horticulture Technology and Veterinary Paramedic.

All new semester hour students, who have earned less than 12 semester hours of college level credit, are required to take a first-year student success course in their first term at HCC. Through research and experience, Houston Community College has determined that many life and career management skills are necessary for students to make the most of their college investment. A student success course is designed to prepare students for the demands of college and for success in the world of work. The course emphasizes setting priorities, time management, effective listening, note-taking, concentration techniques and retention of information, book analysis, comprehension techniques, and test-taking skills. This course also incorporates units that are designed to facilitate the use of library databases in conducting research, planning and setting educational objectives, lifelong career assessment, decision-making, financial aid, tutoring, and student support services, enabling the student to maximize the use of college resources.

Every HCC Career and Technology Education program contains a "capstone," an experience for the student to "put it all together." The capstone is a learning experience resulting in a consolidation of a student's educational experience and certifies mastery of entry level workplace competencies. The capstone experience must occur during the last semester of the student's educational program. The capstone consists of an external learning experience or an advanced course especially designed to help students synthesize knowledge and skills or other licensure as appropriate.

## HORTICULTURE TECHNOLOGY

Horticulture is the art and science of cultivating plants. In the past, this referred to agriculture and simple gardening. New practices and tools have broadened the scope to include "ornamental landscape horticulture" or "production horticulture." The Horticulture Technology program offers the basic knowledge and skills necessary for entry-level jobs and careers in horticulture. Students considering continuing their studies in Horticulture at a four-year college are responsible for reviewing that college's baccalaureate degree requirements and for consulting with an HCC counselor in planning their degree program.

**Please note that a student may only earn one Occupational Skills Award (OSA) per academic year.**

### Program Outcomes

Students will be able to

- Identify key landscape plants, economic crops, insects, pests, and diseases and be able to manage them where they exist in the environment.
- Utilize principles of biology, particularly as they apply to plant propagation and growth and the management of landscape pests and diseases.
- Apply extensive practical knowledge in the management of materials and resources in areas such as fertilization, irrigation, pest management, and greenhouses.
- Demonstrate the ability to locate, apply for, interview, and keep a professional position in the workplace.

For more information call 713.718.5591 or e-mail [brenda.anderson@hccs.edu](mailto:brenda.anderson@hccs.edu).

## Horticulture

### AAS

*TSI testing is required prior to first enrollment.*

### FIRST YEAR

First Semester		Credits
EDUC	1300 Learning Framework <sup>A</sup> .....	3
AGRI	1309 Computers in Agriculture.....	3
AGRI	1315 Horticulture.....	3
HALT	1309 Interior Plants.....	3
3HALT	2312 Turfgrass Maintenance.....	3
<b>Semester Total</b>		<b>15</b>

# Agriculture, Food, Natural Resources

<b>Second Semester</b>		<b>Credits</b>
HALT 1319	Landscape Construction .....	3
HALT 1331	Woody Plant Materials .....	3
HALT 1327	Horticultural Equipment Management.....	3
HALT 1322	Landscape Design .....	3
HALT 1392	Special Topics in Horticultural Science .....	3
<b>Semester Total</b>		<b>15</b>

<b>Third Semester</b>		<b>Credits</b>
SPNL 1291	Special Topics in Spanish Language and Literature.....	2
HALT 1380	Cooperative Education - Applied Horticulture/ Horticultural Operations, General .....	3
<b>Semester Total</b>		<b>5</b>

## SECOND YEAR

<b>First Semester</b>		<b>Credits</b>
HALT 2315	Landscape Management .....	3
HALT 2331	Advanced Landscape Design .....	3
XXXX #3##	Math/Natural Science Elective <sup>B</sup> .....	3
XXXX #3##	Social/Behavioral Sciences Elective <sup>D</sup> .....	3
<b>Semester Total</b>		<b>12</b>

<b>Second Semester</b>		<b>Credits</b>
HALT 1493	Special Topics in Ornamental Horticulture	
HALT 1491	Special Topics in Horticulture Services Operations and Management, General .....	4
HALT 2323	Horticultural Pest Control .....	3
XXXX #3##	Humanities/Fine Arts Elective <sup>C</sup> .....	3
XXXX #3##	General Education Elective <sup>E</sup> .....	3
HALT 1381	Cooperative Education - Applied Horticulture/ Horticultural Operations, General # .....	3
<b>Semester Total</b>		<b>13</b>
<b>Program Total</b>		<b>60</b>

# Capstone Course

<sup>A</sup> Student Success Course: Students are required to complete EDUC 1300 within their first 12 semester credit hours of instruction. Students enrolling at HCC with 12 or more hours completed should consult with an academic advisor to select an appropriate course substitution.

<sup>B</sup> Math/Natural Science: May choose from – ANTH 2301 (with or without 2101 = lab), 2302, ASTR 1303, 1304, 1403, 1404, BIOL 1308, 1309, 1322, 1406, 1407, (2301, 2302 – restricted to Engineering, Science, and Health Sciences majors), CHEM 1305, 1405, 1411, 1412, COSC 1436, GEOG 1301, GEOL 1305, 1345, 1347, 1403, 1404, MATH 1314, 1316, 1324, 1325, 1332, 1342, 1350, 2318, 2320, 2412, 2413, 2414, 2415, PHYS 1305, 1401, 1402, 2325 (with or without 2125= lab), 2326 (with or without 2126 = lab), PSYC 2317.

<sup>C</sup> Humanities/Fine Arts: May choose from – ARTS 1301, 1303, 1304, COMM 2366, DANC 2303, DRAM 1310, 2316, 2366, ENGL 2322, 2323, 2327, 2328, 2332, 2333, 2342, 2343, 2351, HIST 1301, 1302, 2311, 2312, 2321, 2322, 2301, 2327, 2328, 2381, HUMA 1301, 1305, 1311, 2319, 2323, MUSI 1306, 1310, PHIL 1301, 1304, 2306, 2307, 2316, World Languages (ARAB

1411, 1412, CHIN 1411, 1412, FREN 1411, 1412, GERM 1411, 1412, JAPN 1411, 1412, KORE 1411, 1412, SPAN 1411, 1412).

<sup>D</sup> Social/Behavioral Sciences: May choose from – ANTH 2346, 2351, ECON 1301, 2301, 2302, EDUC 1300, GEOG 1302, 1303, GOVT 2305, 2306, PSYC 2301, 2314, 2316, 2319, SOCI 1301, 1306, 2301, 2336, TECA 1354.

<sup>E</sup> General Education: May choose from – ANTH 2301 (with or without 2101 = lab), 2302, 2346, 2351, ARTS 1301, 1303, 1304, ASTR 1303, 1304, 1403, 1404, BIOL 1308, 1309, 1322, 1406, 1407, (2301, 2302 – restricted to Engineering, Science, and Health Sciences majors), CHEM 1305, 1405, 1411, 1412, COMM 2366, COSC 1436, DANC 2303, DRAM 1310, 2316, 2366, ECON 1301, 2301, 2302, EDUC 1300, ENGL 2322, 2323, 2327, 2328, 2332, 2333, 2342, 2343, 2351, GEOG 1301, 1302, 1303, GEOL 1305, 1345, 1347, 1403, 1404, GOVT 2305, 2306, HIST 1301, 1302, 2311, 2312, 2321, 2322, 2301, 2327, 2328, 2381, HUMA 1301, 1305, 1311, 2319, 2323, MATH 1314, 1316, 1324, 1325, 1332, 1342, 1350, 2318, 2320, 2412, 2413, 2414, 2415, MUSI 1306, 1310, PHIL 1301, 1304, 2306, 2307, 2316, PHYS 1305, 1401, 1402, 2325 (with or without 2125 = lab), 2326 (with or without 2126 = lab), PSYC 2301, 2314, 2316, 2317, 2319, SOCI 1301, 1306, 2301, 2336, TECA 1354, World Languages (ARAB 1411, 1412, CHIN 1411, 1412, FREN 1411, 1412, GERM 1411, 1412, JAPN 1411, 1412, KORE 1411, 1412, SPAN 1411, 1412).

## Landscape Horticulture

(Deactivation pending SACSCOC approval. Enrollment is closed to new students.)

The Landscape Horticulture certificate provides students with fundamental instruction in horticultural science and applicable workforce skills with an emphasis on landscaping techniques.

### CERTIFICATE LEVEL I

<b>First Semester</b>		<b>Credits</b>
HALT 1301	Principles of Horticulture .....	3
HALT 1211	Shrubs, Vines, and Groundcovers .....	2
AGRI 1309	Computers in Agriculture .....	3
CHEM 1305	Introductory Chemistry I OR	
CHEM 1405	Introductory Chemistry I .....	3-4
<b>Semester Total</b>		<b>11-12</b>

<b>Second Semester</b>		<b>Credits</b>
HALT 1307	Plant Diseases .....	3
HALT 2314	Plant Propagation .....	3
HALT 2318	Soil Fertility and Fertilizers.....	3
HALT 1309	Interior Plants.....	3
HALT 1322	Landscape Design .....	3
<b>Semester Total</b>		<b>15</b>

# Agriculture, Food, Natural Resources

<b>Third Semester</b>			<b>Credits</b>
HALT 1319	Landscape Construction .....		3
HALT 1333	Landscape Irrigation .....		3
HALT 1382	Cooperative Education.....		3
HALT 2331	Advanced Landscape Design** .....		3
<b>Semester Total</b>			<b>12</b>
<b>Program Total</b>			<b>38-39</b>

*\*Student Success Course*

*\*\*Capstone*

## Horticulture Entrepreneurial Specialization

*(Deactivation pending SACSCOC approval. Enrollment is closed to new students.)*

The Horticulture Entrepreneurial Specialization certificate is designed to prepare students to start their own business. The certificate focuses on the business management aspect of the industry as well as providing instruction in plant care and landscape design.

### CERTIFICATE LEVEL II

*TSI testing is required prior to first enrollment.*

<b>First Semester</b>			<b>Credits</b>
EDUC 1300	Learning Framework*.....		3
HALT 1301	Principles of Horticulture.....		3
HALT 1211	Shrubs, Vines, and Groundcovers.....		2
HALT 2308	Greenhouse Management.....		3
CHEM 1305	Introductory Chemistry I OR		
CHEM 1405	Introductory Chemistry I.....		3-4
<b>Semester Total</b>			<b>14-15</b>

<b>Second Semester</b>			<b>Credits</b>
HALT 1307	Plant Diseases.....		3
HALT 1309	Interior Plants.....		3
HALT 2314	Plant Propagation.....		3
HALT 2318	Soil Fertility and Fertilizers.....		3
<b>Semester Total</b>			<b>12</b>

<b>Third Semester</b>			<b>Credits</b>
HALT 1319	Landscape Construction.....		3
HALT 1322	Landscape Design.....		3
HALT 1333	Landscape Irrigation.....		3
HALT 1380	Cooperative Education.....		3
<b>Semester Total</b>			<b>12</b>

### **SECOND YEAR**

<b>First Semester</b>			<b>Credits</b>
BUSG 1373	Entrepreneurship and Economic Development.....		3
BUSG 2309	Small Business Management/Entrepreneurship.....		3
MRKG 1311	Principles of Marketing OR		
ACNT 1303	Introduction to Accounting OR		

ACNT 2301	Principles of Accounting I.....		3
HALT 2331	Advanced Landscape Design** .....		3
<b>Semester Total</b>			<b>12</b>
<b>Program Total</b>			<b>50-51</b>

*\*Student Success Course*

*\*\*Capstone*

## Master of Floriculture

*(Deactivation pending SACSCOC approval. Enrollment is closed to new students.)*

The Master of Floriculture certificate program prepares students for design and management positions in flower shops and other businesses involving floriculture. This one-year program with emphasis in floral design, plant care, and business knowledge gives students a strong advantage when they seek positions as qualified designers and managers.

### CERTIFICATE LEVEL I

<b>First Semester</b>			<b>Credits</b>
HALT 1301	Principles of Horticulture.....		3
FMKT 1301	Floral Design.....		3
<b>Semester Total</b>			<b>6</b>

<b>Second Semester</b>			<b>Credits</b>
HALT 1309	Interior Plants.....		3
FMKT 2331	Advanced Floral Design.....		3
<b>Semester Total</b>			<b>6</b>

<b>Third Semester</b>			<b>Credits</b>
FMKT 2335	Flower Shop Management.....		3
HALT 1381	Cooperative Education- Applied Horticulture/Horticultural Operations** .....		3
<b>Semester Total</b>			<b>6</b>
<b>Program Total</b>			<b>18</b>

*\*Student Success Course*

*\*\*Capstone*

## Nursery and Floral Production

*(Deactivation pending SACSCOC approval. Enrollment is closed to new students.)*

The Nursery and Floral Production certificate program enables students to gain an understanding of the latest technology, materials, and methods required in the growing, maintenance, distribution, and sale of nursery and floral plant material. The curriculum prepares students for work as wholesale growers of nursery stock, including woody ornamentals and foliage, bedding plants, potted flowering plants, cut flowers, and fruits and vegetables.

# Agriculture, Food, Natural Resources

## **CERTIFICATE LEVEL I**

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<b>First Semester</b>	<b>Credits</b>
HALT 1301 Principles of Horticulture .....	3
HALT 1211 Shrubs, Vines, and Groundcovers .....	2
AGRI 1309 Computers in Agriculture .....	3
HALT 2318 Soil Fertility and Fertilizers .....	3
<b>Semester Total</b>	<b>11</b>

<b>Second Semester</b>	<b>Credits</b>
HALT 1307 Plant Diseases .....	3
HALT 2314 Plant Propagation .....	3
FMKT 1301 Floral Design .....	3
FMKT 2335 Flower Shop Management .....	3
<b>Semester Total</b>	<b>12</b>

<b>Third Semester</b>	<b>Credits</b>
HALT 2308 Greenhouse Management .....	3
HALT 2320 Nursery Production and Management .....	3
FMKT 2331 Advanced Floral Design .....	3
HALT 1380 Cooperative Education** .....	3
<b>Semester Total</b>	<b>12</b>
<b>Program Total</b>	<b>35</b>

\*Student Success Course

\*\*Capstone

## **Gulf Coast Gardener**

The Gulf Coast Gardener Occupational Skills Award (OSA) allows students to choose a path of study from three areas: nursery, floral, or interiorscaping. It provides students with a general knowledge of horticulture and horticultural practices related to nursery and floral production and landscaping.

## **OCCUPATIONAL SKILLS AWARD**

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*(Occupational Skills Award)*

<b>First Semester</b>	<b>Credits</b>
HALT 1301 Principles of Horticulture .....	3
XXXX #3## Elective*** .....	3
HALT 1211 Shrubs, Vines, and Groundcovers .....	2
HALT 1307 Plant Diseases .....	3
XXXX #3## Elective*** .....	3
<b>Semester Total</b>	<b>14</b>
<b>Program Total</b>	<b>14</b>

\*\*\*Electives may be chosen from the following courses:  
 HALT 1309, HALT 1319, HALT 2308, HALT 2320, FMKT 1301,  
 or FMKT 2331

# Architecture and Construction

**Construction Engineering Technology (15.1001)**  
**Heating, Air Conditioning & Refrigeration (47.0201)**  
**Industrial Electricity (46.0301, 46.0302)**

A Career Cluster is a grouping of occupations and broad industries based on commonalities. The Architecture and Construction career cluster is concerned with providing knowledge and skills related to designing, planning, managing, building and maintaining the built environment. This includes the following HCC programs: Construction Engineering Technology, Heating, Air Conditioning & Refrigeration and Industrial Electricity.

All new semester hour students, who have earned less than 12 semester hours of college level credit, are required to take a first-year student success course in their first term at HCC. Through research and experience, Houston Community College has determined that many life and career management skills are necessary for students to make the most of their college investment. A student success course is designed to prepare students for the demands of college and for success in the world of work. The course emphasizes setting priorities, time management, effective listening, note-taking, concentration techniques, retention of information, book analysis, comprehension techniques, and test-taking skills. This course also incorporates units that are designed to facilitate the use of library databases in conducting research, planning and setting educational objectives, lifelong career assessment, decision-making, financial aid, tutoring, and student support services, enabling the student to maximize the use of college resources.

Every HCC Career and Technology Education program contains a "capstone," an experience for the student to "put it all together." The capstone is a learning experience resulting in a consolidation of a student's educational experience and certifies mastery of entry level workplace competencies. The capstone experience must occur during the last semester of the student's educational program. The capstone consists of an external learning experience or an advanced course especially designed to help students synthesize knowledge and skills or other licensure as appropriate.

## CONSTRUCTION ENGINEERING TECHNOLOGY

The Construction Engineering Technology program is designed to develop qualified personnel for employment in the field of construction or to enhance the workplace skills of those already employed in the industry for career advancement. Job opportunities include management and supervisory positions in construction of residential and commercial buildings and other related industries.

### Program Outcomes

Students will be able to:

- Demonstrate knowledge of safety rules and regulations.
- Demonstrate the proper use/selection and maintenance of hand and power tools and measuring instruments.
- Interpret and decode information found in blueprints, specifications, and applicable documents related to construction projects.
- Describe the mechanical, electrical, and plumbing components in construction and interpret applicable building codes.
- Utilize computer and related software to access, estimate, coordinate, and schedule construction projects.

For more information call 713.718.6898.

## Construction Technology

### AAS

*TSI testing is required prior to first enrollment.*

### FIRST YEAR

<b>First Semester</b>		<b>Credits</b>
EDUC	1300 Learning Framework <sup>A</sup> .....	3
ELPT	1315 Electrical Calculations I.....	3
CNBT	1301 Introduction to the Construction Industry.....	3
CNBT	1318 Construction Tools and Techniques.....	3
CNBT	1300 Residential and Light Commercial Blueprint Reading.....	3
CNBT	1311 Construction Methods and Materials I.....	3
<b>Semester Total</b>		<b>18</b>

# Architecture and Construction

## Second Semester Credits

CNBT 1342	Building Codes and Inspections.....	3
ELPT 1329	Residential Wiring.....	3
CNBT 1346	Construction Estimating I.....	3
CNBT 1302	Mechanical, Plumbing, and Electrical Systems in Construction I.....	3
CNBT 1316	Construction Technology I.....	3

**Semester Total 15**

## SECOND YEAR

### First Semester Credits

XXXX #3##	General Education Elective <sup>E</sup> .....	3
CNBT 2337	Construction Estimating II.....	3
XXXX #3##	Humanities/Fine Arts Elective <sup>C</sup> .....	3

**Semester Total 9**

### Second Semester Credits

CNBT 2342	Construction Management I.....	3
XXXX #3##	Math/Natural Science Elective <sup>B</sup> .....	3
XXXX #3##	General Education Elective <sup>E</sup> .....	3
XXXX #3##	Social/Behavioral Sciences Elective <sup>D</sup> .....	3

**Semester Total 12**

### Third Semester Credits

CNBT 1391	Special Topics in Construction/Building Technology/Technician.....	3
CNBT 2335	Computer-Aided Construction Scheduling <sup>#</sup> .....	3

**Semester Total 6**

**Program Total 60**

<sup>#</sup> Capstone Course

<sup>A</sup> Student Success Course: Students are required to complete EDUC 1300 within their first 12 semester credit hours of instruction. Students enrolling at HCC with 12 or more hours completed should consult with an academic advisor to select an appropriate course substitution.

<sup>B</sup> Math/Natural Science: May choose from – ANTH 2301 (with or without 2101 = lab), 2302, ASTR 1303, 1304, 1403, 1404, BIOL 1308, 1309, 1322, 1406, 1407, (2301, 2302 – restricted to Engineering, Science, and Health Sciences majors), CHEM 1305, 1405, 1411, 1412, COSC 1436, GEOG 1301, GEOL 1305, 1345, 1347, 1403, 1404, MATH 1314, 1316, 1324, 1325, 1332, 1342, 1350, 2318, 2320, 2412, 2413, 2414, 2415, PHYS 1305, 1401, 1402, 2325 (with or without 2125= lab), 2326 (with or without 2126 = lab), PSYC 2317.

<sup>C</sup> Humanities/Fine Arts: May choose from – ARTS 1301, 1303, 1304, COMM 2366, DANC 2303, DRAM 1310, 2316, 2366, ENGL 2322, 2323, 2327, 2328, 2332, 2333, 2342, 2343, 2351, HIST 1301, 1302, 2311, 2312, 2321, 2322, 2301, 2327, 2328, 2381, HUMA 1301, 1305, 1311, 2319, 2323, MUSI 1306, 1310, PHIL 1301, 1304, 2306, 2307, 2316, World Languages (ARAB 1411, 1412, CHIN 1411, 1412, FREN 1411, 1412, GERM 1411, 1412, JAPN 1411, 1412, KORE 1411, 1412, SPAN 1411, 1412).

<sup>D</sup> Social/Behavioral Sciences: May choose from – ANTH 2346, 2351, ECON 1301, 2301, 2302, EDUC 1300, GEOG 1302,

1303, GOVT 2305, 2306, PSYC 2301, 2314, 2316, 2319, SOCI 1301, 1306, 2301, 2336, TECA 1354.

<sup>E</sup> General Education: May choose from – ANTH 2301 (with or without 2101 = lab), 2302, 2346, 2351, ARTS 1301, 1303, 1304, ASTR 1303, 1304, 1403, 1404, BIOL 1308, 1309, 1322, 1406, 1407, (2301, 2302 – restricted to Engineering, Science, and Health Sciences majors), CHEM 1305, 1405, 1411, 1412, COMM 2366, COSC 1436, DANC 2303, DRAM 1310, 2316, 2366, ECON 1301, 2301, 2302, EDUC 1300, ENGL 2322, 2323, 2327, 2328, 2332, 2333, 2342, 2343, 2351, GEOG 1301, 1302, 1303, GEOL 1305, 1345, 1347, 1403, 1404, GOVT 2305, 2306, HIST 1301, 1302, 2311, 2312, 2321, 2322, 2301, 2327, 2328, 2381, HUMA 1301, 1305, 1311, 2319, 2323, MATH 1314, 1316, 1324, 1325, 1332, 1342, 1350, 2318, 2320, 2412, 2413, 2414, 2415, MUSI 1306, 1310, PHIL 1301, 1304, 2306, 2307, 2316, PHYS 1305, 1401, 1402, 2325 (with or without 2125 = lab), 2326 (with or without 2126 = lab), PSYC 2301, 2314, 2316, 2317, 2319, SOCI 1301, 1306, 2301, 2336, TECA 1354, World Languages (ARAB 1411, 1412, CHIN 1411, 1412, FREN 1411, 1412, GERM 1411, 1412, JAPN 1411, 1412, KORE 1411, 1412, SPAN 1411, 1412).

## Craft Management Specialization

The AAS in Craft Management prepares qualified craftspeople to enhance their technical skills for career advancement. The program is designed to allow individuals in areas such as the apprenticeship programs and Heating, Air Conditioning and Refrigeration, Industrial Electricity, Welding, or other related disciplines, to assume supervisory, project leader or management positions.

A maximum of 22 semester hours of credit may be awarded for successful completion of an HCC certificate in an approved field, Department of Labor Bureau of Apprentice Training - Journeyman Certification, and/or field experience with approval of the department. For certificates with less than 22 semester hours, additional courses in Construction Technology or other related disciplines may be required.

## AAS

*TSI testing is required prior to first enrollment.*

### FIRST YEAR

Block credit for approved certification <sup>*</sup> .....	21
EDUC 1300 Learning Framework <sup>A</sup> .....	3
<b>Semester Total</b>	<b>24</b>

### SECOND YEAR

#### First Semester Credits

XXXX #3##	General Education Elective <sup>E</sup> .....	3
CNBT 1342	Building Codes and Inspections.....	3
CNBT 2335	Computer-Aided Construction Scheduling.....	3
CNBT 1300	Residential and Light Commercial Blueprint Reading.....	3
XXXX #3##	Humanities/Fine Arts Elective <sup>C</sup> .....	3

**Semester Total 15**

# Architecture and Construction

<b>Second Semester</b>	<b>Credits</b>
CNBT 1346 Construction Estimating I.....	3
CNBT 2342 Construction Management I.....	3
XXXX #3## Math/Natural Science Elective <sup>B</sup> .....	3
XXXX #3## General Education Elective <sup>E</sup> .....	3
XXXX #3## Social/Behavioral Sciences Elective <sup>D</sup> .....	3
<b>Semester Total</b>	<b>15</b>

<b>Third Semester</b>	<b>Credits</b>
CNBT 2337 Construction Estimating II.....	3
CNBT 1391 Special Topics in Construction/Building Technology/Technician #.....	3
<b>Semester Total</b>	<b>6</b>
<b>Program Total</b>	<b>60</b>

# Capstone Course

<sup>A</sup> *Student Success Course: Students are required to complete EDUC 1300 within their first 12 semester credit hours of instruction. Students enrolling at HCC with 12 or more hours completed should consult with an academic advisor to select an appropriate course substitution.*

<sup>B</sup> *Math/Natural Science: May choose from – ANTH 2301 (with or without 2101 = lab), 2302, ASTR 1303, 1304, 1403, 1404, BIOL 1308, 1309, 1322, 1406, 1407, (2301, 2302 – restricted to Engineering, Science, and Health Sciences majors), CHEM 1305, 1405, 1411, 1412, COSC 1436, GEOG 1301, GEOL 1305, 1345, 1347, 1403, 1404, MATH 1314, 1316, 1324, 1325, 1332, 1342, 1350, 2318, 2320, 2412, 2413, 2414, 2415, PHYS 1305, 1401, 1402, 2325 (with or without 2125= lab), 2326 (with or without 2126 = lab), PSYC 2317.*

<sup>C</sup> *Humanities/Fine Arts: May choose from – ARTS 1301, 1303, 1304, COMM 2366, DANC 2303, DRAM 1310, 2316, 2366, ENGL 2322, 2323, 2327, 2328, 2332, 2333, 2342, 2343, 2351, HIST 1301, 1302, 2311, 2312, 2321, 2322, 2301, 2327, 2328, 2381, HUMA 1301, 1305, 1311, 2319, 2323, MUSI 1306, 1310, PHIL 1301, 1304, 2306, 2307, 2316, World Languages (ARAB 1411, 1412, CHIN 1411, 1412, FREN 1411, 1412, GERM 1411, 1412, JAPN 1411, 1412, KORE 1411, 1412, SPAN 1411, 1412).*

<sup>D</sup> *Social/Behavioral Sciences: May choose from – ANTH 2346, 2351, ECON 1301, 2301, 2302, EDUC 1300, GEOG 1302, 1303, GOVT 2305, 2306, PSYC 2301, 2314, 2316, 2319, SOCI 1301, 1306, 2301, 2336, TECA 1354.*

<sup>E</sup> *General Education: May choose from – ANTH 2301 (with or without 2101 = lab), 2302, 2346, 2351, ARTS 1301, 1303, 1304, ASTR 1303, 1304, 1403, 1404, BIOL 1308, 1309, 1322, 1406, 1407, (2301, 2302 – restricted to Engineering, Science, and Health Sciences majors), CHEM 1305, 1405, 1411, 1412, COMM 2366, COSC 1436, DANC 2303, DRAM 1310, 2316, 2366, ECON 1301, 2301, 2302, EDUC 1300, ENGL 2322, 2323, 2327, 2328, 2332, 2333, 2342, 2343, 2351, GEOG 1301, 1302, 1303, GEOL 1305, 1345, 1347, 1403, 1404, GOVT 2305, 2306, HIST 1301, 1302, 2311, 2312, 2321, 2322, 2301, 2327, 2328, 2381, HUMA 1301, 1305, 1311, 2319, 2323, MATH 1314, 1316, 1324, 1325, 1332, 1342, 1350, 2318, 2320, 2412, 2413, 2414, 2415, MUSI 1306, 1310, PHIL 1301, 1304, 2306, 2307, 2316, PHYS 1305, 1401, 1402, 2325 (with or without 2125 = lab), 2326 (with or without 2126 = lab), PSYC 2301, 2314, 2316,*

2317, 2319, SOCI 1301, 1306, 2301, 2336, TECA 1354, World Languages (ARAB 1411, 1412, CHIN 1411, 1412, FREN 1411, 1412, GERM 1411, 1412, JAPN 1411, 1412, KORE 1411, 1412, SPAN 1411, 1412).

## Construction Technology

The Construction Technology certificate program enhances the skills learned in the helper certificate by providing more advanced training in Heating, Air Conditioning and Refrigeration, Industrial Electricity, Plumbing and Construction Technology trades and practices.

### CERTIFICATE LEVEL I

<b>First Semester</b>	<b>Credits</b>
ELPT 1315 Electrical Calculations I.....	3
CNBT 1301 Introduction to the Construction Industry.....	3
CNBT 1318 Construction Tools and Techniques.....	3
CNBT 1300 Residential and Light Commercial Blueprint Reading.....	3
CNBT 1311 Construction Methods and Materials I.....	3
<b>Semester Total</b>	<b>15</b>

<b>Second Semester</b>	<b>Credits</b>
CNBT 2335 Computer-Aided Construction Scheduling.....	3
ELPT 1329 Residential Wiring.....	3
CNBT 1302 Mechanical, Plumbing, and Electrical Systems in Construction I.....	3
CNBT 1316 Construction Technology #.....	3
<b>Semester Total</b>	<b>12</b>
<b>Program Total</b>	<b>27</b>

# Capstone Course

# Architecture and Construction

## Construction Helper

The Construction Helper certificate prepares students for entry-level employment in the field of construction. Students are exposed to a variety of trades involved in residential and commercial buildings. Students enrolled in this certificate obtain basic skills required in the construction industry, including safety regulations, trade standards and practices, blueprint reading, basic carpentry, air conditioning, electrical, and plumbing skills.

### CERTIFICATE LEVEL I

<b>First Semester</b>		<b>Credits</b>
ELPT 1315	Electrical Calculations I.....	3
CNBT 1301	Introduction to the Construction Industry.....	3
CNBT 1318	Construction Tools and Techniques.....	3
CNBT 1300	Residential and Light Commercial Blueprint Reading.....	3
CNBT 1311	Construction Methods and Materials I #.....	3
<b>Semester Total</b>		<b>15</b>
<b>Program Total</b>		<b>15</b>

# Capstone Course

## HEATING, AIR CONDITIONING AND REFRIGERATION

The Heating, Air Conditioning and Refrigeration program is designed to train individuals in the field of air conditioning, heating and refrigeration equipment, maintenance and repair and in the use of EPA-approved recovery equipment. The AAS is building automation and controls centered.

Individuals satisfying course competencies have career opportunities in a variety of job classifications such as service and repair of residential and commercial air conditioning and refrigeration systems.

All seeking employment as air conditioning/refrigeration technicians must pass an Environmental Protection Agency (EPA) certification test. HCC recommends students pass this test before completing the program.

Students successfully completing any of the certificates listed below may apply a maximum of 21 semester hours towards an AAS degree in Construction Technology - Craft Management Specialization. For certificates with fewer than 21 semester hours, additional courses in Construction Technology, Business Administration, or other related disciplines may be required.

## Employment

According to the US Department of Labor, the growing number of sophisticated climate control systems is expected to increase demand for qualified HVACR technicians. Candidates familiar with computers and electronics, as well as those who have developed troubleshooting skills, will have the best job opportunities.

There are 6,819 Heating and Air Conditioning Mechanics and Installers employed in the Greater Houston Area. This number is expected to increase by 8.2% over the next four years.

The estimated annual job openings is 347 jobs a year.

Median Wages - \$19.50 hourly, \$41,000 annually.

## NCCER Certification

Are you interested in getting certified by the National Center for Construction and Education Research (NCCER) while working on your degree?

If so, you have selected the right program.

The Basic HVAC certificate is aligned with NCCER. The Advanced HVAC certificate is aligned with HVAC Excellence and the AAS HVAC degree is aligned with NATE and the American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE).

[Click here](#) to view the list of classes that position you to become NCCER certified

## Industry Partners

Our program is driven by industry. We aim to exceed the needs of industry by continually seeking ways to improve. Our advisory committee is diverse and comprised of representatives from companies that are traditional, non-traditional, private and public. Our industry partners include:

- Carrier
- Century Supply
- Daiken
- Houston Independent School District
- Jackson Supply
- Johnson Controls
- Siemens
- York
- Yokogawa of North America

# Architecture and Construction

## Program Outcomes

Our program is aligned with industry and employment forecasts. Our AAS degree has a strong focus on building automation and controls.

Students will be able to:

- Demonstrate knowledge of safety rules and regulations.
- Demonstrate the proper selection, use, and maintenance of hand and power tools and measuring instruments used in A/C and Refrigeration.
- Demonstrate knowledge of HVAC and refrigeration controls
- Maintain/service/repair HVAC and Refrigeration equipment.
- Troubleshoot A/C and Refrigeration equipment.

For more information call 713.728.2373.

## HEATING, AIR CONDITIONING AND REFRIGERATION AAS

### FIRST YEAR

#### First Semester

			Credits
EDUC	1300	Learning Framework <sup>A</sup> .....	3
ELPT	1315	Electrical Calculations .....	3
HART	1301	Basic Electricity for HVAC .....	3
HART	1356	EPA Recovery Certification Preparation <sup>E</sup> .....	3
XXXX	#3##	Social/Behavioral Sciences Elective <sup>D</sup> .....	3

**Semester Total      15**

#### Second Semester

			Credits
HART	1303	Air Conditioning Control Principles .....	3
HART	1307	Refrigeration Principles .....	3
HART	1341	Residential Air Conditioning <sup>F</sup> .....	3
HART	1345	Gas and Electric Heating <sup>F</sup> .....	3
XXXX	#3##	Social/Behavioral Sciences Elective <sup>D</sup> .....	3

**Semester Total      15**

#### Third Semester

			Credits
HART	2334	Advanced Air Conditioning Controls <sup>F</sup> .....	3
HART	2341	Commercial Air Conditioning .....	3
HART	2345	Residential Air Conditioning Systems Design OR	
HART	2302	Commercial Air Conditioning System Design .....	3
XXXX	#3##	Humanities/Fine Arts Elective <sup>C</sup> .....	3
XXXX	#3##	Math/Natural Science Elective <sup>B</sup> .....	3

**Semester Total      15**

### SECOND YEAR

#### First Semester

			Credits
HART	2336	Air Conditioning Troubleshooting <sup>#</sup> .....	3
HART	2342	Commercial Refrigeration <sup>E</sup> .....	3
HART	2349	Heat Pumps <sup>E</sup> .....	3
HART	2374	Building Control Systems .....	3
XXXX	#3##	Humanities/Fine Arts Elective .....	3

**Semester Total      15**

**Program Total      60**

<sup>#</sup> Capstone Course

<sup>A</sup> Student Success Course: Students are required to complete EDUC 1300 within their first 12 semester credit hours of instruction. Students enrolling at HCC with 12 or more hours completed should consult with an academic advisor to select an appropriate course substitution.

<sup>B</sup> Math/Natural Science: May choose from – ANTH 2301 (with or without 2101 = lab), 2302, ASTR 1303, 1304, 1403, 1404, BIOL 1308, 1309, 1322, 1406, 1407, (2301, 2302 – restricted to Engineering, Science, and Health Sciences majors), CHEM 1305, 1405, 1411, 1412, COSC 1436, GEOG 1301, GEOL 1305, 1345, 1347, 1403, 1404, MATH 1314, 1316, 1324, 1325, 1332, 1342, 1350, 2318, 2320, 2412, 2413, 2414, 2415, PHYS 1305, 1401, 1402, 2325 (with or without 2125= lab), 2326 (with or without 2126 = lab), PSYC 2317.

<sup>C</sup> Humanities/Fine Arts: May choose from – ARTS 1301, 1303, 1304, COMM 2366, DANC 2303, DRAM 1310, 2316, 2366, ENGL 2322, 2323, 2327, 2328, 2332, 2333, 2342, 2343, 2351, HIST 1301, 1302, 2311, 2312, 2321, 2322, 2301, 2327, 2328, 2381, HUMA 1301, 1305, 1311, 2319, 2323, MUSI 1306, 1310, PHIL 1301, 1304, 2306, 2307, 2316, World Languages (ARAB 1411, 1412, CHIN 1411, 1412, FREN 1411, 1412, GERM 1411, 1412, JAPN 1411, 1412, KORE 1411, 1412, SPAN 1411, 1412).

<sup>D</sup> Social/Behavioral Sciences: May choose from – ANTH 2346, 2351, ECON 1301, 2301, 2302, EDUC 1300, GEOG 1302, 1303, GOVT 2305, 2306, PSYC 2301, 2314, 2316, 2319, SOCI 1301, 1306, 2301, 2336, TECA 1354.

<sup>E</sup> Employment certification (ER) required.

<sup>F</sup> EPA Certification Required.

**NOTE: EPA Certification and all Employment Ready Certifications are nationally recognized and offered by HVAC Excellence. <http://www.hvaexcellence.org/>**

# Architecture and Construction

## Heating, Air Conditioning and Refrigeration Technology - Advanced

### CERTIFICATE LEVEL I

<b>First Semester</b>		<b>Credits</b>
ELPT 1315	Electrical Calculations I.....	3
HART 1301	Basic Electricity for HVAC.....	3
HART 1307	Refrigeration Principles.....	3
HART 1356	EPA Recovery Certification Preparation <sup>A</sup> .....	3
<b>Semester Total</b>		<b>12</b>

<b>Second Semester</b>		<b>Credits</b>
HART 1303	Air Conditioning Control Principles.....	3
HART 1341	Residential Air Conditioning <sup>B</sup> .....	3
HART 1345	Gas and Electric Heating <sup>B</sup> .....	3
HART 2334	Advanced Air Conditioning Controls <sup>B</sup> .....	3
HART 2342	Commercial Refrigeration <sup>B</sup> .....	3
<b>Semester Total</b>		<b>15</b>

<b>Third Semester</b>		<b>Credits</b>
HART 2336	Air Conditioning Troubleshooting <sup>#</sup> .....	3
HART 2302	Commercial Air Conditioning System Design.....	3
HART 2345	Residential Air Conditioning Systems Design.....	3
HART 2341	Commercial Air Conditioning.....	3
HART 2349	Heat Pumps <sup>B</sup> .....	3
<b>Semester Total</b>		<b>15</b>
<b>Program Total</b>		<b>42</b>

<sup>#</sup> Capstone

<sup>A</sup> EPA Certification Required

<sup>B</sup> Employment Certification (ER) Required

**EPA Certification and all Employment Ready Certifications are nationally recognized and offered by HVAC Excellence.**  
<http://www.hvaexcellence.org/>

## Heating, Air Conditioning and Refrigeration Technology - Basic

### CERTIFICATE LEVEL I

<b>First Semester</b>		<b>Credits</b>
ELPT 1315	Electrical Calculations I.....	3
HART 1301	Basic Electricity for HVAC.....	3
HART 1356	EPA Recovery Certificate Preparation.....	3
<b>Semester Total</b>		<b>9</b>

### Second Semester Credits

HART 1303	Air Conditioning Control Principles.....	3
HART 1307	Refrigeration Principles.....	3
HART 1341	Residential Air Conditioning <sup>#</sup> .....	3
HART 1345	Gas and Electric Heating.....	3

**Semester Total 12**

**Program Total 21**

<sup>#</sup> Capstone Course

## INDUSTRIAL ELECTRICITY

The Industrial Electricity program prepares students for employment in the electrical industry. There is an increased demand for trained electricians to work in the installation, maintenance, and service of residential, commercial and industrial electrical systems. Rewarding career opportunities exist in the areas of industrial automation and fiber optic installations. The program provides comprehensive, theoretical and hands-on training to meet the industry's continued and changing demands for qualified personnel. Students are required to purchase tools and books.

Students successfully completing any of the certificates listed below may apply a maximum of 21 semester hours towards an AAS degree in Construction Technology - Craft Management Specialization. For certificates with fewer than 21 semester hours, additional courses in Construction Technology, Business Administration, or other related disciplines may be required.

### Program Outcomes

Students will be able to:

- Demonstrate knowledge of safety rules and regulations.
- Demonstrate the proper use/selection and maintenance of hand and power tools and measuring instruments.
- Interpret, decode, and apply information found in electrical codes, blueprints, schematics, wiring diagrams, specifications, and applicable documents to perform, test, and troubleshoot wiring projects.
- Describe the operation, uses, and applications of electromagnetic and Solid State controllers and related control devices to perform, test, and troubleshoot industrial control projects.
- Utilize computers and related software to translate, perform, test, and troubleshoot control schemes.

For more information call 713.718.6898.

# Architecture and Construction

## Electrical Helper

### CERTIFICATE LEVEL I

First Semester	Credits
ELPT 1315 Electrical Calculations I.....	3
ELPT 1221 Introduction to Electrical Safety and Tools .....	2
ELPT 1311 Basic Electrical Theory .....	3
ELPT 1325 National Electrical Code I.....	3
ELPT 1329 Residential Wiring.....	3
ELPT 1345 Commercial Wiring #.....	3
<b>Semester Total</b>	<b>17</b>
<b>Program Total</b>	<b>20</b>

# Capstone Course

## Solar Photovoltaic System Installer

This certificate program prepares students to work as installers, maintenance technicians, and constructors of solar panels and related technologies.

### CERTIFICATE LEVEL I

#### FIRST YEAR

First Semester	Credits
ELPT 1315 Electrical Calculations I.....	3
ELPT 1221 Introduction to Electrical Safety and Tools .....	2
ELPT 1311 Basic Electrical Theory .....	3
ELMT 1311 Solar Fundamentals .....	3
ELMT 1402 Solar Photovoltaic Systems #.....	4
<b>Semester Total</b>	<b>15</b>
<b>Program Total</b>	<b>15</b>

# Capstone Course

## Electrical Power Technology

### CERTIFICATE LEVEL I

First Semester	Credits
ELPT 1315 Electrical Calculations I.....	3
ELPT 1221 Introduction to Electrical Safety and Tools .....	2
ELPT 1311 Basic Electrical Theory .....	3
ELPT 1325 National Electrical Code I.....	3
ELPT 1329 Residential Wiring.....	3
<b>Semester Total</b>	<b>14</b>
Second Semester	Credits
ELPT 1341 Motor Control .....	3
CNBT 1300 Residential and Light Commercial Blueprint Reading.....	3

ELMT 1301 Programmable Logic Controllers .....	3
ELPT 1345 Commercial Wiring.....	3
ELPT 2325 National Electrical Code II OR	
ELPT 1355 Electronic Applications .....	3

**Semester Total 15**

### Third Semester Credits

XXXX #3## Department Approved Elective <sup>A</sup> .....	3
ELPT 2301 Journeyman Electrician Exam Review OR	
CNBT 1302 Mechanical, Plumbing, and Electrical Systems in Construction I #.....	3

**Semester Total 6**

**Program Total 35**

# Capstone Course

<sup>A</sup> Department Approved Elective: May choose from – ELPT 1311, 1315, 1319, 1320, 1325, 1329, 1331, 1341, 1345, 1355, 1364, 1371, 1391, 2319, 2325, 2337, 2339, 2343, 2349, 2355, 2364, 2365

## Industrial Automation Technology

### CERTIFICATE LEVEL I

#### First Semester Credits

ELPT 1315 Electrical Calculations I.....	3
ELPT 1221 Introduction to Electrical Safety and Tools .....	2
ELPT 1311 Basic Electrical Theory .....	3
ELPT 1341 Motor Control .....	3
ELMT 1301 Basic Programmable Logic Controllers.....	3

**Semester Total 14**

#### Second Semester Credits

ELPT 1355 Electronic Applications.....	3
ELPT 2419 Programmable Logic Controllers I .....	4
HYDR 1345 Hydraulics and Pneumatics .....	3
INCR 1302 Physics of Instrumentation .....	3
ELPT 1325 National Electrical Code I.....	3

**Semester Total 16**

#### Third Semester Credits

ELPT 2445 Programmable Logic Controllers II .....	4
ELPT 2449 Industrial Automation #.....	4

**Semester Total 8**

**Program Total 38**

# Capstone Course

# Arts, A/V Technology and Communications

## **COMMUNICATION & MEDIA ARTS**

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**Audio Recording Technology (10.0202)**  
**Digital Communication (10.0303)**  
**Film/Video Production and Special Effects (50.0602)**

## **VISUAL & PERFORMING ARTS**

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**Fashion Design (50.0407)**  
**Fashion Merchandising (52.1902)**  
**Interior Design (50.0408)**  
**Music Business (50.1003)**

A Career Cluster is a grouping of occupations and broad industries based on commonalities. The Arts, Audio/Video Technology and Communications career cluster is concerned with providing knowledge and skills related to designing, producing, exhibiting, performing, writing, and publishing multimedia content including visual and performing arts and design, journalism, and entertainment services. This includes the following HCC programs: Audio Recording Technology, Digital Communication, Film/Video Production and Special Effects, Music Arranging, Composition and Production, Music Business, Music in Performance, Fashion Design, Fashion Merchandising and Interior Design.

All new semester hour students, who have earned less than 12 semester hours of college level credit, are required to take a first-year student success course in their first term at HCC. Through research and experience, Houston Community College has determined that many life and career management skills are necessary for students to make the most of their college investment. A student success course is designed to prepare students for the demands of college and for success in the world of work. The course emphasizes setting priorities, time management, effective listening, note-taking, concentration techniques, retention of information, book analysis, comprehension techniques, and test-taking skills. This course also incorporates units that are designed to facilitate the use of library databases in conducting research, planning and setting educational objectives, lifelong career assessment, decision-making, financial aid, tutoring, and student support services, enabling the student to maximize the use of college resources.

Every HCC Career and Technology Education program contains a “*Capstone Course*,” an experience for the student to “put it all together.” The *Capstone Course* is a learning experience resulting in a consolidation of a student’s educational experience and certifies mastery of entry level workplace competencies. The *Capstone*

*Course* experience must occur during the last semester of the student’s educational program. The *Capstone Course* consists of an external learning experience or an advanced course especially designed to help students synthesize knowledge and skills or other licensure as appropriate.

## **AUDIO RECORDING TECHNOLOGY**

“Hands-on” is the guiding philosophy behind this innovative program in audio recording, live sound and video production. With the addition of a SSL 4048 G+ mixing console, students acquire hundreds of engineering hours as they produce audio recordings, MIDI sequences and music videos in seven well-equipped recording studios and video editing suites. After completing the first and second semester classes, each student is assigned a weekly recording session to enhance technical and creative skills. Graduating students complete their education with classes in audio mastering, CD production, and internships. They may augment their training with two enhanced skills certificates in Electronic Music or Film (see Filmmaking). Upon completion, students pursue careers in recording studios, live sound reinforcement, MIDI sequencing, electronics maintenance, equipment installation, radio, television, music video production and sales.

The Audio Recording Technology program prepares students for employment in the audio industry by providing relevant instruction, opportunities for internships and career advancement, and resources for creating professional musical recordings for portfolios of its graduates. The Audio Recording Technology program is responsive to its industry advisory committee, and consistently achieves graduation and placement rates exceeding the standards set by the Texas Higher Education Coordinating Board (THECB).

### **Program Outcomes**

Students will be able to

- Demonstrate the use of the major skills and techniques used in the creation of audio media content including recording, editing, time manipulation, pitch correction, and mixing strategies appropriate to both genre and medium.
- Create MIDI sequences and incorporate MIDI technology such as sampling, synthesis, and beat manipulation into commercial recording projects.
- Demonstrate a fundamental understanding of electronics, acoustics, and audio system design.
- Compare audio systems utilizing the major operating systems and DAW packages.

# Arts, A/V Technology and Communications

- Analyze analog and digital signal flow on order to troubleshoot and operate audio systems.
- Apply basic musical knowledge in order to create audio recording projects involving professional musicians.
- Describe the roles of other professionals who take part in multimedia projects, such as graphic artists, video editors, cinematographers, animators, and web designers.

For more information call 713.718.5602 or e-mail [ty.welborn@hccs.edu](mailto:ty.welborn@hccs.edu).

## Audio Recording Technology

### AAS

TSI testing is required prior to first enrollment.

#### FIRST YEAR

##### First Semester

	<b>Credits</b>
EDUC 1300 Learning Framework <sup>A</sup> .....	3
MUSC 1335 Commercial Music Software.....	3
MUSC 1331 MIDI I.....	3
XXXX #3## Humanities/Fine Arts Elective <sup>C</sup> .....	3
<b>Semester Total</b>	<b>12</b>

##### Second Semester

	<b>Credits</b>
MUSC 1327 Audio Engineering I.....	3
MUSC 1323 Audio Electronics.....	3
XXXX #3## Social/Behavioral Sciences Elective <sup>D</sup> .....	3
XXXX #3## Humanities/Fine Arts Elective <sup>C</sup> .....	3
<b>Semester Total</b>	<b>12</b>

##### Third Semester

	<b>Credits</b>
MUSC 2427 Audio Engineering II.....	4
RTVB 1240 Audio/Radio Production Practices.....	2
<b>Semester Total</b>	<b>6</b>

#### SECOND YEAR

##### First Semester

	<b>Credits</b>
MUSC 2447 Audio Engineering III.....	4
RTVB 2232 Audio/Radio Production Practices II.....	2
RTVB 1321 TV Field Production.....	3
XXXX #3## Social/Behavioral Sciences Elective <sup>D</sup> .....	3
XXXX #3## Math/Natural Science Elective <sup>B</sup> .....	3
<b>Semester Total</b>	<b>15</b>

##### Second Semester

	<b>Credits</b>
MUSC 2448 Audio Engineering IV.....	4
MUSC 2201 Audio Engineering Practices.....	2
MUSC 1405 Live Sound I.....	4
RTVB 2282 Cooperative Education-Radio and Television Broadcasting Technology/Technician.....	2
<b>Semester Total</b>	<b>12</b>

##### Third Semester

	<b>Credits</b>
RTVB 2343 Commercial Recording Techniques #.....	3
<b>Semester Total</b>	<b>3</b>
<b>Program Total</b>	<b>60</b>

# Capstone Course Course

<sup>A</sup> Student Success Course: Students are required to complete EDUC 1300 within their first 12 semester credit hours of instruction. Students enrolling at HCC with 12 or more hours completed should consult with an academic advisor to select an appropriate course substitution.

<sup>B</sup> Math/Natural Science: May choose from – ANTH 2301 (with or without 2101 = lab), 2302, ASTR 1303, 1304, 1403, 1404, BIOL 1308, 1309, 1322, 1406, 1407, (2301, 2302 – restricted to Engineering, Science, and Health Sciences majors), CHEM 1305, 1405, 1411, 1412, COSC 1436, GEOG 1301, GEOL 1305, 1345, 1347, 1403, 1404, MATH 1314, 1316, 1324, 1325, 1332, 1342, 1350, 2318, 2320, 2412, 2413, 2414, 2415, PHYS 1305, 1401, 1402, 2325 (with or without 2125 = lab), 2326 (with or without 2126 = lab), PSYC 2317.

<sup>C</sup> Humanities/Fine Arts: May choose from – ARTS 1301, 1303, 1304, COMM 2366, DANC 2303, DRAM 1310, 2316, 2366, ENGL 2322, 2323, 2327, 2328, 2332, 2333, 2342, 2343, 2351, HIST 1301, 1302, 2311, 2312, 2321, 2322, 2301, 2327, 2328, 2381, HUMA 1301, 1305, 1311, 2319, 2323, MUSI 1306, 1310, PHIL 1301, 1304, 2306, 2307, 2316, World Languages (ARAB 1411, 1412, CHIN 1411, 1412, FREN 1411, 1412, GERM 1411, 1412, JAPN 1411, 1412, KORE 1411, 1412, SPAN 1411, 1412).

<sup>D</sup> Social/Behavioral Sciences: May choose from – ANTH 2346, 2351, ECON 1301, 2301, 2302, EDUC 1300, GEOG 1302, 1303, GOVT 2305, 2306, PSYC 2301, 2314, 2316, 2319, SOCI 1301, 1306, 2301, 2336, TECA 1354.

## Audio Recording Technology

All courses in this certificate apply to the AAS in Audio Recording Technology degree.

### CERTIFICATE LEVEL I

#### First Semester

	<b>Credits</b>
MUSC 1335 Commercial Music Software.....	3
MUSC 1331 MIDI I.....	3
RTVB 1321 TV Field Production.....	3
<b>Semester Total</b>	<b>9</b>

#### Second Semester

	<b>Credits</b>
MUSC 1327 Audio Engineering I.....	3
MUSC 1323 Audio Electronics.....	3
MUSC 1405 Live Sound I.....	4
<b>Semester Total</b>	<b>10</b>

# Arts, A/V Technology and Communications

<b>Third Semester</b>		<b>Credits</b>
MUSC 2427	Audio Engineering II #	4
RTVB 1240	Audio/Radio Production Practices	2
<b>Semester Total</b>		<b>6</b>
<b>Program Total</b>		<b>25</b>

# Capstone Course

## Electronic Music Production

The certificate program emphasizes skills used by MIDI producers and sound designers in MIDI studios, multitrack recording studios and project studios. Some of the courses in this certificate apply to the AAS in Audio Recording Technology degree.

### CERTIFICATE LEVEL I

<b>First Semester</b>		<b>Credits</b>
LEAD 1370	Workforce Leadership and Critical Thinking Skills for Student Success*	3
MUSC 1327	Audio Engineering I	3
MUSC 1335	Commercial Music Software	3
MUSC 1331	MIDI I	3
MUSI 1181	Piano Class I OR	
MUAP 1169	Piano	1
MUSI 1301	Music Fundamentals	3
<b>Semester Total</b>		<b>16</b>

<b>Second Semester</b>		<b>Credits</b>
MUSC 2427	Audio Engineering II	4
RTVB 1240	Audio/Radio Production Practices	2
MUSC 2355	MIDI II	3
MUSC 2433	Scoring for Video and Film	4
MUSI 1182	Piano Class II OR	
MUAP 1169	Piano	1
MUSC 1270	Fundamentals of Music Production	2
<b>Semester Total</b>		<b>16</b>

<b>Third Semester</b>		<b>Credits</b>
MUAP 1169	Piano	1
MUSC 2345	Synthesis II	3
MUSC 1350	Remixing #	3
<b>Semester Total</b>		<b>7</b>
<b>Program Total</b>		<b>39</b>

# Capstone Course

## Electronic Music Production

Graduates with an AAS in Audio Recording Technology program seeking further training in electronic music production may pursue this certificate.

The courses emphasize digital audio editing, sequencing applications and the creation of music for video and film.

### ENHANCED SKILLS CERTIFICATE

<b>First Semester</b>		<b>Credits</b>
MUSI 1181	Class Piano I OR	
MUAP 1169	Piano	1
MUSC 2355	MIDI II	3
MUSC 2345	Synthesis II	3
MUSC 2433	Scoring for Video and Film	4
MUSC 1350	Remixing	3
<b>Semester Total</b>		<b>14</b>
<b>Program Total</b>		<b>14</b>

## DIGITAL COMMUNICATION

Digital Communication (DigiCom) is a multidisciplinary department. DigiCom comprises five areas of digital computer study: Digital Communication, Digital Photography, Graphic Design, Digital Media, Web Publishing, and Visual Effects & Motion Graphics.

The Digital Communication program offers students the opportunity to explore innovative and visual applications in the world of digital media. Business and industry need skilled digital designers, artists, illustrators, photographers to design, write, edit, and produce a wide variety of advertising and technical materials in print and electronic media. Each of these programs provides students quality instruction and concepts in the rapidly evolving technologies that are utilized in numerous regional and global careers and industries.

Digital Communication, Graphic Design and Photography students will acquire skills to develop their original concepts and ideas in traditional studio and digital design and imaging processes. Digital Animation and Simulation, Digital Media, Web and Mobile application students will acquire skills in animation, digital video, audio, 3D applications and the construction of interactive web and mobile application pages. Students in all specializations

# Arts, A/V Technology and Communications

will develop portfolios of their work to help prepare them for work in industry after graduation. The curriculum in Digital Communication, Photography, Graphic Design, Digital Media, Web Publishing, Animation and Simulation, and Mobile Application is presented in a sequential structure to foster the successful transition from foundation to advanced skills.

The Texas Higher Education Coordinating Board (THECB) allows students to earn only one **AAS** in Digital Communication. Students may choose from one of the following five specializations: Digital Communication (General), Digital Photography, Graphic Design, Digital Media, Web Publishing, and Visual Effects & Motion Graphics.

THECB allows students to earn only one **Certificate Level I** in Digital Communication. Students may choose from one of the following five specializations: General, Digital Photography, Graphic Design, Digital Media, Web Publishing, and Visual Effects & Motion Graphics.

Likewise, THECB allows students to earn only one **Certificate Level II** in Digital Communication. Students may choose from one of the following five specializations: General, Digital Photography, Graphic Design, Digital Media, Web Publishing, and Visual Effects & Motion Graphics.

## Program Outcomes

Students will be able to

- Demonstrate the use of basic graphic design principles
- Identify appropriate industry software applications
- Develop a portfolio that exhibits proficiency and skills based on student's specific area of study
- Effectively present and evaluate projects utilizing appropriate industry vocabulary

*For more information call 713.718.7890 or 713.718.7895.*

## Digital Communication - General

- AAS
- Level I Certificate
- Level II Certificate
- Enhanced Skills Certificate

## Digital Communication with a Specialization in:

### Digital Photography

- AAS
- Level I Certificate
- Level II Certificate
- Enhanced Skills Certificate

### Graphic Design

- AAS
- Level I Certificate
- Level II Certificate

### Digital Media

- AAS
- Level I Certificate
- Level II Certificate

### Visual Effects and Motion Graphics

- AAS
- Level I Certificate
- Level II Certificate

### Web Publishing

- AAS
- Level I Certificate
- Level II Certificate
- Enhanced Skills Certificate

The Digital Communication department provides state-of-the-art curriculum and instruction in digital photography, graphic design, digital media, motion graphics, and web publishing. The department uses the latest technologies to prepare students in meeting professional and personal goals and provides business and industry with a highly skilled workforce.

For specific curriculum information about each certificate and degree, consult the HCCS Catalog online. You may obtain further information about any of the programs or class schedules by calling our department.

**Accreditation:** NASAD ([National Association of Schools of Art & Design](http://www.nasad-eds.org/))

*For more information call 713.718.7895 or visit: <http://swc2.hccs.edu/digicom/>.*

# Arts, A/V Technology and Communications

## Digital Communication - General

Digital Communication prepares students to enter the workforce as generalists in the area of computerized graphic communication. The degree includes generalized training in digital photography, graphic design, multimedia, and web technologies. The program prepares students for employment in the fields of print-based media, electronic interactive multimedia, and web design and authoring.

Students may earn an AAS, Level I or Level II certificate in Digital Communication.

### AAS

*TSI testing is required prior to first enrollment.*

#### FIRST YEAR

##### First Semester Credits

EDUC 1300	Learning Framework <sup>A</sup>	3
ARTC 1325	Introduction to Computer Graphics	3
ARTC 1302	Digital Imaging I	3
ARTC 1309	Basic Illustration	3
ARTC 1305	Basic Graphic Design	3
<b>Semester Total</b>		<b>15</b>

##### Second Semester Credits

ARTC 1353	Computer Illustration	3
IMED 1316	Web Page Design I	3
XXXX #3##	Math/Natural Science Elective <sup>B</sup>	3
ARTS 1303	Art History I	3
<b>Semester Total</b>		<b>12</b>

##### Third Semester Credits

IMED 1341	Interface Design	3
IMED 2359	Interactive Web Elements	3
XXXX #3##	General Education Elective <sup>E</sup>	3
<b>Semester Total</b>		<b>9</b>

#### SECOND YEAR

##### First Semester Credits

ARTC 2313	Digital Publishing II	3
ARTC 1317	Design Communication I	3
IMED 1359	Writing for Digital Media	3
ARTV 1351	Digital Video	3
XXXX #3##	Humanities/Fine Arts Elective <sup>C</sup>	3
<b>Semester Total</b>		<b>15</b>

##### Second Semester Credits

XXXX #3##	Social/Behavioral Sciences Elective <sup>D</sup>	3
ARTV 1345	3-D Modeling and Rendering I	3
IMED 2388	Internship - Digital Communication and Media/Multimedia <sup>#</sup>	3
<b>Semester Total</b>		<b>9</b>
<b>Program Total</b>		<b>60</b>

<sup>#</sup> Capstone Course

<sup>A</sup> Student Success Course: Students are required to complete EDUC 1300 within their first 12 semester credit hours of instruction. Students enrolling at HCC with 12 or more hours completed should consult with an academic advisor to select an appropriate course substitution.

<sup>B</sup> Math/Natural Science: May choose from – ANTH 2301 (with or without 2101 = lab), 2302, ASTR 1303, 1304, 1403, 1404, BIOL 1308, 1309, 1322, 1406, 1407, (2301, 2302 – restricted to Engineering, Science, and Health Sciences majors), CHEM 1305, 1405, 1411, 1412, COSC 1436, GEOG 1301, GEOL 1305, 1345, 1347, 1403, 1404, MATH 1314, 1316, 1324, 1325, 1332, 1342, 1350, 2318, 2320, 2412, 2413, 2414, 2415, PHYS 1305, 1401, 1402, 2325 (with or without 2125= lab), 2326 (with or without 2126 = lab), PSYC 2317.

<sup>C</sup> Humanities/Fine Arts: May choose from – ARTS 1301, 1303, 1304, COMM 2366, DANC 2303, DRAM 1310, 2316, 2366, ENGL 2322, 2323, 2327, 2328, 2332, 2333, 2342, 2343, 2351, HIST 1301, 1302, 2311, 2312, 2321, 2322, 2301, 2327, 2328, 2381, HUMA 1301, 1305, 1311, 2319, 2323, MUSI 1306, 1310, PHIL 1301, 1304, 2306, 2307, 2316, World Languages (ARAB 1411, 1412, CHIN 1411, 1412, FREN 1411, 1412, GERM 1411, 1412, JAPN 1411, 1412, KORE 1411, 1412, SPAN 1411, 1412).

<sup>D</sup> Social/Behavioral Sciences: May choose from – ANTH 2346, 2351, ECON 1301, 2301, 2302, EDUC 1300, GEOG 1302, 1303, GOVT 2305, 2306, PSYC 2301, 2314, 2316, 2319, SOCI 1301, 1306, 2301, 2336, TECA 1354.

<sup>E</sup> General Education: May choose from – ANTH 2301 (with or without 2101 = lab), 2302, 2346, 2351, ARTS 1301, 1303, 1304, ASTR 1303, 1304, 1403, 1404, BIOL 1308, 1309, 1322, 1406, 1407, (2301, 2302 – restricted to Engineering, Science, and Health Sciences majors), CHEM 1305, 1405, 1411, 1412, COMM 2366, COSC 1436, DANC 2303, DRAM 1310, 2316, 2366, ECON 1301, 2301, 2302, EDUC 1300, ENGL 2322, 2323, 2327, 2328, 2332, 2333, 2342, 2343, 2351, GEOG 1301, 1302, 1303, GEOL 1305, 1345, 1347, 1403, 1404, GOVT 2305, 2306, HIST 1301, 1302, 2311, 2312, 2321, 2322, 2301, 2327, 2328, 2381, HUMA 1301, 1305, 1311, 2319, 2323, MATH 1314, 1316, 1324, 1325, 1332, 1342, 1350, 2318, 2320, 2412, 2413, 2414, 2415, MUSI 1306, 1310, PHIL 1301, 1304, 2306, 2307, 2316, PHYS 1305, 1401, 1402, 2325 (with or without 2125 = lab), 2326 (with or without 2126 = lab), PSYC 2301, 2314, 2316, 2317, 2319, SOCI 1301, 1306, 2301, 2336, TECA 1354, World Languages (ARAB 1411, 1412, CHIN 1411, 1412, FREN 1411, 1412, GERM 1411, 1412, JAPN 1411, 1412, KORE 1411, 1412, SPAN 1411, 1412).

# Arts, A/V Technology and Communications

## Digital Communication General

### CERTIFICATE LEVEL I

#### FIRST YEAR

<b>First Semester</b>		<b>Credits</b>
ARTC 1325	Introduction to Computer Graphics .....	3
ARTC 1305	Basic Graphic Design .....	3
ARTC 1302	Digital Imaging I .....	3
PHTC 1311	Fundamentals of Photography.....	3
IMED 1316	Web Design I # .....	3
<b>Semester Total</b>		<b>15</b>
<b>Program Total</b>		<b>15</b>

\*Student Success Course

# Capstone Course

## Digital Communication General

### CERTIFICATE LEVEL II

#### FIRST YEAR

<b>First Semester</b>		<b>Credits</b>
EDUC 1300	Learning Framework <sup>A</sup> .....	3
ARTC 1325	Introduction to Computer Graphics .....	3
ARTC 1302	Digital Imaging I .....	3
ARTC 1309	Basic Illustration.....	3
ARTC 1305	Basic Graphic Design .....	3
<b>Semester Total</b>		<b>15</b>

#### Second Semester

<b>Second Semester</b>		<b>Credits</b>
ARTC 1353	Computer Illustration.....	3
ARTV 1345	3-D Modeling and Rendering I.....	3
IMED 1316	Web Page Design I.....	3
<b>Semester Total</b>		<b>9</b>

#### SECOND YEAR

#### First Semester

<b>First Semester</b>		<b>Credits</b>
IMED 1341	Interface Design.....	3
IMED 2359	Interactive Web Elements.....	3
ARTV 1351	Digital Video.....	3
<b>Semester Total</b>		<b>9</b>

#### Second Semester

<b>Second Semester</b>		<b>Credits</b>
IMED 1359	Writing for Digital Media.....	3
ARTC 2313	Digital Publishing II .....	3
ARTC 2335	Portfolio Development for Graphic Design # OR	
IMED 2313	Project Analysis and Design # .....	3
<b>Semester Total</b>		<b>9</b>
<b>Program Total</b>		<b>42</b>

# Capstone Course

<sup>A</sup> Student Success Course: Students are required to complete EDUC 1300 within their first 12 semester credit hours of instruction. Students enrolling at HCC with 12 or more hours completed should consult with an academic advisor to select an appropriate course substitution.

## Digital Publishing

Deactivation pending SACSCOC approval. Enrollment is closed to new students.

### ENHANCED SKILLS CERTIFICATE

#### FIRST YEAR

<b>First Semester</b>		<b>Credits</b>
ARTC 2348	Digital Publishing III .....	3
ARTC 2317	Typographic Design .....	3
<b>Semester Total</b>		<b>6</b>
<b>Program Total</b>		<b>6</b>

## eLearning and Courseware Development

Deactivation pending SACSCOC approval. Enrollment is closed to new students.

### ENHANCED SKILLS CERTIFICATE

#### FIRST YEAR

<b>First Semester</b>		<b>Credits</b>
IMED 1305	Digital Media Courseware Development .....	3
IMED 2301	Instructional Design .....	3
IMED 1345	Interactive Digital Media I.....	3
<b>Semester Total</b>		<b>9</b>
<b>Program Total</b>		<b>9</b>

## Mobile Application

Responsive media allows you to share more content with more people. Learn what you need to know to build image and typography-rich pages that display correctly on a wide variety of devices. Learn how to convert fixed-width layouts into fluid grid layouts that adapt to different screen sizes, use media queries to deliver custom design experiences, and prepare and retrieve PNG, JPEG, and SVG images so that they look their best

# Arts, A/V Technology and Communications

## CERTIFICATE LEVEL I

### FIRST YEAR

#### First Semester Credits

ARTC 1325	Introduction to Computer Graphics	3
IMED 1316	Web Design I	3
IMED 1341	Interface Design	3

**Semester Total 9**

#### Second Semester Credits

IMED 2351	Digital Media Programming	3
ITSE 2313	Web Authoring	3
IMED 2345	Interactive Digital Media II #	3

**Semester Total 9**

**Program Total 18**

# Capstone Course

## Digital Communication - Digital Photography Specialization

The Digital Communication AAS in Digital Photography Specialization provides training in the field of graphic imaging. Students learn camera and associated equipment operation, image manipulation and production, photographic business management and design and concept development. They study photographic techniques for illustrative, photojournalistic and portraiture presentations. Students also learn how to develop a professional website while they build a portfolio for entry into the workforce.

Students may earn an AAS or Level II certificate in Digital Photography Specialization.

## AAS

TSI testing is required prior to first enrollment.

### FIRST YEAR

#### First Semester Credits

EDUC 1300	Learning Framework <sup>A</sup>	3
ARTC 1305	Basic Graphic Design	3
IMED 1359	Writing for Digital Media	3
ARTC 1302	Digital Imaging I	3
PHTC 1311	Fundamentals of Photography	3
XXXX #3##	Social/Behavioral Sciences Elective <sup>D</sup>	3

**Semester Total 18**

#### Second Semester Credits

ARTV 1351	Digital Video	3
ARTC 2305	Digital Imaging II	3
PHTC 1353	Portraiture I	3

**Semester Total 9**

### Third Semester

XXXX #3##	Humanities/Fine Arts Elective <sup>C</sup>	3
XXXX #3##	General Education Elective <sup>E</sup>	3
ARTS 1303	Art History I	3

**Semester Total 9**

### SECOND YEAR

#### First Semester

PHTC 1345	Illustrative Photography I	3
PHTC 1351	Photojournalism I	3
PHTC 2343	Portfolio Development	3
ARTC 2313	Digital Publishing II	3
IMED 1316	Web Page Design I	3

**Semester Total 15**

#### Second Semester

XXXX #3##	Math/Natural Science Elective <sup>B</sup>	3
PHTC 2340	Photographic Studio Management	3
IMED 2388	Internship-Digital Communication and Media/Multimedia #	3

**Semester Total 9**

**Program Total 60**

# Capstone Course

<sup>A</sup> Student Success Course: Students are required to complete EDUC 1300 within their first 12 semester credit hours of instruction. Students enrolling at HCC with 12 or more hours completed should consult with an academic advisor to select an appropriate course substitution.

<sup>B</sup> Math/Natural Science: May choose from – ANTH 2301 (with or without 2101 = lab), 2302, ASTR 1303, 1304, 1403, 1404, BIOL 1308, 1309, 1322, 1406, 1407, (2301, 2302 – restricted to Engineering, Science, and Health Sciences majors), CHEM 1305, 1405, 1411, 1412, COSC 1436, GEOG 1301, GEOL 1305, 1345, 1347, 1403, 1404, MATH 1314, 1316, 1324, 1325, 1332, 1342, 1350, 2318, 2320, 2412, 2413, 2414, 2415, PHYS 1305, 1401, 1402, 2325 (with or without 2125= lab), 2326 (with or without 2126 = lab), PSYC 2317.

<sup>C</sup> Humanities/Fine Arts: May choose from – ARTS 1301, 1303, 1304, COMM 2366, DANC 2303, DRAM 1310, 2316, 2366, ENGL 2322, 2323, 2327, 2328, 2332, 2333, 2342, 2343, 2351, HIST 1301, 1302, 2311, 2312, 2321, 2322, 2301, 2327, 2328, 2381, HUMA 1301, 1305, 1311, 2319, 2323, MUSI 1306, 1310, PHIL 1301, 1304, 2306, 2307, 2316, World Languages (ARAB 1411, 1412, CHIN 1411, 1412, FREN 1411, 1412, GERM 1411, 1412, JAPN 1411, 1412, KORE 1411, 1412, SPAN 1411, 1412).

<sup>D</sup> Social/Behavioral Sciences: May choose from – ANTH 2346, 2351, ECON 1301, 2301, 2302, EDUC 1300, GEOG 1302, 1303, GOVT 2305, 2306, PSYC 2301, 2314, 2316, 2319, SOCI 1301, 1306, 2301, 2336, TECA 1354.

<sup>E</sup> General Education: May choose from – ANTH 2301 (with or without 2101 = lab), 2302, 2346, 2351, ARTS 1301, 1303, 1304, ASTR 1303, 1304, 1403, 1404, BIOL 1308, 1309, 1322, 1406, 1407, (2301, 2302 – restricted to Engineering, Science, and Health Sciences majors), CHEM 1305, 1405, 1411, 1412, COMM 2366, COSC 1436, DANC 2303, DRAM 1310, 2316,

# Arts, A/V Technology and Communications

2366, ECON 1301, 2301, 2302, EDUC 1300, ENGL 2322, 2323, 2327, 2328, 2332, 2333, 2342, 2343, 2351, GEOG 1301, 1302, 1303, GEOL 1305, 1345, 1347, 1403, 1404, GOVT 2305, 2306, HIST 1301, 1302, 2311, 2312, 2321, 2322, 2301, 2327, 2328, 2381, HUMA 1301, 1305, 1311, 2319, 2323, MATH 1314, 1316, 1324, 1325, 1332, 1342, 1350, 2318, 2320, 2412, 2413, 2414, 2415, MUSI 1306, 1310, PHIL 1301, 1304, 2306, 2307, 2316, PHYS 1305, 1401, 1402, 2325 (with or without 2125 = lab), 2326 (with or without 2126 = lab), PSYC 2301, 2314, 2316, 2317, 2319, SOCI 1301, 1306, 2301, 2336, TECA 1354, World Languages (ARAB 1411, 1412, CHIN 1411, 1412, FREN 1411, 1412, GERM 1411, 1412, JAPN 1411, 1412, KORE 1411, 1412, SPAN 1411, 1412).

## Digital Communication - Digital Photography Specialization

### CERTIFICATE LEVEL I

#### FIRST YEAR

First Semester		Credits
ARTC 1305	Basic Graphic Design .....	3
IMED 1359	Writing for Digital Media .....	3
ARTC 1302	Digital Imaging I .....	3
PHTC 1311	Fundamentals of Photography .....	3
IMED 1316	Web Design I # .....	3
<b>Semester Total</b>		<b>15</b>
<b>Program Total</b>		<b>15</b>

# Capstone Course

## Digital Communication - Digital Photography Specialization

### CERTIFICATE LEVEL II

TSI testing is required prior to first enrollment.

#### FIRST YEAR

First Semester		Credits
EDUC 1300	Learning Framework <sup>A</sup> .....	3
ARTC 1305	Basic Graphic Design .....	3
IMED 1359	Writing for Digital Media .....	3
PHTC 1311	Fundamentals of Photography .....	3
ARTC 1302	Digital Imaging I .....	3
<b>Semester Total</b>		<b>15</b>
Second Semester		Credits
ARTV 1351	Digital Video .....	3
ARTC 2305	Digital Imaging II .....	3
PHTC 1353	Portraiture I .....	3
IMED 1316	Web Design I .....	3
<b>Semester Total</b>		<b>12</b>

#### SECOND YEAR

##### First Semester

		Credits
PHTC 1345	Illustrative Photography I .....	3
PHTC 1351	Photojournalism I .....	3
PHTC 2343	Portfolio Development .....	3
ARTC 2313	Digital Publishing II .....	3
<b>Semester Total</b>		<b>12</b>

##### Second Semester

		Credits
PHTC 2340	Photographic Studio Management # .....	3
<b>Semester Total</b>		<b>9</b>
<b>Program Total</b>		<b>48</b>

# Capstone Course

<sup>A</sup> Student Success Course: Students are required to complete EDUC 1300 within their first 12 semester credit hours of instruction. Students enrolling at HCC with 42 or more hours completed should consult with an academic advisor to select an appropriate course substitution.

## Digital Photography

Deactivation pending SACSCOC approval. Enrollment is closed to new students.

### ENHANCED SKILLS CERTIFICATE

#### FIRST YEAR

First Semester		Credits
PHTC 2353	Portraiture II .....	3
PHTC 2345	Illustrative Photography II .....	3
PHTC 2351	Photojournalism II .....	3
<b>Semester Total</b>		<b>9</b>
<b>Program Total</b>		<b>9</b>

## Digital Communication - Graphic Design Specialization

The Digital Communication-Graphic Design Specialization program provides students training in communication concepts, design, layout, and typography using computer technology to prepare print-based materials such as newsletters, brochures, advertisements, and other documents.

Students may earn an AAS, Level I or Level II certificate in Graphic Design.

# Arts, A/V Technology and Communications

## AAS

TSI testing is required prior to first enrollment.

### FIRST YEAR

#### First Semester Credits

EDUC 1300	Learning Framework <sup>A</sup>	3
ARTC 2311	History of Communication Graphics	3
ARTC 1302	Digital Imaging I	3
ARTC 1309	Basic Illustration	3
ARTC 1305	Basic Graphic Design	3

**Semester Total 15**

#### Second Semester Credits

PHTC 1311	Fundamentals of Photography	3
ARTC 1321	Illustration Techniques I	3
ARTC 1353	Computer Illustration	3
XXXX #3##	Humanities/Fine Arts Elective <sup>C</sup>	3

**Semester Total 12**

#### Third Semester Credits

XXXX #3##	Math/Natural Science Elective <sup>B</sup>	3
XXXX #3##	Social/Behavioral Sciences Elective <sup>D</sup>	3

**Semester Total 6**

### SECOND YEAR

#### First Semester Credits

ARTC 1317	Design Communication I	3
ARTC 2313	Digital Publishing II	3
ARTC 2305	Digital Imaging II	3
IMED 1316	Web Design I	3

**Semester Total 12**

#### Second Semester Credits

XXXX #3##	General Education Elective <sup>E</sup>	3
ARTC 2317	Typographic Design	3
ARTC 2335	Portfolio Development for Graphic Design	3
SPCH 1311	Introduction to Speech Communication OR	
XXXX #3##	General Education Elective <sup>E</sup>	3

**Semester Total 12**

#### Third Semester Credits

IMED 2388	Internship-Digital Communication and Media/Multimedia <sup>#</sup>	3
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**Semester Total 3**

**Program Total 60**

<sup>#</sup> Capstone Course

<sup>A</sup> Student Success Course: Students are required to complete EDUC 1300 within their first 12 semester credit hours of instruction. Students enrolling at HCC with 12 or more hours completed should consult with an academic advisor to select an appropriate course substitution.

<sup>B</sup> Math/Natural Science: May choose from – ANTH 2301 (with or without 2101 = lab), 2302, ASTR 1303, 1304, 1403, 1404, BIOL 1308, 1309, 1322, 1406, 1407, (2301, 2302 – restricted to Engineering, Science, and Health Sciences majors), CHEM 1305, 1405, 1411, 1412, COSC 1436, GEOG 1301, GEOL

1305, 1345, 1347, 1403, 1404, MATH 1314, 1316, 1324, 1325, 1332, 1342, 1350, 2318, 2320, 2412, 2413, 2414, 2415, PHYS 1305, 1401, 1402, 2325 (with or without 2125= lab), 2326 (with or without 2126 = lab), PSYC 2317.

<sup>C</sup> Humanities/Fine Arts: May choose from – ARTS 1301, 1303, 1304, COMM 2366, DANC 2303, DRAM 1310, 2316, 2366, ENGL 2322, 2323, 2327, 2328, 2332, 2333, 2342, 2343, 2351, HIST 1301, 1302, 2311, 2312, 2321, 2322, 2301, 2327, 2328, 2381, HUMA 1301, 1305, 1311, 2319, 2323, MUSI 1306, 1310, PHIL 1301, 1304, 2306, 2307, 2316, World Languages (ARAB 1411, 1412, CHIN 1411, 1412, FREN 1411, 1412, GERM 1411, 1412, JAPN 1411, 1412, KORE 1411, 1412, SPAN 1411, 1412).

<sup>D</sup> Social/Behavioral Sciences: May choose from – ANTH 2346, 2351, ECON 1301, 2301, 2302, EDUC 1300, GEOG 1302, 1303, GOVT 2305, 2306, PSYC 2301, 2314, 2316, 2319, SOCI 1301, 1306, 2301, 2336, TECA 1354.

<sup>E</sup> General Education: May choose from – ANTH 2301 (with or without 2101 = lab), 2302, 2346, 2351, ARTS 1301, 1303, 1304, ASTR 1303, 1304, 1403, 1404, BIOL 1308, 1309, 1322, 1406, 1407, (2301, 2302 – restricted to Engineering, Science, and Health Sciences majors), CHEM 1305, 1405, 1411, 1412, COMM 2366, COSC 1436, DANC 2303, DRAM 1310, 2316, 2366, ECON 1301, 2301, 2302, EDUC 1300, ENGL 2322, 2323, 2327, 2328, 2332, 2333, 2342, 2343, 2351, GEOG 1301, 1302, 1303, GEOL 1305, 1345, 1347, 1403, 1404, GOVT 2305, 2306, HIST 1301, 1302, 2311, 2312, 2321, 2322, 2301, 2327, 2328, 2381, HUMA 1301, 1305, 1311, 2319, 2323, MATH 1314, 1316, 1324, 1325, 1332, 1342, 1350, 2318, 2320, 2412, 2413, 2414, 2415, MUSI 1306, 1310, PHIL 1301, 1304, 2306, 2307, 2316, PHYS 1305, 1401, 1402, 2325 (with or without 2125 = lab), 2326 (with or without 2126 = lab), PSYC 2301, 2314, 2316, 2317, 2319, SOCI 1301, 1306, 2301, 2336, TECA 1354, World Languages (ARAB 1411, 1412, CHIN 1411, 1412, FREN 1411, 1412, GERM 1411, 1412, JAPN 1411, 1412, KORE 1411, 1412, SPAN 1411, 1412).

## Digital Communication-Graphic Design Specialization

### CERTIFICATE LEVEL I

#### FIRST YEAR

#### First Semester Credits

ARTC 1305	Basic Graphic Design	3
ARTC 2311	History of Communication Graphics	3
ARTC 1302	Digital Imaging I	3
ARTC 1353	Computer Illustration	3
ARTC 2313	Digital Publishing II <sup>#</sup>	3

**Semester Total 15**

**Program Total 15**

<sup>#</sup> Capstone Course

# Arts, A/V Technology and Communications

## Digital Communication - Graphic Design Specialization

### CERTIFICATE LEVEL II

*TSI testing is required prior to first enrollment.*

#### FIRST YEAR

<b>First Semester</b>		<b>Credits</b>
EDUC 1300	Learning Framework <sup>A</sup> .....	3
ARTC 1305	Basic Graphic Design .....	3
ARTC 2311	History of Communication Graphics .....	3
ARTC 1302	Digital Imaging I .....	3
ARTC 1309	Basic Illustration.....	3
<b>Semester Total</b>		<b>15</b>

<b>Second Semester</b>		<b>Credits</b>
ARTC 1317	Design Communication I.....	3
ARTC 1321	Illustration Techniques I .....	3
ARTC 1353	Computer Illustration.....	3
PHTC 1311	Fundamentals of Photography .....	3
<b>Semester Total</b>		<b>12</b>

#### SECOND YEAR

<b>First Semester</b>		<b>Credits</b>
ARTC 2305	Digital Imaging II .....	3
ARTC 2313	Digital Publishing II .....	3
IMED 1316	Web Design I.....	3
ARTC 2317	Typographic Design .....	3
<b>Semester Total</b>		<b>12</b>

<b>Second Semester</b>		<b>Credits</b>
ARTC 2335	Portfolio Development for Graphic Design <sup>#</sup> .....	3
<b>Semester Total</b>		<b>3</b>
<b>Program Total</b>		<b>42</b>

<sup>#</sup> *Capstone Course*

<sup>A</sup> *Student Success Course: Students are required to complete EDUC 1300 within their first 12 semester credit hours of instruction. Students enrolling at HCC with 12 or more hours completed should consult with an academic advisor to select an appropriate course substitution.*

## Digital Communication - Digital Media Specialization

The Digital Media Specialization program uses a variety of media such as sound, text, graphics, video, and animation to communicate information in an interactive computer environment. The program prepares students for employment in the fields of advertising, video, animation, marketing presentations, simulations, and interactive software development.

Students may earn an AAS, a Level I and a Level II certificate in Digital Media Specialization.

### AAS

*TSI testing is required prior to first enrollment.*

#### FIRST YEAR

<b>First Semester</b>		<b>Credits</b>
EDUC 1300	Learning Framework <sup>A</sup> .....	3
IMED 1316	Web Design I .....	3
ARTC 1305	Basic Graphic Design .....	3
ARTC 1325	Introduction to Computer Graphics.....	3
<b>Semester Total</b>		<b>12</b>

<b>Second Semester</b>		<b>Credits</b>
IMED 1341	Interface Design.....	3
ARTC 1302	Digital Imaging I .....	3
XXXX #3##	Math/Natural Science Elective <sup>B</sup> .....	3
ARTC 1353	Computer Illustration.....	3
<b>Semester Total</b>		<b>12</b>

<b>Third Semester</b>		<b>Credits</b>
XXXX #3##	General Education Elective <sup>D</sup> .....	3
ARTV 1345	3-D Modeling and Rendering I.....	3
<b>Semester Total</b>		<b>6</b>

#### SECOND YEAR

<b>First Semester</b>		<b>Credits</b>
IMED 1359	Writing for Digital Media.....	3
ARTV 1351	Digital Video.....	3
ARTV 2345	3-D Modeling and Rendering II .....	3
ARTS 1303	Art History I .....	3
<b>Semester Total</b>		<b>12</b>

<b>Second Semester</b>		<b>Credits</b>
XXXX #3##	Social/Behavioral Sciences Elective <sup>C</sup> .....	3
ARTV 2355	Character Rigging and Animation .....	3
XXXX #3##	General Education Elective.....	3
IMED 2313	Project Analysis and Design .....	3
<b>Semester Total</b>		<b>12</b>

<b>Third Semester</b>		<b>Credits</b>
IMED 2388	Internship-DigitalCommunication and Media/Multimedia <sup>#</sup> .....	3
XXXX #3##	Approved Elective.....	3
<b>Semester Total</b>		<b>6</b>
<b>Program Total</b>		<b>60</b>

<sup>#</sup> *Capstone Course*

<sup>A</sup> *Student Success Course: Students are required to complete EDUC 1300 within their first 12 semester credit hours of instruction. Students enrolling at HCC with 12 or more hours completed should consult with an academic advisor to select an appropriate course substitution.*

# Arts, A/V Technology and Communications

<sup>B</sup> *Math/Natural Science: May choose from – ANTH 2301 (with or without 2101 = lab), 2302, ASTR 1303, 1304, 1403, 1404, BIOL 1308, 1309, 1322, 1406, 1407, (2301, 2302 – restricted to Engineering, Science, and Health Sciences majors), CHEM 1305, 1405, 1411, 1412, COSC 1436, GEOG 1301, GEOL 1305, 1345, 1347, 1403, 1404, MATH 1314, 1316, 1324, 1325, 1332, 1342, 1350, 2318, 2320, 2412, 2413, 2414, 2415, PHYS 1305, 1401, 1402, 2325 (with or without 2125= lab), 2326 (with or without 2126 = lab), PSYC 2317.*

<sup>C</sup> *Social/Behavioral Sciences: May choose from – ANTH 2346, 2351, ECON 1301, 2301, 2302, EDUC 1300, GEOG 1302, 1303, GOVT 2305, 2306, PSYC 2301, 2314, 2316, 2319, SOCI 1301, 1306, 2301, 2336, TECA 1354.*

<sup>D</sup> *General Education: May choose from – ANTH 2301 (with or without 2101 = lab), 2302, 2346, 2351, ARTS 1301, 1303, 1304, ASTR 1303, 1304, 1403, 1404, BIOL 1308, 1309, 1322, 1406, 1407, (2301, 2302 – restricted to Engineering, Science, and Health Sciences majors), CHEM 1305, 1405, 1411, 1412, COMM 2366, COSC 1436, DANC 2303, DRAM 1310, 2316, 2366, ECON 1301, 2301, 2302, EDUC 1300, ENGL 2322, 2323, 2327, 2328, 2332, 2333, 2342, 2343, 2351, GEOG 1301, 1302, 1303, GEOL 1305, 1345, 1347, 1403, 1404, GOVT 2305, 2306, HIST 1301, 1302, 2311, 2312, 2321, 2322, 2301, 2327, 2328, 2381, HUMA 1301, 1305, 1311, 2319, 2323, MATH 1314, 1316, 1324, 1325, 1332, 1342, 1350, 2318, 2320, 2412, 2413, 2414, 2415, MUSI 1306, 1310, PHIL 1301, 1304, 2306, 2307, 2316, PHYS 1305, 1401, 1402, 2325 (with or without 2125 = lab), 2326 (with or without 2126 = lab), PSYC 2301, 2314, 2316, 2317, 2319, SOCI 1301, 1306, 2301, 2336, TECA 1354, World Languages (ARAB 1411, 1412, CHIN 1411, 1412, FREN 1411, 1412, GERM 1411, 1412, JAPN 1411, 1412, KORE 1411, 1412, SPAN 1411, 1412).*

<sup>E</sup> *Approved Elective: May choose from – Any ARTC 3 credit course; Any ARTV 3 credit course; Any IMED 3 credit course; Any ITSE 3 credit course; Any 3 credit hour PHTC course, Any 3 credit hour INEW course.*

## Digital Communication - Digital Media Specialization

### CERTIFICATE LEVEL I

<b>First Semester</b>		<b>Credits</b>
ARTC 1325	Introduction to Computer Graphics.....	3
ARTC 1305	Basic Graphic Design.....	3
ARTC 1302	Digital Imaging I.....	3
IMED 1316	Web Design I <sup>#</sup> .....	3
ARTC 1345	3-D Modeling and Rendering I.....	3
<b>Semester Total</b>		<b>15</b>
<b>Program Total</b>		<b>15</b>

<sup>#</sup> *Capstone Course*

## Digital Communication - Digital Media Specialization

### CERTIFICATE LEVEL II

*TSI testing is required prior to first enrollment.*

#### FIRST YEAR

<b>First Semester</b>		<b>Credits</b>
EDUC 1300	Learning Framework <sup>A</sup> .....	3
ARTC 1325	Introduction to Computer Graphics.....	3
IMED 1316	Web Design I.....	3
ARTC 1302	Digital Imaging I.....	3
<b>Semester Total</b>		<b>12</b>

<b>Second Semester</b>		<b>Credits</b>
ARTC 1305	Basic Graphic Design.....	3
IMED 1341	Interface Design.....	3
ARTC 1353	Computer Illustration.....	3
ARTV 1345	3-D Modeling and Rendering I.....	3
<b>Semester Total</b>		<b>12</b>

#### SECOND YEAR

<b>First Semester</b>		<b>Credits</b>
IMED 1359	Writing for Digital Media.....	3
ARTV 1351	Digital Video.....	3
ARTV 1343	Digital Sound.....	3
ARTV 2345	3-D Modeling and Rendering II.....	3
<b>Semester Total</b>		<b>12</b>

<b>Second Semester</b>		<b>Credits</b>
ARTV 2355	Character Rigging and Animation.....	3
IMED 2313	Project Analysis and Design <sup>#</sup> .....	3
IMED 2388	Internship - Digital Communication and Media/Multimedia.....	3
<b>Semester Total</b>		<b>9</b>
<b>Program Total</b>		<b>45</b>

<sup>#</sup> *Capstone Course*

<sup>A</sup> *Student Success Course: Students are required to complete EDUC 1300 within their first 12 semester credit hours of instruction. Students enrolling at HCC with 12 or more hours completed should consult with an academic advisor to select an appropriate course substitution.*

# Arts, A/V Technology and Communications

## Digital Communication - Web Publishing Specialization

The Web Publishing Specialization trains students to work as professional web publishers for the fast-growing and ever-changing Internet community. It offers a series of courses that provide training in designing and deploying interactive, dynamic web sites for education, business and industry. The degree includes activities that promote teamwork in web publishing.

Students may earn an AAS or Level I or Level II certificate in Web Publishing.

### AAS

*TSI testing is required prior to first enrollment.*

#### FIRST YEAR

##### First Semester

	<b>Credits</b>
EDUC 1300 Learning Framework <sup>A</sup> .....	3
ARTC 1325 Introduction to Computer Graphics .....	3
ARTC 1305 Basic Graphic Design .....	3
IMED 1316 Web Design I .....	3
ARTC 1302 Digital Imaging I .....	3

**Semester Total 15**

##### Second Semester

	<b>Credits</b>
XXXX #3## General Education Elective <sup>D</sup> .....	3
IMED 2351 Digital Media Programming .....	3
IMED 1341 Interface Design .....	3
IMED 2315 Web Design II .....	3

**Semester Total 12**

##### Third Semester

	<b>Credits</b>
IMED 2359 Interactive Web Elements .....	3
XXXX #3## Social/Behavioral Sciences Elective <sup>C</sup> .....	3
XXXX #3## Math/Natural Science Elective .....	3

**Semester Total 9**

#### SECOND YEAR

##### First Semester

	<b>Credits</b>
IMED 1359 Writing for Digital Media .....	3
IMED 2309 Internet Commerce .....	3
ARTV 1351 Digital Video .....	3
ARTS 1303 Art History I .....	3

**Semester Total 12**

##### Second Semester

	<b>Credits</b>
IMED 2371 Content Management Systems .....	3
IMED 2313 Project Analysis and Design .....	3
XXXX #3## Approved Program Elective <sup>E</sup> .....	3
IMED 2388 Internship - Digital Communication and Media/Multimedia <sup>#</sup> .....	3

**Semester Total 12**

**Program Total 60**

<sup>#</sup> Capstone Course

<sup>A</sup> Student Success Course: Students are required to complete EDUC 1300 within their first 12 semester credit hours of instruction. Students enrolling at HCC with 12 or more hours completed should consult with an academic advisor to select an appropriate course substitution.

<sup>B</sup> Math/Natural Science: May choose from – ANTH 2301 (with or without 2101 = lab), 2302, ASTR 1303, 1304, 1403, 1404, BIOL 1308, 1309, 1322, 1406, 1407, (2301, 2302 – restricted to Engineering, Science, and Health Sciences majors), CHEM 1305, 1405, 1411, 1412, COSC 1436, GEOG 1301, GEOL 1305, 1345, 1347, 1403, 1404, MATH 1314, 1316, 1324, 1325, 1332, 1342, 1350, 2318, 2320, 2412, 2413, 2414, 2415, PHYS 1305, 1401, 1402, 2325 (with or without 2125= lab), 2326 (with or without 2126 = lab), PSYC 2317.

<sup>C</sup> Social/Behavioral Sciences: May choose from – ANTH 2346, 2351, ECON 1301, 2301, 2302, EDUC 1300, GEOG 1302, 1303, GOVT 2305, 2306, PSYC 2301, 2314, 2316, 2319, SOCI 1301, 1306, 2301, 2336, TECA 1354.

<sup>D</sup> General Education: May choose from – ANTH 2301 (with or without 2101 = lab), 2302, 2346, 2351, ARTS 1301, 1303, 1304, ASTR 1303, 1304, 1403, 1404, BIOL 1308, 1309, 1322, 1406, 1407, (2301, 2302 – restricted to Engineering, Science, and Health Sciences majors), CHEM 1305, 1405, 1411, 1412, COMM 2366, COSC 1436, DANC 2303, DRAM 1310, 2316, 2366, ECON 1301, 2301, 2302, EDUC 1300, ENGL 2322, 2323, 2327, 2328, 2332, 2333, 2342, 2343, 2351, GEOG 1301, 1302, 1303, GEOL 1305, 1345, 1347, 1403, 1404, GOVT 2305, 2306, HIST 1301, 1302, 2311, 2312, 2321, 2322, 2301, 2327, 2328, 2381, HUMA 1301, 1305, 1311, 2319, 2323, MATH 1314, 1316, 1324, 1325, 1332, 1342, 1350, 2318, 2320, 2412, 2413, 2414, 2415, MUSI 1306, 1310, PHIL 1301, 1304, 2306, 2307, 2316, PHYS 1305, 1401, 1402, 2325 (with or without 2125 = lab), 2326 (with or without 2126 = lab), PSYC 2301, 2314, 2316, 2317, 2319, SOCI 1301, 1306, 2301, 2336, TECA 1354, World Languages (ARAB 1411, 1412, CHIN 1411, 1412, FREN 1411, 1412, GERM 1411, 1412, JAPN 1411, 1412, KORE 1411, 1412, SPAN 1411, 1412).

<sup>E</sup> Approved Elective: May choose from – ARTC 1301, 1302 - Fireworks, 1305, 1309, 1313, 1317, 1321, 1327, 1341, 1345, 1353, 1391, 2305, 2309, 2311, 2313 - InDesign, 2313 - QuarkXpress, 2317, 2331, 2335, 2340, 2341, 2347, 2348; ARTV 1303, 1341, 1343, 1345, 2301, 2320, 2322, 2330, 2335, 2341, 2345, 2351, 2355; IMED 1301, 1305, 1345, 1351, 1371, 1372, 1373, 1374, 1375, 1391, 1391 - Internet Graphics, 1391 - Internet Animation, 1391 - Action Scripting, 1391 - XML, 1391 - Advanced Video, 1391 - Writing for the Web, 1392, 2301, 2305, 2311, 2313, 2345, 2349, 2388; INEW 1340, 2320, 2332, 2334, 2338; ITSE 1301, 1302, 1306, 1307, 1310, 1311, 1314, 1318, 1322, 1331, 1345, 1346, 1350, 1352, 1356, 1380, 1391 - Advanced Active Server Pages, 1391 - Visual Basic. NET, 1391 - Beg. Active Server Pages, 1391 - Visual Basic For Databases, 1392, 2301, 2302, 2309, 2313, 2317, 2321, 2333, 2335, 2337, 2339, 2340, 2343, 2344, 2346, 2348, 2349, 2351, 2352, 2354, 2355, 2356, 2357, 2358, 2359; PHTC 1300, 1306, 1311, 1313, 1321, 1325, 1328, 1341, 1345, 1349, 1351, 1353, 1391, 2335, 2340, 2341, 2342, 2343, 2349, 2351, 2353, 2388.

# Arts, A/V Technology and Communications

## Digital Communication-Web Publishing Specialization-Level I

### CERTIFICATE LEVEL I

<b>First Semester</b>		<b>Credits</b>
ARTC 1325	Introduction to Computer Graphics .....	3
ARTC 1305	Basic Graphic Design .....	3
ARTC 1302	Digital Imaging I .....	3
IMED 1341	Interface Design .....	3
IMED 1316	Web Design I <sup>#</sup> .....	3
<b>Semester Total</b>		<b>15</b>
<b>Program Total</b>		<b>15</b>

<sup>#</sup> Capstone Course

## Digital Communication-Web Publishing Specialization

### CERTIFICATE LEVEL II

#### FIRST YEAR

<b>First Semester</b>		<b>Credits</b>
EDUC 1300	Learning Framework <sup>A</sup> .....	3
ARTC 1325	Introduction to Computer Graphics .....	3
ARTC 1305	Basic Graphic Design .....	3
IMED 1316	Web Design I .....	3
ARTC 1302	Digital Imaging I .....	3
<b>Semester Total</b>		<b>15</b>

#### Second Semester

<b>Second Semester</b>		<b>Credits</b>
IMED 1341	Interface Design .....	3
IMED 2351	Digital Media Programming .....	3
IMED 2315	Web Design II .....	3
<b>Semester Total</b>		<b>9</b>

#### SECOND YEAR

<b>First Semester</b>		<b>Credits</b>
IMED 2359	Interactive Web Elements .....	3
ARTV 1351	Digital Video .....	3
IMED 2309	Internet Commerce .....	3
<b>Semester Total</b>		<b>9</b>

#### Second Semester

<b>Second Semester</b>		<b>Credits</b>
IMED 2371	Content Management Systems .....	3
IMED 1359	Writing for Digital Media .....	3
IMED 2313	Project Analysis and Design <sup>#</sup> .....	3
<b>Semester Total</b>		<b>9</b>
<b>Program Total</b>		<b>42</b>

<sup>#</sup> Capstone Course

<sup>A</sup> Student Success Course: Students are required to complete EDUC 1300 within their first 12 semester credit hours of instruction. Students enrolling at HCC with 12 or more hours completed should consult with an academic advisor to select an appropriate course substitution.

## Database Programming for the Web

Deactivation pending SACSCOC approval. Enrollment is closed to new students.

### ENHANCED SKILLS CERTIFICATE

#### FIRST YEAR

<b>First Semester</b>		<b>Credits</b>
INEW 2320	Web Analytics .....	3
ITSE 2309	Database Programming .....	3
<b>Semester Total</b>		<b>6</b>
<b>Program Total</b>		<b>6</b>

## Digital Communication-Visual Effects & Motion Graphics

The Visual Effects and Motion Graphics program uses a variety of media such as sound, text, graphics, video, and animation to communicate information in an interactive computer environment. The program prepares students for employment in the fields of advertising, video, animation, marketing presentations, simulations, and interactive software development.

Students may earn an AAS or Level I or Level II certificate in Visual Effects and Motion Graphics.

### AAS

TSI testing is required prior to first enrollment.

#### FIRST YEAR

<b>First Semester</b>		<b>Credits</b>
EDUC 1300	Learning Framework <sup>A</sup> .....	3
ARTC 1302	Digital Imaging I .....	3
ARTV 1303	Basic Animation .....	3
ARTC 1305	Basic Graphic Design .....	3
ARTV 1351	Digital Video .....	3
<b>Semester Total</b>		<b>15</b>

#### Second Semester

<b>Second Semester</b>		<b>Credits</b>
XXXX #3##	Math/Natural Science Elective <sup>B</sup> .....	3
ARTV 2301	2-D Animation I .....	3
ARTV 1341	3-D Animation I .....	3
ARTV 2341	Advanced Digital Video .....	3
ARTC 1353	Computer Illustration .....	3
<b>Semester Total</b>		<b>15</b>

# Arts, A/V Technology and Communications

<b>Third Semester</b>		<b>Credits</b>
ARTS 1303	Art History I .....	3
XXXX #3##	Social/Behavioral Sciences Elective <sup>C</sup> .....	3
<b>Semester Total</b>		<b>6</b>

## SECOND YEAR

<b>First Semester</b>		<b>Credits</b>
ARTV 2330	2-D Animation II .....	3
ARTV 2351	3-D Animation II .....	3
ARTV 1343	Digital Sound.....	3
XXXX #3##	General Education Elective <sup>E</sup> .....	3
<b>Semester Total</b>		<b>12</b>

<b>Second Semester</b>		<b>Credits</b>
IMED 2388	Internship-Digital Communication and Media/Multimedia #.....	3
ARTV 2317	Typography OR	
PHTC 1311	Fundamentals of Photography.....	3
XXXX #3##	Humanities/Fine Arts Elective .....	3
ARTV 2335	Portfolio Development for Animation.....	3
<b>Semester Total</b>		<b>12</b>
<b>Program Total</b>		<b>60</b>

# Capstone Course

<sup>A</sup> Student Success Course: Students are required to complete EDUC 1300 within their first 12 semester credit hours of instruction. Students enrolling at HCC with 12 or more hours completed should consult with an academic advisor to select an appropriate course substitution.

<sup>B</sup> Math/Natural Science: May choose from – ANTH 2301 (with or without 2101 = lab), 2302, ASTR 1303, 1304, 1403, 1404, BIOL 1308, 1309, 1322, 1406, 1407, (2301, 2302 – restricted to Engineering, Science, and Health Sciences majors), CHEM 1305, 1405, 1411, 1412, COSC 1436, GEOG 1301, GEOL 1305, 1345, 1347, 1403, 1404, MATH 1314, 1316, 1324, 1325, 1332, 1342, 1350, 2318, 2320, 2412, 2413, 2414, 2415, PHYS 1305, 1401, 1402, 2325 (with or without 2125= lab), 2326 (with or without 2126 = lab), PSYC 2317.

<sup>C</sup> Humanities/Fine Arts: May choose from – ARTS 1301, 1303, 1304, COMM 2366, DANC 2303, DRAM 1310, 2316, 2366, ENGL 2322, 2323, 2327, 2328, 2332, 2333, 2342, 2343, 2351, HIST 1301, 1302, 2311, 2312, 2321, 2322, 2301, 2327, 2328, 2381, HUMA 1301, 1305, 1311, 2319, 2323, MUSI 1306, 1310, PHIL 1301, 1304, 2306, 2307, 2316, World Languages (ARAB 1411, 1412, CHIN 1411, 1412, FREN 1411, 1412, GERM 1411, 1412, JAPN 1411, 1412, KORE 1411, 1412, SPAN 1411, 1412).

<sup>D</sup> Social/Behavioral Sciences: May choose from – ANTH 2346, 2351, ECON 1301, 2301, 2302, EDUC 1300, GEOG 1302, 1303, GOVT 2305, 2306, PSYC 2301, 2314, 2316, 2319, SOCI 1301, 1306, 2301, 2336, TECA 1354.

<sup>E</sup> General Education: May choose from – ANTH 2301 (with or without 2101 = lab), 2302, 2346, 2351, ARTS 1301, 1303, 1304, ASTR 1303, 1304, 1403, 1404, BIOL 1308, 1309, 1322, 1406, 1407, (2301, 2302 – restricted to Engineering, Science, and Health Sciences majors), CHEM 1305, 1405, 1411, 1412, COMM 2366, COSC 1436, DANC 2303, DRAM 1310, 2316,

2366, ECON 1301, 2301, 2302, EDUC 1300, ENGL 2322, 2323, 2327, 2328, 2332, 2333, 2342, 2343, 2351, GEOG 1301, 1302, 1303, GEOL 1305, 1345, 1347, 1403, 1404, GOVT 2305, 2306, HIST 1301, 1302, 2311, 2312, 2321, 2322, 2301, 2327, 2328, 2381, HUMA 1301, 1305, 1311, 2319, 2323, MATH 1314, 1316, 1324, 1325, 1332, 1342, 1350, 2318, 2320, 2412, 2413, 2414, 2415, MUSI 1306, 1310, PHIL 1301, 1304, 2306, 2307, 2316, PHYS 1305, 1401, 1402, 2325 (with or without 2125 = lab), 2326 (with or without 2126 = lab), PSYC 2301, 2314, 2316, 2317, 2319, SOCI 1301, 1306, 2301, 2336, TECA 1354, World Languages (ARAB 1411, 1412, CHIN 1411, 1412, FREN 1411, 1412, GERM 1411, 1412, JAPN 1411, 1412, KORE 1411, 1412, SPAN 1411, 1412).

## Digital Communication - Visual Effects & Motion Graphics

### CERTIFICATE LEVEL I

#### FIRST YEAR

<b>First Semester</b>		<b>Credits</b>
ARTC 1302	Digital Imaging I .....	3
ARTV 1303	Basic Animation .....	3
ARTV 1351	Digital Video .....	3
<b>Semester Total</b>		<b>9</b>

#### Second Semester

<b>Second Semester</b>		<b>Credits</b>
ARTV 1341	3-D Animation I .....	3
ARTV 2301	2-D Animation I #.....	3
<b>Semester Total</b>		<b>6</b>
<b>Program Total</b>		<b>15</b>

# Capstone Course

## Digital Communication - Visual Effects & Motion Graphics

### CERTIFICATE LEVEL II

TSI testing is required prior to first enrollment.

#### FIRST YEAR

<b>First Semester</b>		<b>Credits</b>
EDUC 1300	Learning Framework <sup>A</sup> .....	3
ARTC 1302	Digital Imaging I .....	3
ARTV 1303	Basic Animation .....	3
ARTC 1305	Basic Graphic Design .....	3
ARTV 1351	Digital Video.....	3
<b>Semester Total</b>		<b>15</b>

# Arts, A/V Technology and Communications

<b>Second Semester</b>			<b>Credits</b>
ARTV 1341	3-D Animation I .....		3
ARTC 1353	Computer Illustration.....		3
ARTV 2301	2-D Animation I .....		3
XXXX #3##	Department Approved Elective <sup>B</sup> .....		3
<b>Semester Total</b>			<b>12</b>

## SECOND YEAR

<b>First Semester</b>			<b>Credits</b>
ARTV 2330	2-D Animation II .....		3
ARTV 2351	3-D Animation II .....		3
ARTV 2341	Advanced Digital Video.....		3
ARTV 1343	Digital Sound.....		3
<b>Semester Total</b>			<b>12</b>

<b>Second Semester</b>			<b>Credits</b>
ARTV 2335	Portfolio Development for Animation #.....		3
<b>Semester Total</b>			<b>3</b>
<b>Program Total</b>			<b>42</b>

# *Capstone Course*

<sup>A</sup> *Student Success Course: Students are required to complete EDUC 1300 within their first 12 semester credit hours of instruction. Students enrolling at HCC with 12 or more hours completed should consult with an academic advisor to select an appropriate course substitution.*

<sup>B</sup> *Approved Electives: May choose from – Any ARTC 3 credit course, Any ARTV 3 credit course., Any IMED 3 credit course., Any ITSE 3 credit course, Any 3 credit hour PHTC course, Any 3 credit hour INEW course.*

## FILM/VIDEO PRODUCTION AND SPECIAL EFFECTS

HCC's Film/Video Production and Special Effects program offers training for one career paths with **five** specializations in the film industry. Students studying traditional Film/Video Production will learn all phases of filmmaking, pre-production, production and post-production. In this innovative hands-on program, students work with HD and 16mm film cameras and edit with both non-linear digital and traditional equipment. During their academic career, students perform every function necessary to complete theatrical, documentary, and docu-drama style films: scriptwriting, producing, directing, acting, shooting, budgeting, managing and serving as crew.

After their first year, students refine their skills through the rigorous application of their craft in advanced areas of theatrical, feature and documentary film production.

Upon graduation, students pursue careers in all levels of the film industry.

The Texas Higher Education Coordinating Board (THECB) allows students to earn only one **AAS** in Filmmaking. Students may choose from one of the following two specializations: General, or Film/Video and Special Effects.

The Texas Higher Education Coordinating Board (THECB) allows students to earn only one **Certificate** in Filmmaking I. Students may choose from one of the following four specializations: Filmmaking Editing, Film/Video Production, Filmmaking Screenwriting or Film/Video and Special Effects.

The Texas Higher Education Coordinating Board (THECB) allows students to earn only one **Certificate** in Filmmaking II. Students may choose from one of the following two specializations: General or Film/Video and Special Effects.

### Program Outcomes

Students will be able to

- Compose effective treatments and scripts for use in common video and film genres including documentaries, dramas, commercials, news, and public service announcements.
- Demonstrate the preparation needed for film and video production, management (including budgeting, supervision of personnel, permitting, scheduling and guild/union relations) and post-production supervision.
- Describe accepted film industry distribution processes including promotions, advertising, and publicity.
- Demonstrate industry standard film/video editing and post-production processes used in the completion of shorts, trailers, documentaries, and features.
- Apply cinematographic concepts to film/video projects including camera setup, lighting, and scene design.
- Develop professionally acceptable resumes, demo reels and interview techniques needed for employment within the film industry.

*For more information call 713.718.5602 or 713.718.5990 or e-mail richard.boyd@hccs.edu or rick.harrington@hccs.edu.*

### PROGRAMS OFFERED

#### Filmmaking

- AAS
- Level II Certificate
- Enhanced Skills Certificate

# Arts, A/V Technology and Communications

## Filmmaking with a Specialization in:

### Editing

- Level I Certificate

### Film/Video Production

- Level I Certificate

### Screenwriting

- Level I Certificate

### Film/Video and Special Effects

- AAS
- Level I Certificate
- Level II Certificate

## Filmmaking - General

### AAS

TSI testing is required prior to first enrollment.

#### FIRST YEAR

##### First Semester Credits

EDUC 1300	Learning Framework <sup>A</sup>	3
RTVB 1321	TV/Video Field Production	3
RTVB 1309	Audio/Radio Production I	3
FLMC 1300	Production Management	3

**Semester Total 12**

##### Second Semester Credits

RTVB 2337	TV/Video Production Workshop I	3
RTVB 1329	Scriptwriting	3
FLMC 2336	Production Development/Producing	3
RTVB 2330	Film and Video Editing	3
XXXX #3##	Humanities/Fine Arts Elective <sup>C</sup>	3

**Semester Total 15**

##### Third Semester Credits

FLMC 2335	Screenwriting for Features, Shorts and Documentaries	3
FLMC 2344	Advanced Film and Video Editing OR	
FLMC 1331	Video Graphics and Visual Effects I	3

**Semester Total 6**

#### SECOND YEAR

##### First Semester Credits

FLMC 1304	Lighting for Film or Video	3
FLMC 1292	Special Topics in Film-Video Making/Cinematography and Production	2
FLMC 2333	Cinematography	3
XXXX #3##	Humanities/Fine Arts Elective <sup>C</sup>	3
XXXX #3##	Social/Behavioral Sciences Elective <sup>D</sup>	3

**Semester Total 14**

## Second Semester

## Credits

FLMC 2334	Directing for Film or Video	3
FLMC 2330	Audio Post Production	3
RTVB 2164	Practicum (or Field Experience) - Radio and Television #	1
XXXX #3##	Social/Behavioral Sciences Elective <sup>D</sup>	3
XXXX #3##	Math/Natural Science Elective <sup>B</sup>	3

**Semester Total 13**

**Program Total 60**

# Capstone Course

<sup>A</sup> Student Success Course: Students are required to complete EDUC 1300 within their first 12 semester credit hours of instruction. Students enrolling at HCC with 12 or more hours completed should consult with an academic advisor to select an appropriate course substitution.

<sup>B</sup> Math/Natural Science: May choose from – ANTH 2301 (with or without 2101 = lab), 2302, ASTR 1303, 1304, 1403, 1404, BIOL 1308, 1309, 1322, 1406, 1407, (2301, 2302 – restricted to Engineering, Science, and Health Sciences majors), CHEM 1305, 1405, 1411, 1412, COSC 1436, GEOG 1301, GEOL 1305, 1345, 1347, 1403, 1404, MATH 1314, 1316, 1324, 1325, 1332, 1342, 1350, 2318, 2320, 2412, 2413, 2414, 2415, PHYS 1305, 1401, 1402, 2325 (with or without 2125= lab), 2326 (with or without 2126 = lab), PSYC 2317.

<sup>C</sup> Humanities/Fine Arts: May choose from – ARTS 1301, 1303, 1304, COMM 2366, DANC 2303, DRAM 1310, 2316, 2366, ENGL 2322, 2323, 2327, 2328, 2332, 2333, 2342, 2343, 2351, HIST 1301, 1302, 2311, 2312, 2321, 2322, 2301, 2327, 2328, 2381, HUMA 1301, 1305, 1311, 2319, 2323, MUSI 1306, 1310, PHIL 1301, 1304, 2306, 2307, 2316, World Languages (ARAB 1411, 1412, CHIN 1411, 1412, FREN 1411, 1412, GERM 1411, 1412, JAPN 1411, 1412, KORE 1411, 1412, SPAN 1411, 1412).

<sup>D</sup> Social/Behavioral Sciences: May choose from – ANTH 2346, 2351, ECON 1301, 2301, 2302, EDUC 1300, GEOG 1302, 1303, GOVT 2305, 2306, PSYC 2301, 2314, 2316, 2319, SOCI 1301, 1306, 2301, 2336, TECA 1354.

## Filmmaking - General - Certificate

Students wishing for a complete education in film production without the academic courses required by an associate degree should pursue this certificate. All courses in this certificate apply towards the AAS in Filmmaking.

### CERTIFICATE LEVEL II

#### FIRST YEAR

##### First Semester Credits

EDUC 1300	Learning Framework <sup>A</sup>	3
RTVB 1321	TV/Video Field Production	3
FLMC 1300	Production Management	3
FLMC 1311	Survey of the Motion Picture	3
RTVB 1309	Audio/Radio Production I	3

**Semester Total 15**

# Arts, A/V Technology and Communications

## Second Semester

	<b>Credits</b>
RTVB 2337 TV/Video Production Workshop I.....	3
FLMC 2336 Production Development/Producing .....	3
RTVB 1329 Scriptwriting .....	3
RTVB 2330 Film and Video Editing.....	3
FLMC 2330 Audio Post Production .....	3

**Semester Total 15**

## Third Semester

	<b>Credits</b>
FLMC 2335 Screenwriting for Features, Shorts and Documentaries ..	3
FLMC 1331 Video Graphics and Visual Effects I.....	3

**Semester Total 6**

## SECOND YEAR

### First Semester

	<b>Credits</b>
FLMC 1304 Lighting for Film or Video.....	3
FLMC 2333 Cinematography.....	3
FLMC 2344 Advanced Film and Video Editing .....	3
FLMC 1292 Special Topics in Film or Video Making/Cinematography and Production.....	2
RTVB 2164 Practicum (or Field Experience) - Radio and Television # 1	1
FLMC 2334 Directing for Film or Video .....	3

**Semester Total 15**

**Program Total 51**

# Capstone Course

<sup>A</sup> Student Success Course: Students are required to complete EDUC 1300 within their first 12 semester credit hours of instruction. Students enrolling at HCC with 12 or more hours completed should consult with an academic advisor to select an appropriate course substitution.

## Filmmaking - Audio Post-Production

Graduates with an AAS in Filmmaking seeking further training in audio post-production techniques may pursue this certificate.

The courses emphasize digital audio production techniques, Foley and ADR techniques, and music sequencing for video and film.

### ENHANCED SKILLS CERTIFICATE

#### First Semester

	<b>Credits</b>
MUSC 1327 Audio Engineering I.....	3
MUSC 1331 MIDI I .....	3
MUSC 2433 Scoring for Video and Film.....	4
FLMC 1311 Survey of the Motion Picture.....	3

**Semester Total 13**

**Program Total 13**

## Filmmaking - Editing Specialization

Students prepare for a career in film editing by acquiring hundreds of hours using linear, non-linear video and film editors. The certificate also includes courses in audio post production using computer programs such as Pro Tools. All courses in this certificate apply towards the AAS in Filmmaking.

### CERTIFICATE LEVEL I

#### FIRST YEAR

##### First Semester

	<b>Credits</b>
RTVB 1321 TV Field Production .....	3
FLMC 1311 Survey of the Motion Picture.....	3
FLMC 1300 Production Management.....	3
RTVB 1309 Audio/Radio Production I .....	3
RTVB 2330 Film and Video Editing.....	3

**Semester Total 15**

##### Second Semester

	<b>Credits</b>
FLMC 1331 Video Graphics and Visual Effects I.....	3
FLMC 2344 Advanced Film and Video Editing# .....	3
FLMC 2330 Audio Post Production .....	3
FLMC 1392 Special Topics in Film-Video Making/ Cinematography and Production .....	3
FLMC 2336 Production Development - Producing .....	3

**Semester Total 15**

**Program Total 30**

# Capstone Course

## Filmmaking - Film/Video Production Specialization

Students prepare for a career in film production by acquiring hundreds of production hours. Courses include video and 16mm film cinematography, general production and lighting. All courses in this certificate apply towards the AAS in Filmmaking.

### CERTIFICATE LEVEL I

#### FIRST YEAR

##### First Semester

	<b>Credits</b>
RTVB 1309 Audio/Radio Production I .....	3
RTVB 1321 TV Field Production .....	3
RTVB 2330 Film and Video Editing.....	3

**Semester Total 9**

# Arts, A/V Technology and Communications

<b>Second Semester</b>		<b>Credits</b>
DRAM 2366	Introduction to Cinema.....	3
FLMC 1300	Production Management.....	3
FLMC 2333	Cinematography.....	3
FLMC 2344	Advanced Film and Video Editing <sup>#</sup> .....	3
RTVB 1329	Scriptwriting.....	3
<b>Semester Total</b>		<b>15</b>
<b>Program Total</b>		<b>24</b>

<sup>#</sup> Capstone Course

## Filmmaking - Screenwriting Specialization

Students interested in a career in screenwriting should choose this option since it emphasizes skills used when writing scripts for film and video productions. All courses in this certificate apply towards the AAS in Filmmaking.

### CERTIFICATE LEVEL I

#### FIRST YEAR

<b>First Semester</b>		<b>Credits</b>
RTVB 1321	TV Field Production.....	3
ENGL 1301	Composition I.....	3
RTVB 1329	Scriptwriting.....	3
FLMC 1311	Survey of the Motion Picture.....	3
<b>Semester Total</b>		<b>12</b>

<b>Second Semester</b>		<b>Credits</b>
FLMC 2335	Screenwriting for Features, Shorts and Documentaries <sup>#</sup> .....	3
FLMC 1392	Special Topics in Film-Video Making/ Cinematography and Production.....	3
RTVB 2330	Film and Video Editing.....	3
FLMC 1300	Production Management.....	3
<b>Semester Total</b>		<b>12</b>
<b>Program Total</b>		<b>24</b>

<sup>#</sup> Capstone Course

## Filmmaking - Film/Video and Special Effects Specialization

The AAS and Certificate Levels I & II are in de-activation Process as of August 2016. Deactivation pending SACSCOC approval. Enrollment is closed to new students.

The Film/Video and Special Effects AAS Specialization is a cutting-edge, hands-on program combining video production with computer-generated special effects. Students learn to create digital video for all types of formats using high definition (HDTV) or standard definition video: single-camera video, broadcast, live studio, internet streaming video, podcasting and DVD authoring. Students completing the AAS degree will be ready for employment in many types of productions including movies, commercials, documentaries, church productions, news, talk shows, live sports, instructional videos, and corporate videos. The program also offers students certificates in Film/Video and Special Effects.

For more information call 713.718.6725 or email marcelo.gonzalez@hccs.edu or linda.leauvano@hccs.edu.

### AAS

*TSI testing is required prior to first enrollment.*

#### FIRST YEAR

<b>First Semester</b>		<b>Credits</b>
EDUC 1300	Learning Framework*.....	3
ARTC 1302	Digital Imaging I.....	3
RTVB 1321	TV Field Production.....	3
COMM 1307	Introduction to Mass Communication.....	3
RTVB 2330	Film and Video Editing.....	3
<b>Semester Total</b>		<b>15</b>

<b>Second Semester</b>		<b>Credits</b>
RTVB 1325	TV Studio Production.....	3
FLMC 2344	Advanced Film and Video Editing.....	3
FLMC 1331	Video Graphics and Visual Effects I.....	3
FLMC 1300	Production Management.....	3
ENGL 1301	Composition I.....	3
<b>Semester Total</b>		<b>15</b>

<b>Third Semester</b>		<b>Credits</b>
FLMC 2380	Cooperative Education-Cinematography and Film/Video Production.....	3
DRAM 2366	Survey of the History of Film OR	
XXXX #3##	Humanities/Fine Arts General Education Elective.....	3
<b>Semester Total</b>		<b>6</b>

#### SECOND YEAR

<b>First Semester</b>		<b>Credits</b>
FLMC 2333	Cinematography.....	3
FLMC 2305	Film Style 3-D Animation Production.....	3
RTVB 1309	Audio/Radio Production I.....	3
RTVB 1329	Scriptwriting.....	3
XXXX #3##	Social/Behavioral Science General Education Elective... ..	3
<b>Semester Total</b>		<b>15</b>

# Arts, A/V Technology and Communications

## Second Semester Credits

RTVB 2335	Television Production.....	3
RTVB 1355	Radio and Television Announcing.....	3
FLMC 1391	Special Topics in Film/Cinema Studies.....	3
XXXX #3##	Math/Natural Science General Education Elective.....	3

**Semester Total 12**

## Third Semester Credits

RTVB 2386	Internship - Radio and Television.....	3
FLMC 2331	Video Graphics and Visual Effects II#.....	3

**Semester Total 6**

**Program Total 69**

\*Student Success Course

#Capstone Course

## Filmmaking - Film/Video and Special Effects Specialization

*The AAS and Certificate Levels I & II are in de-activation Process as of August 2016. Deactivation pending SACSCOC approval. Enrollment is closed to new students.*

### CERTIFICATE LEVEL I

#### FIRST YEAR

##### First Semester Credits

FLMC 1331	Video Graphics and Visual Effects I.....	3
RTVB 1321	TV Field Production.....	3
RTVB 2330	Film and Video Editing.....	3
FLMC 1311	Survey of the Motion Picture.....	3
RTVB 1309	Audio/Radio Production I.....	3

**Semester Total 15**

##### Second Semester Credits

FLMC 2331	Video Graphics and Visual Effects II #.....	3
FLMC 2344	Advanced Film and Video Editing.....	3
FLMC 1304	Lighting for Film or Video.....	3
RTVB 2337	TV Production Workshop I.....	3
FLMC 1300	Production Management.....	3

**Semester Total 15**

##### Third Semester Credits

FLMC 2305	Film Style 3-D Animation Production.....	3
FLMC 2333	Cinematography.....	3

**Semester Total 6**

**Program Total 36**

\*Student Success Course

#Capstone Course

## Filmmaking - Film/Video and Special Effects Specialization

*The AAS and Certificate Levels I & II are in de-activation Process as of August 2016. Deactivation pending SACSCOC approval. Enrollment is closed to new students.*

### CERTIFICATE LEVEL II

*TSI testing is required prior to first enrollment.*

#### FIRST YEAR

##### First Semester Credits

EDUC 1300	Learning Framework*.....	3
ARTC 1302	Digital Imaging I.....	3
RTVB 1321	TV Field Production.....	3
RTVB 2330	Film and Video Editing.....	3
DRAM 2366	Survey and History of Film OR	
XXXX #3##	Humanities/Fine Arts General Education Elective.....	3

**Semester Total 15**

##### Second Semester Credits

RTVB 1325	TV Studio Production.....	3
FLMC 2344	Advanced Film and Video Editing.....	3
FLMC 1331	Video Graphics and Visual Effects I.....	3
FLMC 1300	Production Management.....	3
ENGL 1301	Composition I.....	3

**Semester Total 15**

##### Third Semester Credits

FLMC 2380	Cooperative Education-Cinematography and Film/Video Production.....	3
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**Semester Total 3**

#### SECOND YEAR

##### First Semester Credits

FLMC 2333	Cinematography.....	3
FLMC 2331	Video Graphics and Visual Effects II.....	3
RTVB 1309	Audio/Radio Production I.....	3
RTVB 1329	Scriptwriting.....	3

**Semester Total 12**

##### Second Semester Credits

FLMC 1391	Special Topics in Film/Cinema Studies.....	3
RTVB 1355	Radio and Television Announcing.....	3
RTVB 2335	Television Production.....	3
FLMC 2305	Film-Style 3-D Animation Production#.....	3

**Semester Total 12**

**Program Total 57**

\*Student Success Course

#Capstone Course

# Arts, A/V Technology and Communications

## FASHION DESIGN

The Fashion Design program prepares students for careers in fashion related fields. Creative studies in design fundamentals, fashion analysis, fashion history, textiles, color, and sketching, along with technical training in draping, pattern making, pattern grading, and clothing construction provide the training required for entry-level employment by the mass production ready-to-wear industry or for custom design business operations.

The Texas Higher Education Coordinating Board (THECB) allows students to earn only one **AAS** in Fashion Design. Students may choose from one of the following two specializations: General or Theatrical Costume Design.

In addition, please note that a student may only earn one Occupational Skills Award (OSA) per academic year.

### Program Outcomes

Students will be able to

- Experiment with lines, colors, fabrics, patterns, textures, and styles in design and creation of original fashion design. Ability to produce projects to simulate a real life industry situations.
- Apply critical thinking and creative problem solving skills to a variety of fashion design problems.
- Communicate design concepts at various stages of development using the design process, sewing skills, drawing skills and/or appropriate software.
- Demonstrate punctuality and recognize the necessity of working long hours to meet deadlines by prioritizing tasks and effective use of time.

For more information call 713.718.6158 or e-mail [suzette.brimmer@hccs.edu](mailto:suzette.brimmer@hccs.edu).

## Fashion Design

### AAS

TSI testing is required prior to first enrollment.

### FIRST YEAR

First Semester		Credits
EDUC 1300	Learning Framework <sup>A</sup> .....	3
FSDH 1313	Art for Fashion .....	3
FSDH 1322	Fashion Sketching .....	3
FSDH 1324	Ready-to-Wear Construction .....	3
XXXX #3##	Humanities/Fine Arts Elective <sup>C</sup> .....	3
<b>Semester Total</b>		<b>15</b>

### Second Semester

FSDH 1328	Flat Pattern Design I .....	3
FSDH 1301	Textiles .....	3
FSDH 1351	Design Construction Techniques .....	3
FSDH 1311	Fashion History .....	3
XXXX #3##	Math/Natural Science Elective <sup>B</sup> .....	3

**Semester Total 15**

### Third Semester

FSDH 2306	Draping .....	3
XXXX #3##	Social/Behavioral Sciences Elective <sup>D</sup> .....	3

**Semester Total 6**

## SECOND YEAR

### First Semester

FSDH 1355	Flat Pattern Design II .....	3
FSDH 1318	Apparel Computer Systems .....	3
FSDH 2343	Fashion Collection Design .....	3
XXXX #3##	Social/Behavioral Sciences Elective <sup>D</sup> .....	3

**Semester Total 12**

### Second Semester

FSDH 2341	Pattern Grading .....	3
FSDH 2388	Internship-Fashion/Apparel Design .....	3
FSDH 2344	Fashion Collection Production <sup>#</sup> .....	3
XXXX #3##	Humanities/Fine Arts Elective <sup>C</sup> .....	3

**Semester Total 12**

**Program Total 60**

<sup>#</sup> Capstone Course

<sup>A</sup> Student Success Course: Students are required to complete EDUC 1300 within their first 12 semester credit hours of instruction. Students enrolling at HCC with 12 or more hours completed should consult with an academic advisor to select an appropriate course substitution.

<sup>B</sup> Math/Natural Science: May choose from – ANTH 2301 (with or without 2101 = lab), 2302, ASTR 1303, 1304, 1403, 1404, BIOL 1308, 1309, 1322, 1406, 1407, (2301, 2302 – restricted to Engineering, Science, and Health Sciences majors), CHEM 1305, 1405, 1411, 1412, COSC 1436, GEOG 1301, GEOL 1305, 1345, 1347, 1403, 1404, MATH 1314, 1316, 1324, 1325, 1332, 1342, 1350, 2318, 2320, 2412, 2413, 2414, 2415, PHYS 1305, 1401, 1402, 2325 (with or without 2125= lab), 2326 (with or without 2126 = lab), PSYC 2317.

<sup>C</sup> Humanities/Fine Arts: May choose from – ARTS 1301, 1303, 1304, COMM 2366, DANC 2303, DRAM 1310, 2316, 2366, ENGL 2322, 2323, 2327, 2328, 2332, 2333, 2342, 2343, 2351, HIST 1301, 1302, 2311, 2312, 2321, 2322, 2301, 2327, 2328, 2381, HUMA 1301, 1305, 1311, 2319, 2323, MUSI 1306, 1310, PHIL 1301, 1304, 2306, 2307, 2316, World Languages (ARAB 1411, 1412, CHIN 1411, 1412, FREN 1411, 1412, GERM 1411, 1412, JAPN 1411, 1412, KORE 1411, 1412, SPAN 1411, 1412).

<sup>D</sup> Social/Behavioral Sciences: May choose from – ANTH 2346, 2351, ECON 1301, 2301, 2302, EDUC 1300, GEOG 1302, 1303, GOVT 2305, 2306, PSYC 2301, 2314, 2316, 2319, SOCI 1301, 1306, 2301, 2336, TECA 1354.

# Arts, A/V Technology and Communications

## Digital Design

The Digital Design certificate program prepares students for entry-level work in ladies' clothing alterations, custom dressmaking, and designer's sample sewing. All courses in this certificate apply to the AAS in Fashion Design degree.

### CERTIFICATE LEVEL I

#### FIRST YEAR

<b>First Semester</b>		<b>Credits</b>
FSHD 1302	Introduction to Fashion .....	3
FSHD 1318	Apparel Computer Systems .....	3
FSHN 1301	Textiles .....	3
<b>Semester Total</b>		<b>9</b>
<b>Second Semester</b>		<b>Credits</b>
FSHD 1322	Fashion Sketching .....	3
FSHD 1313	Art for Fashion .....	3
FSHD 1324	Ready-to-Wear Construction .....	3
FSHD 2305	Computer Aided Apparel Design .....	3
<b>Semester Total</b>		<b>12</b>
<b>Third Semester</b>		<b>Credits</b>
FSHN 2432	Advanced Pattern Drafting .....	4
FSHD 2388	Internship-Fashion/Apparel Design # .....	3
<b>Semester Total</b>		<b>7</b>
<b>Program Total</b>		<b>33</b>

# Capstone Course

## Men's Tailoring and Alterations

The Men's Tailoring and Alterations certificate program prepares students for entry-level work in men's clothing alterations and custom tailoring. All courses in this certificate apply to the AAS in Fashion Design degree.

### CERTIFICATE LEVEL I

<b>First Semester</b>		<b>Credits</b>
FSHD 1302	Introduction to Fashion .....	3
FSHD 1318	Apparel Computer Systems .....	3
FSHD 1324	Ready-to-Wear Construction .....	3
FSHN 1301	Textiles .....	3
<b>Semester Total</b>		<b>12</b>
<b>Second Semester</b>		<b>Credits</b>
FSHN 1305	Apparel Alterations .....	3
FSHN 1329	Basic Men's Tailoring .....	3
FSHD 2388	Internship-Fashion/Apparel Design # .....	3
<b>Semester Total</b>		<b>9</b>
<b>Program Total</b>		<b>21</b>

# Capstone Course

## Patternmaking

The Patternmaking certificate program prepares the student for entry-level work in ladies' ready-to-wear pattern-making, pattern grading and pattern marker making. All courses in this certificate apply to the AAS in Fashion Design degree.

### CERTIFICATE LEVEL I

<b>First Semester</b>		<b>Credits</b>
FSHD 1302	Introduction to Fashion .....	3
FSHD 1313	Art for Fashion .....	3
FSHD 1328	Flat Pattern Design I .....	3
FSHN 1301	Textiles .....	3
FSHD 1318	Apparel Computer Systems .....	3
<b>Semester Total</b>		<b>15</b>
<b>Second Semester</b>		<b>Credits</b>
FSHD 1332	Custom Patterns .....	3
FSHD 1355	Flat Pattern Design II .....	3
FSHD 2306	Draping .....	3
FSHD 2341	Pattern Grading .....	3
FSHD 2388	Internship-Fashion/Apparel Design # .....	3
<b>Semester Total</b>		<b>15</b>
<b>Program Total</b>		<b>30</b>

# Capstone Course

## Theatrical Costume Design

The Theatrical Costume Design certificate program prepares the student for entry-level work in a theatrical costume workshop.

### CERTIFICATE LEVEL II

*TSI testing is required prior to first enrollment.*

#### FIRST YEAR

<b>First Semester</b>		<b>Credits</b>
EDUC 1300	Learning Framework <sup>A</sup> .....	3
FSHN 1301	Textiles .....	3
DRAM 1310	Introduction to Theater .....	3
FSHD 1313	Art for Fashion .....	3
FSHD 1322	Fashion Sketching .....	3
FSHD 1324	Ready-to-Wear Construction .....	3
<b>Semester Total</b>		<b>18</b>

# Arts, A/V Technology and Communications

## Second Semester Credits

FSHD 1235	Millinery.....	2
FSHD 1328	Flat Pattern Design I.....	3
FSHD 1351	Design Construction Techniques.....	3
FSHD 2215	Bustier Construction.....	2
FSHD 1332	Custom Patterns.....	3
FSHD 1311	Fashion History.....	3

**Semester Total 16**

## SECOND YEAR

### First Semester Credits

FSHD 2306	Draping.....	3
FSHD 2310	Fabric Design.....	3
FSHN 1329	Basic Men's Tailoring.....	3
FSHD 2312	Theatrical Costume Design.....	3
FSHD 2388	Internship-Fashion/Apparel Design #.....	3

**Semester Total 15**

**Program Total 49**

# Capstone Course

<sup>A</sup> Student Success Course: Students are required to complete EDUC 1300 within their first 12 semester credit hours of instruction. Students enrolling at HCC with 12 or more hours completed should consult with an academic advisor to select an appropriate course substitution.

## FASHION MERCHANDISING

The Fashion Merchandising program offers an opportunity for students to prepare for careers in fashion retailing or wholesale operations through basic training in merchandising techniques along with creative development. All of the courses in the Fashion Merchandising certificates apply to this AAS in Fashion Merchandising degree.

In addition, please note that a student may only earn one Occupational Skills Award (OSA) per academic year.

### Program Outcomes

Students will be able to

- Express ideas clearly utilizing a broad fashion vocabulary demonstrating knowledge of fashion/textile/knitwear terminology and standard calculations.
- Analyze collections in terms of targeted consumer, size, markets and retail price categories.
- Communicate design concepts at various stages of development using the design process, basic knowledge of clothing production, drawing skills, and/or appropriate software.

- Identify different consumer market segments and determine a specific target market on which to focus. Employ the basic theory and practice of retail management and merchandising.

For more information call 713.718.6158 or e-mail [suzette.brimmer@hccs.edu](mailto:suzette.brimmer@hccs.edu).

## Fashion Merchandising

### AAS

TSI testing is required prior to first enrollment.

### FIRST YEAR

#### First Semester Credits

EDUC 1300	Learning Framework <sup>A</sup> .....	3
FSHD 1302	Introduction to Fashion.....	3
FSHN 1301	Textiles.....	3
XXXX #3##	General Education Elective <sup>E</sup> .....	3
FSHD 1324	Ready-to-Wear Construction.....	3

**Semester Total 15**

#### Second Semester Credits

FSHN 1320	Fashion Selling.....	3
FSHD 1311	Fashion History.....	3
FSHD 1318	Apparel Computer Systems.....	3

**Semester Total 9**

#### Third Semester Credits

XXXX #3##	Social/Behavioral Sciences Elective <sup>D</sup> .....	3
XXXX #3##	Math/Natural Science Elective <sup>B</sup> .....	3
XXXX #3##	Humanities/Fine Arts Elective <sup>C</sup> .....	3
XXXX #3##	General Education Elective <sup>E</sup> .....	3

**Semester Total 12**

### SECOND YEAR

#### First Semester Credits

FSHN 2303	Fashion Buying.....	3
FSHN 2307	Fashion Advertising.....	3
FSHN 2320	Visual Merchandising.....	3
MRKG 1311	Principles of Marketing.....	3

**Semester Total 12**

#### Second Semester Credits

FSHN 2301	Fashion Promotion.....	3
FSHN 2305	Fashion Retailing.....	3
FSHN 2309	Fashion Image.....	3
FSHD 2388	Internship-Fashion Merchandising #.....	3

**Semester Total 12**

**Program Total 60**

# Capstone Course

# Arts, A/V Technology and Communications

<sup>A</sup> *Student Success Course: Students are required to complete EDUC 1300 within their first 12 semester credit hours of instruction. Students enrolling at HCC with 12 or more hours completed should consult with an academic advisor to select an appropriate course substitution.*

<sup>B</sup> *Math/Natural Science: May choose from – ANTH 2301 (with or without 2101 = lab), 2302, ASTR 1303, 1304, 1403, 1404, BIOL 1308, 1309, 1322, 1406, 1407, (2301, 2302 – restricted to Engineering, Science, and Health Sciences majors), CHEM 1305, 1405, 1411, 1412, COSC 1436, GEOG 1301, GEOL 1305, 1345, 1347, 1403, 1404, MATH 1314, 1316, 1324, 1325, 1332, 1342, 1350, 2318, 2320, 2412, 2413, 2414, 2415, PHYS 1305, 1401, 1402, 2325 (with or without 2125= lab), 2326 (with or without 2126 = lab), PSYC 2317.*

<sup>C</sup> *Humanities/Fine Arts: May choose from – ARTS 1301, 1303, 1304, COMM 2366, DANC 2303, DRAM 1310, 2316, 2366, ENGL 2322, 2323, 2327, 2328, 2332, 2333, 2342, 2343, 2351, HIST 1301, 1302, 2311, 2312, 2321, 2322, 2301, 2327, 2328, 2381, HUMA 1301, 1305, 1311, 2319, 2323, MUSI 1306, 1310, PHIL 1301, 1304, 2306, 2307, 2316, World Languages (ARAB 1411, 1412, CHIN 1411, 1412, FREN 1411, 1412, GERM 1411, 1412, JAPN 1411, 1412, KORE 1411, 1412, SPAN 1411, 1412).*

<sup>D</sup> *Social/Behavioral Sciences: May choose from – ANTH 2346, 2351, ECON 1301, 2301, 2302, EDUC 1300, GEOG 1302, 1303, GOVT 2305, 2306, PSYC 2301, 2314, 2316, 2319, SOCI 1301, 1306, 2301, 2336, TECA 1354.*

<sup>E</sup> *General Education: May choose from – ANTH 2301 (with or without 2101 = lab), 2302, 2346, 2351, ARTS 1301, 1303, 1304, ASTR 1303, 1304, 1403, 1404, BIOL 1308, 1309, 1322, 1406, 1407, (2301, 2302 – restricted to Engineering, Science, and Health Sciences majors), CHEM 1305, 1405, 1411, 1412, COMM 2366, COSC 1436, DANC 2303, DRAM 1310, 2316, 2366, ECON 1301, 2301, 2302, EDUC 1300, ENGL 2322, 2323, 2327, 2328, 2332, 2333, 2342, 2343, 2351, GEOG 1301, 1302, 1303, GEOL 1305, 1345, 1347, 1403, 1404, GOVT 2305, 2306, HIST 1301, 1302, 2311, 2312, 2321, 2322, 2301, 2327, 2328, 2381, HUMA 1301, 1305, 1311, 2319, 2323, MATH 1314, 1316, 1324, 1325, 1332, 1342, 1350, 2318, 2320, 2412, 2413, 2414, 2415, MUSI 1306, 1310, PHIL 1301, 1304, 2306, 2307, 2316, PHYS 1305, 1401, 1402, 2325 (with or without 2125 = lab), 2326 (with or without 2126 = lab), PSYC 2301, 2314, 2316, 2317, 2319, SOCI 1301, 1306, 2301, 2336, TECA 1354, World Languages (ARAB 1411, 1412, CHIN 1411, 1412, FREN 1411, 1412, GERM 1411, 1412, JAPN 1411, 1412, KORE 1411, 1412, SPAN 1411, 1412).*

## Fashion Image Merchandising (Formerly Fashion Image Consultant)

The Fashion Image Consultant certificate program develops the students' awareness of personal style while preparing them to advise clients on color, line, design, silhouette, and total wardrobe planning. All the courses in this certificate apply to the AAS in Fashion Merchandising degree.

### CERTIFICATE LEVEL I

<b>First Semester</b>		<b>Credits</b>
FSHD 1302	Introduction to Fashion .....	3
FSHN 1301	Textiles .....	3
FSHD 1313	Art for Fashion Design .....	3
FSHD 1324	Ready-to-Wear Construction .....	3
<b>Semester Total</b>		<b>12</b>
<b>Second Semester</b>		<b>Credits</b>
FSHN 1320	Fashion Selling .....	3
FSHN 2301	Fashion Promotion .....	3
FSHN 2309	Fashion Image .....	3
FSHD 1311	Fashion History .....	3
FSHD 1348	Apparel Computer Systems .....	3
<b>Semester Total</b>		<b>15</b>
<b>Third Semester</b>		<b>Credits</b>
FSHN 2388	Internship-Fashion Merchandising # .....	3
<b>Semester Total</b>		<b>3</b>
<b>Program Total</b>		<b>30</b>

# Capstone Course

### Visual Merchandising

The Visual Merchandising certificate program develops the students' technical window and interior display skills and understanding of aesthetic principles and applications, preparing them for entry-level positions as visual merchandisers in retail stores. Studies are concentrated on window and interior display, including computer applications. All of the courses in this certificate apply to the AAS in Fashion Merchandising degree.

### CERTIFICATE LEVEL I

<b>First Semester</b>		<b>Credits</b>
FSHD 1302	Introduction to Fashion .....	3
FSHN 1301	Textiles .....	3
FSHD 1313	Art for Fashion Design .....	3
<b>Semester Total</b>		<b>9</b>
<b>Second Semester</b>		<b>Credits</b>
FSHN 2303	Fashion Buying .....	3
FSHN 2305	Fashion Retailing .....	3
FSHD 1318	Apparel Computer Systems .....	3
FSHD 1322	Fashion Sketching .....	3
FSHN 2301	Fashion Promotion .....	3
<b>Semester Total</b>		<b>15</b>

# Arts, A/V Technology and Communications

<b>Third Semester</b>		<b>Credits</b>
FSHN 2307	Fashion Advertising .....	3
FSHN 2320	Visual Merchandising .....	3
FSHN 2388	Internship-Fashion Merchandising # .....	3
<b>Semester Total</b>		<b>9</b>
<b>Program Total</b>		<b>33</b>

# Capstone Course

## INTERIOR DESIGN

The Interior Design curriculum, culminating in an AAS degree, provides a balance of technical, creative, and business training necessary for a career in the interior design profession.

The Interior Design program consists of four (4) semesters and two (2) summers of study in interior design with 15 semester hours of academic courses, all of which provide graduates the essential skills to enter the profession of interior design and decoration. As this is a skills-based program, please be aware of course sequencing and prerequisites.

To obtain more information about registering as an interior designer in the state of Texas, please contact the Texas Board of Architectural Examiners, 333 Guadalupe, Suite 350, Austin, TX, 78701-3942, 512.305.8535.

In addition, please note that a student may only earn one Occupational Skills Award (OSA) per academic year.

### Program Outcomes

Students will be able to

- Demonstrate an understanding of programming, planning and designing interior spaces by solving specific design problems, synthesizing and applying technical, historical, cultural and theoretical concepts.
- Apply critical thinking and creative problem solving skills to a variety of interior design problems.
- Communicate design concepts at various stages of development using the design process, drawing skills and/or appropriate software programs.
- Develop professional quality presentations and demonstrate adequate written and oral communication skills.

### Accreditation

- Certified Interior Decorators International
- National Kitchen and Bath Association - Supported Status

### Professional Affiliations

- American Society of Interior Designers
- International Interior Design Association
- National Kitchen and Bath Association
- The Network of Executive Women in Hospitality

All interior design majors are encouraged to consult with the Interior Design Department before registering for classes.

For more information call 713.718.6038.

## Interior Design

### AAS

TSI testing is required prior to first enrollment.

### Prerequisites

EDUC 1300	Learning Framework <sup>A</sup> .....	3
XXXX #3##	General Education Elective <sup>C</sup> .....	3
<b>Semester Total</b>		<b>6</b>

### FIRST YEAR

#### First Semester Credits

INDS 1311	Fundamentals of Interior Design .....	3
INDS 1301	Basic Elements of Design .....	3
INDS 1319	Technical Drawing for Interior Designers .....	3
INDS 1370	History of Interiors .....	3
INDS 2321	Presentation Drawing .....	3
<b>Semester Total</b>		<b>15</b>

#### Second Semester Credits

INDS 1349	Fundamentals of Space Planning .....	3
INDS 2307	Textiles for Interior Design .....	3
INDS 2305	Interior Design Graphics .....	3
INDS 2317	Rendering Techniques .....	3
<b>Semester Total</b>		<b>12</b>

#### Third Semester Credits

ARTS 1303	Art History I .....	3
XXXX #3##	Math/Natural Science Elective <sup>B</sup> .....	3
<b>Semester Total</b>		<b>6</b>

### SECOND YEAR

#### First Semester Credits

INDS 2313	Residential Design I .....	3
INDS 1315	Materials, Methods and Estimating .....	3
INDS 2271	Digital Presentation Methods .....	2
ARTS 1304	Art History II .....	3
<b>Semester Total</b>		<b>11</b>

# Arts, A/V Technology and Communications

<b>Second Semester</b>		<b>Credits</b>
INDS 1345	Commercial Design I.....	3
INDS 2325	Professional Practices for Interior Designers.....	3
INDS 2237	Portfolio Presentation #.....	2
INDS 2264	Practicum (or Field Experience) - Interior Design.....	2
<b>Semester Total</b>		<b>10</b>
<b>Program Total</b>		<b>60</b>

#Capstone Course

<sup>A</sup> Student Success Course: Students are required to complete EDUC 1300 within their first 12 semester credit hours of instruction. Students enrolling at HCC with 12 or more hours completed should consult with an academic advisor to select an appropriate course substitution.

<sup>B</sup> Math/Natural Science: May choose from – ANTH 2301 (with or without 2101 = lab), 2302, ASTR 1303, 1304, 1403, 1404, BIOL 1308, 1309, 1322, 1406, 1407, (2301, 2302 – restricted to Engineering, Science, and Health Sciences majors), CHEM 1305, 1405, 1411, 1412, COSC 1436, GEOG 1301, GEOL 1305, 1345, 1347, 1403, 1404, MATH 1314, 1316, 1324, 1325, 1332, 1342, 1350, 2318, 2320, 2412, 2413, 2414, 2415, PHYS 1305, 1401, 1402, 2325 (with or without 2125= lab), 2326 (with or without 2126 = lab), PSYC 2317.

<sup>C</sup> General Education: May choose from – ANTH 2301 (with or without 2101 = lab), 2302, 2346, 2351, ARTS 1301, 1303, 1304, ASTR 1303, 1304, 1403, 1404, BIOL 1308, 1309, 1322, 1406, 1407, (2301, 2302 – restricted to Engineering, Science, and Health Sciences majors), CHEM 1305, 1405, 1411, 1412, COMM 2366, COSC 1436, DANC 2303, DRAM 1310, 2316, 2366, ECON 1301, 2301, 2302, EDUC 1300, ENGL 2322, 2323, 2327, 2328, 2332, 2333, 2342, 2343, 2351, GEOG 1301, 1302, 1303, GEOL 1305, 1345, 1347, 1403, 1404, GOVT 2305, 2306, HIST 1301, 1302, 2311, 2312, 2321, 2322, 2301, 2327, 2328, 2381, HUMA 1301, 1305, 1311, 2319, 2323, MATH 1314, 1316, 1324, 1325, 1332, 1342, 1350, 2318, 2320, 2412, 2413, 2414, 2415, MUSI 1306, 1310, PHIL 1301, 1304, 2306, 2307, 2316, PHYS 1305, 1401, 1402, 2325 (with or without 2125 = lab), 2326 (with or without 2126 = lab), PSYC 2301, 2314, 2316, 2317, 2319, SOCI 1301, 1306, 2301, 2336, TECA 1354, World Languages (ARAB 1411, 1412, CHIN 1411, 1412, FREN 1411, 1412, GERM 1411, 1412, JAPN 1411, 1412, KORE 1411, 1412, SPAN 1411, 1412).

## Interior Decorating

The Interior Decorating curriculum, culminating in a certificate, provides a balance of technical, creative, and business training necessary for a career in the interior decorating profession. Students will demonstrate an understanding of how to specify finishes and fabrics as well as operate a small interior decorating business. All courses in this certificate apply to the AAS in Interior Design degree.

## CERTIFICATE LEVEL I

### FIRST YEAR

<b>Prerequisites</b>		<b>Credits</b>
TECM 1301	Industrial Mathematics.....	3
<b>Semester Total</b>		<b>3</b>

### First Semester

		<b>Credits</b>
INDS 1311	Fundamentals of Interior Design.....	3
INDS 1319	Technical Drawing for Interior Designers.....	3
INDS 1301	Basic Elements of Design.....	3
<b>Semester Total</b>		<b>9</b>

### Second Semester

		<b>Credit</b>
INDS 2307	Textiles for Interior Design.....	3
INDS 1315	Materials, Methods and Estimating.....	3
INDS 2325	Professional Practices for Interior Designers#.....	3
<b>Semester Total</b>		<b>9</b>
<b>Program Total</b>		<b>21</b>

#Capstone Course

## Interior Design - Kitchen & Bath Design Professional

The Kitchen & Bath Design Professional certificate program prepares students for entry level and advanced positions in the Kitchen & Bath Design Industry. This program includes the knowledge, skills, and attributes necessary for working in this specialized design area.

## CERTIFICATE LEVEL II

TSI testing is required prior to first enrollment.

### FIRST YEAR

<b>First Semester</b>		<b>Credits</b>
EDUC 1300	Learning Framework <sup>A</sup> .....	3
INDS 1311	Fundamentals of Interior Design.....	3
INDS 1319	Technical Drawing for Interior Designers.....	3
INDS 2321	Presentation Drawing.....	3
<b>Semester Total</b>		<b>12</b>

### Second Semester

		<b>Credits</b>
INDS 2310	Kitchen and Bath Design.....	3
INDS 2305	Interior Design Graphics.....	3
INDS 1315	Materials, Methods and Estimating.....	3
INDS 2317	Rendering Techniques.....	3
<b>Semester Total</b>		<b>12</b>

# Arts, A/V Technology and Communications

## SECOND YEAR

### First Semester Credits

INDS 2370	Digital Presentation Methods.....	3
INDS 2330	Interior Design Building Systems.....	3
INDS 1341	Color Theory and Appreciation.....	3
INDS 2315	Lighting for Interior Designers.....	3

**Semester Total 12**

### Second Semester Credits

INDS 2371	Advanced Kitchen and Bath Design.....	3
INDS 2325	Professional Practices for Interior Design.....	3
INDS 2386	Internship - Interior Design <sup>#</sup> .....	3

**Semester Total 9**

**Program Total 45**

<sup>#</sup> Capstone Course

<sup>A</sup> Student Success Course: Students are required to complete EDUC 1300 within their first 12 semester credit hours of instruction. Students enrolling at HCC with 12 or more hours completed should consult with an academic advisor to select an appropriate course substitution.

## Interior Design Communication

The Interior Design Communication Occupational Skills Award (OSA) is one that distinguishes individuals interested in specialized training in becoming effective visual design communicators. Students who complete this OSA will gain recognition for their high level of skill in a variety of visual mediums, qualifying them to enter the interior design field as an entry-level draftsman, design assistant, junior designer and/or gain an entry-level position within the presentation department of a larger design firm.

### OCCUPATIONAL SKILLS AWARD

(Occupational Skills Award)

#### First Semester Credits

INDS 1319	Technical Drawing.....	3
INDS 2321	Presentation Drawing.....	3

**Semester Total 6**

#### Second Semester Credits

INDS 2305	Interior Design Graphics (AutoCAD).....	3
INDS 2317	Rendering Techniques.....	3

**Semester Total 6**

**Program Total 12**

## MUSIC BUSINESS

The Music Business Program provides students with knowledge and experience to gain employment in the many exciting fields of the music entertainment industry. In addition to the Workforce and Academic core, the student will become familiar with the wide scope of the music business and gain industry experience in an approved internship.

Students learn to be music businessmen and women, music arrangers, songwriters, producers and performers. In addition to music business and traditional academic music studies, these programs provide interdisciplinary training in computer based music production technologies, entertainment business strategies, and popular music performance. The commercial music field is where the greatest amount of music industry employment is to be found.

To accommodate the skills and knowledge needed for varied student career objectives, AAS Degrees and Certificates are offered in both Music Business Administration and in Music Business Songwriting and Production specializations.

For additional information on the Music Business Program, call 713-718-5620 or email [Aubrey.tucker@hccs.edu](mailto:Aubrey.tucker@hccs.edu).

### Program Outcomes

Students will be able to

- List the 6 "bundle of rights" that are the foundation of U.S. copyright law and the key to music property rights.
- List 8 basic clauses common to many music industry contracts.
- Describe "The Music Business System" and list 8 of its subsystems which work together to produce income.
- Gain college freshmen level skills in Music Performance, Theory, Ear Training, Piano/Keyboard and audio and video technologies.
- Develop core competencies to the college sophomore level through readings and lectures, writing reports and exams, learning music, accounting and researching and presenting oral reports utilizing computer skills.
- Successfully apply knowledge and skills learned in this program by satisfactorily completing the Capstone Course music industry internship, based on employer satisfaction.

For more information call 713.718.5606 or e-mail [aubrey.tucker@hccs.edu](mailto:aubrey.tucker@hccs.edu).



# Arts, A/V Technology and Communications

MUSB #3##	Approved Music Business/Commercial Music Elective <sup>B</sup>	3
MUSB #3##	Approved Music Business/Commercial Music Elective <sup>B</sup>	3
<b>Semester Total</b>		<b>17</b>

<b>Second Semester</b>		<b>Credits</b>
MUSB 2309	The Record Industry	3
MUSB 1391	Special Topics in Music Business	3
MUSB 2355	Legal Aspects of the Entertainment Industry	3
MUSB 2345	Live Music and Talent Management	3
MUSB #3##	Approved Music Business/Commercial Music Elective <sup>B</sup>	3
<b>Semester Total</b>		<b>15</b>

<b>Third Semester</b>		<b>Credits</b>
ACNT 1303	Introduction to Accounting I	3
MUSB 1341	Concert Promotion and Venue Management	3
MUSB 2381	Cooperative Education-Music Management and Merchandising <sup>#</sup>	3
MUSC 1405	Live Sound I	4
MUSB #3##	Approved Music Business/Commercial Music Elective <sup>#</sup>	3
<b>Semester Total</b>		<b>16</b>
<b>Program Total</b>		<b>48</b>

<sup>#</sup> Capstone Course

<sup>A</sup> Student Success Course: Students are required to complete EDUC 1300 within their first 12 semester credit hours of instruction. Students enrolling at HCC with 12 or more hours completed should consult with an academic advisor to select an appropriate course substitution.

<sup>B</sup> Program-related Electives: (12 semester hours) may be chosen from the following courses – MUSB 2301 Music Marketing & Merch, MUSB 2305 Music Publishing, MUSC 1327 Audio I, MUSC 1331 MIDI I, MUSC 1321 Song Writing, RTVB 1321 TV Field Production, BUSG 1373 Entrepreneurship & Economic Development.

## Music Business - Songwriting/ Production Specialization

### AAS

TSI testing is required prior to first enrollment.

#### FIRST YEAR

<b>First Semester</b>		<b>Credits</b>
EDUC 1300	Learning Frameworks <sup>A</sup>	3
MUSB 1305	Survey of the Music Business	3
XXXX #3##	Approved General Education Elective	3
MUSC 1270	Fundamentals of Music Production	2
MUSC 1321	Songwriting I	3
<b>Semester Total</b>		<b>14</b>

<b>Second Semester</b>		<b>Credits</b>
MUAP 1292	Arranging and Composition	2
MUSB 2355	Legal Aspects of the Entertainment Industry	3
MUSC 1335	Commercial Music Software	3
MUSI 1301	Fundamentals of Music OR	
MUSI 1310	American Music	3
MUSB #3##	Approved Music Business/Commercial Music/ Applied Music Elective <sup>D</sup>	3
<b>Semester Total</b>		<b>14</b>

#### SECOND YEAR

<b>First Semester</b>		<b>Credits</b>
MUAP 2292	Arranging and Composition***	2
MUSB 2309	The Record Industry	3
MUSB 2345	Live Music and Talent Management	3
XXXX #3##	Social/Behavioral Sciences Elective <sup>C</sup>	3
MUSB #3##	Approved Music Business/Commercial Music/ Applied Music Elective <sup>D</sup>	3
MUSB #3##	Approved Music Business/Commercial Music/ Applied Music Elective <sup>D</sup>	3
<b>Semester Total</b>		<b>17</b>

<b>Second Semester</b>		<b>Credits</b>
MUAP 2292	Arranging and Composition***	2
MUSB 1341	Concert Promotion and Venue Management	3
MUSB 1391	Special Topics in Music Business	3
XXXX #3##	Math/Natural Science Elective <sup>B</sup>	3
MUSC 2141	Forum/Recital <sup>#</sup>	1
MUSB #3##	Approved Music Business/Commercial Music/ Applied Music Elective <sup>D</sup>	3
<b>Semester Total</b>		<b>15</b>
<b>Program Total</b>		<b>60</b>

<sup>#</sup> Capstone Course

\*\*\*Required twice

<sup>A</sup> Student Success Course: Students are required to complete EDUC 1300 within their first 12 semester credit hours of instruction. Students enrolling at HCC with 12 or more hours completed should consult with an academic advisor to select an appropriate course substitution.

<sup>B</sup> Math/Natural Science: May choose from – ANTH 2301 (with or without 2101 = lab), 2302, ASTR 1303, 1304, 1403, 1404, BIOL 1308, 1309, 1322, 1406, 1407, (2301, 2302 – restricted to Engineering, Science, and Health Sciences majors), CHEM 1305, 1405, 1411, 1412, COSC 1436, GEOG 1301, GEOL 1305, 1345, 1347, 1403, 1404, MATH 1314, 1316, 1324, 1325, 1332, 1342, 1350, 2318, 2320, 2412, 2413, 2414, 2415, PHYS 1305, 1401, 1402, 2325 (with or without 2125= lab), 2326 (with or without 2126 = lab), PSYC 2317.

<sup>C</sup> Social/Behavioral Sciences: May choose from – ANTH 2346, 2351, ECON 1301, 2301, 2302, EDUC 1300, GEOG 1302, 1303, GOVT 2305, 2306, PSYC 2301, 2314, 2316, 2319, SOCI 1301, 1306, 2301, 2336, TECA 1354.

# Arts, A/V Technology and Communications

<sup>D</sup> Program-related Electives: (12 semester hours) May be chosen from the following courses – MUSB 2301 Music Marketing & Merch, MUSB 2305 Music Publishing, MUSC 1327 Audio I, MUSC 1331 MIDI I, MUSC 2355 MIDI II, MUSC 1405 Live Sound, RTVB 1321 TV Field Production, MUAP X269 Piano, MUAP X261 Guitar, MUAP X281 Voice, MUAP X285 Improvisation, MUAP X2XX, Other Musical Instrument Private Instruction, (Maximum of 6 credits of MUAP Electives)

<sup>B</sup> Program related electives: (10 semester hours) MUSB 2301 Music Marketing & Merch, MUSB 2305 Music Publishing, MUSC 1327 Audio I, MUSC 1331 MIDI I, MUSC 2355 MIDI II, MUSC 1405 Live Sound, RTVB 1321 TV Field Production, MUAP X269 Piano, MUAP X261 Guitar, MUAP X281 Voice, MUAP X285 Improvisation, MUAP X2XX Other Musical Instrument Private Instruction, MUSI 1301 Music Fundamentals (Maximum of 6 credits of MUAP Electives)

## Music Business - Songwriting/ Production Specialization

### CERTIFICATE LEVEL II

#### FIRST YEAR

First Semester		Credits
EDUC 1300	Learning Frameworks <sup>A</sup>	3
MUAP 1292	Arranging and Composition	2
MUAP #2##	Applied Music Elective	2
MUSB 1305	Survey of the Music Business	3
MUSC 1335	Commercial Music Software	3
MUSC 1321	Songwriting I	3
<b>Semester Total</b>		<b>16</b>

Second Semester		Credits
MUAP 2292	Arranging and Composition	2
MUSB 2309	The Record Industry	3
MUSB 2345	Live Music and Talent Management	3
MUSB 2355	Legal Aspects of the Entertainment Industry	3
MUSC 1270	Fundamentals of Music Production	2
XXXX #2##	Approved Music Business/Commercial Music/ Applied Music Elective <sup>B</sup>	2
<b>Semester Total</b>		<b>15</b>

Third Semester		Credits
MUAP 2292	Arranging and Composition	2
MUSB 1341	Concert Promotion and Venue Management	3
MUSB 1391	Special Topics in Music Business	3
MUSC 2141	Forum/Recital #	1
MUAP #2##	Approved Music Business/Commercial Music/ Applied Music Elective <sup>B</sup>	2
XXXX #3##	Approved Music Business/Commercial Music/ Applied Music Elective <sup>B</sup>	3
XXXX #3##	Approved Music Business/Commercial Music/ Applied Music Elective <sup>B</sup>	3
<b>Semester Total</b>		<b>17</b>
<b>Program Total</b>		<b>48</b>

# Capstone Course

<sup>A</sup> Student Success Course: Students are required to complete EDUC 1300 within their first 12 semester credit hours of instruction. Students enrolling at HCC with 12 or more hours completed should consult with an academic advisor to select an appropriate course substitution.

## Music Business

The Music Business certificate gives students a solid foundation for the Music Business industry. All courses earned apply to the Music Business AAS degree.

### CERTIFICATE LEVEL I

First Semester		Credits
MUSB 1305	Survey of the Music Business	3
MUSB 2355	Legal Aspects of the Entertainment Industry #	3
MUSB #3##	Approved Music Business Elective <sup>A</sup>	3
MUSB #3##	Approved Music Business Elective <sup>A</sup>	3
MUSB #3##	Approved Music Business Elective <sup>A</sup>	3
<b>Semester Total</b>		<b>15</b>
<b>Program Total</b>		<b>15</b>

# Capstone Course

# Business

**Accounting (52.0301)**  
**Business Management (52.0201)**  
**Logistics (52.0203)**  
**Business Technology (52.0407)**  
**Finance - Banking (52.0803)**  
**International Business (52.1101)**  
**Marketing (52.1401)**

A Career Cluster is a grouping of occupations and broad industries based on commonalities. The Business career cluster is concerned with providing knowledge and skills related to planning, organizing, directing and evaluating business functions essential to efficient and productive business operations. Business Management and Administration career opportunities are available in every sector of the economy. This includes the following HCC programs: Accounting, Business Management, Business Technology, Finance, International Business, Marketing, and Real Estate.

All new semester hour students, who have earned less than 12 semester hours of college level credit, are required to take a first-year student success course in their first term at HCC. Through research and experience, Houston Community College has determined that many life and career management skills are necessary for students to make the most of their college investment. A student success course is designed to prepare students for the demands of college and for success in the world of work. The course emphasizes setting priorities, time management, effective listening, note-taking, concentration techniques, and retention of information, book analysis, comprehension techniques, and test-taking skills. This course also incorporates units that are designed to facilitate the use of library databases in conducting research, planning and setting educational objectives, lifelong career assessment, decision-making, financial aid, tutoring, and student support services, enabling the student to maximize the use of college resources.

Every HCC Career and Technology Education program contains a "capstone," an experience for the student to "put it all together." The capstone is a learning experience resulting in a consolidation of a student's educational experience and certifies mastery of entry level workplace competencies. The capstone experience must occur during the last semester of the student's educational program. The capstone consists of an external learning experience or an advanced course especially designed to help students synthesize knowledge and skills or other licensure as appropriate.

## ACCOUNTING

The Accounting program provides students with occupational and technical instruction, continuing education, college-parallel courses, professional assistance, and resources for learning. This program prepares students for careers as paraprofessionals in accounting firms assisting certified public accountants as generalists who prepare taxes, perform audits, and prepare financial statements.

The Accounting program offers courses that qualify students for the CPA exam. The Texas State Board of Public Accountancy, 333 Guadalupe, Tower 3, Suite 900, Austin, TX 78701-3900, 512.305.7800, Fax 512.305.7854 has accredited these courses for CPA candidates. The website for the Texas State Board of Public Accountancy is [www.tsbpa.texas.gov](http://www.tsbpa.texas.gov).

In addition, please note that a student may only earn one Occupational Skills Award (OSA) per academic year.

### Program Outcomes

Students will be able to

- Students will be able to read, listen, speak, and write proficiently in preparation for presentations with clients, accounting firms and compliance work
- Students will demonstrate complete understanding of the complete accounting cycle.
- Students will be able to prepare financial statements and tax returns utilizing computerized software packages, ie. Turbo Tax, Peachtree, and/or Quick Books.
- Students will be able to reconcile and verify account balances, audit for internal control, and prepare financial statements.
- Students will be able to help managers make financial and non financial decisions using internal and external information.

*For more information call 713.718.7905 or  
e-mail [marina.grau@hccs.edu](mailto:marina.grau@hccs.edu).*

# Business

## Accounting

### AAS

TSI testing is required prior to first enrollment.

#### FIRST YEAR

##### First Semester

		<b>Credits</b>
EDUC 1300	Learning Framework <sup>A</sup>	3
ACCT 2301	Principles of Financial Accounting <sup>*</sup>	3
XXXX #3##	Math/Natural Science Elective <sup>B</sup>	3
XXXX #3##	Computer Applications Elective <sup>C</sup>	3
ENGL 1301	Composition I	3

**Semester Total 15**

##### Second Semester

		<b>Credits</b>
ACCT 2302	Principles of Managerial Accounting	3
ACNT 2331	Internal Control and Auditing OR	3
ACNT 1313	Computerized Accounting Applications	3
ACNT 1331	Federal Income Tax: Individual	3
ACNT 1382	Cooperative Education-Accounting Technology/Technician and Bookkeeping	3
XXXX #3##	Humanities/Fine Arts Elective <sup>D</sup>	3

**Semester Total 15**

#### SECOND YEAR

##### First Semester

		<b>Credits</b>
ITSW 2334	Advanced Spreadsheets OR	3
POFI 1349	Spreadsheets	3
ACNT 1347	Federal Income Tax for Partnerships and Corporations	3
ACNT 2382	Cooperative Education-Accounting Technology/Technician and Bookkeeping**	3
ACNT 2303	Intermediate Accounting I	3
PSYC 2301	Introduction to Psychology	3

**Semester Total 15**

##### Second Semester

		<b>Credits</b>
BMGT 1327	Principles of Management	3
ECON 2301	Principles of Economics (Macro)	3
XXXX #3##	Humanities/Fine Arts Elective <sup>D</sup>	3
BUSG 2305	Business Law/Contracts	3
ACNT 2304	Intermediate Accounting II <sup>#</sup>	3

**Semester Total 15**

**Program Total 60**

<sup>#</sup> Capstone Course

<sup>A</sup> Student Success Course: Students are required to complete EDUC 1300 within their first 12 semester credit hours of instruction. Students enrolling at HCC with 12 or more hours completed should consult with an academic advisor to select an appropriate course substitution.

<sup>B</sup> Math/Natural Science: May choose from – ANTH 2301 (with or without 2101 = lab), 2302, ASTR 1303, 1304, 1403, 1404, BIOL 1308, 1309, 1322, 1406, 1407, (2301, 2302 – restricted to Engineering, Science, and Health Sciences majors), CHEM

1305, 1405, 1411, 1412, COSC 1436, GEOG 1301, GEOL 1305, 1345, 1347, 1403, 1404, MATH 1314, 1316, 1324, 1325, 1332, 1342, 1350, 2318, 2320, 2412, 2413, 2414, 2415, PHYS 1305, 1401, 1402, 2325 (with or without 2125 = lab), 2326 (with or without 2126 = lab), PSYC 2317.

<sup>C</sup> Computer Applications Electives may be chosen from the following courses: ITSC 1309, POFI 1301, or BCIS 1405.

<sup>D</sup> Humanities/Fine Arts: May choose from – ARTS 1301, 1303, 1304, COMM 2366, DANC 2303, DRAM 1310, 2316, 2366, ENGL 2322, 2323, 2327, 2328, 2332, 2333, 2342, 2343, 2351, HIST 1301, 1302, 2311, 2312, 2321, 2322, 2301, 2327, 2328, 2381, HUMA 1301, 1305, 1311, 2319, 2323, MUSI 1306, 1310, PHIL 1301, 1304, 2306, 2307, 2316, World Languages (ARAB 1411, 1412, CHIN 1411, 1412, FREN 1411, 1412, GERM 1411, 1412, JAPN 1411, 1412, KORE 1411, 1412, SPAN 1411, 1412).

<sup>\*</sup> Students without an accounting background are strongly advised to complete ACNT 1303, Introduction to Accounting I.

## Accounting

### CERTIFICATE LEVEL I

#### First Semester

		<b>Credits</b>
ACNT 1313	Computerized Accounting Applications.....	3
ACNT 1331	Federal Income Tax: Individual.....	3
ACCT 2301	Principles of Financial Accounting <sup>A</sup> .....	3
XXXX #3##	Computer Applications Elective <sup>B</sup> .....	3

**Semester Total 12**

#### Second Semester

		<b>Credits</b>
ACCT 2302	Principles of Managerial Accounting.....	3
ACNT 2331	Internal Control and Auditing.....	3
ACNT 1347	Federal Income Tax for Partnerships and Corporations.....	3
ACNT 1382	Cooperative Education-Accounting Technology/Technician and Bookkeeping.....	3

**Semester Total 12**

#### Third Semester

		<b>Credits</b>
ITSW 2334	Advanced Spreadsheets.....	3
ACNT 2382	Cooperative Education-Accounting Technology/Technician and Bookkeeping.....	3
ACNT 2303	Intermediate Accounting I <sup>#</sup> .....	3
ACNT 2309	Cost Accounting OR	3
ACNT 1335	Accounting Ethics.....	3

**Semester Total 12**

**Program Total 36**

<sup>#</sup> Capstone Course

<sup>A</sup> Students without an accounting background are strongly advised to complete ACNT 1303, Introduction to Accounting I.

<sup>B</sup> Computer Applications Elective may be chosen from the following courses: ITSC 1309, POFI 1301, or BCIS 1405.

# Business

## Payroll Specialist

The Payroll Specialist Certificate prepares students to perform activities associated with human resources, payroll transactions, payroll tax compliance and filing of all quarterly and yearly payroll tax reports required by company policies and government regulations.

### CERTIFICATE LEVEL I

#### FIRST YEAR

<b>First Semester</b>		<b>Credits</b>
ACNT 1303	Introduction to Accounting I	3
ACNT 1329	Payroll and Business Tax Accounting	3
POFI 1301	Computer Applications I OR	
ITSC 1309	Integrated Software Applications	3
POFI 1349	Spreadsheets OR	
ITSW 2334	Advanced Spreadsheets	3
ACNT 1313	Computerized Accounting Applications	3
<b>Semester Total</b>		<b>15</b>
<b>Program Total</b>		<b>15</b>

## Forensic Accounting and Fraud Examination Certificate

This certificate addresses the role of the Forensic Accountant and Fraud Examiner. Curriculum includes specialized topics in accounting as well as investigative techniques on how to collect, analyze, and evaluate evidential matter, and to interpret and communicate findings. These are important skills when calculating damages in court cases or lawsuits. Students registering for Forensic and Fraud Examination Certificate courses must have earned a bachelor degree in accounting or an AAS degree in accounting.

The four courses (12 EQH) in this certificate are also CPA exam qualifying courses but count towards CPA exam qualification only if they are taken after earning a bachelor degree from a recognized college or university by the Texas State Board of Public Accountancy. Students planning to enroll in this certificate program are highly advised to see the accounting department chair prior to enrollment in this Enhanced Sills Certificate.

#### FIRST YEAR

<b>First Semester</b>		<b>Credits</b>
ACNT 1305	Forensic Accounting.....	3
ACNT 1335	Accounting Ethics .....	3
ACNT 2330	Governmental and Not-for-Profit Accounting .....	3
ACNT 1391	Special Topics in Accounting-Fraud Examination .....	3
<b>Semester Total</b>		<b>12</b>
<b>Program Total</b>		<b>12</b>

## BUSINESS MANAGEMENT

The Business management program provides distinctive learning that actively engages students, faculty, and the business community in developing knowledge and skills relevant for success in a complex global economy. The majority of Americans make their living in business, regardless of their academic major. The job market is opening up for individuals with an associate degree in business. The program offers an AAS degree and certificate with several specializations.

The Texas Higher Education Coordinating Board (THECB) allows students to earn only one AAS in Business Management. Students may choose from one of the following two specializations: General or Human Resource Management.

In addition, please note that a student may only earn one Occupational Skills Award (OSA) per academic year.

#### Program Outcomes

Students will be able to

- Identify essential management skills necessary for career success.
- Describe the relationships of social responsibility, ethics, and law in business.
- Construct a business plan.
- Examine the role of strategic human resource planning in support of organizational mission and objectives.

For more information call 713.718.6295 or e-mail [raven.davenport@hccs.edu](mailto:raven.davenport@hccs.edu).

# Business

## General Business

### AAS

*TSI testing is required prior to first enrollment.*

#### FIRST YEAR

<b>First Semester</b>		<b>Credits</b>
EDUC 1300	Learning Framework <sup>A</sup>	3
ETWR 1302	Introduction to Technical Writing OR	
ENGL 1301	Composition I .....	3
BUSG 1370	Personal Financial Planning .....	3
BMGT 1327	Principles of Management .....	3
BUSG 1301	Introduction to Business.....	3
<b>Semester Total</b>		<b>15</b>

<b>Second Semester</b>		<b>Credits</b>
BMGT 1301	Supervision .....	3
HRPO 1311	Human Relations .....	3
BUSG 2305	Business Law/Contracts OR	
BUSI 2301	Business Law I.....	3
HRPO 2307	Organizational Behavior.....	3
HRPO 2301	Human Resource Management.....	3
<b>Semester Total</b>		<b>15</b>

#### SECOND YEAR

<b>First Semester</b>		<b>Credits</b>
BUSG 2309	Small Business Mgmt/Entrepreneurship # .....	3
MRKG 1311	Principles of Marketing.....	3
XXXX #3##	Humanities/Fine Arts Elective <sup>C</sup> .....	3
XXXX #3##	Approved Program Related Elective <sup>E</sup> .....	3
ACNT 1303	Introduction to Accounting I OR	
ACCT 2301	Principles of Accounting I.....	3
<b>Semester Total</b>		<b>15</b>

<b>Second Semester</b>		<b>Credits</b>
XXXX #3##	Computer Applications Elective <sup>B</sup> .....	3
ECON 2302	Principles of Microeconomics .....	3
MATH 1324	Mathematics for Business & Social Sciences .....	3
XXXX #3##	General Education Elective <sup>D*</sup> .....	3
BUSG 2380	Cooperative Education Business/Commerce General .....	3
<b>Semester Total</b>		<b>15</b>
<b>Program Total</b>		<b>60</b>

# Capstone

<sup>A</sup> *Student Success Course:* Students are required to complete *EDUC 1300* within their first 12 semester credit hours of instruction. Students enrolling at HCC with 12 or more hours completed should consult with an academic advisor to select an appropriate course substitution.

<sup>B</sup> *Computer Applications Elective:* May choose from – *ITSE 1309, POFI 1301, or BCIS 1405.*

<sup>C</sup> *Humanities/Fine Arts:* May choose from – *ARTS 1301, 1303, 1304, COMM 2366, DANC 2303, DRAM 1310, 2316, 2366, ENGL 2322, 2323, 2327, 2328, 2332, 2333, 2342, 2343, 2351, HIST 1301, 1302, 2311, 2312, 2321, 2322, 2301, 2327, 2328, 2381, HUMA 1301, 1305, 1311, 2319, 2323, MUSI 1306, 1310, PHIL 1301, 1304, 2306, 2307, 2316, World Languages (ARAB 1411, 1412, CHIN 1411, 1412, FREN 1411, 1412, GERM 1411, 1412, JAPN 1411, 1412, KORE 1411, 1412, SPAN 1411, 1412).*

<sup>D</sup> *General Education:* May choose from – *ASTR 1303, 1304, 1403, 1404, BIOL 1308, 1309, 1322, 1406, 1407, (2301, 2302 – restricted to Engineering, Science, and Health Sciences majors), CHEM 1305, 1405, 1411, 1412, COSC 1436, GEOG 1301, 1303, GEOL 1305, 1345, 1347, 1403, 1404, HIST 1301, 1302, 2311, 2312, 2321, 2322, 2301, 2327, 2328, 2381, 2325 (with or without 2125 = lab), 2326 (with or without 2126 = lab), TECA 1354.*

\* *Note – Humanities/Fine Arts or Social/Behavioral Sciences, English Composition, Speech, Foreign Language, and Physical Education courses Do Not fulfill the General Education requirements for this program.*

<sup>E</sup> *Program Approved Elective:* May choose from – *BUSG , BMGT, HRPO, IBUS, MRKG, or LMG.*

## Business Management

The Business Management certificate provides students with the knowledge and skills required for entry-level positions in management. All courses in this certificate apply to the AAS in Business Management degree.

### CERTIFICATE LEVEL I

<b>First Semester</b>		<b>Credits</b>
BUSG 1370	Personal Financial Planning	3
ETWR 1302	Introduction to Technical Writing .....	3
BUSG 1301	Introduction to Business.....	3
BMGT 1327	Principles of Management .....	3
<b>Semester Total</b>		<b>12</b>

<b>Second Semester</b>		<b>Credits</b>
BMGT 1301	Supervision .....	3
HRPO 1311	Human Relations .....	3
BUSG 2305	Business Law/Contracts OR	
BUSI 2301	Business Law I.....	3
HRPO 2301	Human Resources Management .....	3
BUSG 2380	Cooperative Education I # .....	3
<b>Semester Total</b>		<b>15</b>
<b>Program Total</b>		<b>27</b>

# Capstone Course

# Business

## Business Management Entrepreneurship

The Business Management-Entrepreneurship certificate provides students with instruction in entrepreneurial skills, business principles, accounting, and real life experiences through cooperative education. The program is designed to assist students in starting their own businesses.

### CERTIFICATE LEVEL I

<b>First Semester</b>		<b>Credits</b>
BUSG 1370	Personal Financial Planning	3
ETWR 1302	Introduction to Technical Writing	3
MRKG 1311	Principles of Marketing OR	
MRKG 2312	e-Commerce Marketing	3
BUSG 1373	Entrepreneurship and Economic Development	3
<b>Semester Total</b>		<b>12</b>
<b>Second Semester</b>		<b>Credits</b>
BUSG 2309	Small Business Management	3
BUSI 2301	Business Law I OR	
BUSG 2305	Business Law/Contracts	3
ACNT 1303	Introduction to Accounting I OR	
ACCT 2301	Principles of Financial Accounting	3
BUSG 1301	Introduction to Business OR	
BUSI 1301	Business Principles	3
BUSG 2380	Cooperative Education - Business/Commerce, General #	3
<b>Semester Total</b>		<b>15</b>
<b>Program Total</b>		<b>27</b>

# Capstone

## Human Resource Management Specialization

The AAS in Human Resource Management Specialization provides students with the knowledge and skills necessary to pursue a career in the human resources area including benefits, compensation, and other aspects of human resource management.

The Texas Higher Education Coordinating Board (THECB) allows students to earn the AAS in Business Management OR the AAS in Human Resource Management Specialization, not both.

### AAS

*TSI testing is required prior to first enrollment.*

#### FIRST YEAR

<b>First Semester</b>		<b>Credits</b>
EDUC 1300	Learning Framework <sup>A</sup>	3
ETWR 1302	Introduction to Technical Writing OR	
ENGL 1301	Composition I	3
BMGT 1327	Principles of Management	3
HRPO 1305	Management and Labor Relations	3
BUSG 1301	Introduction to Business	3
<b>Semester Total</b>		<b>15</b>

<b>Second Semester</b>		<b>Credits</b>
HRPO 2306	Benefits and Compensation	3
HRPO 2305	Human Resource Information Systems	3
HRPO 1302	Human Resource Training & Management	3
BUSG 2305	Business Law/Contracts OR	
BUSI 2301	Business Law I	3
HRPO 2301	Human Resource Management	3
<b>Semester Total</b>		<b>15</b>

#### SECOND YEAR

<b>First Semester</b>		<b>Credits</b>
BMGT 1301	Supervision	3
HRPO 1311	Human Relations	3
XXXX #3##	Humanities/Fine Arts Elective <sup>B</sup>	3
HRPO 2307	Organizational Behavior	3
ACCT 2301	Principles of Financial Accounting	3
<b>Semester Total</b>		<b>15</b>

<b>Second Semester</b>		<b>Credits</b>
XXXX #3##	Computer Applications Elective <sup>C</sup>	3
ECON 2302	Principles of Microeconomics	3
MATH 1314	College Algebra	3
XXXX #3##	General Education Elective <sup>D</sup>	3
BUSG 2380	Cooperative Education - Business / Commerce - General #	3
<b>Semester Total</b>		<b>15</b>
<b>Program Total</b>		<b>60</b>

# Capstone Course

<sup>A</sup> Student Success Course: Students are required to complete EDUC 1300 within their first 12 semester credit hours of instruction. Students enrolling at HCC with 12 or more hours completed should consult with an academic advisor to select an appropriate course substitution.

<sup>B</sup> Humanities/Fine Arts: May choose from – ARTS 1301, 1303, 1304, COMM 2366, DANC 2303, DRAM 1310, 2316, 2366, ENGL 2322, 2323, 2327, 2328, 2332, 2333, 2342, 2343, 2351, HIST 1301, 1302, 2311, 2312, 2321, 2322, 2301, 2327, 2328, 2381, HUMA 1301, 1305, 1311, 2319, 2323, MUSI 1306, 1310, PHIL 1301, 1304, 2306, 2307, 2316, World Languages (ARAB 1411, 1412, CHIN 1411, 1412, FREN 1411, 1412, GERM 1411, 1412, JAPN 1411, 1412, KORE 1411, 1412, SPAN 1411, 1412).

# Business

<sup>C</sup> Computer Applications: May choose from – ITSE 1309, POFI 1301, or BCIS 1405.

<sup>D</sup> General Education: May choose from – ANTH 2301 (with or without 2101 = lab), 2302, 2346, 2351, ARTS 1301, 1303, 1304, ASTR 1303, 1304, 1403, 1404, BIOL 1308, 1309, 1322, 1406, 1407, (2301, 2302 – restricted to Engineering, Science, and Health Sciences majors), CHEM 1305, 1405, 1411, 1412, COMM 2366, COSC 1436, DANC 2303, DRAM 1310, 2316, 2366, ECON 1301, 2301, 2302, EDUC 1300, ENGL 2322, 2323, 2327, 2328, 2332, 2333, 2342, 2343, 2351, GEOG 1301, 1302, 1303, GEOL 1305, 1345, 1347, 1403, 1404, GOVT 2305, 2306, HIST 1301, 1302, 2311, 2312, 2321, 2322, 2301, 2327, 2328, 2381, HUMA 1301, 1305, 1311, 2319, 2323, MATH 1314, 1316, 1324, 1325, 1332, 1342, 1350, 2318, 2320, 2412, 2413, 2414, 2415, MUSI 1306, 1310, PHIL 1301, 1304, 2306, 2307, 2316, PHYS 1305, 1401, 1402, 2325 (with or without 2125 = lab), 2326 (with or without 2126 = lab), PSYC 2301, 2314, 2316, 2317, 2319, SOCI 1301, 1306, 2301, 2336, TECA 1354, World Languages (ARAB 1411, 1412, CHIN 1411, 1412, FREN 1411, 1412, GERM 1411, 1412, JAPN 1411, 1412, KORE 1411, 1412, SPAN 1411, 1412).

## Human Resource Management

The Human Resource Management certificate provides students with the knowledge and abilities to apply individual technical skills within the defined area. All courses in this certificate apply to the AAS in Human Resource Management degree.

### CERTIFICATE LEVEL I

First Semester	Credits
BUSG 1301 Introduction to Business.....	3
ETWR 1302 Introduction to Technical Writing.....	3
HRPO 1305 Management and Labor Relations.....	3
BMGT 1327 Principles of Management.....	3
HRPO 1302 Human Resources Training and Development.....	3
<b>Semester Total</b>	<b>12</b>

Second Semester	Credits
HRPO 2306 Benefits and Compensation.....	3
HRPO 2305 Human Resource Information Systems.....	3
HRPO 2301 Human Resource Management.....	3
BUSI 2301 Business Law I OR	
BUSG 2305 Business Law/Contracts.....	3
BUSG 2380 Cooperative Education I #.....	3
<b>Semester Total</b>	<b>15</b>
<b>Program Total</b>	<b>27</b>

# Capstone Course

## Insurance Specialist/Associate

This Level 1 Certificate will prepare students for the required insurance license examination needed for employment with an independent Insurance Agent or a large insurance company. Upon successful completion, students take the state licensure examination.

### CERTIFICATE LEVEL I

First Semester	Credits
INSR 1205 Personal Insurance.....	2
INSR 1209 Principles of Insurance.....	2
INSR 1301 Commercial Insurance.....	3
INSR 2340 Multiline Insurance Sales and Marketing.....	3
INSR 1217 Insurance Customer Service Representative.....	2
BUSG 1301 Introduction to Business.....	3
<b>Semester Total</b>	<b>15</b>
<b>Program Total</b>	<b>15</b>

## LOGISTICS & GLOBAL SUPPLY CHAIN MANAGEMENT

The AAS in Logistics and Global Supply Chain Management provides students with the knowledge and abilities to apply individual technical skills necessary to pursue a career in areas such as exporting/importing, materials handling, global transportation, warehouse and distribution center management, purchasing management, and traffic management.

### Program Outcomes

Students will be able to

- Explain logistics/supply chain terms.
- Demonstrate understanding of technological factors of logistics in international trade.
- Apply forecasting techniques to various facets of supply chain management.
- Solve transportation problems utilizing knowledge of world geography and the transportation system.
- Explain the total supply chain management and function in distribution.

For more information call 713.718.6295 or e-mail [raven.davenport@hccs.edu](mailto:raven.davenport@hccs.edu).

# Business

## Logistics & Global Supply Chain Management - General

### AAS

TSI testing is required prior to first enrollment.

#### FIRST YEAR

First Semester		Credits
EDUC 1300	Learning Framework <sup>A</sup>	3
LMGT 1319	Introduction to Business Logistics.....	3
IBUS 1341	Global Supply Chain Management.....	3
MATH 1324	Mathematics for Business & Social Sciences .....	3
ETWR 1302	Introduction to Technical Writing.....	3
<b>Semester Total</b>		<b>15</b>

Second Semester		Credits
ENGL 1301	Composition I.....	3
IBUS 1301	Principles of Exports.....	3
BMGT 1301	Supervision.....	3
BMGT 1313	Principles of Purchasing.....	3
XXXX #3##	Humanities/Fine Arts Elective <sup>B</sup> .....	3
<b>Semester Total</b>		<b>15</b>

#### SECOND YEAR

First Semester		Credits
LMGT 1321	Introduction to Materials Handling.....	3
LMGT 2288	Internship: Logistics and Materials Management.....	2
IBUS 1302	Principles of Imports.....	3
LMGT 1323	Domestic & International Transportation Mgmt.....	3
ECON 2302	Principles of Microeconomics .....	3
LMGT 1193	Special Topics in Logistics and Materials Management: GLA Exam Preparation.....	1
<b>Semester Total</b>		<b>15</b>

Second Semester		Credits
IBUS 2335	International Business Law.....	3
LMGT 1325	Warehouse and Distribution Center Mgmt.....	3
LMGT 1345	Economics of Transportation and Distribution.....	3
XXXX #3##	General Education Elective <sup>C</sup> .....	3
IBUS 2332	Global Business Simulation #.....	3
<b>Semester Total</b>		<b>15</b>
<b>Program Total</b>		<b>60</b>

# Capstone Course

<sup>A</sup> Student Success Course: Students are required to complete EDUC 1300 within their first 12 semester credit hours of instruction. Students enrolling at HCC with 12 or more hours completed should consult with an academic advisor to select an appropriate course substitution.

<sup>B</sup> Humanities/Fine Arts: May choose from – ARTS 1301, 1303, 1304, COMM 2366, DANC 2303, DRAM 1310, 2316, 2366, ENGL 2322, 2323, 2327, 2328, 2332, 2333, 2342, 2343, 2351, HIST 1301, 1302, 2311, 2312, 2321, 2322, 2301, 2327, 2328, 2381, HUMA 1301, 1305, 1311, 2319, 2323, MUSI 1306, 1310,

PHIL 1301, 1304, 2306, 2307, 2316, World Languages (ARAB 1411, 1412, CHIN 1411, 1412, FREN 1411, 1412, GERM 1411, 1412, JAPN 1411, 1412, KORE 1411, 1412, SPAN 1411, 1412).

<sup>C</sup> General Education: May choose from – ANTH 2301 (with or without 2101 = lab), 2302, 2346, 2351, ARTS 1301, 1303, 1304, ASTR 1303, 1304, 1403, 1404, BIOL 1308, 1309, 1322, 1406, 1407, (2301, 2302 – restricted to Engineering, Science, and Health Sciences majors), CHEM 1305, 1405, 1411, 1412, COMM 2366, COSC 1436, DANC 2303, DRAM 1310, 2316, 2366, ECON 1301, 2301, 2302, EDUC 1300, ENGL 2322, 2323, 2327, 2328, 2332, 2333, 2342, 2343, 2351, GEOG 1301, 1302, 1303, GEOL 1305, 1345, 1347, 1403, 1404, GOVT 2305, 2306, HIST 1301, 1302, 2311, 2312, 2321, 2322, 2301, 2327, 2328, 2381, HUMA 1301, 1305, 1311, 2319, 2323, MATH 1314, 1316, 1324, 1325, 1332, 1342, 1350, 2318, 2320, 2412, 2413, 2414, 2415, MUSI 1306, 1310, PHIL 1301, 1304, 2306, 2307, 2316, PHYS 1305, 1401, 1402, 2325 (with or without 2125 = lab), 2326 (with or without 2126 = lab), PSYC 2301, 2314, 2316, 2317, 2319, SOCI 1301, 1306, 2301, 2336, TECA 1354, World Languages (ARAB 1411, 1412, CHIN 1411, 1412, FREN 1411, 1412, GERM 1411, 1412, JAPN 1411, 1412, KORE 1411, 1412, SPAN 1411, 1412).

## Logistics & Global Supply Chain Management

The Logistics and Global Supply Chain Management certificate provides students with the knowledge and abilities to apply individual technical skills for an entry-level position. All courses in the certificate apply to the AAS in Logistics and Global Supply Chain Management.

### CERTIFICATE LEVEL I

#### FIRST YEAR

First Semester		Credits
LMGT 1319	Introduction to Business Logistics	3
IBUS 1301	Principles of Exports	3
LMGT 1321	Introduction to Materials Handling	3
IBUS 1341	Global Supply Chain Management	3
<b>Semester Total</b>		<b>12</b>

Second Semester		Credits
LMGT 1323	Domestic and International Transportation Management	3
LMGT 1325	Warehouse and Distribution Center Management	3
IBUS 1302	Principles of Imports	3
BMGT 1313	Principles of Purchasing	3
LMGT 1193	Special Topics: GLA Exam Prep #	1
<b>Semester Total</b>		<b>13</b>
<b>Program Total</b>		<b>25</b>

# Capstone Course

# Business

## Logistics & Global Supply Chain Management Specialist

The Logistics and Global Supply Chain Management certificate provides students with the knowledge and abilities to apply individual technical skills for an entry-level position. All courses in the certificate apply to the AAS in Logistics and Global Supply Chain Management.

### CERTIFICATE LEVEL I

#### FIRST YEAR

##### First Semester

	<b>Credits</b>
LMGT 1319 Introduction to Business Logistics	3
IBUS 1301 Principles of Exports	3
<b>Semester Total</b>	<b>6</b>

##### Second Semester

	<b>Credits</b>
LMGT 1323 Domestic and International Transportation Management	3
LMGT 1325 Warehouse and Distribution Center Management	3
IBUS 1302 Principles of Imports	3
LMGT 1193 Special Topics: GLA Exam Prep #	1
<b>Semester Total</b>	<b>10</b>
<b>Program Total</b>	<b>16</b>

# Capstone Course

## Maritime Transportation Logistics Specialization

The Maritime certificate provides students with specialized skills needed for an entry level position in the maritime logistic industry.

### AAS

TSI testing is required prior to first enrollment.

#### FIRST YEAR

##### First Semester

	<b>Credits</b>
EDUC 1300 Learning Framework <sup>A</sup>	3
LMGT 1319 Introduction to Business Logistics	3
ENGL 1301 Composition I	3
MATH 1324 Mathematics for Business & Social Sciences	3
IBUS 1341 Global Supply Chain Management	3
<b>Semester Total</b>	<b>15</b>

##### Second Semester

	<b>Credits</b>
LMGT 1170 Certified Logistics Assistant	1
LMGT 1271 Certified Logistics Technician	2
ETWR 1302 Introduction to Technical Writing OR	3

ENGL 2311	Technical & Business Writing	3
ECON 2302	Principles of Microeconomics	3
XXXX #3##	Humanities/Fine Arts Elective <sup>B</sup>	3
IBUS 1301	Principles of Exports	3
<b>Semester Total</b>		<b>15</b>

#### SECOND YEAR

##### First Semester

	<b>Credits</b>	
IBUS 2335	International Business Law	3
OSHT 1301	Introduction to Safety and Health	3
LMGT 1345	Economics of Transportation and Distribution	3
IBUS 1302	Principles of Imports	3
LMGT 1323	Domestic and International Transportation Mgmt	3
<b>Semester Total</b>		<b>15</b>

##### Second Semester

	<b>Credits</b>	
LMGT 1325	Warehouse and Distribution Center Management	3
LMGT 2389	Internship: Logistics and Materials Management #	3
MART 1370	Introduction to Maritime Shipping	3
XXXX #3##	General Education Elective	3
LMGT 1370	Equipment Operation	3
<b>Semester Total</b>		<b>15</b>
<b>Program Total</b>		<b>60</b>

# Capstone Course

<sup>A</sup> Student Success Course: Students are required to complete EDUC 1300 within their first 12 semester credit hours of instruction. Students enrolling at HCC with 12 or more hours completed should consult with an academic advisor to select an appropriate course substitution.

<sup>B</sup> Humanities/Fine Arts: May choose from – ARTS 1301, 1303, 1304, COMM 2366, DANC 2303, DRAM 1310, 2316, 2366, ENGL 2322, 2323, 2327, 2328, 2332, 2333, 2342, 2343, 2351, HIST 1301, 1302, 2311, 2312, 2321, 2322, 2301, 2327, 2328, 2381, HUMA 1301, 1305, 1311, 2319, 2323, MUSI 1306, 1310, PHIL 1301, 1304, 2306, 2307, 2316, World Languages (ARAB 1411, 1412, CHIN 1411, 1412, FREN 1411, 1412, GERM 1411, 1412, JAPN 1411, 1412, KORE 1411, 1412, SPAN 1411, 1412).

<sup>C</sup> General Education: May choose from – ANTH 2301 (with or without 2101 = lab), 2302, 2346, 2351, ARTS 1301, 1303, 1304, ASTR 1303, 1304, 1403, 1404, BIOL 1308, 1309, 1322, 1406, 1407, (2301, 2302 – restricted to Engineering, Science, and Health Sciences majors), CHEM 1305, 1405, 1411, 1412, COMM 2366, COSC 1436, DANC 2303, DRAM 1310, 2316, 2366, ECON 1301, 2301, 2302, EDUC 1300, ENGL 2322, 2323, 2327, 2328, 2332, 2333, 2342, 2343, 2351, GEOG 1301, 1302, 1303, GEOL 1305, 1345, 1347, 1403, 1404, GOVT 2305, 2306, HIST 1301, 1302, 2311, 2312, 2321, 2322, 2301, 2327, 2328, 2381, HUMA 1301, 1305, 1311, 2319, 2323, MATH 1314, 1316, 1324, 1325, 1332, 1342, 1350, 2318, 2320, 2412, 2413, 2414, 2415, MUSI 1306, 1310, PHIL 1301, 1304, 2306, 2307, 2316, PHYS 1305, 1401, 1402, 2325 (with or without 2125 = lab), 2326 (with or without 2126 = lab), PSYC 2301, 2314, 2316, 2317, 2319, SOCI 1301, 1306, 2301, 2336, TECA 1354, World Languages (ARAB 1411, 1412, CHIN 1411, 1412, FREN 1411, 1412, GERM 1411, 1412, JAPN 1411, 1412, KORE 1411, 1412, SPAN 1411, 1412).

# Business

## Maritime Logistics Specialization

The Maritime certificate provides students with specialized skills needed for an entry level position in the maritime logistics industry.

### CERTIFICATE LEVEL I

<b>First Semester</b>			<b>Credits</b>
MART 1370	Introduction to Maritime Shipping .....		3
LMGT 1170	Certified Logistics Associate .....		1
OSHT 1301	Introduction to Safety and Health.....		3
<b>Semester Total</b>			<b>7</b>
LMGT 1370	Equipment Operation		3
LMGT 1271	Certified Logistics Technician Certification		2
LMGT 1325	Warehouse and Distribution Center Management #		3
<b>Semester Total</b>			<b>8</b>
<b>Program Total</b>			<b>15</b>

# Capstone Course

## BUSINESS TECHNOLOGY

The Business Technology curricula are designed to provide students an opportunity to develop the knowledge, skills, and abilities required for assuming administrative assistant and other office positions in today's competitive workplace. The curricula are competency-based and organized to teach industry-driven educational outcomes.

All courses in the Business Technology certificate programs apply toward the AAS in Business Technology. The Business Technology program offers courses that qualify students for the (MOS) Microsoft Office Specialist certification. Please visit the MOS website: [www.certipoint.com/officespecialist](http://www.certipoint.com/officespecialist) for more information.

Students who hold Certified Administrative Professional or Certified Professional Secretary credentials are granted 15 semester credit hours for the following courses: POFT 1370, (Introduction to Office Technology); POFT 2301, Intermediate Keyboarding; ACNT 1303, Introduction to Accounting I; POFT 1325, Business Math and Machine Applications; POFT 2331, Administrative Systems.

To be granted the 15 semester credit hours, the applicant must request that the certifying agency provide the College with proof that the applicant has passed all sections of the certification exam.

The Texas Higher Education Coordinating Board (THECB) allows students to earn only one **AAS** in Business Technology. Students may choose from one of the following

four specializations: General Office Administration, Microsoft Office Technology, Legal Office Assistant, or Medical Office Specialist.

Likewise, the Texas Higher Education Coordinating Board (THECB) allows students to earn only one **Certificate** in Business Technology. Students may choose from one of the following six specializations: Bilingual Business Technology, General Office Administration, Human Resources/PeopleSoft, Microsoft Office Technology, Legal Office Assistant, or Medical Office Specialist.

In addition, please note that a student may only earn one Occupational Skills Award (OSA) per academic year.

### Program Outcomes

Students will be able to

- Read, listen, speak, and write proficiently.
- Apply keyboarding and document processing skills to specific office applications.
- Use appropriate tools and processes such as records management, accounting fundamentals, and software applications in word processing, spreadsheet, database, and presentations to manage information.
- Apply organizational skills to the management of projects, daily schedules, multiple tasks, and unexpected interruptions.

For more information call 713.718.7807 or e-mail [willie.caldwell@hccs.edu](mailto:willie.caldwell@hccs.edu).

## General Office Administration Specialization

### AAS

*TSI testing is required prior to first enrollment.*

#### FIRST YEAR

<b>First Semester</b>			<b>Credits</b>
EDUC 1300	Learning Framework <sup>A</sup>		3
POFI 1301	Computer Applications I		3
POFT 1329	Beginning Keyboarding		3
POFT 1370	Introduction to Office Technology		3
POFT 1325	Business Math Using Technology		3
<b>Semester Total</b>			<b>15</b>
<b>Second Semester</b>			<b>Credits</b>
ENGL 1301	Composition I		3
POFT 1319	Records and Information Management I		3
XXXX #3##	Humanities/Fine Arts Elective <sup>C</sup>		3
POFT 2301	Intermediate Keyboarding		3
POFI 1341	Computer Applications II		3
<b>Semester Total</b>			<b>15</b>

# Business

## SECOND YEAR

### First Semester Credits

POFT 1345	Shorthand/Notetaking I	3
BMGT 1370	Introduction to HR/ PeopleSoft Applications	3
BMGT 1325	Office Management	3
POFI 1349	Spreadsheets	3
POFT 1380	Cooperative Education I - Administrative Assistant and Secretarial Science, General	3

**Semester Total 15**

### Second Semester Credits

POFT 2331	Administrative Project Solutions <sup>#</sup>	3
POFT 2380	Cooperative Education II - Administrative Assistant and Secretarial Science, General	3
XXXX #3##	Math/Natural Science Elective <sup>B</sup>	3
PSYC 2301	Introduction to Psychology	3
ECON 1301	Introduction to Economics	3

**Semester Total 15**

**Program Total 60**

<sup>#</sup> Capstone Course

<sup>A</sup> Student Success Course: Students are required to complete EDUC 1300 within their first 12 semester credit hours of instruction. Students enrolling at HCC with 12 or more hours completed should consult with an academic advisor to select an appropriate course substitution.

<sup>B</sup> Math/Natural Science: May choose from – ANTH 2301 (with or without 2101 = lab), 2302, ASTR 1303, 1304, 1403, 1404, BIOL 1308, 1309, 1322, 1406, 1407, (2301, 2302 – restricted to Engineering, Science, and Health Sciences majors), CHEM 1305, 1405, 1411, 1412, COSC 1436, GEOG 1301, GEOL 1305, 1345, 1347, 1403, 1404, MATH 1314, 1316, 1324, 1325, 1332, 1342, 1350, 2318, 2320, 2412, 2413, 2414, 2415, PHYS 1305, 1401, 1402, 2325 (with or without 2125= lab), 2326 (with or without 2126 = lab), PSYC 2317.

<sup>C</sup> Humanities/Fine Arts: May choose from – ARTS 1301, 1303, 1304, COMM 2366, DANC 2303, DRAM 1310, 2316, 2366, ENGL 2322, 2323, 2327, 2328, 2332, 2333, 2342, 2343, 2351, HIST 1301, 1302, 2311, 2312, 2321, 2322, 2301, 2327, 2328, 2381, HUMA 1301, 1305, 1311, 2319, 2323, MUSI 1306, 1310, PHIL 1301, 1304, 2306, 2307, 2316, World Languages (ARAB 1411, 1412, CHIN 1411, 1412, FREN 1411, 1412, GERM 1411, 1412, JAPN 1411, 1412, KORE 1411, 1412, SPAN 1411, 1412).

## General Office Administration Specialization

### CERTIFICATE LEVEL I

#### FIRST YEAR

### First Semester Credits

POFI 1301	Computer Applications I	3
POFT 1325	Business Math Using Technology	3
POFT 1329	Beginning Keyboarding	3

**Semester Total 9**

### Second Semester Credits

POFT 1349	Records and Information Management I	3
POFI 1341	Computer Applications II	3
POFT 1370	Introduction to Office Technology	3
POFT 2301	Intermediate Keyboarding <sup>#</sup>	3

**Semester Total 12**

**Program Total 21**

<sup>#</sup> Capstone Course

## Bilingual Business Technology

### CERTIFICATE LEVEL II

#### First Semester Credits

EDUC 1300	Learning Framework <sup>A</sup>	3
POFI 1301	Computer Applications I	3
POFT 1370	Introduction to Office Technology	3
POFT 1329	Beginning Keyboarding	3
XXXX #4##	Beginning Foreign Language I	4

**Semester Total 16**

#### Second Semester Credits

ENGL 1301	Composition I	3
POFI 1341	Computer Applications II	3
XXXX #4##	Beginning Foreign Language II	4
BMGT 1325	Office Management	3
POFT 2331	Administrative Systems	3

**Semester Total 16**

#### Third Semester Credits

BMGT 1325	Office Management	3
POFT 2331	Administrative Project Solutions <sup>#</sup>	3

**Semester Total 6**

**Program Total 38**

<sup>#</sup> Capstone Course

# Business

## Human Resources/PeopleSoft Specialization

### CERTIFICATE LEVEL I

#### First Semester Credits

POFI 1301	Computer Applications I	3
BMGT 1370	Introduction to HR/PeopleSoft Applications	3
POFT 1329	Beginning Keyboarding	3

**Semester Total 9**

#### Second Semester Credits

POFI 1341	Computer Applications II	3
BMGT 1371	Intermediate HR/PeopleSoft Applications	3
BMGT 2305	Advanced Communications in Management/PeopleSoft Applications	3

**Semester Total 9**

#### Third Semester Credits

BMGT 2331	Principles of Quality Management/PeopleSoft Applications	3
BMGT 2310	Financial Management/PeopleSoft Applications	3
POFT 2331	Administrative Project Solutions #	3

**Semester Total 9**

**Program Total 27**

# Capstone Course

## Microsoft Office Technology Specialization

### AAS

TSI testing is required prior to first enrollment.

#### FIRST YEAR

#### First Semester Credits

EDUC 1300	Learning Framework <sup>A</sup>	3
POFI 1301	Computer Applications I	3
POFT 1329	Beginning Keyboarding	3
POFI 1349	Spreadsheets	3
POFT 1325	Business Math Using Technology	3

**Semester Total 15**

#### Second Semester Credits

POFI 1341	Computer Applications II	3
POFI 2331	Desktop Publishing	3
POFT 2301	Intermediate Keyboarding	3
POFT 1370	Introduction to Office Technology	3
BMGT 1325	Office Management	3

**Semester Total 15**

## SECOND YEAR

#### First Semester Credits

POFT 1380	Cooperative Education I - Administrative Assistant and Secretarial Services, General	3
XXXX #3##	Humanities/Fine Arts Elective <sup>C</sup>	3
ENGL 1301	Composition I	3
BMGT 1370	Introduction to HR/ PeopleSoft Applications	3
ECON 1301	Introduction to Economics	3

**Semester Total 15**

#### Second Semester Credits

BMGT 1371	Intermediate HR/ PeopleSoft Applications	3
POFT 2331	Administrative Project Solutions #	3
PSYC 2301	Introduction to Psychology	3
XXXX #3##	Math/Natural Science Elective <sup>B</sup>	3
POFT 2380	Cooperative Education II - Administrative Assistant and Secretarial Services, General	3

**Semester Total 15**

**Program Total 60**

# Capstone Course

<sup>A</sup> Student Success Course: Students are required to complete EDUC 1300 within their first 12 semester credit hours of instruction. Students enrolling at HCC with 12 or more hours completed should consult with an academic advisor to select an appropriate course substitution.

<sup>B</sup> Math/Natural Science: May choose from – ANTH 2301 (with or without 2101 = lab), 2302, ASTR 1303, 1304, 1403, 1404, BIOL 1308, 1309, 1322, 1406, 1407, (2301, 2302 – restricted to Engineering, Science, and Health Sciences majors), CHEM 1305, 1405, 1411, 1412, COSC 1436, GEOG 1301, GEOL 1305, 1345, 1347, 1403, 1404, MATH 1314, 1316, 1324, 1325, 1332, 1342, 1350, 2318, 2320, 2412, 2413, 2414, 2415, PHYS 1305, 1401, 1402, 2325 (with or without 2125= lab), 2326 (with or without 2126 = lab), PSYC 2317.

<sup>C</sup> Humanities/Fine Arts: May choose from – ARTS 1301, 1303, 1304, COMM 2366, DANC 2303, DRAM 1310, 2316, 2366, ENGL 2322, 2323, 2327, 2328, 2332, 2333, 2342, 2343, 2351, HIST 1301, 1302, 2311, 2312, 2321, 2322, 2301, 2327, 2328, 2381, HUMA 1301, 1305, 1311, 2319, 2323, MUSI 1306, 1310, PHIL 1301, 1304, 2306, 2307, 2316, World Languages (ARAB 1411, 1412, CHIN 1411, 1412, FREN 1411, 1412, GERM 1411, 1412, JAPN 1411, 1412, KORE 1411, 1412, SPAN 1411, 1412).

## Microsoft Office Technology Specialization

### CERTIFICATE LEVEL I

#### First Semester Credits

POFI 1301	Computer Applications I	3
POFI 1349	Spreadsheets	3
POFT 1329	Beginning Keyboarding	3

**Semester Total 9**

# Business

## Second Semester

POFI 1341	Computer Applications II	Credits	3
POFT 1325	Business Math Using Technology		3
POFI 2331	Desktop Publishing <sup>#</sup>		3
<b>Semester Total</b>			<b>9</b>
<b>Program Total</b>			<b>18</b>

<sup>#</sup> Capstone Course

## Legal Office Assistant Specialization

### AAS

*TSI testing is required prior to first enrollment.*

#### FIRST YEAR

##### First Semester

EDUC 1300	Learning Framework <sup>A</sup>	Credits	3
POFI 1301	Computer Applications I		3
POFL 1305	Legal Terminology		3
POFT 1345	Shorthand/Notetaking I		3
POFT 1329	Beginning Keyboarding		3
<b>Semester Total</b>			<b>15</b>

##### Second Semester

POFT 2301	Intermediate Keyboarding	Credits	3
POFL 2305	Introduction to Legal Research		3
POFT 1319	Records and Information Management I		3
POFT 1370	Introduction to Office Technology		3
XXXX #3##	Humanities/Fine Arts Elective <sup>C</sup>		3
<b>Semester Total</b>			<b>15</b>

#### SECOND YEAR

##### First Semester

ENGL 1301	Composition I	Credits	3
POFT 1380	Cooperative Education I - Administrative Assistant and Secretarial Services, General		3
POFL 1359	Legal Transcription		3
BMGT 1325	Office Management		3
ECON 1301	Introduction to Economics		3
<b>Semester Total</b>			<b>15</b>

##### Second Semester

POFT 2380	Cooperative Education II - Administrative Assistant and Secretarial Services, General	Credits	3
PSYC 2301	Introduction to Psychology		3
XXXX #3##	Math/Natural Science Elective <sup>B</sup>		3
BMGT 1370	Introduction to HR/ PeopleSoft Applications		3
POFT 2331	Administrative Project Solutions <sup>#</sup>		3
<b>Semester Total</b>			<b>15</b>
<b>Program Total</b>			<b>60</b>

<sup>#</sup> Capstone Course

<sup>A</sup> *Student Success Course:* Students are required to complete *EDUC 1300* within their first 12 semester credit hours of instruction. Students enrolling at HCC with 12 or more hours completed should consult with an academic advisor to select an appropriate course substitution.

<sup>B</sup> *Math/Natural Science:* May choose from – ANTH 2301 (with or without 2101 = lab), 2302, ASTR 1303, 1304, 1403, 1404, BIOL 1308, 1309, 1322, 1406, 1407, (2301, 2302 – restricted to Engineering, Science, and Health Sciences majors), CHEM 1305, 1405, 1411, 1412, COSC 1436, GEOG 1301, GEOL 1305, 1345, 1347, 1403, 1404, MATH 1314, 1316, 1324, 1325, 1332, 1342, 1350, 2318, 2320, 2412, 2413, 2414, 2415, PHYS 1305, 1401, 1402, 2325 (with or without 2125 = lab), 2326 (with or without 2126 = lab), PSYC 2317.

<sup>C</sup> *Humanities/Fine Arts:* May choose from – ARTS 1301, 1303, 1304, COMM 2366, DANC 2303, DRAM 1310, 2316, 2366, ENGL 2322, 2323, 2327, 2328, 2332, 2333, 2342, 2343, 2351, HIST 1301, 1302, 2311, 2312, 2321, 2322, 2301, 2327, 2328, 2381, HUMA 1301, 1305, 1311, 2319, 2323, MUSI 1306, 1310, PHIL 1301, 1304, 2306, 2307, 2316, World Languages (ARAB 1411, 1412, CHIN 1411, 1412, FREN 1411, 1412, GERM 1411, 1412, JAPN 1411, 1412, KORE 1411, 1412, SPAN 1411, 1412).

## Legal Office Assistant Specialization

### CERTIFICATE LEVEL I

#### First Semester

POFI 1301	Computer Applications I	Credits	3
POFL 1305	Legal Terminology		3
POFT 1345	Shorthand/Notetaking		3
POFL 1359	Legal Transcription		3

**Semester Total** 12

#### Second Semester

BMGT 1370	Introduction to HR/ PeopleSoft Applications	Credits	3
POFL 2305	Introduction to Legal Research		3
POFT 2301	Intermediate Keyboarding <sup>#</sup>		3

**Semester Total** 9

**Program Total** 21

<sup>#</sup> Capstone Course

# Business

## Medical Office Specialist Specialization

### AAS

TSI testing is required prior to first enrollment.

#### FIRST YEAR

<b>First Semester</b>		<b>Credits</b>
EDUC 1300	Learning Framework <sup>A</sup>	3
POFI 1301	Computer Applications I.....	3
POFM 1300	Basic Medical Coding.....	3
POFT 1329	Beginning Keyboarding.....	3
MDCA 1313	Medical Terminology I.....	3
<b>Semester Total</b>		<b>15</b>

<b>Second Semester</b>		<b>Credits</b>
MRMT 1307	Medical Transcription I.....	3
POFT 2301	Intermediate Keyboarding.....	3
POFM 2333	Medical Document Production (Coding II).....	3
POFT 2331	Administrative Project Solutions #.....	3
POFI 1341	Computer Applications II.....	3
<b>Semester Total</b>		<b>15</b>

#### SECOND YEAR

<b>First Semester</b>		<b>Credits</b>
POFT 1370	Introduction to Office Technology.....	3
POFT 1380	Cooperative Education I - Administrative Assistant and Secretarial Services, General.....	3
BMGT 1325	Office Management.....	3
POFT 1319	Records and Information Management I.....	3
PSYC 2301	Introduction to Psychology.....	3
<b>Semester Total</b>		<b>15</b>

<b>Second Semester</b>		<b>Credits</b>
ENGL 1301	Composition I.....	3
BIOL 1308	Introductory Biology I.....	3
XXXX #3##	Humanities/Fine Arts Elective <sup>B</sup> .....	3
POFT 2380	Cooperative Education II Administrative Assistant and Secretarial Services, General.....	3
ECON 1301	Introduction to Economics.....	3
<b>Semester Total</b>		<b>15</b>
<b>Program Total</b>		<b>60</b>

# Capstone Course

<sup>A</sup> *Student Success Course: Students are required to complete EDUC 1300 within their first 12 semester credit hours of instruction. Students enrolling at HCC with 12 or more hours completed should consult with an academic advisor to select an appropriate course substitution.*

<sup>B</sup> *Humanities/Fine Arts: May choose from – ARTS 1301, 1303, 1304, COMM 2366, DANC 2303, DRAM 1310, 2316, 2366, ENGL 2322, 2323, 2327, 2328, 2332, 2333, 2342, 2343, 2351, HIST 1301, 1302, 2311, 2312, 2321, 2322, 2301, 2327, 2328, 2381, HUMA 1301, 1305, 1311, 2319, 2323, MUSI 1306, 1310, PHIL 1301, 1304, 2306, 2307, 2316, World Languages (ARAB 1411, 1412, CHIN 1411, 1412, FREN 1411, 1412, GERM 1411, 1412, JAPN 1411, 1412, KORE 1411, 1412, SPAN 1411, 1412).*

## Medical Coding/Transcription Specialist Specialization\*\*\*

### CERTIFICATE LEVEL I

<b>First Semester</b>		<b>Credits</b>
MDCA 1313	Medical Terminology	3
POFI 1301	Computer Applications I	3
POFT 2301	Intermediate Keyboarding	3
POFM 1300	Basic Medical Coding	3
<b>Semester Total</b>		<b>12</b>

<b>Second Semester</b>		<b>Credits</b>
MRMT 1307	Medical Transcription I	3
POFM 2333	Medical Document Production (Coding II)	3
POFT 2331	Administrative Project Solutions #	3
<b>Semester Total</b>		<b>9</b>
<b>Program Total</b>		<b>21</b>

# Capstone Course

\*\*\*Complete certificate also offered through Distance Education.

## BANKING/FINANCE

The AAS in Banking/Finance provides training in the financial services industry. The HCC School of Finance is fortunate to have a long standing relationship (over 37 years) with the American Bankers Association (ABA), the educational branch of the American Bankers' Association, located at 1120 Connecticut Avenue, N.W., Washington, DC 20036, 512.472.8388. This link is provided by the Texas Bankers' Association (TBA), which is the local training provider for the ABA and helps with assistance and placement within the finance industry.

# Business

The following courses are given simultaneous credit with the American Banker's Association: BNKG 1303 (Principles of Bank Operations), BNKG 1340 (Money and Banking), BNKG 1345 (Consumer Lending), BNKG 1349 (Commercial Lending), BNKG 1351 (Selling Bank Products and Services), BNKG 1353 (Mortgage Lending), BNKG 1356 (Analyzing Financial Statements), BUSG 1303 (Principles of Finance), and IBUS 2339 (International Banking). Other college courses taken within the Finance - Banking program are given transfer credit toward American Banker's Association (ABA) diplomas at their discretion.

Although the major emphasis of the program is on commercial banking, the AAS degree may be used in a broad range of financial service areas. Upon consultation with the Finance-Banking department, students may tailor their curriculum to fit the type of financial business desired.

In addition, please note that a student may only earn one Occupational Skills Award (OSA) per academic year.

## Program Outcomes

Students will be able to

- Analyze the functions of the financial intermediary system including its methods of generating income.
- Demonstrate knowledge of the Federal Reserve's purpose, structure, and relationship to monetary policy.
- Apply the concepts of Financial Business Ethics.
- Organize and formulate financial data into statements and utilize them to make financial decisions.

For more information call 713.718.5404 or e-mail earl.smith@hccs.edu.

## Banking/Finance

### AAS

TSI testing is required prior to first enrollment.

### FIRST YEAR

First Semester		Credits
EDUC 1300	Learning Framework <sup>A</sup>	3
BNKG 1303	Principles of Bank Operation	3
BNKG 1351	Selling Bank/Financial Products and Services	3
BNKG 1340	Money and Financial Markets	3
ACCT 2301	Principles of Financial Accounting I	3
<b>Semester Total</b>		<b>15</b>

Second Semester		Credits
BNKG 1356	Analyzing Financial Statements I	3
IBUS 2339	International Banking and Trade Finance	3
BNKG 1345	Consumer Lending	3
BUSG 1301	Introduction to Business	3
BNKG 1380	Cooperative Education I - Banking and Financial Support Services	3
<b>Semester Total</b>		<b>15</b>

### SECOND YEAR

First Semester		Credits
BUSG 2305	Business Law/Contracts	3
XXXX #3##	Humanities/Fine Arts Elective <sup>C</sup>	3
BUSG 1303	Principles of Finance	3
BMGT 1327	Principles of Management	3
XXXX #3##	Math/Natural Science Elective <sup>B</sup>	3
<b>Semester Total</b>		<b>15</b>

Second Semester		Credits
XXXX #3##	Social/Behavioral Sciences Elective <sup>D</sup>	3
ECON 2302	Principles of Economics (Micro)	3
BNKG 2374	Financial Business Administration #	3
ENGL 1301	Composition I	3
BNKG 2381	Cooperative Education II - Banking and Financial Support Services	3
<b>Semester Total</b>		<b>15</b>
<b>Program Total</b>		<b>60</b>

# Capstone Course

<sup>A</sup> Student Success Course: Students are required to complete EDUC 1300 within their first 12 semester credit hours of instruction. Students enrolling at HCC with 12 or more hours completed should consult with an academic advisor to select an appropriate course substitution.

<sup>B</sup> Math/Natural Science: May choose from – ANTH 2301 (with or without 2101 = lab), 2302, ASTR 1303, 1304, 1403, 1404, BIOL 1308, 1309, 1322, 1406, 1407, (2301, 2302 – restricted to Engineering, Science, and Health Sciences majors), CHEM 1305, 1405, 1411, 1412, COSC 1436, GEOG 1301, GEOL 1305, 1345, 1347, 1403, 1404, MATH 1314, 1316, 1324, 1325, 1332, 1342, 1350, 2318, 2320, 2412, 2413, 2414, 2415, PHYS 1305, 1401, 1402, 2325 (with or without 2125 = lab), 2326 (with or without 2126 = lab), PSYC 2317.

<sup>C</sup> Humanities/Fine Arts: May choose from – ARTS 1301, 1303, 1304, COMM 2366, DANC 2303, DRAM 1310, 2316, 2366, ENGL 2322, 2323, 2327, 2328, 2332, 2333, 2342, 2343, 2351, HIST 1301, 1302, 2311, 2312, 2321, 2322, 2301, 2327, 2328, 2381, HUMA 1301, 1305, 1311, 2319, 2323, MUSI 1306, 1310, PHIL 1301, 1304, 2306, 2307, 2316, World Languages (ARAB 1411, 1412, CHIN 1411, 1412, FREN 1411, 1412, GERM 1411, 1412, JAPN 1411, 1412, KORE 1411, 1412, SPAN 1411, 1412).

<sup>D</sup> Social/Behavioral Sciences: May choose from – ANTH 2346, 2351, ECON 1301, 2301, 2302, EDUC 1300, GEOG 1302, 1303, GOVT 2305, 2306, PSYC 2301, 2314, 2316, 2319, SOCI 1301, 1306, 2301, 2336, TECA 1354.

# Business

## Financial Lending

The Financial Lending certificate is designed to provide students with a solid foundation for a career in the financial lending industry. For those students who wish to pursue a four-year degree, both the certificate and the AAS can be tailored to their best advantage. Most courses with the BNKG prefix are accredited and earn dual credit with the American Bankers Association (ABA).

For more information call 713.718.5404 or e-mail earl.smith@hccs.edu.

### CERTIFICATE LEVEL I

<b>First Semester</b>		<b>Credits</b>
BNKG 1303	Principles of Bank Operation	3
BNKG 1351	Selling Bank/Financial Products and Services	3
BNKG 1340	Money and Banking	3
<b>Semester Total</b>		<b>9</b>

<b>Second Semester</b>		<b>Credits</b>
BNKG 1356	Analyzing Financial Statements I	3
IBUS 2339	International Banking and Trade Finance	3
BNKG 1345	Consumer Lending	3
BNKG 1349	Commercial Lending	3
BNKG 2380	Cooperative Education I-Banking and Financial Support Services #	3
<b>Semester Total</b>		<b>15</b>
<b>Program Total</b>		<b>24</b>

# Capstone Course

## Financial Operations

The Financial Operations certificate is designed to provide students with a solid foundation for a career in the retail banking industry. For those students who wish to pursue a four-year degree, both the certificate and the AAS can be tailored to their best advantage. Most courses with the BNKG prefix are accredited and earn dual credit with the American Bankers Association (ABA).

For more information call 713.718.5404 or e-mail earl.smith@hccs.edu.

### CERTIFICATE LEVEL I

<b>First Semester</b>		<b>Credits</b>
BNKG 1303	Principles of Bank Operation	3
BNKG 1351	Selling Bank/Financial Products and Services	3
BNKG 1340	Money and Banking	3
<b>Semester Total</b>		<b>9</b>

## Second Semester

		<b>Credits</b>
BUSG 1303	Principles of Finance	3
ETWR 1302	Introduction to Technical Writing (or higher)	3
BNKG 2380	Cooperative Education I-Banking and Financial Support Services #	3
<b>Semester Total</b>		<b>9</b>
<b>Program Total</b>		<b>18</b>

# Capstone Course

## Teller Training

The entry-level Teller Training Occupational Skills Award (OSA) prepares students for employment in a financial institution as a teller. Because of multiple start dates within a semester, students should contact the office or consult the schedule of courses for specific program start dates.

For more information call 713.718.5404 or e-mail earl.smith@hccs.edu.

### OCCUPATIONAL SKILLS AWARD

(Occupational Skills Award)

<b>First Semester</b>		<b>Credits</b>
BNKG 1305	Teller Training	3
BNKG 1373	Teller Training Lab	3
BNKG 1351	Selling Bank/Financial Products and Services	3
<b>Semester Total</b>		<b>9</b>
<b>Program Total</b>		<b>9</b>

## INTERNATIONAL BUSINESS

The International Business program provides students with the knowledge and abilities to apply individual technical skills necessary to pursue an entry-level job in areas such as international marketing, international sales/broker, import/export compliance, international management, supply chain management, freight forwarding and logistics.

These three International Business programs prepare students to take the International NASBITE Certified Global Business Professional (CGBP) exam. The International NASBITE Certified Global Business Professional (CGBP) certification confirms knowledge in international trade and assures that employees are able to practice global business at the professional level required in today's competitive environment. It certifies that a candidate is competent in the following four primary domains: Global Business Management, Global Marketing, Supply Chain Management and Trade Finance. The credential also helps individuals diversify their skills in global commerce

# Business

and assure they understand a broad range of topics rather than just the specific field within international trade that they have experienced.

In addition, please note that a student may only earn one Occupational Skills Award (OSA) per academic year.

## Program Outcomes

Students will be able to

- Identify global issues and trends.
- Identify current global legal issues and international trade management issues.
- Analyze various sources of international business research.
- Demonstrate knowledge of global and world geography.
- Analyze, evaluate, and synthesize information presented in source language to provide high quality translation and interpretation to target language through written and oral communication.

For more information call 713.718.6295 or e-mail [raven.davenport@hccs.edu](mailto:raven.davenport@hccs.edu).

## International Business

### AAS

TSI testing is required prior to first enrollment.

#### FIRST YEAR

##### First Semester

	<b>Credits</b>
EDUC 1300 Learning Framework <sup>A</sup> .....	3
ENGL 1301 Composition I.....	3
IBUS 1305 Introduction to International Business and Trade.....	3
IBUS 1354 International Marketing Management.....	3
BUSG 1301 Introduction to Business.....	3

**Semester Total 15**

##### Second Semester

	<b>Credits</b>
IBUS 1301 Principles of Exports.....	3
ECON 2302 Principles of Microeconomics.....	3
IBUS 1341 Global Supply Chain Management.....	3
BUSG 1307 Entrepreneurship and Economic Development.....	3
IBUS 1300 Global Logistics Management.....	3

**Semester Total 15**

#### SECOND YEAR

##### First Semester

	<b>Credits</b>
MATH 1324 Mathematics for Business & Social Sciences.....	3
IBUS 1370 Economic Geography.....	3
IBUS 1302 Principles of Imports.....	3

MRKG 2312 E-Commerce.....	3
XXXX #3## Humanities/Fine Arts Elective <sup>B</sup> .....	3

**Semester Total 15**

#### Second Semester

	<b>Credits</b>
IBUS 2335 International Business Law.....	3
IBUS 2280 Cooperative Education - International Business/Trade/Commerce OR	3
IBUS 1291 Special Topics in International Business.....	2
XXXX #3## General Education Elective <sup>C</sup> .....	3
IBUS 1191 Special Topics in International Business - Certified Global Business Professional Exam Preparation Course.....	1
IBUS 2339 International Banking and Finance OR	3
LMGT 1345 Economics of Transportation & Distribution.....	3
IBUS 2341 Intercultural Management <sup>#</sup> .....	3

**Semester Total 15**

**Program Total 60**

<sup>#</sup> Capstone Course

<sup>A</sup> Student Success Course: Students are required to complete EDUC 1300 within their first 12 semester credit hours of instruction. Students enrolling at HCC with 12 or more hours completed should consult with an academic advisor to select an appropriate course substitution.

<sup>B</sup> Humanities/Fine Arts: May choose from – ARTS 1301, 1303, 1304, COMM 2366, DANC 2303, DRAM 1310, 2316, 2366, ENGL 2322, 2323, 2327, 2328, 2332, 2333, 2342, 2343, 2351, HIST 1301, 1302, 2311, 2312, 2321, 2322, 2301, 2327, 2328, 2381, HUMA 1301, 1305, 1311, 2319, 2323, MUSI 1306, 1310, PHIL 1301, 1304, 2306, 2307, 2316, World Languages (ARAB 1411, 1412, CHIN 1411, 1412, FREN 1411, 1412, GERM 1411, 1412, JAPN 1411, 1412, KORE 1411, 1412, SPAN 1411, 1412).

<sup>C</sup> General Education: May choose from – ANTH 2301 (with or without 2101 = lab), 2302, 2346, 2351, ARTS 1301, 1303, 1304, ASTR 1303, 1304, 1403, 1404, BIOL 1308, 1309, 1322, 1406, 1407, (2301, 2302 – restricted to Engineering, Science, and Health Sciences majors), CHEM 1305, 1405, 1411, 1412, COMM 2366, COSC 1436, DANC 2303, DRAM 1310, 2316, 2366, ECON 1301, 2301, 2302, EDUC 1300, ENGL 2322, 2323, 2327, 2328, 2332, 2333, 2342, 2343, 2351, GEOG 1301, 1302, 1303, GEOL 1305, 1345, 1347, 1403, 1404, GOVT 2305, 2306, HIST 1301, 1302, 2311, 2312, 2321, 2322, 2301, 2327, 2328, 2381, HUMA 1301, 1305, 1311, 2319, 2323, MATH 1314, 1316, 1324, 1325, 1332, 1342, 1350, 2318, 2320, 2412, 2413, 2414, 2415, MUSI 1306, 1310, PHIL 1301, 1304, 2306, 2307, 2316, PHYS 1305, 1401, 1402, 2325 (with or without 2125 = lab), 2326 (with or without 2126 = lab), PSYC 2301, 2314, 2316, 2317, 2319, SOCI 1301, 1306, 2301, 2336, TECA 1354, World Languages (ARAB 1411, 1412, CHIN 1411, 1412, FREN 1411, 1412, GERM 1411, 1412, JAPN 1411, 1412, KORE 1411, 1412, SPAN 1411, 1412).

# Business

## International Business

The International Business certificate provides students with the knowledge and abilities to apply individual technical skills for an entry-level position in international business. All courses in this certificate apply to the AAS in International Business degree.

### CERTIFICATE LEVEL I

<b>First Semester</b>		<b>Credits</b>
IBUS 1305	Introduction to International Business and Trade.....	3
IBUS 1354	International Marketing Management .....	3
IBUS 1301	Principles of Exports .....	3
IBUS 1341	Global Supply Chain Management.....	3
<b>Semester Total</b>		<b>12</b>

<b>Second Semester</b>		<b>Credits</b>
IBUS 1302	Principles of Imports .....	3
IBUS 2335	International Business Law .....	3
IBUS 1191	Special Topics in International Business - Certified Global Business Professional Exam Preparation Course # .....	1
<b>Semester Total</b>		<b>7</b>
<b>Program Total</b>		<b>19</b>

# Capstone Course

## Global Exporting

Deactivation pending SACSCOC approval. Enrollment is closed to new students.

### CERTIFICATE LEVEL II

#### FIRST YEAR

<b>First Semester</b>		<b>Credits</b>
EDUC 1300	Learning Framework <sup>A</sup> .....	3
IBUS 1301	Principles of Exports .....	3
IBUS 1305	Introduction to International Business and Trade.....	3
IBUS 1354	International Marketing Management .....	3
IBUS 2335	International Business Law .....	3
<b>Semester Total</b>		<b>15</b>

<b>Second Semester</b>		<b>Credits</b>
IBUS 1302	Principles of Imports .....	3
IBUS 2341	Intercultural Management .....	3
IBUS 1341	Global Supply Chain Management .....	3
BUSG 1301	Introduction to Business.....	3
IBUS 1300	Global Logistics Management.....	3
<b>Semester Total</b>		<b>15</b>

#### Third Semester

		<b>Credits</b>
IBUS 1349	International E-Commerce Systems .....	3
IBUS 1191	Special Topics in International Business - Certified Global Business Professional Exam Preparation Course .....	1
IBUS 2280	Cooperative Education - International Business/Trade/Commerce OR .....	2
IBUS 1291	Special Topics in International Business # .....	2
<b>Semester Total</b>		<b>13</b>
<b>Program Total</b>		<b>43</b>

# Capstone Course

<sup>A</sup> Student Success Course: Students are required to complete EDUC 1300 within their first 12 semester credit hours of instruction. Students enrolling at HCC with 12 or more hours completed should consult with an academic advisor to select an appropriate course substitution.

## Translation and Interpretation

The Advanced Technical Certificate (ATC) Program in Translation and Interpretation provides the basic skills needed to become a translator or interpreter. Upon completion of this program, students will be eligible for translator/interpreter positions in various companies, or they will be able to start their own business as freelance translators.

Prerequisites: AA, AS, AAS, or Bachelor Degree.

### CERTIFICATE LEVEL II

#### FIRST YEAR

<b>First Semester</b>		<b>Credits</b>
EDUC 1300	Learning Framework <sup>A</sup> .....	3
TRAI 1371	Fundamentals of the Theory and Practice of Translation and Interpretation .....	3
TRAI 1271	Technology for Translation and Interpretation .....	2
TRAI 1272	Terminology Management and Research .....	2
TRAI 1372	Writing, Editing and Revising for Translation .....	3
TRAI 1373	Intercultural Communication .....	3
<b>Semester Total</b>		<b>16</b>

# Business

## Second Semester Credits

HITT 1305	Medical Terminology I	3
POFL 1305	Legal Terminology	3
TRAI 2271	Fundamentals of Specialized Written Translation (Sci-Tech)	2
TRAI 2277	Fundamentals of Specialized Written Translation (Legal)	2
TRAI 2278	Fundamentals of Specialized Written Translation (Medical)	2

**Semester Total 12**

## Third Semester Credits

TRAI 2274	Introduction to Interpreting (Consecutive and Sight)	2
TRAI 2275	Advanced Project in Translation	2
TRAI 2376	Internship - Translation & Interpretation #	3

**Semester Total 7**

**Program Total 35**

# Capstone Course

<sup>A</sup> Student Success Course: Students are required to complete EDUC 1300 within their first 12 semester credit hours of instruction. Students enrolling at HCC with 12 or more hours completed should consult with an academic advisor to select an appropriate course substitution.

## Certified Global Business Specialist

The International Business Certified Global Business Specialist OSA prepares students to sit for the Certified Global Business Professional (CGBP) credential exam. The CGBP designation is recognized internationally as a professional credential for people who work in all fields related to international trade. All courses in this award apply to the AAS in International Business degree.

## OCCUPATIONAL SKILLS AWARD

(Occupational Skills Award)

### First Semester Credits

IBUS 1305	Introduction to International Business and Trade	3
IBUS 1301	Principles of Exports	3
IBUS 1354	International Marketing Management	3
IBUS 1191	Special Topics in International Business - Certified Global Business Professional Exam Preparation Course	1

**Semester Total 10**

**Program Total 10**

## MARKETING

The AAS in Marketing provides students with the knowledge, skills, and abilities to pursue a career in marketing, marketing research, advertising, retailing or sales. The degree offers a wide spectrum of courses in all aspects of marketing including marketing services. The program is designed for anyone seeking entry-level employment in the field of Marketing.

### Program Outcomes

Students will be able to

- Identify the marketing mix components in relation to market segmentation.
- Explain the environmental factors which influence consumer and organization decision making process.
- Outline a marketing plan.
- Identify the elements of the communication process between buyers and sellers in business.
- Utilize marketing research techniques to implement competitive marketing decisions.

### Continuing Education Programs

Continuing Education certificates offer contact hours, not academic credit. One Continuing Education Unit, or CEU, is 10 contact hours of successful participation/completion in an organized continuing education experience under responsible sponsorship, capable direction and qualified instruction. CEUs are not substituted for college credit hours, but rather are a means of reporting continuing education activities. Transcripts listing CEU credits satisfactorily completed are available on request. CEUs are recognized internationally as a measure of substantial professional education and training.

For more information call 713.718.6295 or e-mail [raven.davenport@hccs.edu](mailto:raven.davenport@hccs.edu).

## Marketing - General

### AAS

TSI testing is required prior to first enrollment.

### FIRST YEAR

#### First Semester Credits

EDUC 1300	Learning Framework <sup>A</sup>	3
MRKG 1311	Principles of Marketing	3
MRKG 2372	Consumer Behavior	3
MRKG 2333	Principles of Selling	3
MRKG 2349	Advertising and Sales Promotion	3

**Semester Total 15**

# Business

## Second Semester

		Credits
MRKG 1391	Special Topics in Business Marketing and Management.....	3
MRKG 2312	e-Commerce Marketing OR	
MRKG 2371	Services Marketing .....	3
MRKG 1302	Principles of Retailing .....	3
ENGL 1301	Composition I .....	3
BMGT 1327	Principles of Management .....	3
<b>Semester Total</b>		<b>15</b>

## SECOND YEAR

### First Semester

		Credits
MRKG 2380	Cooperative Education I- Marketing/Marketing Management, General.....	3
ECON 2302	Principles of Microeconomics .....	3
HRPO 1311	Human Relations .....	3
IBUS 1354	International Marketing Management .....	3
ACNT 1303	Introduction to Accounting I OR	
ACCT 2301	Principles of Financial Accounting .....	3
<b>Semester Total</b>		<b>15</b>

### Second Semester

		Credits
XXXX #3##	General Education Elective <sup>C</sup> .....	3
MRKG 2348	Marketing Research and Strategies.....	3
MRKG 2374	Marketing Case Studies # .....	3
MATH 1324	Mathematics for Business & Social Sciences.....	3
XXXX #3##	Humanities/Fine Arts Elective <sup>B</sup> .....	3
<b>Semester Total</b>		<b>18</b>
<b>Program Total</b>		<b>60</b>

# Capstone Course

<sup>A</sup> Student Success Course: Students are required to complete EDUC 1300 within their first 12 semester credit hours of instruction. Students enrolling at HCC with 12 or more hours completed should consult with an academic advisor to select an appropriate course substitution.

<sup>B</sup> Humanities/Fine Arts: May choose from – ARTS 1301, 1303, 1304, COMM 2366, DANC 2303, DRAM 1310, 2316, 2366, ENGL 2322, 2323, 2327, 2328, 2332, 2333, 2342, 2343, 2351, HIST 1301, 1302, 2311, 2312, 2321, 2322, 2301, 2327, 2328, 2381, HUMA 1301, 1305, 1311, 2319, 2323, MUSI 1306, 1310, PHIL 1301, 1304, 2306, 2307, 2316, World Languages (ARAB 1411, 1412, CHIN 1411, 1412, FREN 1411, 1412, GERM 1411, 1412, JAPN 1411, 1412, KORE 1411, 1412, SPAN 1411, 1412).

<sup>C</sup> General Education: May choose from – ANTH 2301 (with or without 2101 = lab), 2302, 2346, 2351, ARTS 1301, 1303, 1304, ASTR 1303, 1304, 1403, 1404, BIOL 1308, 1309, 1322, 1406, 1407, (2301, 2302 – restricted to Engineering, Science, and Health Sciences majors), CHEM 1305, 1405, 1411, 1412, COMM 2366, COSC 1436, DANC 2303, DRAM 1310, 2316, 2366, ECON 1301, 2301, 2302, EDUC 1300, ENGL 2322, 2323, 2327, 2328, 2332, 2333, 2342, 2343, 2351, GEOG 1301, 1302, 1303, GEOL 1305, 1345, 1347, 1403, 1404, GOVT 2305, 2306, HIST 1301, 1302, 2311, 2312, 2321, 2322, 2301, 2327, 2328, 2381, HUMA 1301, 1305, 1311, 2319, 2323, MATH 1314, 1316, 1324, 1325, 1332, 1342, 1350, 2318, 2320, 2412, 2413, 2414, 2415, MUSI 1306, 1310, PHIL 1301, 1304, 2306, 2307, 2316,

PHYS 1305, 1401, 1402, 2325 (with or without 2125 = lab), 2326 (with or without 2126 = lab), PSYC 2301, 2314, 2316, 2317, 2319, SOCI 1301, 1306, 2301, 2336, TECA 1354, World Languages (ARAB 1411, 1412, CHIN 1411, 1412, FREN 1411, 1412, GERM 1411, 1412, JAPN 1411, 1412, KORE 1411, 1412, SPAN 1411, 1412).

## Marketing

The Marketing certificate provides students with specialized skills needed for entry-level positions in marketing or retailing. All courses in this certificate apply to the AAS in Marketing degree.

### CERTIFICATE LEVEL I

#### First Semester

		Credits
MRKG 1311	Principles of Marketing	3
MRKG 2372	Consumer Behavior	3
MRKG 2333	Principles of Selling	3
MRKG 2349	Advertising and Sales Promotion	3
<b>Semester Total</b>		<b>12</b>

#### Second Semester

		Credits
IBUS 1354	International Marketing Management OR	
MRKG 1391	Special Topics in Business Marketing and Marketing Management	3
MRKG 2312	e-Commerce OR	
MRKG 2371	Services Marketing	3
MRKG 2380	Cooperative Education-Marketing Management #	3
<b>Semester Total</b>		<b>9</b>
<b>Program Total</b>		<b>21</b>

# Capstone Course

## Retailing

The Retailing certificate provides students with specialized skills needed for entry-level positions in marketing or retailing. All courses in this certificate apply to the AAS in Marketing degree.

### CERTIFICATE LEVEL I

#### First Semester

		Credits
MRKG 1311	Principles of Marketing	3
MRKG 2372	Consumer Behavior	3
MRKG 2333	Principles of Selling	3
MRKG 1302	Principles of Retailing	3
<b>Semester Total</b>		<b>12</b>

# Business

Second Semester			Credits
HRPO 1311	Human Relations		3
XXXX #3##	Program-Related Elective *		3
XXXX #3##	Program-Related Elective *		3
MRKG 2371	Services Marketing #		3
<b>Semester Total</b>			<b>12</b>
<b>Program Total</b>			<b>24</b>

# Capstone Course

\* Electives may be chosen from the following: BUSG, BMGT, HRPO, IBUS, MRKG, or LMGT.

## Marketing - Innovation & Enterprise Specialization

### AAS

TSI testing is required prior to first enrollment.

#### FIRST YEAR

First Semester			Credits
EDUC 1300	Learning Framework <sup>A</sup>		3
MRKG 1311	Principles of Marketing		3
MRKG 2372	Consumer Behavior		3
MRKG 2333	Principles of Selling		3
MRKG 1371	Enterprise Mindset		3
<b>Semester Total</b>			<b>15</b>

Second Semester			Credits
MRKG 2370	Creativity and Innovation		3
BUSG 2370	Legal Issues for Enterprise		3
ENGL 1301	Composition I		3
MRKG 2312	e-Commerce Marketing OR		3
MRKG 2371	Services Marketing		3
MATH 1332	Contemporary Mathematics		3
<b>Semester Total</b>			<b>15</b>

#### SECOND YEAR

First Semester			Credits
ACNT 1303	Introduction to Accounting I		3
BUSG 1307	Entrepreneurship and Economic Development		3
ECON 2302	Principles of Microeconomics		3
MRKG 2377	Financial Management/Budgeting for Enterprise Marketing		3
XXXX #3##	Humanities/Fine Arts Elective <sup>B</sup>		3
<b>Semester Total</b>			<b>15</b>

Second Semester			Credits
XXXX #3##	General Education Elective <sup>C</sup>		3
MRKG 2375	Social Enterprise		3
MRKG 2376	Enterprise Opportunity Analysis		3
BUSG 2309	Small Business Management/Entrepreneurship		3
BUSG 2382	Cooperative Education - Entrepreneurship /Entrepreneurial Studies #		3
<b>Semester Total</b>			<b>15</b>
<b>Program Total</b>			<b>60</b>

# Capstone Course

<sup>A</sup> Student Success Course: Students are required to complete EDUC 1300 within their first 12 semester credit hours of instruction. Students enrolling at HCC with 12 or more hours completed should consult with an academic advisor to select an appropriate course substitution.

<sup>B</sup> Humanities/Fine Arts: May choose from – ARTS 1301, 1303, 1304, COMM 2366, DANC 2303, DRAM 1310, 2316, 2366, ENGL 2322, 2323, 2327, 2328, 2332, 2333, 2342, 2343, 2351, HIST 1301, 1302, 2311, 2312, 2321, 2322, 2301, 2327, 2328, 2381, HUMA 1301, 1305, 1311, 2319, 2323, MUSI 1306, 1310, PHIL 1301, 1304, 2306, 2307, 2316, World Languages (ARAB 1411, 1412, CHIN 1411, 1412, FREN 1411, 1412, GERM 1411, 1412, JAPN 1411, 1412, KORE 1411, 1412, SPAN 1411, 1412).

<sup>C</sup> General Education: May choose from – ANTH 2301 (with or without 2101 = lab), 2302, 2346, 2351, ARTS 1301, 1303, 1304, ASTR 1303, 1304, 1403, 1404, BIOL 1308, 1309, 1322, 1406, 1407, (2301, 2302 – restricted to Engineering, Science, and Health Sciences majors), CHEM 1305, 1405, 1411, 1412, COMM 2366, COSC 1436, DANC 2303, DRAM 1310, 2316, 2366, ECON 1301, 2301, 2302, EDUC 1300, ENGL 2322, 2323, 2327, 2328, 2332, 2333, 2342, 2343, 2351, GEOG 1301, 1302, 1303, GEOL 1305, 1345, 1347, 1403, 1404, GOVT 2305, 2306, HIST 1301, 1302, 2311, 2312, 2321, 2322, 2301, 2327, 2328, 2381, HUMA 1301, 1305, 1311, 2319, 2323, MATH 1314, 1316, 1324, 1325, 1332, 1342, 1350, 2318, 2320, 2412, 2413, 2414, 2415, MUSI 1306, 1310, PHIL 1301, 1304, 2306, 2307, 2316, PHYS 1305, 1401, 1402, 2325 (with or without 2125 = lab), 2326 (with or without 2126 = lab), PSYC 2301, 2314, 2316, 2317, 2319, SOCI 1301, 1306, 2301, 2336, TECA 1354, World Languages (ARAB 1411, 1412, CHIN 1411, 1412, FREN 1411, 1412, GERM 1411, 1412, JAPN 1411, 1412, KORE 1411, 1412, SPAN 1411, 1412).

# Business

## Marketing - Social Enterprise

### CERTIFICATE LEVEL I

<b>First Semester</b>		<b>Credits</b>
MRKG 1311	Principles of Marketing.....	3
BUSG 1307	Entrepreneurship and Economic Development .....	3
IBUS 1370	Economic Geography .....	3
MRKG 2372	Consumer Behavior .....	3
<b>Semester Total</b>		<b>12</b>
<b>Second Semester</b>		<b>Credits</b>
BUSG 2309	Small Business Management/Entrepreneurship.....	3
IBUS 2370	Global Issues in Enterprise.....	3
MRKG 2376	Enterprise Opportunity Analysis # .....	3
<b>Semester Total</b>		<b>9</b>
<b>Program Total</b>		<b>21</b>

# Capstone Course

## Marketing - Enterprise Development

Enterprise development is a systematic approach to controlling growth, development and improvement of a purposeful or industrious activity organized to provide a service or product within an economy.

### CERTIFICATE LEVEL I

<b>First Semester</b>		<b>Credits</b>
MRKG 1311	Principles of Marketing.....	3
BUSG 1307	Entrepreneurship & Economic Development .....	3
MRKG 2370	Creativity and Innovation .....	3
MRKG 2378	Franchising.....	3
MRKG 2376	Enterprise Opportunity Analysis # .....	3
<b>Semester Total</b>		<b>15</b>
<b>Program Total</b>		<b>15</b>

# Capstone Course

## REAL ESTATE

The Real Estate program provides students with the knowledge and specialized skills required for career opportunities in the real estate profession. Students may choose to prepare for careers in residential sales, commercial real estate, mortgage lending, appraisal, inspection, or property management. Courses are available for professional development or for personal information.

The Real Estate program offers current workplace curriculum and training in the use of technology to assist individuals and business and industry in meeting their professional goals.

This HCC Real Estate program is accredited by the Texas Real Estate Commission, 1101 Camino La Costa, Austin, TX 78711-2188, 512.459.6544.

The Texas Higher Education Coordinating Board (THECB) allows students to earn only one **AAS** in Real Estate. Students may choose from one of the following two specializations: General or Mortgage Lending.

In addition, please note that a student may only earn one Occupational Skills Award (OSA) per academic year.

### Program Outcomes

Students will be able to

- Explain the Articles of the Texas Real Estate Commission's "Canons of Professional Ethics".
- Analyze the disclosure requirements in various real estate situations.
- Explain the elements of the fiduciary obligation.

For more information call 713.718.5240 or e-mail [alex.binkley@hccs.edu](mailto:alex.binkley@hccs.edu).

### REAL ESTATE - AAS

The AAS in Real Estate is a two year program that introduces students to the many opportunities in the real estate industry such as residential and commercial brokerage, comparative market analysis, property management and investment. Upon completion, students will have met the educational requirements for the Texas Real Estate salesperson and broker licenses.

*TSI testing is required prior to first enrollment.*

### FIRST YEAR

<b>First Semester</b>		<b>Credits</b>
EDUC 1300	Learning Framework <sup>A</sup> .....	3
RELE 1201	Principles of Real Estate I.....	2
ENGL 1301	Composition I.....	3
RELE 2201	Law of Agency.....	2
RELE 1211	Law of Contracts.....	2
RELE 1323	Real Estate Computer Application.....	3
RELE 1325	Real Estate Mathematics.....	3
<b>Semester Total</b>		<b>18</b>

# Business

<b>Second Semester</b>		<b>Credits</b>
RELE 1321	Real Estate Marketing.....	3
RELE 1238	Principles of Real Estate II.....	2
RELE 1200	Contract Forms and Addenda.....	2
RELE 1219	Real Estate Finance.....	2
RELE 1324	Loan Origination and Quality Control OR	
RELE 1309	Real Estate Law.....	3
<b>Semester Total</b>		<b>12</b>

## SECOND YEAR

<b>First Semester</b>		<b>Credits</b>
ECON 2301	Principles of Economics (Macro) .....	3
RELE 1303	Real Estate Appraisal.....	3
RELE 1307	Real Estate Investments.....	3
RELE 2331	Real Estate Brokerage.....	3
RELE 1381	Cooperative Education - Real Estate.....	3
<b>Semester Total</b>		<b>15</b>

<b>Second Semester</b>		<b>Credits</b>
XXXX ##3#	Social/Behavioral Sciences Elective <sup>C</sup> .....	3
RELE 1329	Fundamentals of Environmental Issues OR	
RELE 1315	Property Management .....	3
XXXX #3##	Humanities/Fine Arts Elective <sup>B</sup> .....	3
GEOL 1305	Environmental Science .....	3
RELE 2381	Cooperative Education - Real Estate <sup>#</sup> .....	3
<b>Semester Total</b>		<b>15</b>
<b>Program Total</b>		<b>60</b>

<sup>#</sup> Capstone Course

<sup>A</sup> Student Success Course: Students are required to complete EDUC 1300 within their first 12 semester credit hours of instruction. Students enrolling at HCC with 12 or more hours completed should consult with an academic advisor to select an appropriate course substitution.

<sup>B</sup> Humanities/Fine Arts: May choose from – ARTS 1301, 1303, 1304, COMM 2366, DANC 2303, DRAM 1310, 2316, 2366, ENGL 2322, 2323, 2327, 2328, 2332, 2333, 2342, 2343, 2351, HIST 1301, 1302, 2311, 2312, 2321, 2322, 2301, 2327, 2328, 2381, HUMA 1301, 1305, 1311, 2319, 2323, MUSI 1306, 1310, PHIL 1301, 1304, 2306, 2307, 2316, World Languages (ARAB 1411, 1412, CHIN 1411, 1412, FREN 1411, 1412, GERM 1411, 1412, JAPN 1411, 1412, KORE 1411, 1412, SPAN 1411, 1412).

<sup>C</sup> Social/Behavioral Sciences: May choose from – ANTH 2346, 2351, ECON 1301, 2301, 2302, EDUC 1300, GEOG 1302, 1303, GOVT 2305, 2306, PSYC 2301, 2314, 2316, 2319, SOCI 1301, 1306, 2301, 2336, TECA 1354.

## Real Estate Comparative Market Analysis

The Real Estate Comparative Market Analysis program provides students with a fundamental understanding of the appraisal/valuation process. Investors, lenders, property managers, end users and various governmental agencies use appraisal/valuation techniques in their decision making. The curriculum focuses on valuation procedures, approaches to value, property descriptions, residential and commercial applications, appraisal math and construction.

For more information about Real Estate Appraisal licensure, contact the Texas Appraiser Licensing and Certification Board: [www.talcb.state.tx.us](http://www.talcb.state.tx.us), P. O. Box 12188 Austin, TX 78711-2188, 877.825.2289.

## CERTIFICATE LEVEL I

<b>First Semester</b>		<b>Credits</b>
RELE 1307	Real Estate Investments	3
RELE 1329	Fundamentals of Environmental Issues	3
RELE 1335	Real Estate Construction	3
RELE 1303	Real Estate Appraisal	3
<b>Semester Total</b>		<b>12</b>
<b>Second Semester</b>		<b>Credits</b>
RELE 1381	Cooperative Education-Real Estate <sup>#</sup>	3
<b>Semester Total</b>		<b>3</b>
<b>Program Total</b>		<b>15</b>

<sup>#</sup> Capstone Course

## Commercial Real Estate

The Commercial Real Estate program prepares students to enter the non-residential real estate market as an owner, broker or sales agent. The curriculum focuses on the general environment of commercial real estate and includes valuation, environmental issues, selling, listing, and leasing activities.

## CERTIFICATE LEVEL I

<b>First Semester</b>		<b>Credits</b>
RELE 1307	Real Estate Investment	3
RELE 1391	Special Topics in Real Estate: Commercial Real Estate	3
RELE 1315	Property Management	3
RELE 1303	Real Estate Appraisal	3
<b>Semester Total</b>		<b>12</b>

# Business

<b>Second Semester</b>		<b>Credits</b>
RELE 1381	Cooperative Education-Real Estate #	3
<b>Semester Total</b>		<b>3</b>
<b>Program Total</b>		<b>15</b>

# Capstone Course

## Residential Real Estate

The Residential Real Estate program prepares students to enter the world of residential real estate as a salesperson, broker or leasing agent. The curriculum meets the Texas Real Estate Commission's educational requirement to obtain a salesperson's license and meets the Statutory Annual Education (SAE) requirement.

For more information about Residential Real Estate licensure contact the Texas Real Estate Commission [www.trec.state.tx.us](http://www.trec.state.tx.us), 1101 Camino La Costa, Austin, TX 78752, 800.250.8732.

### CERTIFICATE LEVEL I

<b>First Semester</b>		<b>Credits</b>
RELE 1201	Principles of Real Estate I.....	2
RELE 1238	Principles of Real Estate II.....	2
RELE 1211	Law of Contracts.....	2
RELE 2201	Law of Agency.....	2
RELE 1200	Contract Forms and Addenda.....	2
RELE 1219	Real Estate Finance	2
<b>Semester Total</b>		<b>12</b>

<b>Second Semester</b>		<b>Credits</b>
RELE 1381	Cooperative Education-Real Estate #	3
<b>Semester Total</b>		<b>3</b>
<b>Program Total</b>		<b>15</b>

# Capstone Course

## Property Management

The Property Management program is designed for students wanting to enter the property management field as an onsite manager, consultant, owner, or assistant. The curriculum focuses on the operational side of non-residential real estate and includes maintenance, rent collection, insurance and legal issues.

### CERTIFICATE LEVEL I

<b>First Semester</b>		<b>Credits</b>
RELE 1335	Real Estate Construction	3
RELE 1315	Property Management	3

RELE 1307	Real Estate Investments	3
RELE 1309	Real Estate Law	3
<b>Semester Total</b>		<b>12</b>

<b>Second Semester</b>		<b>Credits</b>
RELE 1381	Cooperative Education-Real Estate #	3
<b>Semester Total</b>		<b>3</b>
<b>Program Total</b>		<b>15</b>

# Capstone Course

## Real Estate-Mortgage Lending Specialization

The two year AAS in Real Estate - Mortgage Lending Specialization degree prepares students to enter the mortgage lending industry as a loan officer, loan processor or administrator.

### AAS

TSI testing is required prior to first enrollment.

#### FIRST YEAR

<b>First Semester</b>		<b>Credits</b>
EDUC 1300	Learning Framework <sup>A</sup>	3
RELE 1201	Principles of Real Estate I	2
ENGL 1301	Composition I	3
RELE 1325	Real Estate Mathematics	3
RELE 1324	Loan Origination and Quality Control	3
RELE 1211	Law of Contracts	2
<b>Semester Total</b>		<b>16</b>

<b>Second Semester</b>		<b>Credits</b>
XXXX ##3#	Social/Behavioral Sciences Elective <sup>C</sup>	3
RELE 2201	Law of Agency	2
RELE 1238	Principles of Real Estate II	2
RELE 1303	Real Estate Appraisal	3
RELE 1381	Cooperative Education-Real Estate	3
RELE 2331	Real Estate Brokerage	3
<b>Semester Total</b>		<b>16</b>

#### SECOND YEAR

<b>First Semester</b>		<b>Credits</b>
ECON 2301	Principles of Economics (Macro)	3
RELE 2307	Real Estate Title and Settlement	3
RELE 1219	Real Estate Finance	2
GEOL 1305	Environmental Science	3
RELE 1371	Loan Processing	3
<b>Semester Total</b>		<b>14</b>

# Business

<b>Second Semester</b>			<b>Credits</b>
RELE 1309	Real Estate Law		3
RELE 2311	Fundamentals of Mortgage Lending		3
RELE 1291	Special Topics in Real Estate		2
XXXX #3##	Humanities/Fine Arts Elective <sup>B</sup>		3
RELE 2381	Cooperative Education-Real Estate #		3
<b>Semester Total</b>			<b>14</b>
<b>Program Total</b>			<b>60</b>

# Capstone Course

<sup>A</sup> *Student Success Course: Students are required to complete EDUC 1300 within their first 12 semester credit hours of instruction. Students enrolling at HCC with 12 or more hours completed should consult with an academic advisor to select an appropriate course substitution.*

<sup>B</sup> *Humanities/Fine Arts: May choose from – ARTS 1301, 1303, 1304, COMM 2366, DANC 2303, DRAM 1310, 2316, 2366, ENGL 2322, 2323, 2327, 2328, 2332, 2333, 2342, 2343, 2351, HIST 1301, 1302, 2311, 2312, 2321, 2322, 2301, 2327, 2328, 2381, HUMA 1301, 1305, 1311, 2319, 2323, MUSI 1306, 1310, PHIL 1301, 1304, 2306, 2307, 2316, World Languages (ARAB 1411, 1412, CHIN 1411, 1412, FREN 1411, 1412, GERM 1411, 1412, JAPN 1411, 1412, KORE 1411, 1412, SPAN 1411, 1412).*

<sup>C</sup> *Social/Behavioral Sciences: May choose from – ANTH 2346, 2351, ECON 1301, 2301, 2302, EDUC 1300, GEOG 1302, 1303, GOVT 2305, 2306, PSYC 2301, 2314, 2316, 2319, SOCI 1301, 1306, 2301, 2336, TECA 1354.*

The Real Estate certificate options listed below provide students with the knowledge and abilities to apply individualized technical skills within the defined area.

For more information call 713.718.5240 or e-mail [alex.binkley@hccs.edu](mailto:alex.binkley@hccs.edu).

## Mortgage Lending Professional

The Mortgage Lending Professional program prepares students to enter the mortgage lending industry as a loan officer, loan processor, loan clerk or administrative assistant.

For more information about Residential Mortgage Lending Professional licensure, contact the Texas Department of Savings and Mortgage Lending [www.sml.state.tx.us](http://www.sml.state.tx.us), 2601 North Lamar, Suite 201, Austin, TX 78705, 512.475.1350.

## CERTIFICATE LEVEL I

<b>First Semester</b>			<b>Credits</b>
RELE 1219	Real Estate Finance.....		2
RELE 1324	Loan Origination and Quality Control.....		3
RELE 1371	Loan Processing OR		
RELE 2307	Real Estate Title and Settlement .....		3
RELE 1303	Real Estate Appraisal.....		3
RELE 2311	Fundamentals of Mortgage Lending.....		3
<b>Semester Total</b>			<b>14</b>

<b>Second Semester</b>			<b>Credits</b>
RELE 1381	Cooperative Education-Real Estate #		3
<b>Semester Total</b>			<b>3</b>
<b>Program Total</b>			<b>17</b>

# Capstone Course

# Education and Schools

## **Child Development (19.0706, 19.0708, 19.0709)**

A Career Cluster is a grouping of occupations and broad industries based on commonalities. The Education and Schools career cluster is concerned with providing knowledge and skills related to planning, managing and providing education and training services and related learning support services. Texas teacher certification requires a bachelor's degree. Students may complete the first two years at HCC by earning the Associate of Arts in Teaching (AAT).

All new semester hour students, who have earned less than 12 semester hours of college level credit, are required to take a first-year student success course in their first term at HCC. Through research and experience, Houston Community College has determined that many life and career management skills are necessary for students to make the most of their college investment. A student success course is designed to prepare students for the demands of college and for success in the world of work. The course emphasizes setting priorities, time management, effective listening, note-taking, concentration techniques, and retention of information, book analysis, comprehension techniques, and test-taking skills. This course also incorporates units that are designed to facilitate the use of library databases in conducting research, planning and setting educational objectives, lifelong career assessment, decision-making, financial aid, tutoring, and student support services, enabling the student to maximize the use of college resources.

Every HCC Career and Technology Education program contains a "capstone," an experience for the student to "put it all together." The capstone is a learning experience resulting in a consolidation of a student's educational experience and certifies mastery of entry level workplace competencies. The capstone experience must occur during the last semester of the student's educational program. The capstone consists of an external learning experience or an advanced course especially designed to help students synthesize knowledge and skills or other licensure as appropriate.

## **CHILD DEVELOPMENT**

The Child Development curricula are designed to provide academic background and practical work experience necessary for successful care and guidance of young children. Students completing this program will be qualified to serve as the following: early childhood teachers or assistants, foster parents, paraprofessionals, or, with appropriate work experience, child development center directors. Some courses apply to EC-6 teacher certification. (See General Information, Academic Degrees and Certificates for field of study information.) The AAS degree requires completion of 60 semester hours. All of the courses in the Child Development Administration and Early Childhood Certificate programs may apply to this AAS degree. The Child Development AAS degree is approved for Tech Prep.

According to the Texas Department of Family and Protective Services: "No person with a conviction or who is under indictment for, or is the subject of an official criminal complaint alleging violation of any of the crimes listed as a felony against the person or a felony violation of the Texas Controlled Substance Act may be present while children are in care," therefore the Child Development program is not appropriate for anyone who falls into this category.

The A.A.S. Child Development at Houston Community College is accredited by the Commission on the Accreditation of Early Childhood Higher Education Programs of the National Association for the Education of Young Children, 1313 L Street, NW, #500, Washington, DC 20005. (202) 232-8777. The accreditation term runs from March, 2017 through March, 2019.

The associate degree program seeks to sow and cultivate the knowledge, skills, and dispositions that highly qualified early education professionals are expected to possess if they are to be more effective in their care-giving and teaching efforts.

**Please note that a student may only earn one Occupational Skills Award (OSA) per academic year.**

### **Program Outcomes**

Students will be able to

- Develop an understanding of child development and learning (Child Development and Learning).
- Examine family and community relationships (Family and Community).

# Education and Schools

- Explain the observation, documentation, and assessment process needed to support young children and their families (Observation and Assessment).
- Construct meaningful curriculum from content knowledge in early childhood, using developmentally effective approaches which connect children and their families (Using Content Knowledge to Build Meaningful Curriculum).
- Identify and conduct themselves as members of the early childhood profession (Professionalism).
- Knowing and understanding developmentally effective strategies, tools, and appropriate teaching/learning approaches for early education (Developmentally Effective Approaches).

For more information call 713.718.6303 or email [pamela.norwood@hccs.edu](mailto:pamela.norwood@hccs.edu).

## Child Development

### AAS

TSI testing is required prior to first enrollment.

#### FIRST YEAR

First Semester		Credits
EDUC 1300	Learning Framework <sup>A</sup>	3
XXXX #3##	Math/Natural Science Elective <sup>B</sup>	3
CDEC 1313	Curriculum Resources for Early Childhood Programs	3
TECA 1311	Educating Young Children	3
CDEC 1323	Observation and Assessment	3
<b>Semester Total</b>		<b>15</b>

#### Second Semester

XXXX #3##	Humanities/Fine Arts Elective <sup>C</sup>	3
CDEC 1358	Creative Arts for Early Childhood	3
CDEC 2326	Administration of Programs for Children I	3
TECA 1354	Child Growth and Development	3
CDEC 1319	Child Guidance	3
<b>Semester Total</b>		<b>15</b>

#### Third Semester

SOCI 1301	Introduction to Sociology OR	
SOCI 2301	Marriage and the Family OR	
GOVT 2305	Federal Government	3
CDEC #3##	Approved Program Elective <sup>D</sup>	3
<b>Semester Total</b>		<b>6</b>

#### SECOND YEAR

##### First Semester

		Credits
CDEC 1356	Emergent Literacy for Early Childhood	3
PSYC 2301	Introduction to Psychology	3
XXXX #3##	General Education Elective <sup>E</sup>	3
TECA 1303	Family, School, and Community	3
CDEC 1359	Children with Special Needs	3

**Semester Total 15**

##### Second Semester

		Credits
CDEC 2307	Math and Science for Early Childhood	3
TECA 1318	Wellness of the Young Child	3
CDEC 2380	Cooperative Education - Child Care Provider/ Assistant #	3

**Semester Total 9**

**Program Total 60**

# Capstone Course

<sup>A</sup> Student Success Course: Students are required to complete EDUC 1300 within their first 12 semester credit hours of instruction. Students enrolling at HCC with 12 or more hours completed should consult with an academic advisor to select an appropriate course substitution.

<sup>B</sup> Math/Natural Science: May choose from – ANTH 2301 (with or without 2101 = lab), 2302, ASTR 1303, 1304, 1403, 1404, BIOL 1308, 1309, 1322, 1406, 1407, (2301, 2302 – restricted to Engineering, Science, and Health Sciences majors), CHEM 1305, 1405, 1411, 1412, COSC 1436, GEOG 1301, GEOL 1305, 1345, 1347, 1403, 1404, MATH 1314, 1316, 1324, 1325, 1332, 1342, 1350, 2318, 2320, 2412, 2413, 2414, 2415, PHYS 1305, 1401, 1402, 2325 (with or without 2125= lab), 2326 (with or without 2126 = lab), PSYC 2317.

<sup>C</sup> Humanities/Fine Arts: May choose from – ARTS 1301, 1303, 1304, COMM 2366, DANC 2303, DRAM 1310, 2316, 2366, ENGL 2322, 2323, 2327, 2328, 2332, 2333, 2342, 2343, 2351, HIST 1301, 1302, 2311, 2312, 2321, 2322, 2301, 2327, 2328, 2381, HUMA 1301, 1305, 1311, 2319, 2323, MUSI 1306, 1310, PHIL 1301, 1304, 2306, 2307, 2316, World Languages (ARAB 1411, 1412, CHIN 1411, 1412, FREN 1411, 1412, GERM 1411, 1412, JAPN 1411, 1412, KORE 1411, 1412, SPAN 1411, 1412).

<sup>D</sup> Approved Program Elective: May choose from – CDEC 1339, 1393, 1391, 1321, 1317, 2322, 2324, 2328, 2341; BUSG 1370 and BMGT 1301; POFI 1301, ITSC 1309 or BCIS 1405, all EDUC courses. Alternative electives may be chosen with prior departmental approval.

<sup>E</sup> General Education: May choose from – ANTH 2301 (with or without 2101 = lab), 2302, 2346, 2351, ARTS 1301, 1303, 1304, ASTR 1303, 1304, 1403, 1404, BIOL 1308, 1309, 1322, 1406, 1407, (2301, 2302 – restricted to Engineering, Science, and Health Sciences majors), CHEM 1305, 1405, 1411, 1412, COMM 2366, COSC 1436, DANC 2303, DRAM 1310, 2316, 2366, ECON 1301, 2301, 2302, EDUC 1300, ENGL 2322, 2323, 2327, 2328, 2332, 2333, 2342, 2343, 2351, GEOG 1301, 1302, 1303, GEOL 1305, 1345, 1347, 1403, 1404, GOVT 2305, 2306, HIST 1301, 1302, 2311, 2312, 2321, 2322, 2301, 2327, 2328,

# Education and Schools

2381, HUMA 1301, 1305, 1311, 2319, 2323, MATH 1314, 1316, 1324, 1325, 1332, 1342, 1350, 2318, 2320, 2412, 2413, 2414, 2415, MUSI 1306, 1310, PHIL 1301, 1304, 2306, 2307, 2316, PHYS 1305, 1401, 1402, 2325 (with or without 2125 = lab), 2326 (with or without 2126 = lab), PSYC 2301, 2314, 2316, 2317, 2319, SOCI 1301, 1306, 2301, 2336, TECA 1354, World Languages (ARAB 1411, 1412, CHIN 1411, 1412, FREN 1411, 1412, GERM 1411, 1412, JAPN 1411, 1412, KORE 1411, 1412, SPAN 1411, 1412).

## Child Development Administration

The Child Development Administration certificate is designed for students who have appropriate experience and whose goals include the administration of programs for young children whether in a day care or institutional setting. The certificate focuses upon the interpersonal skills needed to supervise childcare staff, manage business practices, maintain the minimum standards in a child care setting, and recognize the importance of parent, staff, and community interactions. Most of the courses in this certificate apply to the AAS in Child Development degree.

### CERTIFICATE LEVEL I

First Semester		Credits
CDEC 1313	Curriculum Resource for Early Childhood Programs	3
CDEC 2326	Administration of Programs for Children I	3
BMGT 1301	Supervision	3
<b>Semester Total</b>		<b>9</b>
Second Semester		Credits
CDEC 1319	Child Guidance	3
CDEC #3##	Elective	3
CDEC 2328	Administration of Programs for Children II #	3
POFI 1301	Computer Applications I OR	
ITSC 1309	Integrated Software Applications I	3
<b>Semester Total</b>		<b>12</b>
<b>Program Total</b>		<b>21</b>

# Capstone Course

\*\*\*Electives may be chosen from the following courses: CDEC 1317, 1321, 1339, 1391, 1393, 2315, 2322, 2324, 2328, 2341; BUSG 1370 and BMGT 1301; POFI 1301, ITSC 1309, or BCIS 1405, all EDUC courses. Alternative electives may be chosen with prior departmental approval.

## Early Childhood

The Early Childhood certificate is designed to give students a practical working knowledge of basic child development principles that will assist them in the everyday planning and implementation of developmentally appropriate activities and environments for young children. The certificate is meant to integrate with the goals and courses required for the AAS degree in Child Development. Most of the courses in this certificate apply to the AAS in Child Development degree.

### CERTIFICATE LEVEL II

First Semester		Credits
EDUC 1300	Learning Framework <sup>A</sup>	3
ENGL 1301	Composition I	3
TECA 1311	Educating Young Children	3
CDEC 1313	Curriculum Resources for Early Childhood Programs	3
CDEC #3##	Program Approved Elective <sup>B</sup>	3
<b>Semester Total</b>		<b>15</b>
Second Semester		Credits
PSYC 2301	Introduction to Psychology OR	
SOCI 1301	Introduction to Sociology OR	
CDEC 1359	Children with Special Needs	3
TECA 1354	Child Growth and Development	3
CDEC 1319	Child Guidance	3
CDEC 1358	Creative Arts for Early Childhood	3
CDEC #3##	Program Approved Elective <sup>B</sup>	3
<b>Semester Total</b>		<b>15</b>
Third Semester		Credits
CDEC #3##	Program Approved Elective <sup>B</sup>	3
TECA 1318	Wellness of the Young Child	3
CDEC 1356	Emergent Literacy for Early Childhood	3
CDEC 2307	Math and Science for Early Childhood	3
CDEC 2326	Administration of Programs for Children I #	3
<b>Semester Total</b>		<b>15</b>
<b>Program Total</b>		<b>45</b>

# Capstone Course

<sup>A</sup> Student Success Course: Students are required to complete EDUC 1300 within their first 12 semester credit hours of instruction. Students enrolling at HCC with 12 or more hours completed should consult with an academic advisor to select an appropriate course substitution.

<sup>B</sup> Electives: May choose from – CDEC 1317, 1321, 1339, 1391, 1393, 2315, 2322, 2324, 2328, 2341; BUSG 1370 and BMGT 1301; POFI 1301, ITSC 1309, or BCIS 1405, all EDUC courses. Alternative electives may be chosen with prior departmental approval.

# Education and Schools

## Teacher Assistant/Aide

The Teacher Assistant/Aide certificate is designed to prepare students for entrance into the teaching profession as public school aides, assistant teachers in early learning facilities or to transfer to a four-year institution. The certificate focuses on the skills and abilities needed to work with young children.

<sup>B</sup> *Math/Natural Science: May choose from – ANTH 2301 (with or without 2101 = lab), 2302, ASTR 1303, 1304, 1403, 1404, BIOL 1308, 1309, 1322, 1406, 1407, (2301, 2302 – restricted to Engineering, Science, and Health Sciences majors), CHEM 1305, 1405, 1411, 1412, COSC 1436, GEOG 1301, GEOL 1305, 1345, 1347, 1403, 1404, MATH 1314, 1316, 1324, 1325, 1332, 1342, 1350, 2318, 2320, 2412, 2413, 2414, 2415, PHYS 1305, 1401, 1402, 2325 (with or without 2125= lab), 2326 (with or without 2126 = lab), PSYC 2317.*

## CERTIFICATE LEVEL II

### FIRST YEAR

<b>First Semester</b>		<b>Credits</b>
EDUC 1300	Learning Framework <sup>A</sup> .....	3
TECA 1354	Child Growth and Development .....	3
CDEC 1323	Observation and Assessment .....	3
ENGL 1301	Composition I .....	3
TECA 1311	Educating Young Children.....	3
<b>Semester Total</b>		<b>15</b>

<b>Second Semester</b>		<b>Credits</b>
SOCI 1301	Introduction to Sociology OR	
TECA 1303	Family, School, and Community .....	3
CDEC 1319	Child Guidance .....	3
CDEC 1313	Curriculum Resources for Early Childhood Programs ....	3
EDUC 1301	Introduction to Education .....	3
EDUC 2301	Introduction to Special Education OR	
CDEC 1359	Children with Special Needs.....	3
<b>Semester Total</b>		<b>15</b>

<b>Third Semester</b>		<b>Credits</b>
CDEC 1358	Creative Arts for Early Childhood.....	3
CDEC 2315	Diverse Cultural/Multilingual Education.....	3
<b>Semester Total</b>		<b>6</b>

### SECOND YEAR

<b>First Semester</b>		<b>Credits</b>
CDEC 1356	Emergent Literacy for Early Childhood .....	3
CDEC 2341	The School Age Child <sup>#</sup> .....	3
SPCH 1315	Public Speaking OR	
SPCH 1318	Interpersonal Communication.....	3
XXXX #3##	Math/Natural Science Elective <sup>B</sup> .....	3
<b>Semester Total</b>		<b>12</b>
<b>Program Total</b>		<b>48</b>

<sup>#</sup> *Capstone Course*

<sup>A</sup> *Student Success Course: Students are required to complete EDUC 1300 within their first 12 semester credit hours of instruction. Students enrolling at HCC with 12 or more hours completed should consult with an academic advisor to select an appropriate course substitution.*

## Infant & Toddler Teacher

Students who complete this Certificate develop the necessary skills to support quality care for infants and toddlers by providing experiences and opportunities which enhance the physical, social, emotional, and intellectual development of children ages 0-3.

## CERTIFICATE LEVEL I

<b>First Semester</b>		<b>Credits</b>
CDEC 1339	Early Childhood Development: 0-3 Years .....	3
CDEC 1321	The Infant and Toddler .....	3
CDEC 1391	Special Topics Infants and Toddlers and Their Families ..	3
<b>Semester Total</b>		<b>9</b>

<b>Second Semester</b>		<b>Credits</b>
CDEC 1313	Curriculum Resources for Early Childhood Programs .....	3
CDEC 1319	Child Guidance <sup>#</sup> .....	3
<b>Semester Total</b>		<b>6</b>
<b>Program Total</b>		<b>15</b>

<sup>#</sup> *Capstone Course*

# Government and Public Service

**Criminal Justice/Law Enforcement/  
Police Science (43.0107)  
Fire Protection (43.0201)  
Fire Science/Firefighting (43.0203)  
Paralegal Technology (22.0302)**

A Career Cluster is a grouping of occupations and broad industries based on commonalities. The Law, Public Safety, Corrections and Security career cluster is concerned with providing knowledge and skills related to planning, managing, and providing legal, public safety, protective services and homeland security, including professional and technical support services. This includes the following HCC programs: Criminal Justice/Law Enforcement, Fire Protection, Fire Science/Firefighting and Paralegal Technology.

All new semester hour students, who have earned less than 12 semester hours of college level credit, are required to take a first-year student success course in their first term at HCC. Through research and experience, Houston Community College has determined that many life and career management skills are necessary for students to make the most of their college investment. A student success course is designed to prepare students for the demands of college and for success in the world of work. The course emphasizes setting priorities, time management, effective listening, note-taking, concentration techniques, retention of information, book analysis, comprehension techniques, and test-taking skills. This course also incorporates units that are designed to facilitate the use of library databases in conducting research, planning and setting educational objectives, lifelong career assessment, decision-making, financial aid, tutoring, and student support services, enabling the student to maximize the use of college resources.

Every HCC Career and Technology Education program contains a "capstone," an experience for the student to "put it all together." The capstone is a learning experience resulting in a consolidation of a student's educational experience and certifies mastery of entry level workplace competencies. The capstone experience must occur during the last semester of the student's educational program. The capstone consists of an external learning experience or an advanced course especially designed to help students synthesize knowledge and skills or other licensure as appropriate.

## CRIMINAL JUSTICE

The Criminal Justice program consists of the AA transfer plan for Criminal Justice, the AAS in Criminal Justice with concentrations in law enforcement, corrections, or juvenile justice, and the following certificate: Basic Peace Officer Licensing. Texas requires a four-year degree to qualify as a probation officer or protective service worker. Students must be 21 or older to enter the police academy.

Students with an interest in a criminal justice program should consult with one of the criminal justice faculty to assure that their career and academic goals are met. Academic classes are offered on-line, off-site, during the day and evening, and on Saturday. Basic Peace Officer Licensing courses must be completed in person.

The Department offers on-site and off-site in-service training for law enforcement and corrections personnel including juvenile and adult community corrections officers.

Students who intend to transfer to a senior institution should refer to the Associate in Arts (AA) degree transfer advising plans/Criminal Justice speciality area (See General Course Information, Academic Degrees for specialty area of the catalog) or consult an HCC counselor to design a course of study to avoid inappropriate course selection and possible loss of credit upon transfer.

## Law Enforcement

This two-year program prepares students for a career in Law Enforcement. Upon successful completion of the program, students obtain an AAS degree and the opportunity to take the Texas Commission on Law Enforcement (TCOLE) State Licensing Exam. This program satisfies all the educational requirements for such agencies as the Houston Police Department and the Department of Public Safety. Most of the coursework may be taken at any of the HCC campuses; however, the last semester must be taken at HCC Northeast Campus.

The Texas Higher Education Coordinating Board (THECB) allows students to earn only one **AAS** in Criminal Justice. Students may choose from one of the following concentrations in law enforcement, corrections, or juvenile justice.

# Government and Public Service

## Program Outcomes

Students will be able to

- Demonstrate outcomes set forth in TCLEOSE Course 1000 (WECM statement of end of course outcomes).
- Articulate key concepts in police science and criminal justice.
- Analyze and apply research to Texas Penal Code Law, Code of Criminal Procedure, Family Code, Health and Safety Code, and Transportation Code.
- Demonstrate knowledge of and commitment to law enforcement professional, ethical, and legal obligations.

For more information call 713.718.8361 or e-mail [chris.carmean@hccs.edu](mailto:chris.carmean@hccs.edu).

## LAW ENFORCEMENT AAS

TSI testing required prior to first enrollment.

### FIRST YEAR

#### First Semester

	<b>Credits</b>
EDUC 1300 Learning Framework <sup>A</sup> .....	3
CRIJ 1301 Introduction to Criminal Justice.....	3
ENGL 1301 Composition I.....	3
GOVT 2305 Federal Government.....	3
<b>Semester Total</b>	<b>12</b>

#### Second Semester

	<b>Credits</b>
CRIJ 1307 Crime in America.....	3
ENGL 1302 Composition II OR.....	3
ENGL 2311 Technical & Business Writing.....	3
XXXX #3## Math/Natural Science Elective <sup>B</sup> .....	3
CRIJ 2328 Police Systems and Practices.....	3
<b>Semester Total</b>	<b>12</b>

### SECOND YEAR

#### First Semester

	<b>Credits</b>
GOVT 2306 Texas Government.....	3
CRIJ 2323 Legal Aspects of Law Enforcement.....	3
XXXX #3## Humanities/Fine Arts Elective <sup>C</sup> .....	3
XXXX #3## Computer Applications Elective <sup>D</sup> .....	3
<b>Semester Total</b>	<b>12</b>

#### Second Semester

	<b>Credits</b>
CJLE 1506 Basic Peace Officer I.....	5
CJLE 1512 Basic Peace Officer II.....	5
CJLE 1518 Basic Peace Officer III.....	5
CJLE 1524 Basic Peace Officer IV.....	5
<b>Semester Total</b>	<b>20</b>

## Third Semester

	<b>Credits</b>
CJLE 2484 Criminal Justice Cooperative Education - Law Enforcement/Police Science #.....	4
<b>Semester Total</b>	<b>4</b>
<b>Program Total</b>	<b>60</b>

# Capstone Course

<sup>A</sup> Student Success Course: Students are required to complete EDUC 1300 within their first 12 semester credit hours of instruction. Students enrolling at HCC with 12 or more hours completed should consult with an academic advisor to select an appropriate course substitution.

<sup>B</sup> Math/Natural Science: May choose from – ANTH 2301 (with or without 2101 = lab), 2302, ASTR 1303, 1304, 1403, 1404, BIOL 1308, 1309, 1322, 1406, 1407, (2301, 2302 – restricted to Engineering, Science, and Health Sciences majors), CHEM 1305, 1405, 1411, 1412, COSC 1436, GEOG 1301, GEOL 1305, 1345, 1347, 1403, 1404, MATH 1314, 1316, 1324, 1325, 1332, 1342, 1350, 2318, 2320, 2412, 2413, 2414, 2415, PHYS 1305, 1401, 1402, 2325 (with or without 2125= lab), 2326 (with or without 2126 = lab), PSYC 2317.

<sup>C</sup> Humanities/Fine Arts: May choose from – ARTS 1301, 1303, 1304, COMM 2366, DANC 2303, DRAM 1310, 2316, 2366, ENGL 2322, 2323, 2327, 2328, 2332, 2333, 2342, 2343, 2351, HIST 1301, 1302, 2311, 2312, 2321, 2322, 2301, 2327, 2328, 2381, HUMA 1301, 1305, 1311, 2319, 2323, MUSI 1306, 1310, PHIL 1301, 1304, 2306, 2307, 2316, World Languages (ARAB 1411, 1412, CHIN 1411, 1412, FREN 1411, 1412, GERM 1411, 1412, JAPN 1411, 1412, KORE 1411, 1412, SPAN 1411, 1412).

<sup>D</sup> Computer Applications Elective: May choose from – ITSC 1301 Introduction to Computers I, POFI 1301 Computer Applications I, or BCIS 1405 Business Computer Applications.

## Basic Peace Officer Licensing

The Basic Peace Officer Licensing program prepares students for a career as a Texas Peace Officer. Upon successful completion, students take the state licensure examination. Students must be at least 21 years of age and a US citizen, submit to fingerprinting for a criminal history report, physical examination and drug screen, psychological evaluation, achieve an acceptable score in English and reading on the COMPASS test, and have a high school diploma or GED. Students must meet stringent requirements that exceed general college rules for enrollment and completion of this program. Students may enroll in day (full or part-time) or night (part-time) classes.

Students may choose to enroll in the Basic Peace Officer Licensing certificate program for credit or the optional non-credit track.

For more information call 713.718.8361 or 713.718.8377 or e-mail [chris.carmean@hccs.edu](mailto:chris.carmean@hccs.edu).

# Government and Public Service

## CERTIFICATE

### Level I

First Semester	Credits
CJLE 1506 Basic Peace Officer I .....	5
CJLE 1512 Basic Peace Officer II .....	5
<b>Semester Total</b>	<b>10</b>

### Level II

Second Semester	Credits
CJLE 1518 Basic Peace Officer III .....	5
CJLE 1524 Basic Peace Officer IV # .....	5
<b>Semester Total</b>	<b>10</b>
<b>Program Total</b>	<b>20</b>

# Capstone Course

## Corrections Specialization

*(Deactivation pending SACSCOC approval. Enrollment is closed to new students.)*

The Corrections Specialization program trains individuals for a career in Corrections and employment with the Texas Department of Criminal Justice (TDCJ). Students currently employed with TDCJ can utilize this degree for promotional purposes. This degree program transfers to Midwestern University and University of Houston/Clear Lake in total by agreement.

For more information call 713.718.8377 or e-mail [chris.carmean@hccs.edu](mailto:chris.carmean@hccs.edu).

## AAS

*TSI testing required prior to first enrollment.*

### FIRST YEAR

First Semester	Credits
CRIJ 1301 Introduction to Criminal Justice* .....	3
ENGL 1301 Composition I .....	3
GOVT 2305 Federal Government .....	3
PSYC 2301 Introduction to Psychology .....	3
XXXX #3## Computer Applications Elective*** .....	3
<b>Semester Total</b>	<b>15</b>

### Second Semester

Credits	
CRIJ 1306 The Courts and Criminal Procedure .....	3
CRIJ 1310 Fundamentals of Criminal Law .....	3
XXXX #4## Foreign Language Elective OR	
SGNL 1401 American Sign Language (ASL): Beginning I .....	4
SOCI 1301 Introduction to Sociology .....	3
XXXX #3## Humanities/Fine Arts General Education Elective .....	3
<b>Semester Total</b>	<b>16</b>

## SECOND YEAR

### First Semester

Credits	
MATH 1314 College Algebra .....	3
SPCH 1311 Fundamentals of Speech .....	3
ENGL 2311 Technical and Industrial Correspondence and Report Writing .....	3
CRIJ 1307 Crime in America .....	3
CRIJ 2314 Criminal Investigation .....	3
<b>Semester Total</b>	<b>15</b>

### Second Semester

Credits	
CRIJ 2301 Community Resources in Corrections .....	3
CRIJ 2313 Correctional Systems and Practices .....	3
CJCR 2325 Legal Aspects of Corrections .....	3
PHIL 2306 Introduction to Ethics .....	3
CJSA 2364 Practicum (or Field Experience)-Criminal Justice/Safety Studies** .....	3
<b>Semester Total</b>	<b>15</b>
<b>Program Total</b>	<b>61</b>

\*Student Success Course

\*\*Capstone

\*\*\*Electives may be chosen from the following courses: ITSC 1309, POFI 1301, or BCIS 1405

## Juvenile Justice Specialization

*(Deactivation pending SACSCOC approval. Enrollment is closed to new students.)*

The AAS Juvenile Justice Specialization program prepares students for a career as a Juvenile Probation Officer or for other related Juvenile Justice occupations. After program completion, students may transfer to Prairie View A&M's School of Juvenile Justice to complete the Bachelor of Science degree. This program features competency-based instruction from Juvenile Probation Officers working in the field.

For more information call 713.718.8377 or e-mail [chris.carmean@hccs.edu](mailto:chris.carmean@hccs.edu).

## AAS

*TSI testing required prior to first enrollment.*

### FIRST YEAR

First Semester	Credits
CRIJ 1301 Introduction to Criminal Justice* .....	3
ENGL 1301 Composition I .....	3
GOVT 2305 Federal Government .....	3
PSYC 2301 Introduction to Psychology .....	3
XXXX #3## Computer Applications Elective*** .....	3
<b>Semester Total</b>	<b>15</b>

# Government and Public Service

## Second Semester Credits

CRIJ 1310	Fundamentals of Criminal Law .....	3
CRIJ 1306	The Courts and Criminal Procedure .....	3
GOVT 2306	Texas Government.....	3
XXXX #4##	Foreign Language Elective .....	4
XXXX #3##	Humanities/Fine Arts General Education Elective .....	3
<b>Semester Total</b>		<b>16</b>

## SECOND YEAR

### First Semester Credits

SGNL 1401	American Sign Language (ASL): Beginning I.....	4
MATH 1314	College Algebra.....	3
CRIJ 2301	Community Resources in Corrections .....	3
CRIJ 1313	Juvenile Justice Systems.....	3
SOCI 1301	Introduction to Sociology.....	3
<b>Semester Total</b>		<b>16</b>

### Second Semester Credits

SPCH 1311	Fundamentals of Speech.....	3
ENGL 2311	Technical and Industrial Correspondence and Report Writing I.....	3
CJSA 1393	Special Topics in Criminal Justice Studies.....	3
PHIL 2306	Introduction to Ethics .....	3
CJSA 2364	Practicum-Criminal Justice Studies**.....	3
<b>Semester Total</b>		<b>15</b>
<b>Program Total</b>		<b>62</b>

\*Student Success Course

\*\*Capstone

\*\*\*Electives may be chosen from the following courses: ITSC 1309, POFI 1301, or BCIS 1405

## FIRE PROTECTION

The Fire Protection program provides courses leading to an AAS degree in Fire and Arson Investigation Technology.

The AAS degree in Fire and Arson Investigation Technology provides advanced training and education in fire and arson investigation techniques and topics. The curriculum includes courses from the Criminal Justice program.

In addition, please note that a student may only earn one Occupational Skills Award (OSA) per academic year.

### Program Outcomes

Students will be able to

- Identify the Basics of Fire Behavior
- Describe the Procedures for Conducting a Fire Inspection

- Create an Incident Action Plan
- Inspect the Performance of Building Systems

For more information call 713.718.5236 or e-mail rufus.summers@hccs.edu.

## Fire and Arson Investigation Technology

### AAS

TSI testing required prior to first enrollment.

### FIRST YEAR

#### First Semester Credits

EDUC 1300	Learning Framework <sup>A</sup> .....	3
CRIJ 1301	Introduction to Criminal Justice* .....	3
ENGL 1301	Composition I.....	3
CRIJ 2323	Legal Aspects of Law Enforcement.....	3
FIRT 1338	Fire Protection Systems.....	3
<b>Semester Total</b>		<b>15</b>

#### Second Semester Credits

GOVT 2306	Texas Government.....	3
XXXX #3##	Humanities/Fine Arts Elective <sup>B</sup> .....	3
CRIJ 1307	Crime in America.....	3
CRIJ 1310	Fundamentals of Criminal Law .....	3
FIRT 1327	Building Construction in the Fire Service.....	3
<b>Semester Total</b>		<b>15</b>

### SECOND YEAR

#### First Semester Credits

CHEM 1305	Introductory Chemistry.....	3
CRIJ 2314	Criminal Investigation.....	3
FIRT 1303	Fire and Arson Investigation I .....	3
XXXX #3##	General Education Elective C.....	3
FIRT 1315	Hazardous Materials I.....	3
<b>Semester Total</b>		<b>15</b>

#### Second Semester Credits

CRIJ 1306	The Courts and Criminal Procedure .....	3
CRIJ 2328	Police Systems and Practices.....	3
FIRT 1345	Hazardous Materials II.....	3
FIRT 2333	Fire and Arson Investigation II .....	3
FIRT 2380	Cooperative Education-Fire Protection and Safety Technology/Technician <sup>#</sup> .....	3
<b>Semester Total</b>		<b>15</b>
<b>Program Total</b>		<b>60</b>

\*\*Capstone

<sup>A</sup> Student Success Course: Students are required to complete EDUC 1300 within their first 12 semester credit hours of instruction. Students enrolling at HCC with 12 or more hours completed should consult with an academic advisor to select an appropriate course substitution.

# Government and Public Service

<sup>B</sup> Humanities/Fine Arts: May choose from – ARTS 1301, 1303, 1304, COMM 2366, DANC 2303, DRAM 1310, 2316, 2366, ENGL 2322, 2323, 2327, 2328, 2332, 2333, 2342, 2343, 2351, HIST 1301, 1302, 2311, 2312, 2321, 2322, 2301, 2327, 2328, 2381, HUMA 1301, 1305, 1311, 2319, 2323, MUSI 1306, 1310, PHIL 1301, 1304, 2306, 2307, 2316, World Languages (ARAB 1411, 1412, CHIN 1411, 1412, FREN 1411, 1412, GERM 1411, 1412, JAPN 1411, 1412, KORE 1411, 1412, SPAN 1411, 1412).

<sup>C</sup> General Education: May choose from – ANTH 2301 (with or without 2101 = lab), 2302, 2346, 2351, ARTS 1301, 1303, 1304, ASTR 1303, 1304, 1403, 1404, BIOL 1308, 1309, 1322, 1406, 1407, (2301, 2302 – restricted to Engineering, Science, and Health Sciences majors), CHEM 1305, 1405, 1411, 1412, COMM 2366, COSC 1436, DANC 2303, DRAM 1310, 2316, 2366, ECON 1301, 2301, 2302, EDUC 1300, ENGL 2322, 2323, 2327, 2328, 2332, 2333, 2342, 2343, 2351, GEOG 1301, 1302, 1303, GEOL 1305, 1345, 1347, 1403, 1404, GOVT 2305, 2306, HIST 1301, 1302, 2311, 2312, 2321, 2322, 2301, 2327, 2328, 2381, HUMA 1301, 1305, 1311, 2319, 2323, MATH 1314, 1316, 1324, 1325, 1332, 1342, 1350, 2318, 2320, 2412, 2413, 2414, 2415, MUSI 1306, 1310, PHIL 1301, 1304, 2306, 2307, 2316, PHYS 1305, 1401, 1402, 2325 (with or without 2125 = lab), 2326 (with or without 2126 = lab), PSYC 2301, 2314, 2316, 2317, 2319, SOCI 1301, 1306, 2301, 2336, TECA 1354, World Languages (ARAB 1411, 1412, CHIN 1411, 1412, FREN 1411, 1412, GERM 1411, 1412, JAPN 1411, 1412, KORE 1411, 1412, SPAN 1411, 1412).

## Fire & Arson Investigator

The Fire and Arson Investigator Occupational Skills Award (OSA) provides students work in a public or private organization to investigate fires and determine the cause and origin. It also provides the certification to give credibility to testimony of cause and origin of fires. Students completing the MSA will be able to list possible motives for fire setters and describe the elements of investigation practices.

### OCCUPATIONAL SKILLS AWARD

(Occupational Skills Award)

<b>First Semester</b>		<b>Credits</b>
FIRT 1301	Fundamentals of Fire Protection.....	3
FIRT 1303	Fire and Arson Investigation I.....	3
FIRT 2333	Fire and Arson Investigation II.....	3
<b>Semester Total</b>		<b>9</b>
<b>Program Total</b>		<b>9</b>

## FIRE SCIENCE & SAFETY

A growing trend in fire service nationwide is the creation of a college-educated fire-fighting workforce. The goal of the Fire Science and Safety awards is to enhance technical competencies in the following areas: fire suppression, fire prevention, fire service management, life safety, and other related topics. Although this program is primarily directed toward the professional firefighter, it also provides training and education for personnel of insurance organizations and other industries involved in fire safety and protection.

The Texas Higher Education Coordinating Board (THECB) allows students to earn only one AAS in Fire Protection and Safety Technology. Students must choose from one of the following three specializations: Fire Officer, Fire Fighter, or Industrial.

### Fire Officer I

The Fire Officer I certificate is offered to fire fighters who complete the required courses and who reach the level of competency described by NFPA standard 1021. These six courses allow fire fighters to take the Fire Officer I test from the Texas Commission on Fire Protection.

For more information call 713.718.5236 or e-mail [rufus.summers@hccs.edu](mailto:rufus.summers@hccs.edu).

### CERTIFICATE LEVEL I

<b>First Semester</b>		<b>Credits</b>
FIRT 1307	Fire Prevention Codes and Inspections.....	3
FIRT 1309	Fire Administration I.....	3
FIRT 1303	Fire and Arson Investigation I.....	3
<b>Semester Total</b>		<b>9</b>
<b>Second Semester</b>		<b>Credits</b>
FIRT 2309	Firefighting Strategies and Tactics I.....	3
FIRT 2305	Fire Instructor I.....	3
FIRT 2351	Company Fire Officer <sup>#</sup> OR	
FIRT 1342	Fire Officer I <sup>#</sup> .....	3
<b>Semester Total</b>		<b>9</b>
<b>Program Total</b>		<b>18</b>

<sup>#</sup> Capstone Course

# Government and Public Service

## Fire Instructor

The series of three courses provides training required to apply for the Texas Commission on Fire Protection (TCFP) Fire Instructor I, II, and III certifications. These courses also provide a three-course certification step to becoming a Training Program Manager.

To obtain the TCFP Fire Instructor I, II, and III certification, participants must have a Basic Fire Fighter certification with TCFP and pass the Knowledge and Skills tests for each level of certification. An application fee of \$15 per certification must be paid to TCFP when submitting an application to take the final assessment from the Texas Commission on Environmental Quality.

### Program Outcomes

Students will be able to

- Demonstrate a lesson plan using instructional aids and evaluation forms.
- Develop a lesson plan, schedule training sessions, and conduct a class using lesson plans.
- Develop a comprehensive training curriculum and write equipment specifications from specific curriculum information.

For more information call 713.718.5236 or e-mail [rufus.summers@hccs.edu](mailto:rufus.summers@hccs.edu).

## OCCUPATIONAL SKILLS AWARD

(Occupational Skills Award)

<b>First Semester</b>		<b>Credits</b>
FIRT 2305	Fire Instructor I.....	3
<b>Semester Total</b>		<b>3</b>
<b>Second Semester</b>		<b>Credits</b>
FIRT 2307	Fire Instructor II.....	3
<b>Semester Total</b>		<b>3</b>
<b>Third Semester</b>		<b>Credits</b>
FIRT 2459	Fire Instructor III.....	4
<b>Semester Total</b>		<b>4</b>
<b>Program Total</b>		<b>10</b>

## Fire Science and Safety

Students seeking a career in the Fire Service can receive a certification required to work as a fire fighter in the State of Texas. By completing this AAS degree, students are eligible to take the State exam. The demand for firefighters is increasing, and those with certification and an associate degree have

an educational advantage over those with a basic certification. These awards meet the educational need for advanced certification from the Texas Commission on Fire Protection.

### Program Outcomes

Students will be able to

- Write a basic incident report, given the report forms, guidelines, and information, so that all pertinent information is recorded, the information is accurate, and the report is complete.
- Demonstrate the need for team assistance, given fire department communications equipment, SOPs, and a team, so that the supervisor is consistently informed of team needs, departmental SOPs are followed, and the assignment is accomplished safely.
- Recognize an ignitable liquid fire, operating as a member of a team, given an assignment, an attack line, personal protective equipment, a foam proportioning device, a nozzle, foam concentrates, and a water supply, so that the correct type of foam concentrate is selected for the given fuel and conditions, a properly proportioned foam stream is applied to the surface of the fuel to create and maintain a foam blanket, fire is extinguished, reignition is prevented, team protection is maintained with a foam stream, and the hazard is faced until retreat to safe haven is reached.
- Use an interior attack line for a team's accomplishment of an assignment in a structure fire, given attack lines, personnel, personal protective equipment, and tools, so that crew integrity is established; attack techniques are selected for the given level of the fire (e.g., attic, grade level, upper levels, or basement); attack techniques are communicated to the attack teams; constant team coordination is maintained; fire growth and development is continuously evaluated; search, rescue, and ventilation requirements are communicated or managed; hazards are reported to the attack teams; and incident command is apprised of changing conditions.
- Control a flammable gas cylinder fire, operating as a member of a team, given an assignment, a cylinder outside of a structure, an attack line, personal protective equipment, and tools, so that crew integrity is maintained, contents are identified, safe havens are identified prior to advancing, open valves are closed, flames are not extinguished unless the leaking gas is eliminated, the cylinder is cooled, cylinder integrity is evaluated, hazardous conditions are recognized and

# Government and Public Service

acted upon, and the cylinder is faced during approach and retreat.

- Analyze evidence of fire cause and origin, given a flashlight and overhaul tools, so that the evidence is noted and protected from further disturbance until investigators can arrive on the scene.
- Practice a victim entrapped in a motor vehicle as part of a team, given stabilization and extrication tools, so that the vehicle is stabilized, the victim is disentangled without further injury, and hazards are managed.
- Organize rescue operation teams, given standard operating procedures, necessary rescue equipment, and an assignment, so that procedures are followed, rescue items are recognized and retrieved in the time as prescribed by the AHJ, and the assignment is completed.
- Demonstrate a fire safety survey in a private dwelling, given survey forms and procedures, so that fire and life safety hazards are identified, recommendations for their correction are made to the occupant, and unresolved issues are referred to the proper authority.
- Relate fire safety information to station visitors or small groups, given prepared materials, so that all information is presented, the information is accurate, and questions are answered or referred.
- Interpret a pre-incident survey, given forms, necessary tools, and an assignment, so that all required occupancy information is recorded, items of concern are noted, and accurate sketches or diagrams are prepared.
- Identify power plants, power tools, and lighting equipment, given tools and manufacturers' instructions, so that equipment is clean and maintained according to manufacturer and departmental guidelines, maintenance is recorded, and equipment is placed in a ready state or reported otherwise.
- Describe an annual service test on fire hose, given a pump, a marking device, pressure gauges, a timer, record sheets, and related equipment, so that procedures are followed, the condition of the hose is evaluated, any damaged hose is removed from service, and the results are recorded.

For more information call 713.718.5236 or e-mail [rufus.summers@hccs.edu](mailto:rufus.summers@hccs.edu).

## Fire Science & Safety - Firefighter

### AAS

*TSI testing required prior to first enrollment.*

#### FIRST YEAR

<b>First Semester</b>		<b>Credits</b>
EDUC 1300	Learning Framework <sup>A</sup> .....	3
FIRS 1301	Firefighter Certification I* .....	3
FIRS 1407	Firefighter Certification II .....	4
FIRS 1313	Firefighter Certification III .....	3
<b>Semester Total</b>		<b>13</b>

<b>Second Semester</b>		<b>Credits</b>
FIRS 1319	Firefighter Certification IV .....	3
FIRS 1423	Firefighter Certification V .....	4
FIRS 1329	Firefighter Certification VI .....	3
FIRS 1433	Firefighter Certification VII .....	4
FIRS 1203	Firefighter Agility and Fitness Preparation .....	2
<b>Semester Total</b>		<b>16</b>

#### SECOND YEAR

<b>First Semester</b>		<b>Credits</b>
CHEM 1305	Introductory Chemistry .....	3
FIRT 1327	Building Construction in the Fire Service .....	3
GOVT 2306	Texas Government .....	3
XXXX #3##	Humanities/Fine Arts Elective <sup>B</sup> .....	3
FIRT 2309	Firefighting Strategies and Tactics I .....	3
PSYC 2301	Introduction to Psychology .....	3
<b>Semester Total</b>		<b>18</b>

<b>Second Semester</b>		<b>Credits</b>
FIRT 1309	Fire Administration I .....	3
FIRT 1338	Fire Protection Systems .....	3
FIRT 1315	Hazardous Materials I .....	3
FIRT 1303	Fire and Arson Investigation I .....	3
FIRT 2188	Internship - Fire Protection and Safety Technology/Technician # .....	1
<b>Semester Total</b>		<b>13</b>

**Program Total 60**

*\*Student Success Course*

*# Capstone*

<sup>A</sup> *Student Success Course: Students are required to complete EDUC 1300 within their first 12 semester credit hours of instruction. Students enrolling at HCC with 12 or more hours completed should consult with an academic advisor to select an appropriate course substitution.*

<sup>B</sup> *Humanities/Fine Arts: May choose from – ARTS 1301, 1303, 1304, COMM 2366, DANC 2303, DRAM 1310, 2316, 2366, ENGL 2322, 2323, 2327, 2328, 2332, 2333, 2342, 2343, 2351, HIST 1301, 1302, 2311, 2312, 2321, 2322, 2301, 2327, 2328,*

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2381, HUMA 1301, 1305, 1311, 2319, 2323, MUSI 1306, 1310, PHIL 1301, 1304, 2306, 2307, 2316, World Languages (ARAB 1411, 1412, CHIN 1411, 1412, FREN 1411, 1412, GERM 1411, 1412, JAPN 1411, 1412, KORE 1411, 1412, SPAN 1411, 1412).

## Fire Inspector

The Fire Inspector Occupational Skills Award (OSA) provides students with work inspecting buildings and occupancies for fire hazards. It also provides certification for individuals to enforce building and occupancy codes to prevent loss of life and prevent fires. Students completing the MSA should be able to utilize the appropriate codes, list types of construction and occupancy classifications, identify building service equipment, processes and hazards, list different types of fire protection systems, water supply and be able to review blueprints and make corrections that comply with current codes.

### Program Outcomes

Students will be able to

- Demonstrate appropriate codes, list different occupancy classifications, and understand fire protection systems.
- Demonstrate and evaluate occupancy types, emergency plans, and fire protection systems.
- Evaluate building plans and identify code deficiencies, recognize symbols for fire protection and Life Safety Codes.

For more information call 713.718.5236 or e-mail [rufus.summers@hccs.edu](mailto:rufus.summers@hccs.edu).

## OCCUPATIONAL SKILLS AWARD

(Occupational Skills Award)

First Semester		Credits
FIRT 1408	Fire Inspector I	4
FIRT 1340	Fire Inspector II	3
FIRT 1202	Plans Examiner I	2
<b>Semester Total</b>		<b>9</b>
<b>Program Total</b>		<b>9</b>

## FIRE SCIENCE/FIREFIGHTING

Students completing the Basic Fire Fighting certificate will meet the requirements for the Texas Commission on Fire Protection minimum standards for working as a fire fighter in the State of Texas. This certificate can be for credit or

noncredit. Credit hours will apply to the AAS degree Fire Science/Firefighting.

The Basic Firefighter certificate program is designed to meet all of the requirements of the fire-training phase of the Texas Commission on Fire Protection's minimum standards for Structure Fire Protection Personnel Certification. Successful completion of the program prepares students to take the State certification written and skills test. The curriculum is divided into two semesters. Students must register for all courses in the semester, and all courses for each semester must be taken concurrently. Failure to successfully complete any of the requirements for any one course results in a failing grade for all the courses in that semester. Each student must complete the first semester before being eligible to enroll in the second semester courses. As a minimum, each student must also complete an approved Emergency Care Attendant (ECA) course in order to be certified as a Structural Firefighter. HCC offers EMSP 1005, Emergency Care Attendant, as a non-credit course (see Continuing Education).

The program's current schedule is 672 contact hours and is scheduled for two semesters. HCC offers the schedule as a day class, four days a week for ten weeks a semester. For students who need to work and attend classes, HCC offers a schedule of two semesters of twenty weeks each with classes Monday and Wednesday nights from 6:00 PM to 9:00 PM, and Saturdays from 7:30 AM to 5:30 PM. Students may choose to enroll in the Basic Firefighter certificate program for credit or the optional non-credit track.

### Program Outcomes

Students will be able to

- Demonstrate the ability to don personal protective clothing within 1 minute; doff personal protective clothing and prepare for reuse; hoist tools and equipment using ropes and the correct knot; and locate information in departmental documents and standard or code materials.
- Identify knot types and usage; the difference between life safety and utility rope; reasons for placing rope out of service; the types of knots to use for given tools, ropes, or situations; hoisting methods for tools and equipment; and using rope to support response activities.
- Identify conditions that require respiratory protection, uses and limitations of SCBA, components of SCBA, donning procedures, breathing techniques, indications for and emergency procedures used with SCBA, and physical requirements of the SCBA wearer.

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- Identify procedures for reporting an emergency, departmental SOPs for taking and receiving alarms, radio codes or procedures, and information needs of dispatch center. Perform fire department procedures for answering nonemergency telephone calls. Demonstrate the ability to operate fire station telephone and intercom equipment. Comprehend personnel accountability systems, communication procedures, emergency evacuation methods, what constitutes a safe haven, elements that create or indicate a hazard, and emergency procedures for loss of air supply.
- Demonstrate mounting and dismounting procedures for riding fire apparatus, hazards and ways to avoid hazards associated with riding apparatus, prohibited practices, and types of department personal protective equipment and the means for usage. Identify potential hazards involved in operating on emergency scenes including vehicle traffic, utilities, and environmental conditions; proper procedures for dismounting apparatus in traffic; procedures for safe operation at emergency scenes; and the protective equipment available for members' safety on emergency scenes and work zone designations.
- Identify basic construction of typical doors, windows, and walls within the department's community or service area; operation of doors, windows, and locks; and the dangers associated with forcing entry through doors, windows, and walls. Identify parts of a ladder, hazards associated with setting up ladders, what constitutes a stable foundation for ladder placement, different angles for various tasks, safety limits to the degree of angulation, and what constitutes a reliable structural component for top placement. Identify the principles, advantages, limitations, and effects of horizontal, mechanical, and hydraulic ventilation as well as safety considerations when venting a structure. Demonstrate the use of forcible entry tools during rescue operations, ladder operations for rescue, psychological effects of operating in obscured conditions and ways to manage them.
- Identify the principles of fire streams; types, design, operation, nozzle pressure effects, and flow capabilities of nozzles; precautions to be followed when advancing hose lines to a fire; observable results that a fire stream has been properly applied. Identify principles of fire streams as they relate to fighting automobile fires. Identify types of attack lines and water streams appropriate for attacking stacked, piled materials and outdoor fires. Identify the types of fire attack lines and water application devices most

effective for overhaul, water application methods for extinguishment that limit water damage. Understand the purpose of property conservation and its value to the public.

- Demonstrate loading and off-loading procedures for mobile water supply apparatus; fire hydrant operation; and suitable static water supply sources, procedures, and protocol for connecting to various water sources. Identify the classifications of fire; the types of, rating systems for, and risks associated with each class of fire; and the operating methods of and limitations of portable extinguishers.
- Identify safety principles and practices, power supply capacity and limitations, and light deployment methods. Properties, principles, and safety concerns for electricity, gas, and water systems; utility disconnect methods and associated dangers; and use of required safety equipment. Identify the types of ground cover fires, parts of ground cover fires, methods to contain or suppress, and safety principles and practices. Identify the types of cleaning methods for various tools and equipment, correct use of cleaning solvents, and manufacturer's or departmental guidelines for cleaning equipment and tools. Identify departmental procedures for noting a defective hose and removing it from service, cleaning methods, and hose rolls and loads.

For more information call 713.718.5236 or e-mail [rufus.summers@hccs.edu](mailto:rufus.summers@hccs.edu).

## Basic Firefighter

### CERTIFICATE LEVEL I

First Semester		Credits
FIRS 1301	Firefighter Certification I*	3
FIRS 1407	Firefighter Certification II	4
FIRS 1313	Firefighter Certification III	3
FIRS 1203	Firefighter Agility and Fitness	2
<b>Semester Total</b>		<b>12</b>
Second Semester		Credits
FIRS 1319	Firefighter Certification IV	3
FIRS 1423	Firefighter Certification V	4
FIRS 1329	Firefighter Certification VI	3
FIRS 1433	Firefighter Certification VII #	4
<b>Semester Total</b>		<b>14</b>
<b>Program Total</b>		<b>26</b>

\*Student Success Course

# Capstone Course

# Government and Public Service

## PARALEGAL TECHNOLOGY

The Paralegal Technology program prepares individuals to perform research, drafting, investigation, record-keeping and related administrative functions under the supervision of an attorney or court or business. The program includes instruction in legal research, document drafting, law office procedures, pleadings, courthouse procedures, and legal specialization.

The field is growing rapidly, and the need for trained individuals in the area is critical. The program may also be useful for pre-law training.

As an option for the Paralegal Technology elective, students may take LGLA 1370-ProDoc for Paralegals. At the conclusion of this course, students have the opportunity to take the exam offered by ProDoc, Inc., a division of Thompson-Reuters located at 610 Opperman Dr., Eagan, Minnesota 55123. Successful completion of the exam certifies students in ProDoc software.

Paralegals are not authorized by the State Bar of Texas to give legal advice or perform legal work without the supervision of an attorney.

The Texas Higher Education Coordinating Board (THECB) allows students to earn only one Certificate in Paralegal Technology - Legal Assistant. Students must choose from one of the following two specializations: General or Medical.

### Program Outcomes

Students will be able to

- Analyze the current law on Paralegal Licensing and Certification as it pertains to their individual goals by mapping their personal career paths and comparing it to the state licensing requirements.
- Formulate answer day in Texas for a Civil Lawsuit after service of citation.
- Interpret a Legal issue dealing with Texas State Court Law and prepare/reach a Legal Conclusion.
- Prepare a general denial/answer and a simple legal petition using Texas style of form.
- Illustrate basic courtroom etiquette and court filing procedure in Texas.

For more information call 713.718.6505 or 713.718.5404 or e-mail [ronald.esposito@hccs.edu](mailto:ronald.esposito@hccs.edu) or [earl.smith@hccs.edu](mailto:earl.smith@hccs.edu).

## AAS

*TSI testing is required prior to first enrollment.*

### FIRST YEAR

First Semester		Credits
EDUC 1300	Learning Framework <sup>A</sup> .....	3
LGLA 1303	Legal Research .....	3
LGLA 1344	Texas Civil Litigation .....	3
LGLA 1351	Contracts.....	3
MATH 1314	College Algebra <u>OR</u>	
XXXX #3##	Math/Natural Science Elective <sup>B</sup> .....	3
<b>Semester Total</b>		<b>15</b>

Second Semester		Credits
LGLA 1305	Legal Writing.....	3
LGLA 1345	Civil Litigation.....	3
ENGL 1301	Composition I.....	3
XXXX #3##	Paralegal Technology Elective <sup>D</sup> .....	3
PSYC 2301	General Psychology.....	3
<b>Semester Total</b>		<b>15</b>

### SECOND YEAR

First Semester		Credits
LGLA 1353	Wills, Trusts and Probate Administration .....	3
LGLA 2303	Torts and Personal Injury Law.....	3
ACNT 1303	Introduction to Accounting I.....	3
LGLA 2309	Real Property.....	3
GOVT 2305	Federal Government OR	
GOVT 2306	Texas Government.....	3
LGLA 1380	Cooperative Ed.: Legal Asst./Paralegal .....	3
<b>Semester Total</b>		<b>18</b>

Second Semester		Credits
LGLA 2307	Law Office Management.....	3
XXXX #3##	Humanities/Fine Arts Elective <sup>C</sup> .....	3
XXXX #3##	Paralegal Technology Elective <sup>D</sup> .....	3
LGLA 2381	Cooperative Education-Legal Assistant/Paralegal #.....	3
<b>Semester Total</b>		<b>12</b>
<b>Program Total</b>		<b>60</b>

# Capstone Course

<sup>A</sup> Student Success Course: Students are required to complete EDUC 1300 within their first 12 semester credit hours of instruction. Students enrolling at HCC with 12 or more hours completed should consult with an academic advisor to select an appropriate course substitution.

<sup>B</sup> Math/Natural Science: May choose from – ANTH 2301 (with or without 2101 = lab), 2302, ASTR 1303, 1304, 1403, 1404, BIOL 1308, 1309, 1322, 1406, 1407, (2301, 2302 – restricted to Engineering, Science, and Health Sciences majors), CHEM 1305, 1405, 1411, 1412, COSC 1436, GEOG 1301, GEOL 1305, 1345, 1347, 1403, 1404, MATH 1314, 1316, 1324, 1325, 1332, 1342, 1350, 2318, 2320, 2412, 2413, 2414, 2415, PHYS 1305, 1401, 1402, 2325 (with or without 2125= lab), 2326 (with or without 2126 = lab), PSYC 2317.

# Government and Public Service

<sup>C</sup> Humanities/Fine Arts: May choose from – ARTS 1301, 1303, 1304, COMM 2366, DANC 2303, DRAM 1310, 2316, 2366, ENGL 2322, 2323, 2327, 2328, 2332, 2333, 2342, 2343, 2351, HIST 1301, 1302, 2311, 2312, 2321, 2322, 2301, 2327, 2328, 2381, HUMA 1301, 1305, 1311, 2319, 2323, MUSI 1306, 1310, PHIL 1301, 1304, 2306, 2307, 2316, World Languages (ARAB 1411, 1412, CHIN 1411, 1412, FREN 1411, 1412, GERM 1411, 1412, JAPN 1411, 1412, KORE 1411, 1412, SPAN 1411, 1412).

<sup>D</sup> Paralegal electives: May choose from – LGLA 1370, 1355, 2315, POFI 1301, MDCA 1313, LGLA 2311 Business Organizations and LGLA 2313 Criminal Law.

## Law Office Clerk

The Law Office Clerk certificate is a stepping-stone to the Paralegal Technology degree. This certificate allows students who are interested in working in a law office to gain entry to the legal world while working on courses which will advance them to a Paralegal position.

Paralegals are not authorized by the State Bar of Texas to give legal advice or perform legal work without the supervision of an attorney.

For more information call 713.718.6505 or 713.718.5404 or e-mail [ronald.esposito@hccs.edu](mailto:ronald.esposito@hccs.edu) or [earl.smith@hccs.edu](mailto:earl.smith@hccs.edu).

### CERTIFICATE LEVEL I

#### FIRST YEAR

First Semester		Credits
LGLA 1303	Legal Research.....	3
LGLA 1344	Texas Civil Litigation.....	3
<b>Semester Total</b>		<b>6</b>

Second Semester		Credits
ACNT 1303	Introduction to Accounting I.....	3
LGLA 2307	Law Office Management.....	3
LGLA 1380	Cooperative Education-Legal Assistant/Paralegal #.....	3
<b>Semester Total</b>		<b>9</b>
<b>Program Total</b>		<b>15</b>

# Capstone Course

## Legal Assistant - General

The Legal Assistant certificate allows a student to work in a law office or corporation as an assistant to an attorney or a trained paralegal. It consists of 30 semester hours which provides adequate training in the skills necessary to be a trained Legal Assistant.

Paralegals are not authorized by the State Bar of Texas to give legal advice or perform legal work without the supervision of an attorney.

For more information call 713.718.6505 or 713.718.5404 or e-mail [ronald.esposito@hccs.edu](mailto:ronald.esposito@hccs.edu) or [earl.smith@hccs.edu](mailto:earl.smith@hccs.edu).

### CERTIFICATE LEVEL I

#### FIRST YEAR

First Semester		Credits
LGLA 1303	Legal Research.....	3
LGLA 1344	Texas Civil Litigation.....	3
LGLA 2309	Real Property.....	3
LGLA #3##	Paralegal Technology Elective <sup>A</sup> .....	3
ACNT 1303	Introduction to Accounting.....	3
<b>Semester Total</b>		<b>15</b>

Second Semester		Credits
LGLA 1305	Legal Writing.....	3
LGLA 1345	Civil Litigation.....	3
LGLA 2303	Torts and Personal Injury Law.....	3
LGLA 2307	Law Office Management.....	3
LGLA 1380	Cooperative Education-Legal Assistant/Paralegal #.....	3
<b>Semester Total</b>		<b>15</b>
<b>Program Total</b>		<b>30</b>

# Capstone Course

<sup>A</sup> The Paralegal Technology Elective may be chosen from the following courses: LGLA 1370, LGLA 1355, LGLA 2315, POFI 1301, MDCA 1313, LGLA 2311 Business Organizations and LGLA 2313 Criminal Law.

## Legal Assistant-Medical Specialization

The Legal Assistant-Medical Specialization is a step towards the Paralegal Technology degree from HCC with an emphasis in medical legal training. This certificate allows a student to work in a law office or corporation as an assistant to an attorney or a trained paralegal. The training and education offered by the certificate is ideal for those students who are interested, have been employed or who are currently employed in the medical field. It consists of 30 semester hours which provides adequate training in the skills necessary to be a trained Legal Assistant with a medical specialization.

Paralegals are not authorized by the State Bar of Texas to give legal advice or perform legal work without the supervision of an attorney.

For more information call 713.718.6505 or 713.718.5404 or e-mail [ronald.esposito@hccs.edu](mailto:ronald.esposito@hccs.edu) or [earl.smith@hccs.edu](mailto:earl.smith@hccs.edu).

# Government and Public Service

## **CERTIFICATE LEVEL I**

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### **FIRST YEAR**

<b>First Semester</b>	<b>Credits</b>
LGLA 1303 Legal Research.....	3
LGLA 1344 Texas Civil Litigation .....	3
LGLA #3## Paralegal Technology Elective <sup>A</sup> .....	3
LGLA 2309 Real Property.....	3
MDCA 1313 Medical Terminology .....	3

**Semester Total 15**

<b>Second Semester</b>	<b>Credits</b>
LGLA 1305 Legal Writing.....	3
LGLA 1345 Civil Litigation.....	3
LGLA 2303 Torts and Personal Injury Law.....	3
LGLA 2307 Law Office Management.....	3
LGLA 1380 Cooperative Education-Legal Assistant/Paralegal #.....	3

**Semester Total 15**

**Program Total 30**

# Capstone Course

<sup>A</sup> The Paralegal Technology Elective may be chosen from the following courses: LGLA 1370, LGLA 1355, LGLA 2315, POFI 1301, MDCA 1313, LGLA 2311 Business Organizations and LGLA 2313 Criminal Law.

# Health and Medical Sciences

- Allied Health (51.0000)**
- Dental Assisting (51.0601)**
- Dental Hygiene (51.0602)**
- Diagnostic Medical Sonography (51.0910)**
- Emergency Medical Services (51.0904)**
- Health Information Technology (51.0707, 51.0713)**
- Histologic Technician (51.1008)**
- Human Service Technology (51.1501, 51.1502) see Human Services & Social Sciences cluster**
- Medical Assistant (51.0801)**
- Medical Laboratory Technician (51.1004)**
- Nuclear Medicine Technology (51.0905)**
- Nursing (51.3801)**
- Occupational Therapy Assistant (51.0803)**
- Pharmacy Technician (51.0805)**
- Physical Therapist Assistant (51.0806)**
- Radiography/Computed Tomography (51.0911)**
- Respiratory Therapist (51.0908)**
- Surgical Technology (51.0909)**
- Vocational Nursing (51.3901)**

A Career Cluster is a grouping of occupations and broad industries based on commonalities. The Health and Medical Sciences career cluster is concerned with providing knowledge and skills related to planning, managing, and providing therapeutic services, diagnostic services, health informatics, support services, and biotechnology research and development. This includes the following HCC programs: Allied Health, Dental Assisting, Dental Hygiene, Diagnostic Medical Sonography, Emergency Medical Services, Health and Fitness Instructor, Health Information Technology, Histologic Technology, Medical Assisting, Medical Laboratory Technician, Nuclear Medicine Technology, Nursing, Occupational Therapy Assistant, Pharmacy Technician, Physical Therapist Assistant, Radiography/Computed Tomography, Respiratory Therapist, Surgical Technology and Vocational Nursing.

All new semester hour students, who have earned less than 12 semester hours of college level credit, are required to take a first-year student success course in their first term at HCC. Through research and experience, Houston Community College has determined that many life and career management skills are necessary for students to make the most of their college investment. A student success course is designed to prepare students for the demands of college and for success in the world of work. The course emphasizes setting priorities, time management, effective listening, note-taking, concentration techniques, retention of information, book analysis, comprehension techniques, and test-taking skills. This course also incorporates units that are designed to facilitate the use of library databases in conducting research, planning and setting educational objectives, lifelong career assessment, decision-making, financial aid, tutoring, and student support services, enabling the student to maximize the use of college resources.

Every HCC Career and Technology Education program contains a "capstone," an experience for the student to "put it all together." The capstone is a learning experience resulting in a consolidation of a student's educational experience and certifies mastery of entry level workplace competencies. The capstone experience must occur during the last semester of the student's educational program. The capstone consists of an external learning experience or an advanced course especially designed to help students synthesize knowledge and skills or other licensure as appropriate.

## General Application Procedures for Health Sciences Programs

Courses in the Health Sciences programs are offered in a sequence which begins in the fall term each year, unless indicated otherwise on the following chart. Most students are required to attend classes full-time. Students are expected to complete certificate programs within 12 months and associate degree programs within 24 months. Health Science students are required to have a criminal background check, drug screening, certain immunizations (bacterial meningitis, tetanus/diphtheria(TD), measles, mumps, rubella (MMR), Hepatitis B, chickenpox, and seasonal flu) and proof of health insurance prior to clinical training.

*NOTE: Review the accompanying chart to identify the specific requirements associated with your program of choice.*

# Health and Medical Sciences

HEALTH SCIENCES PROGRAMS						
Requirements for Admission	ESC Computed Tomography 1 Semester FT/Evenings	CERT Dental Assisting (DNTA) FT Day	AAS Dental Hygiene (DHYG)	ATC Diagnostic Medical Sonography (DMSO) 4 Semesters FT/Day	CERT Emergency Medical Services (EMSP) Day, Night and Hybrid	AAS Emergency Medical Services (EMSP) Day, Night and Hybrid
Prerequisites	Graduate of Radiography, Radiation Therapy or Nuclear Medicine program	HPRS 1201	HPRS 1201; BIOL 2301/2101; SOCI 1301; ENGL 1301; CHEM 1305 or higher	Graduate of 2 year Allied Health Program or BA degree. See Program narrative	Current CPR (HCP)	For Paramedic completed BLS certificate
Application Deadline & Terms students admitted	June 1, Fall October 1, Spring	June 15, Admit Fall	March 30, Admit Fall	June 1, Admit Fall	NONE Admit several dates/year	NONE Admit several dates/year
High School Grad. or GED Required	YES	YES	YES	YES	YES	YES
High School Transcript GED Scores on File	NO	YES	YES	NO	YES	YES
TSI Testing Required	N/A	YES (unless exempt)	YES (unless exempt)	Exempt from TSI	YES (unless exempt)	YES (unless exempt)
TSI Complete before Admission	N/A	NO	YES (unless exempt)	N/A	YES (unless exempt)	YES (unless exempt)
CELSA Required for non-USA High School Graduates	N/A	YES	YES	N/A	YES All remediation complete	YES All remediation complete
Math/Algebra Requirement	N/A	MATH 0306 or higher	College Level	MATH 1314	MATH 0306 or higher	Eligible to enroll in MATH 1314
Reading Requirement	N/A	GUST 0342 or higher	College Level	N/A	Compass 81/Asset 42 (College Level)	Compass 81/Asset 42 (College Level)
English Requirement	N/A	College Level	College Level	N/A	ENGL 0300 or 0347	College Level
Other Tests or Requirements	TDH-MRT & ARRT or NMTCB	Current Immunization Record	HESI pass @ 70% (Biology & Physics Exempt)	See Program Narrative	Immunization & TB Skin Test	NONE
College/University Transcripts on file	YES	YES	YES	YES	NO	YES (submit with application)
Personal Narrative	NO	NO	NO	YES	NO	NO
Personal Interview	NO	YES	YES	YES	YES	YES
Health Care Experience or Observation	YES	NO	YES (RDH)	YES	NO	NO
No. of Applicants accepted/year	16/year	24/year	20/year	15-20/year	100 +/year	100 +/year
<b>AFTER ACCEPTANCE FOR ENROLLMENT, APPLICANT MUST PROVIDE THE FOLLOWING:</b>						
Physical/Health Status Report (form provided)	YES	YES and Dental Exam	YES	YES	YES	YES
Current CPR Certification	YES	YES	YES	YES	YES health care provider	YES
Proof of Hepatitis-B Vaccine	YES	YES	YES	YES	YES	YES
Health Care Insurance	YES	YES	YES	YES	YES	YES
Medical Malpractice Insur. (paid at registration)	YES	YES	YES	YES	YES	YES
First Aid Training	N/A	N/A	Optional	N/A	N/A	NO
Background Checks Drug Screening	YES	YES	YES	YES	YES	YES

# Health and Medical Sciences

HEALTH SCIENCES PROGRAMS							
Requirements for Admission	AAS Health Information Technology (HITT) 24 Months FT/Evening	AAS Histologic Technician (HLAB) 21 Months FT & PT/Day	CERT Medical Assistant (MCA) 12 Months FT & PT/Day Medical Scribe	AAS Medical Laboratory Technician (MLAB) 24 Months FT & PT/Day	AAS Nuclear Medicine Technology (NMTT) 24 Months FT/Day	AAS Nursing: LVN to RN Transition (RNSG) 12 Months FT/Day	AAS Nursing: General (RNSG) 24 Months FT/Day & Evening
Prerequisites	BIOL 2301/2101, ENGL 1301	HPRS 1201	HPRS 1201 ENG 1301	HPRS 1201	HPRS 1201	Current VOCN License & Work, entire Academic Core RNSG 1301	BIOL 2301/2101 ENGL 1301 PSYC 2301 RNSG 1301
Application Deadline & Terms students admitted	November 1, Admit Spring June 1, Admit Fall	July 15, Fall	July 15, Fall November 15, Spring	July 15, Fall	June 1, Admit Summer	December 1, Admit Summer	April 1, Admit August August 1, Admit January
High School Grad. or GED Required	YES	YES	YES	YES	YES	YES	YES
High School Transcript GED Scores on File	YES	YES	YES	YES	YES	YES	YES
TSI Testing Required	YES (unless exempt)	YES (unless exempt)	YES (unless exempt)	YES (unless exempt)	YES (unless exempt)	YES (unless exempt)	YES (unless exempt)
TSI Complete before Admission	YES (unless exempt)	YES (unless exempt)	YES (unless exempt)	YES (unless exempt)	YES (unless exempt)	YES (unless exempt)	YES (unless exempt)
CELSA Required for non-USA High School Graduates	YES	YES	YES	YES	YES	NO	Only for placement Academic Courses
Math/Algebra Requirement	MATH 0312 or higher	College Level	Completed MATH 0308 or higher	College Level	Completed MATH 0312 or higher	Completed MATH 0312 or higher	Completed MATH 0312 or higher
Reading Requirement	College Level	College Level	College Level	College Level	College Level	College Level	College Level
English Requirement	College Level	College Level	College Level	College Level	College Level	ENGL 1301 completed	College Level
Other Tests or Requirements	NONE	NONE	NONE	NONE	NONE	HESI Test: Read 75, Grammar 75, A&P 75, Math 75; TOEFL (non-English as first Language)	HESI Test: Read 75, Grammar 75, A&P 75, Math 75; TOEFL (non-English as first Language)
College/University Transcripts on file	YES	YES	YES	YES	YES	YES	YES
Personal Narrative	NO	YES	NO	YES	YES	NO	NO
Personal Interview	YES	YES	YES	YES	YES	NO	
Health Care Experience or Observation	NO	NO	NO	NO	Recommend	YES	NO
No. of Applicants accepted/year	30/year	15	50/class	24/year	15-25/year	30/year	180 per class max.
AFTER ACCEPTANCE FOR ENROLLMENT, APPLICANT MUST PROVIDE THE FOLLOWING:							
Physical/Health Status Report (form provided)	YES	YES	YES	YES	YES	YES	YES
Current CPR Certification	NO	NO	NO	NO	NO	YES	YES
Proof of Hepatitis-B Vaccine	YES	YES	YES	YES	YES	YES	YES
Health Care Insurance	YES	YES	YES	YES	YES	YES	YES
Medical Malpractice Insur. (paid at registration)	YES	YES	YES	YES	YES	YES	YES
First Aid Training	N/A	N/A	N/A	N/A	N/A	NO	NO
Background Checks Drug Screening	YES	YES	YES	YES	YES	YES	YES

# Health and Medical Sciences

HEALTH SCIENCES PROGRAMS							
Requirements for Admission	CERT Occupational Therapy Assistant (OTHA) 12 Months FT/Day	CERT Pharmacy Technician (PHRA) 6 Months FT 12 Months PT Day	AAS Physical Therapist Assistant (PTHA) 24 Months FT/Day	AAS Radiography (RADR) 24 Months FT/Day	AAS Respiratory Therapist (RSPT) 24 Months FT/Day	CERT Surgical Technology (SRGT) 12 Months FT/Day	CERT Vocational Nursing (VNSG) 12 Months FT/Day
Prerequisites	HPRS 1201 OTHA 1301	Complete HPRS 1201 with "B" or higher	Mandatory Information Sessions	Mandatory Information Sessions MATH 1314 ENGL 1301 After Fall 2007, add BIOL 2301/2101, HPRS 1201, HPRS 1106	BIOL 2301/2101, BIOL 2302/2102, RSPT 1201	HPRS 1201	VNSG 1320 VNSG 1216
Application Deadline & Terms students admitted	May 1, Admit Fall	July 1, Admit Fall Dec 1, Admit Spring April 1, Admit Summer	March 1, Priority Deadline, June 1, Regular Deadline Admit Fall	February 1, for Summer	June 1, Admit Fall	July 1, Admit Fall	June 1, Admit Fall October 1, Admit Spring
High School Grad. or GED Required	YES	YES	YES	YES	YES	YES	YES
High School Transcript GED Scores on File	YES	YES	NO	YES	YES	YES	YES
TSI Testing Required	YES (unless exempt)	YES (unless exempt)	YES (unless exempt)	YES (unless exempt)	YES (unless exempt)	YES (unless exempt)	YES
TSI Complete before Admission	YES	YES	YES (unless exempt)	YES (unless exempt)	YES (unless exempt)	NO	YES
CELSA Required for non-USA High School Graduates	YES	YES	YES	YES	YES	YES	YES
Math/Algebra Requirement	Completed MATH 0312 or higher	Completed MATH 0308 or higher with "C" or above	MATH 0308 or higher	MATH 1314	MATH 1314	MATH 0308 or higher	MATH 0308 or higher
Reading Requirement	College Level	College Level	College Level	College Level	College Level	GUST 0342 or higher	
English Requirement	College Level	College Level	College Level	Completed ENGL 1301	College Level	College Level	
Other Tests or Requirements	ASSET or Compass	ASSET or Compass	YES BIOL 2301/2101 and 2302/2102 (taken within 5 years of department approval), PSYC 2301 or 2314	NONE	Program Exam	ASSET or Compass	TEAS Math 60 Reading 64
College/University Transcripts on file	YES	YES	YES	YES	YES	YES	YES
Personal Narrative	YES	YES	YES	NO	NO	NO	YES
Personal Interview	YES & 3 reference letters	YES	YES	YES	YES	YES	YES
Health Care Experience or Observation	YES	NO	YES	Recommend	Recommend	NO	YES
No. of Applicants accepted/year	20/year	150/year	40/year	40 per class	35-40/year	30-35/year	135/year
<b>AFTER ACCEPTANCE FOR ENROLLMENT, APPLICANT MUST PROVIDE THE FOLLOWING:</b>							
Physical/Health Status Report (form provided)	YES	YES	YES See Program Narrative	YES	YES	YES	YES
Current CPR Certification	YES	NO	Recommend	YES	YES	YES	YES
Proof of Hepatitis-B Vaccine	YES	NO	YES	YES	YES	YES	YES
Health Care Insurance	YES	YES	YES	YES	YES	YES	YES
Medical Malpractice Insur. (paid at registration)	YES	YES	YES	YES	YES	YES	YES
First Aid Training	YES	N/A	Recommend	N/A	YES	N/A	N/A
Background Checks Drug Screening	YES	YES	YES	YES	YES	YES	YES

# Health and Medical Sciences

## ALLIED HEALTH

The Associate of Applied Science-Allied Health Concentration is a career path for persons who have completed the following certificate programs: Dental Assisting, Medical Assistant, Pharmacy Technician, Surgical Technology and Vocational Nursing. The 60 plus credit hour degrees for these programs are designed for health science professionals in these areas to meet continuing education goals and to attain possible promotion from entry-level to advanced level clinical posts.

### Allied Health/Dental Assisting Track

#### AAS

*TSI testing is required prior to first enrollment.*

#### Prerequisite

EDUC 1300	Learning Framework <sup>A</sup>	3
HPRS 1201	Introduction to Health Professions	2
<b>Prerequisite Total</b>		<b>5</b>

#### First Semester

DNTA 1245	Preventive Dentistry	2
DNTA 1411	Dental Science	4
DNTA 1401	Dental Materials	4
DNTA 1415	Chairside Assisting	4
DNTA 1305	Dental Radiology	3
<b>Semester Total</b>		<b>17</b>

#### Second Semester

DNTA 1447	Advanced Dental Science	4
DNTA 1351	Dental Office Management	3
DNTA 1453	Dental Assisting Applications	4
DNTA 1349	Dental Radiology in the Clinic	3
DNTA 1167	Practicum (or Field Experience) - Dental Assisting/Assistant	1
<b>Semester Total</b>		<b>15</b>

#### Third Semester

DNTA 2130	Seminar for the Dental Assistant	1
DNTA 1102	Communication and Behavior in the Dental Office	1
DNTA 2267	Practicum (or Field Experience) - Dental Assisting/Assistant <sup>#</sup>	2
<b>Semester Total</b>		<b>4</b>

### SECOND YEAR

#### First Semester

ENGL 1301	Composition I	3
XXXX #4##	Math/Natural Science Elective <sup>B</sup>	4
XXXX #3##	Humanities/Fine Arts Elective <sup>C</sup>	3
ENGL 1302	Composition II	3
<b>Semester Total</b>		<b>13</b>

#### Second Semester

XXXX #3##	General Education Elective <sup>D</sup>	3
XXXX #3##	General Education Elective <sup>D</sup>	3

<b>Semester Total</b>	<b>6</b>
<b>Program Total</b>	<b>60</b>

<sup>#</sup> Capstone Course

<sup>A</sup> Student Success Course: Students are required to complete EDUC 1300 within their first 12 semester credit hours of instruction. Students enrolling at HCC with 12 or more hours completed should consult with an academic advisor to select an appropriate course substitution.

<sup>B</sup> Math/Natural Science: May choose from – ANTH 2301 (with or without 2101 = lab), 2302, ASTR 1303, 1304, 1403, 1404, BIOL 1308, 1309, 1322, 1406, 1407, (2301, 2302 – restricted to Engineering, Science, and Health Sciences majors), CHEM 1305, 1405, 1411, 1412, COSC 1436, GEOG 1301, GEOL 1305, 1345, 1347, 1403, 1404, MATH 1314, 1316, 1324, 1325, 1332, 1342, 1350, 2318, 2320, 2412, 2413, 2414, 2415, PHYS 1305, 1401, 1402, 2325 (with or without 2125= lab), 2326 (with or without 2126 = lab), PSYC 2317.

<sup>C</sup> Humanities/Fine Arts: May choose from – ARTS 1301, 1303, 1304, COMM 2366, DANC 2303, DRAM 1310, 2316, 2366, ENGL 2322, 2323, 2327, 2328, 2332, 2333, 2342, 2343, 2351, HIST 1301, 1302, 2311, 2312, 2321, 2322, 2301, 2327, 2328, 2381, HUMA 1301, 1305, 1311, 2319, 2323, MUSI 1306, 1310, PHIL 1301, 1304, 2306, 2307, 2316, World Languages (ARAB 1411, 1412, CHIN 1411, 1412, FREN 1411, 1412, GERM 1411, 1412, JAPN 1411, 1412, KORE 1411, 1412, SPAN 1411, 1412).

<sup>D</sup> General Education: May choose from – ANTH 2301 (with or without 2101 = lab), 2302, 2346, 2351, ARTS 1301, 1303, 1304, ASTR 1303, 1304, 1403, 1404, BIOL 1308, 1309, 1322, 1406, 1407, (2301, 2302 – restricted to Engineering, Science, and Health Sciences majors), CHEM 1305, 1405, 1411, 1412, COMM 2366, COSC 1436, DANC 2303, DRAM 1310, 2316, 2366, ECON 1301, 2301, 2302, EDUC 1300, ENGL 2322, 2323, 2327, 2328, 2332, 2333, 2342, 2343, 2351, GEOG 1301, 1302, 1303, GEOL 1305, 1345, 1347, 1403, 1404, GOVT 2305, 2306, HIST 1301, 1302, 2311, 2312, 2321, 2322, 2301, 2327, 2328, 2381, HUMA 1301, 1305, 1311, 2319, 2323, MATH 1314, 1316, 1324, 1325, 1332, 1342, 1350, 2318, 2320, 2412, 2413, 2414, 2415, MUSI 1306, 1310, PHIL 1301, 1304, 2306, 2307, 2316, PHYS 1305, 1401, 1402, 2325 (with or without 2125 = lab), 2326 (with or without 2126 = lab), PSYC 2301, 2314, 2316, 2317, 2319, SOCI 1301, 1306, 2301, 2336, TECA 1354, World Languages (ARAB 1411, 1412, CHIN 1411, 1412, FREN 1411, 1412, GERM 1411, 1412, JAPN 1411, 1412, KORE 1411, 1412, SPAN 1411, 1412).

# Health and Medical Sciences

## Allied Health/ Medical Assistant Track

### AAS

*TSI testing is required prior to first enrollment.*

#### Prerequisite

EDUC 1300	Learning Framework <sup>A</sup>	3
HPRS 1201	Introduction to Health Professions	2
ENGL 1301	Composition I	3

**Prerequisite Total 8**

#### First Semester

#### Credits

HPRS 1304	Basic Health Profession Skills	3
MDCA 1205	Medical Law and Ethics	2
MDCA 1213	Medical Terminology	2

**Semester Total 7**

#### Second Semester

#### Credits

MDCA 1409	Anatomy and Physiology for Medical Assistants	4
MDCA 1343	Medical Insurance	3
MDCA 1352	Medical Assistant Laboratory Procedures	3
MDCA 1417	Procedures in a Clinical Setting	4

**Semester Total 14**

#### Third Semester

#### Credits

MDCA 1310	Medical Assistant Interpersonal and Communication Skills	3
MDCA 1321	Administrative Procedures	3
MDCA 1372	Electronic Medical Record Documentation for Scribes	3
MDCA 1448	Pharmacology and Administration of Medications	4

**Semester Total 13**

### SECOND YEAR

#### First Semester

#### Credits

MDCA 1254	Medical Assisting Credentialing Exam Review	2
MDCA 1264	Practicum - Medical Assistant <sup>#</sup>	2

**Semester Total 4**

#### Second Semester

#### Credits

XXXX #4##	General Education Elective <sup>D</sup>	4
XXXX #4##	Math/Natural Science Elective <sup>B</sup>	4
XXXX #3##	Humanities/Fine Arts Elective <sup>C</sup>	3
XXXX #3##	General Education Elective <sup>D</sup>	3

**Semester Total 14**

**Program Total 60**

<sup>#</sup> Capstone Course

<sup>A</sup> Student Success Course: Students are required to complete EDUC 1300 within their first 12 semester credit hours of instruction. Students enrolling at HCC with 12 or more hours completed should consult with an academic advisor to select an appropriate course substitution.

<sup>B</sup> Math/Natural Science: May choose from – ANTH 2301 (with or without 2101 = lab), 2302, ASTR 1303, 1304, 1403, 1404, BIOL 1308, 1309, 1322, 1406, 1407, (2301, 2302 – restricted to Engineering, Science, and Health Sciences majors), CHEM 1305, 1405, 1411, 1412, COSC 1436, GEOG 1301, GEOL 1305, 1345, 1347, 1403, 1404, MATH 1314, 1316, 1324, 1325, 1332, 1342, 1350, 2318, 2320, 2412, 2413, 2414, 2415, PHYS 1305, 1401, 1402, 2325 (with or without 2125 = lab), 2326 (with or without 2126 = lab), PSYC 2317.

<sup>C</sup> Humanities/Fine Arts: May choose from – ARTS 1301, 1303, 1304, COMM 2366, DANC 2303, DRAM 1310, 2316, 2366, ENGL 2322, 2323, 2327, 2328, 2332, 2333, 2342, 2343, 2351, HIST 1301, 1302, 2311, 2312, 2321, 2322, 2301, 2327, 2328, 2381, HUMA 1301, 1305, 1311, 2319, 2323, MUSI 1306, 1310, PHIL 1301, 1304, 2306, 2307, 2316, World Languages (ARAB 1411, 1412, CHIN 1411, 1412, FREN 1411, 1412, GERM 1411, 1412, JAPN 1411, 1412, KORE 1411, 1412, SPAN 1411, 1412).

<sup>D</sup> General Education: May choose from – ANTH 2301 (with or without 2101 = lab), 2302, 2346, 2351, ARTS 1301, 1303, 1304, ASTR 1303, 1304, 1403, 1404, BIOL 1308, 1309, 1322, 1406, 1407, (2301, 2302 – restricted to Engineering, Science, and Health Sciences majors), CHEM 1305, 1405, 1411, 1412, COMM 2366, COSC 1436, DANC 2303, DRAM 1310, 2316, 2366, ECON 1301, 2301, 2302, EDUC 1300, ENGL 2322, 2323, 2327, 2328, 2332, 2333, 2342, 2343, 2351, GEOG 1301, 1302, 1303, GEOL 1305, 1345, 1347, 1403, 1404, GOVT 2305, 2306, HIST 1301, 1302, 2311, 2312, 2321, 2322, 2301, 2327, 2328, 2381, HUMA 1301, 1305, 1311, 2319, 2323, MATH 1314, 1316, 1324, 1325, 1332, 1342, 1350, 2318, 2320, 2412, 2413, 2414, 2415, MUSI 1306, 1310, PHIL 1301, 1304, 2306, 2307, 2316, PHYS 1305, 1401, 1402, 2325 (with or without 2125 = lab), 2326 (with or without 2126 = lab), PSYC 2301, 2314, 2316, 2317, 2319, SOCI 1301, 1306, 2301, 2336, TECA 1354, World Languages (ARAB 1411, 1412, CHIN 1411, 1412, FREN 1411, 1412, GERM 1411, 1412, JAPN 1411, 1412, KORE 1411, 1412, SPAN 1411, 1412).

## Allied Health/Pharmacy Technician Track

### AAS

*TSI testing is required prior to first enrollment.*

#### Prerequisites

#### Credits

EDUC 1300	Learning Framework <sup>A</sup>	3
HPRS 1201	Introduction to Health Professions	2
PHRA 1301	Introduction to Pharmacy	3

**Prerequisites Total 8**

#### First Semester

#### Credits

PHRA 1305	Drug Classification	3
PHRA 1309	Pharmaceutical Mathematics I	3
PHRA 1413	Community Pharmacy Practice	4
PHRA 1272	Professional Practices for Pharmacy Technicians	2

**Semester Total 12**

# Health and Medical Sciences

<b>Second Semester</b>			<b>Credits</b>
PHRA 1449	Institutional Pharmacy Practice.....	4	
PHRA 1445	Compounding Sterile Preparations and Aseptic Technique.....	4	
PHRA 1247	Pharmaceutical Mathematics II.....	2	
PHRA 1304	Pharmacotherapy and Disease Process.....	3	
<b>Semester Total</b>			<b>13</b>

<b>Third Semester</b>			<b>Credits</b>
PHRA 1261	Clinical-Pharmacy Technician/Assistant .....	2	
PHRA 2260	Clinical-Pharmacy Technician/Assistant .....	2	
PHRA 2261	Clinical-Pharmacy Technician/Assistant #.....	2	
PHRA 1243	Pharmacy Technician Certification Review .....	2	
<b>Semester Total</b>			<b>8</b>

## SECOND YEAR

<b>First Semester</b>			<b>Credits</b>
ENGL 1301	Composition I.....	3	
XXXX #4##	Math/Natural Science Elective <sup>B</sup> .....	4	
XXXX #3##	Humanities/Fine Arts Elective <sup>C</sup> .....	3	
XXXX #3##	Social/Behavioral Sciences Elective <sup>D</sup> .....	3	
<b>Semester Total</b>			<b>13</b>

<b>Second Semester</b>			<b>Credits</b>
ENGL 1302	Composition II.....	3	
XXXX #3##	General Education Elective <sup>E</sup> .....	3	
<b>Semester Total</b>			<b>6</b>
<b>Program Total</b>			<b>60</b>

# Capstone Course

<sup>A</sup> Student Success Course: Students are required to complete EDUC 1300 within their first 12 semester credit hours of instruction. Students enrolling at HCC with 12 or more hours completed should consult with an academic advisor to select an appropriate course substitution.

<sup>B</sup> Math/Natural Science: May choose from – ANTH 2301 (with or without 2101 = lab), 2302, ASTR 1303, 1304, 1403, 1404, BIOL 1308, 1309, 1322, 1406, 1407, (2301, 2302 – restricted to Engineering, Science, and Health Sciences majors), CHEM 1305, 1405, 1411, 1412, COSC 1436, GEOG 1301, GEOL 1305, 1345, 1347, 1403, 1404, MATH 1314, 1316, 1324, 1325, 1332, 1342, 1350, 2318, 2320, 2412, 2413, 2414, 2415, PHYS 1305, 1401, 1402, 2325 (with or without 2125= lab), 2326 (with or without 2126 = lab), PSYC 2317.

<sup>C</sup> Humanities/Fine Arts: May choose from – ARTS 1301, 1303, 1304, COMM 2366, DANC 2303, DRAM 1310, 2316, 2366, ENGL 2322, 2323, 2327, 2328, 2332, 2333, 2342, 2343, 2351, HIST 1301, 1302, 2311, 2312, 2321, 2322, 2301, 2327, 2328, 2381, HUMA 1301, 1305, 1311, 2319, 2323, MUSI 1306, 1310, PHIL 1301, 1304, 2306, 2307, 2316, World Languages (ARAB 1411, 1412, CHIN 1411, 1412, FREN 1411, 1412, GERM 1411, 1412, JAPN 1411, 1412, KORE 1411, 1412, SPAN 1411, 1412).

<sup>D</sup> Social/Behavioral Sciences: May choose from – ANTH 2346, 2351, ECON 1301, 2301, 2302, EDUC 1300, GEOG 1302, 1303, GOVT 2305, 2306, PSYC 2301, 2314, 2316, 2319, SOCI 1301, 1306, 2301, 2336, TECA 1354.

<sup>E</sup> General Education: May choose from – ANTH 2301 (with or without 2101 = lab), 2302, 2346, 2351, ARTS 1301, 1303, 1304, ASTR 1303, 1304, 1403, 1404, BIOL 1308, 1309, 1322, 1406, 1407, (2301, 2302 – restricted to Engineering, Science, and Health Sciences majors), CHEM 1305, 1405, 1411, 1412, COMM 2366, COSC 1436, DANC 2303, DRAM 1310, 2316, 2366, ECON 1301, 2301, 2302, EDUC 1300, ENGL 2322, 2323, 2327, 2328, 2332, 2333, 2342, 2343, 2351, GEOG 1301, 1302, 1303, GEOL 1305, 1345, 1347, 1403, 1404, GOVT 2305, 2306, HIST 1301, 1302, 2311, 2312, 2321, 2322, 2301, 2327, 2328, 2381, HUMA 1301, 1305, 1311, 2319, 2323, MATH 1314, 1316, 1324, 1325, 1332, 1342, 1350, 2318, 2320, 2412, 2413, 2414, 2415, MUSI 1306, 1310, PHIL 1301, 1304, 2306, 2307, 2316, PHYS 1305, 1401, 1402, 2325 (with or without 2125 = lab), 2326 (with or without 2126 = lab), PSYC 2301, 2314, 2316, 2317, 2319, SOCI 1301, 1306, 2301, 2336, TECA 1354, World Languages (ARAB 1411, 1412, CHIN 1411, 1412, FREN 1411, 1412, GERM 1411, 1412, JAPN 1411, 1412, KORE 1411, 1412, SPAN 1411, 1412).

## Allied Health/Surgical Technology Track

### AAS

TSI testing is required prior to first enrollment.

<b>Prerequisite</b>	<b>Credits</b>	
EDUC 1300 Learning Framework <sup>A</sup> .....	3	
HPRS 1201 Introduction to Health Professions.....	2	
<b>Prerequisite Total</b>		<b>5</b>

<b>First Semester</b>		<b>Credits</b>
HPRS 1206	Essentials of Medical Terminology.....	2
SCIT 1407	Applied Human Anatomy and Physiology I.....	4
SRGT 1361	Clinical - Surgical Technologist.....	3
SRGT 1405	Introduction to Surgical Technology.....	4
SRGT 1409	Fundamentals of Perioperative Concepts and Techniques.....	4
<b>Semester Total</b>		<b>17</b>

HITT 1205	Medical Terminology.....	2
SRGT 1361	Clinical - Surgical Technologist.....	3

<b>Second Semester</b>		<b>Credits</b>
SCIT 1408	Applied Human Anatomy and Physiology II.....	4
SRGT 1441	Surgical Procedures I.....	4
SRGT 1463	Clinical - Surgical Technologist.....	4
<b>Semester Total</b>		<b>12</b>

<b>Third Semester</b>		<b>Credits</b>
SRGT 1442	Surgical Procedures II.....	4
SRGT 2463	Clinical - Surgical Technologist/Technology #.....	4
<b>Semester Total</b>		<b>8</b>

# Health and Medical Sciences

## SECOND YEAR

### First Semester

	<b>Credits</b>
ENGL 1301 Composition I.....	3
XXXX #3## Math/Natural Science Elective <sup>B</sup> .....	3
XXXX #3## Humanities/Fine Arts Elective <sup>C</sup> .....	3
XXXX #3## Social/Behavioral Sciences Elective <sup>D</sup> .....	3
<b>Semester Total</b>	<b>12</b>

### Second Semester

	<b>Credits</b>
XXXX #3## General Education Elective <sup>E</sup> .....	3
ENGL 1302 Composition II.....	3
<b>Semester Total</b>	<b>6</b>
<b>Program Total</b>	<b>60</b>

# Capstone Course

<sup>A</sup> Student Success Course: Students are required to complete EDUC 1300 within their first 12 semester credit hours of instruction. Students enrolling at HCC with 12 or more hours completed should consult with an academic advisor to select an appropriate course substitution.

<sup>B</sup> Math/Natural Science: May choose from – ANTH 2301 (with or without 2101 = lab), 2302, ASTR 1303, 1304, 1403, 1404, BIOL 1308, 1309, 1322, 1406, 1407, (2301, 2302 – restricted to Engineering, Science, and Health Sciences majors), CHEM 1305, 1405, 1411, 1412, COSC 1436, GEOG 1301, GEOL 1305, 1345, 1347, 1403, 1404, MATH 1314, 1316, 1324, 1325, 1332, 1342, 1350, 2318, 2320, 2412, 2413, 2414, 2415, PHYS 1305, 1401, 1402, 2325 (with or without 2125= lab), 2326 (with or without 2126 = lab), PSYC 2317.

<sup>C</sup> Humanities/Fine Arts: May choose from – ARTS 1301, 1303, 1304, COMM 2366, DANC 2303, DRAM 1310, 2316, 2366, ENGL 2322, 2323, 2327, 2328, 2332, 2333, 2342, 2343, 2351, HIST 1301, 1302, 2311, 2312, 2321, 2322, 2301, 2327, 2328, 2381, HUMA 1301, 1305, 1311, 2319, 2323, MUSI 1306, 1310, PHIL 1301, 1304, 2306, 2307, 2316, World Languages (ARAB 1411, 1412, CHIN 1411, 1412, FREN 1411, 1412, GERM 1411, 1412, JAPN 1411, 1412, KORE 1411, 1412, SPAN 1411, 1412).

<sup>D</sup> Social/Behavioral Sciences: May choose from – ANTH 2346, 2351, ECON 1301, 2301, 2302, EDUC 1300, GEOG 1302, 1303, GOVT 2305, 2306, PSYC 2301, 2314, 2316, 2319, SOCI 1301, 1306, 2301, 2336, TECA 1354.

<sup>E</sup> General Education: May choose from – ANTH 2301 (with or without 2101 = lab), 2302, 2346, 2351, ARTS 1301, 1303, 1304, ASTR 1303, 1304, 1403, 1404, BIOL 1308, 1309, 1322, 1406, 1407, (2301, 2302 – restricted to Engineering, Science, and Health Sciences majors), CHEM 1305, 1405, 1411, 1412, COMM 2366, COSC 1436, DANC 2303, DRAM 1310, 2316, 2366, ECON 1301, 2301, 2302, EDUC 1300, ENGL 2322, 2323, 2327, 2328, 2332, 2333, 2342, 2343, 2351, GEOG 1301, 1302, 1303, GEOL 1305, 1345, 1347, 1403, 1404, GOVT 2305, 2306, HIST 1301, 1302, 2311, 2312, 2321, 2322, 2301, 2327, 2328, 2381, HUMA 1301, 1305, 1311, 2319, 2323, MATH 1314, 1316, 1324, 1325, 1332, 1342, 1350, 2318, 2320, 2412, 2413, 2414, 2415, MUSI 1306, 1310, PHIL 1301, 1304, 2306, 2307, 2316, PHYS 1305, 1401, 1402, 2325 (with or without 2125 = lab),

2326 (with or without 2126 = lab), PSYC 2301, 2314, 2316, 2317, 2319, SOCI 1301, 1306, 2301, 2336, TECA 1354, World Languages (ARAB 1411, 1412, CHIN 1411, 1412, FREN 1411, 1412, GERM 1411, 1412, JAPN 1411, 1412, KORE 1411, 1412, SPAN 1411, 1412).

## Allied Health/Vocational Nursing Track

### AAS

TSI testing is required prior to first enrollment.

<b>Prerequisite</b>	<b>Credits</b>
EDUC 1300 Learning Framework.....	3
VNSG 1216 Nutrition.....	2
VNSG 1320 Anatomy and Physiology for Allied Health.....	3
<b>Prerequisite Total</b>	<b>8</b>

### First Semester

	<b>Credits</b>
VNSG 1400 Nursing in Health and Illness I.....	4
VNSG 1122 Vocational Nursing Concepts.....	1
VNSG 1227 Essentials of Medication Administration.....	2
VNSG 1423 Basic Nursing Skills.....	4
VNSG 1161 Clinical - Licensed Practical Vocational Nurse Training... 1	1
<b>Semester Total</b>	<b>12</b>

### Second Semester

	<b>Credits</b>
VNSG 1330 Maternal-Neonatal Nursing.....	3
VNSG 1162 Clinical - Licensed Practical Vocational Nurse Training... 1	1
VNSG 1266 Practicum -Licensed Practical Vocational Nurse Training 2	2
VNSG 1409 Nursing in Health and Illness II.....	4
VNSG 2331 Advanced Nursing Skills.....	3
VNSG 1238 Mental Illness.....	2
<b>Semester Total</b>	<b>15</b>

### Third Semester

	<b>Credits</b>
VNSG 1219 Leadership and Professional Development.....	2
VNSG 1163 Clinical -Licensed Practical Vocational Nurse Training.... 1	1
VNSG 1334 Pediatrics.....	3
VNSG 1410 Nursing in Health and Illness III.....	4
VNSG 1267 Practicum - Licensed Practical Vocational Nurse Training #.....	2
<b>Semester Total</b>	<b>12</b>

## SECOND YEAR

### First Semester

	<b>Credits</b>
XXXX #3## General Education Elective.....	3
XXXX #4## Math/Natural Science General Education Elective.....	4
XXXX #3## Humanities/Fine Arts General Education Elective.....	3
XXXX #3## General Education Elective.....	3
<b>Semester Total</b>	<b>13</b>
<b>Program Total</b>	<b>60</b>

# Capstone Course

# Health and Medical Sciences

## DENTAL ASSISTING

The Dental Assisting program is offered as a full-time day program. Graduates of this program receive a certificate of completion from the college. The program is accredited by the Commission on Dental Accreditation of the American Dental Association, a specialized accrediting body recognized by the Council of Postsecondary Accreditation and by the United States Department of Education (Manager, Dental Assisting Education Commission Dental Accreditation/American Dental Association, 211 East Chicago Avenue, Chicago, IL 60611).

The Dental Assisting curriculum prepares graduates for the Registered Dental Assistant (RDA) exam administered through the Texas State Board of Dental Examiners, and for employment as a dental assistant, receptionist, and office manager to the general or specialty dentist in private offices, clinics, and institutions. As a vital member of the dental health team, the dental assistant prepares the patient for treatment, provides the dentist with necessary instruments, instructs patients in proper oral hygiene, records dental services, and performs all managerial duties for the office. As a Certified Dental Assistant (CDA). Graduates must take the Registered Dental Assistant Exam (RDA) through the Texas State Board of Dental Examiners in order to work as a dental assistant in Texas.

Applicants must have earned a high school diploma or GED. The Dental Assisting classes are offered Monday through Friday from 8:00 a.m. to 5:00 p.m. DNTA 1102 and DNTA 2130 are offered as hybrid classes (50% in the classroom and 50% on-line) in the third semester of the program. Students are required to pay a liability insurance fee which protects students against losses resulting from malpractice claims. The insurance is available through HCC on a blanket coverage program at a reduced rate. Each semester, students must also pay a film badge fee to monitor for radiation exposure. Applicants must meet the minimum requirements for admission to certificate programs in the Health Sciences. These requirements include: minimum scores on the TSI state approved test, successful completion of any required developmental courses, and completion and submission of the application packet by the deadline.

Individuals interested in applying should create an account on Coleman Connection (<http://colemanconnection.org>) and register to attend a program session. For further information, please see the General Application Procedures for Health

Science Programs and the Dental Assisting Program Admission Steps available on the Coleman College website.

### Program Outcomes

Students will be able to

- Application of four-handed dentistry concepts.
- Systematically collect diagnostic patient data.
- Manage infection and hazard control protocol consistent with published professional guidelines.
- Perform dental office business procedures.

For more information call 713.718.7351 or e-mail [kay.jukes@hccs.edu](mailto:kay.jukes@hccs.edu).

## Dental Assisting

### CERTIFICATE LEVEL I

#### Prerequisite

HPRS 1201	Introduction to Health Professions *	2
<b>Prerequisite Total</b>		<b>2</b>

#### First Semester

DNTA 1245	Preventive Dentistry	2
DNTA 1411	Dental Science	4
DNTA 1401	Dental Materials	4
DNTA 1415	Chairside Assisting	4
DNTA 1305	Dental Radiology	3
<b>Semester Total</b>		<b>17</b>

#### Second Semester

DNTA 1447	Advanced Dental Science	4
DNTA 1351	Dental Office Management	3
DNTA 1453	Dental Assisting Applications	4
DNTA 1349	Dental Radiology in the Clinic	3
DNTA 1167	Practicum (or Field Experience) - Dental Assisting/Assistant	1
<b>Semester Total</b>		<b>15</b>

#### Third Semester

DNTA 2130	Seminar for the Dental Assistant	1
DNTA 1102	Communication and Behavior in the Dental Office	1
DNTA 2267	Practicum (or Field Experience) - Dental Assisting/Assistant #	2
<b>Semester Total</b>		<b>4</b>
<b>Program Total</b>		<b>38</b>

\* Student Success Course

# Capstone Course

# Health and Medical Sciences

## DENTAL HYGIENE

The Dental Hygiene program is designed for those interested in becoming a registered dental hygienist (RDH). Graduates are prepared to function in a variety of settings including private dental offices, dental clinics or public dental health care clinics. The AAS in the dental hygiene program includes general education courses as a foundation for dental hygiene courses. The dental hygiene program curriculum is a structured intense program with didactic and clinical practice taking place at Coleman College for Health Sciences.

All of the major requirement courses are to be taken in a sequential order or at the advisement of the department advisor. A grade of "C" or higher is required for satisfactory completion of all courses. Upon successful completion of the program, graduates are eligible to apply for the national board examination and the state licensure examination for dental hygiene. The program has initial accreditation by the Commission on Dental Accreditation of the American Dental Association, 211 East Chicago Avenue, Chicago, IL 60611.

Once students have completed the two year program they are eligible to sit for the National and State board exams to become a Registered Dental Hygienist (RDH).

Individuals interested in applying must attend an Essential Requirements (ER) session at Coleman College for Health Sciences. Go online or call 713.718.8338 for the dates, times and location of the sessions. For further information, please see the **General Application Procedures** for Health Science programs.

### Program Outcomes

Students will be able to

- The dental hygienist must create an informative tabletop presentation to appraise original research on a specific topic.
- The dental hygienist must create a case study and evaluate clinical therapy treatment on a periodontal patient.
- The dental hygienist must demonstrate the application of a therapeutic agent to clinical competence that is used in the field of dentistry
- Dental hygiene students must demonstrate an extraoral exam to identify the anatomy of the head and neck.
- The dental hygienist must demonstrate psychomotor skills to deliver preventive services to patients

For more information call 713.718.8338.

## Dental Hygiene

### AAS

*TSI testing is required prior to first enrollment.*

### Prerequisite

CHEM	1305	Introductory Chemistry I.....	3
BIOL	2301	Anatomy and Physiology I (Lecture).....	3
BIOL	2101	Anatomy and Physiology I (Lab).....	1
ENGL	1301	Composition I.....	3
SOCI	1301	Introduction to Sociology.....	3
<b>Prerequisite Total</b>			<b>13</b>

### FIRST YEAR

<b>First Semester</b>			<b>Credits</b>
DHYG	1331	Preclinical Dental Hygiene.....	3
DHYG	1304	Dental Radiology.....	3
DHYG	1227	Preventive Dental Hygiene Care.....	2
DHYG	1301	Orofacial Anatomy, Histology & Embryology.....	3
BIOL	2302	Anatomy and Physiology II (Lecture).....	3
BIOL	2102	Anatomy and Physiology II (Lab).....	1
<b>Semester Total</b>			<b>15</b>

<b>Second Semester</b>			<b>Credits</b>
DHYG	1260	Clinical-Dental Hygiene/Hygienist.....	2
DHYG	1339	General and Oral Pathology.....	3
DHYG	2201	Dental Hygiene Care I.....	2
DHYG	1319	Dental Materials.....	3
BIOL	2320	Microbiology (Lecture).....	3
BIOL	2120	Microbiology (Lab).....	1
DHYG	1207	General and Dental Nutrition.....	2
<b>Semester Total</b>			<b>16</b>

### SECOND YEAR

<b>First Semester</b>			<b>Credits</b>
DHYG	1211	Periodontology.....	2
DHYG	1235	Pharmacology for the Dental Hygienist.....	2
DHYG	1215	Community Dentistry.....	2
DHYG	2360	Clinical-Dental Hygiene/Hygienist.....	3
PHIL	2306	Introduction to Ethics.....	3
<b>Semester Total</b>			<b>12</b>

<b>Second Semester</b>			<b>Credits</b>
DHYG	2153	Dental Hygiene Practice.....	1
DHYG	2231	Dental Hygiene Care II.....	2
DHYG	2361	Clinical-Dental Hygiene/Hygienist #.....	3
PSYC	2301	Introduction to Psychology.....	3
SPCH	1318	Interpersonal Communication.....	3
<b>Semester Total</b>			<b>12</b>
<b>Program Total</b>			<b>68</b>

# Capstone Course

# Health and Medical Sciences

## DIAGNOSTIC MEDICAL SONOGRAPHY

The goal of the Diagnostic Medical Sonography program is to prepare competent entry-level general sonographers in the cognitive (knowledge), psychomotor (skills), and affective (behavior) domains. The sonographer assists the physician in gathering sonographic data necessary to make diagnostic decisions. The program is fully accredited in general diagnostic medical sonography by the Commission on Accreditation of Allied Health Education Programs (CAAHEP), 1361 Park Street, Clearwater, FL 33756-6039, Telephone: 727.210.2350, Fax: 727.210.2354, www.caahep.org.

The four-semester, full-time day program, awards an Advanced Technical Certificate after graduation. Graduates of the program are eligible to take the Ultrasound Physics & Instrumentation, Abdomen, and Obstetrics & Gynecology exams offered through the American Registry for Diagnostic Medical Sonography (ARDMS).

To be considered for admission, applicants must have completed the following courses prior to the start of the program: 1. college algebra, statistics or higher mathematics; 2. general college-level physics and/or radiographic physics; 3. communication skills (English composition or speech); 4. human anatomy and physiology I; and 5. either have completed a two-year allied health educational program in a patient care related area or have earned a bachelor's degree. Because applicants of this program must possess a degree prior to entrance, they are not required to take a TSI test.

Applicants must meet current college admission requirements and admission requirements to the program including transcript review and personal oral and written interviews (see program's website for further information on the selection criteria). Students who are accepted into the program are required to pay a liability insurance fee which protects students against losses resulting from malpractice claims. Students must pass a physical examination, drug screening test, and a criminal background check by the midpoint of their first semester in the program. Students must have all required immunizations (The hepatitis B vaccination series may take up to 6 months to complete.) or show serologic confirmation of immunity to specific diseases and carry health insurance prior to the second semester in the program in order to receive a clinical assignment. Technical Standards (physical requirements for success in the program) are available online under the program's website.

Individuals interested in applying and who live in Houston

or the surrounding area must attend an information session. Go online or call 713.718.7650 for the dates, times and location of the sessions. Individuals living outside the Houston area should send an e-mail to [elizabeth.ho@hccs.edu](mailto:elizabeth.ho@hccs.edu) for program information or log onto the program website at <http://coleman.hccs.edu/programs/dmsol/>.

### Program Outcomes

Students will be able to

- Provide basic patient care and practices in general diagnostic medical sonography, including employ professional judgment, ethics and communication skills.
- Recognize sonographic appearance and/or Doppler patterns of normal structures, disease processes, and pathologies.
- Apply acoustic physics and Doppler ultrasound principles to operate the ultrasound machine.
- Perform sonographic examinations according to protocols.

For more information call 713.718.7650 or e-mail [elizabeth.ho@hccs.edu](mailto:elizabeth.ho@hccs.edu).

## Diagnostic Medical Sonography

**Admission steps:** Prospective students must have completed an Associate Degree in Allied Health (2-year educational program in a patient-care related area) OR a Bachelor degree in any area. Because applicants of this program must possess a degree prior to entrance, they are not required to take a TSI test.

**REQUIRED COURSES:** Completion of the following courses with a minimum grade of "C" no later than Spring Semester:

1. College Algebra, Statistics Or Higher Mathematics
2. General College-Level Physics And/Or Radiographic Physics,
3. Communication Skills (English Composition Or Speech)
4. Human Anatomy And Physiology I

## ADVANCED TECHNICAL CERTIFICATE

### FIRST YEAR

First Semester	Credits
DMSO 1210 Introduction to Sonography *	2
DMSO 1441 Introduction to Abdominopelvic Sonography	4

# Health and Medical Sciences

DMSO 1202	Basic Ultrasound Physics .....	2
DMSO 1355	Sonographic Pathophysiology .....	3
DMSO 1451	Sonographic Sectional Anatomy .....	4

**Semester Total 15**

**Second Semester Credits**

DMSO 2441	Sonography of Abdominopelvic Pathology .....	4
DMSO 2405	Sonography of Obstetrics/Gynecology .....	4
DMSO 1342	Intermediate Ultrasound Physics .....	3
DMSO 1266	Sonographic Practicum I.....	2

**Semester Total 13**

**Third Semester Credits**

DMSO 2351	Doppler Physics.....	3
DMSO 2342	Sonography of High Risk Obstetrics.....	3
DMSO 2253	Sonography of Superficial Structures .....	2
DMSO 2266	Practicum (or Field Experience) - Diagnostic Medical Sonography/Sonographer and Ultrasound Technician ....	2

**Semester Total 10**

**SECOND YEAR**

**First Semester Credits**

DMSO 2243	Advanced Ultrasound Physics.....	2
DMSO 2130	Advanced Ultrasound and Review.....	1
DMSO 2467	Practicum (or Field Experience) - Diagnostic Medical Sonography/Sonographer and Ultrasound Technician #..	4

**Semester Total 7**

**Program Total 45**

\* Student Success Course

# Capstone Course

## EMERGENCY MEDICAL SERVICES

The two-year Emergency Medical Services (EMS) program is designed to prepare individuals as competent, entry-level pre-hospital Emergency Medical Services Practitioners.

The paramedic program is fully accredited by: The Commission on Accreditation of Allied Health Educational Programs (CAAHEP): Address: 25400 US HWY 19 North, Suite 158, Clearwater, FL 33763 Phone: 727.210.2350. Fax: 727.210.2354. www.caahep.org.

CAAHEP Standards and Guidelines are monitored and applied by:

The Committee on Accreditation of Educational Programs for the Emergency Medical Services Professions CoAEMSP): Address: 8301 Lakeview Parkway, Suite 111-312, Rowlett, TX 75088, Phone: 214--703-8445. Fax: 214-703-8992; www.coaemsp.org

Successful program graduates are awarded certificates of

completion to become certified as a Basic, Intermediate (Advanced EMT), or Paramedic practitioner. After paramedic coursework is completed an AAS in Emergency Medical Services can be obtained. Licensure to practice will be granted via the Texas Department of State Health Services once the National Registry Certification Test is passed.

The program is designed to orient students to entry and advanced-level emergency care as it relates to assessment, treatment, management, and ongoing evaluation of the critically ill and injured patients in their care. Advanced standing credit may be awarded for relevant education and/or experience.

NOTE: Upon successful completion of EMSP 1501/1160, students are eligible to sit for the National Registry EMT-Basic exam. Upon successful completion of EMSP 1338,2205,1356,1355 and 1263, students are eligible to sit for the National Registry AEMT Exam. Upon successful completion of EMSP 2306, 2444, 2160, 2434, 2330, 2261, 2262, and 2243, students are eligible to sit for the National Registry EMT-Paramedic exam.

Students accepted into the EMS program are required to pay a liability insurance fee which protects the students against losses resulting from malpractice claims. Clinical assignments are made in more than one hospital and field internship site, and all students are expected to rotate through clinical sites as assigned. Transportation between locations is the responsibility of the student. Students must complete all hourly requirements as filed with the Texas Department of State Health Services and Commission on Accreditation of Allied Health Education Programs (CAAHEP)

Applicants must meet the following minimum requirements for admission to the Emergency Medical Services program: college level readiness in reading, or completion of required developmental courses and submission of required admission documents by the deadline. Applicants educated in non-English speaking countries must complete the TOEFL exam with a minimum score of 20 in each of the 4 required elements.

Individuals interested in applying should contact the Northeast Codwell Hall Campus or Katy Campus. For further information, please go to the website at <http://www.emsacademy.hccs.edu>.

**Program Outcomes**

Students will be able to:

- Formulate a treatment plan after performing patient assessment

# Health and Medical Sciences

- Demonstrate the ability to deliver medications appropriately
- Evaluate the ability to make ethical and moral patient care decisions
- Demonstrate appropriate behavior while interacting with EMS preceptor and team members during EMS rotations.

## Accreditation:

The paramedic program is fully accredited by: The Commission on Accreditation of Allied Health Educational Programs (CAAHEP): Address: 25400 US HWY 19 North, Suite 158, Clearwater, FL 33763 Phone: 727.210.2350. Fax: 727.210.2354. www.caahep.org.

CAAHEP Standards and Guidelines are monitored and applied by: The Committee on Accreditation of Educational Programs for the Emergency Medical Services Professions CoAEMSP): Address: 8301 Lakeview Parkway, Suite 111-312, Rowlett, TX 75088, Phone: 214--703-8445. Fax: 214-703-8992; www.coaemsp.org

Successful program graduates are awarded certificates of completion for certification as a Basic, Intermediate (Advanced EMT), or Paramedic practitioner. After paramedic coursework is completed an AAS in Emergency Medical Services can be obtained. Licensure to practice will be granted via the Texas Department of State Health Services once the National Registry Certification Test is passed.

## Employment:

Employment of emergency medical technicians (EMTs) and paramedics is projected to grow 24 percent from 2014 to 2024, much faster than the average for all occupations.

**Median Wages** - \$15.63 hourly, \$33,000 annually - High wages \$55,000 annually

## Clinical Training Sites:

- Acute Medical Services (AMS)
- Austin County EMS
- BayStar EMS
- Bayou City EMS
- Best Care EMS
- City EMS
- Community Volunteer Fire/EMS Department
- ETMC EMS (City of Pasadena)
- Fort Bend County EMS
- Harris County Emergency Corp - HCEC ESD 1
- Harris Health System
- Houston Fire Department
- Houston Recovery Center

- City of Katy Fire Department
- City of Laporte
- Manvel EMS
- Memorial Hermann TMC and Children's Memorial Hospital
- Memorial Hermann Southwest Hospital
- North Channel Emergency Medical Services
- Orion EMS
- Texas Children's Hospital - TMC
- Texas Children's Hospital - West
- The Methodist Hospital - Sugarland
- The Methodist Hospital - West
- UT Harris County Psychiatric Center
- The Village Fire/EMS Department
- Westlake Fire/EMS Department

For more information call 713.718.7694 or e-mail vicki.may@hccs.edu

## Emergency Medical Services

### AAS

*TSI testing is required prior to first enrollment.*

### FIRST YEAR

<b>First Semester</b>		<b>Credits</b>
EMSP 1501	Emergency Medical Technician-Basic*	5
EMSP 1160	Clinical-Emergency Medical Technology/Technician	1
EMSP 2205	EMS Operations	2
EMSP 1338	Introduction to Advanced Practice	3
EMSP 1356	Patient Assessment and Airway Management	3
EMSP 1355	Trauma Management	3
<b>Semester Total</b>		<b>17</b>

### Second Semester

<b>Second Semester</b>		<b>Credits</b>
EMSP 1263	Clinical-Emergency Medical Technology/Technician	2
EMSP 2306	Emergency Pharmacology	3
EMSP 2444	Cardiology	4
EMSP 2160	Clinical-Emergency Medical EMT Paramedic (Cardiology)	1
BIOL 2301	Anatomy and Physiology I <sup>A</sup>	3
BIOL 2101	Anatomy and Physiology I <sup>A</sup>	1
XXXX #3##	General Education Elective <sup>D</sup>	3
<b>Semester Total</b>		<b>17</b>

### SECOND YEAR

<b>First Semester</b>		<b>Credits</b>
EMSP 2434	Medical Emergencies	4
EMSP 2261	Clinical-Emergency Medical EMT Paramedic (Special Populations)	2
EMSP 2330	Special Populations	3
BIOL 2302	Anatomy and Physiology II <sup>A</sup>	3
BIOL 2102	Anatomy and Physiology II <sup>A</sup>	1
XXXX #3##	SSocial/Behavioral Sciences Elective <sup>C</sup>	3
<b>Semester Total</b>		<b>16</b>

# Health and Medical Sciences

<b>Second Semester</b>		<b>Credits</b>
EMSP 2262	Clinical-Emergency Medical EMT Paramedic (Paramedic Field).....	2
EMSP 2243	Assessment Based Management # .....	2
EMSP 1191	Special Topics in EMS .....	1
XXXX #3##	Humanities/Fine Arts Elective <sup>B</sup> .....	3
EMSP 2252	Emergency Medical Services Research .....	2
<b>Semester Total</b>		<b>10</b>
<b>Program Total</b>		<b>60</b>

\*Student Success Course

# Capstone Course

<sup>A</sup> Note: Maybe taken prior to admission. BIOL 1406 is strongly recommended prior to BIOL 2301/2101.

<sup>B</sup> Humanities/Fine Arts: May choose from – ARTS 1301, 1303, 1304, COMM 2366, DANC 2303, DRAM 1310, 2316, 2366, ENGL 2322, 2323, 2327, 2328, 2332, 2333, 2342, 2343, 2351, HIST 1301, 1302, 2311, 2312, 2321, 2322, 2301, 2327, 2328, 2381, HUMA 1301, 1305, 1311, 2319, 2323, MUSI 1306, 1310, PHIL 1301, 1304, 2306, 2307, 2316, World Languages (ARAB 1411, 1412, CHIN 1411, 1412, FREN 1411, 1412, GERM 1411, 1412, JAPN 1411, 1412, KORE 1411, 1412, SPAN 1411, 1412).

<sup>C</sup> Social/Behavioral Sciences: May choose from – ANTH 2346, 2351, ECON 1301, 2301, 2302, EDUC 1300, GEOG 1302, 1303, GOVT 2305, 2306, PSYC 2301, 2314, 2316, 2319, SOCI 1301, 1306, 2301, 2336, TECA 1354.

<sup>D</sup> General Education: May choose from – ANTH 2301 (with or without 2101 = lab), 2302, 2346, 2351, ARTS 1301, 1303, 1304, ASTR 1303, 1304, 1403, 1404, BIOL 1308, 1309, 1322, 1406, 1407, (2301, 2302 – restricted to Engineering, Science, and Health Sciences majors), CHEM 1305, 1405, 1411, 1412, COMM 2366, COSC 1436, DANC 2303, DRAM 1310, 2316, 2366, ECON 1301, 2301, 2302, EDUC 1300, ENGL 2322, 2323, 2327, 2328, 2332, 2333, 2342, 2343, 2351, GEOG 1301, 1302, 1303, GEOL 1305, 1345, 1347, 1403, 1404, GOVT 2305, 2306, HIST 1301, 1302, 2311, 2312, 2321, 2322, 2301, 2327, 2328, 2381, HUMA 1301, 1305, 1311, 2319, 2323, MATH 1314, 1316, 1324, 1325, 1332, 1342, 1350, 2318, 2320, 2412, 2413, 2414, 2415, MUSI 1306, 1310, PHIL 1301, 1304, 2306, 2307, 2316, PHYS 1305, 1401, 1402, 2325 (with or without 2125 = lab), 2326 (with or without 2126 = lab), PSYC 2301, 2314, 2316, 2317, 2319, SOCI 1301, 1306, 2301, 2336, TECA 1354, World Languages (ARAB 1411, 1412, CHIN 1411, 1412, FREN 1411, 1412, GERM 1411, 1412, JAPN 1411, 1412, KORE 1411, 1412, SPAN 1411, 1412).

## Emergency Medical Services - Paramedic

### CERTIFICATE LEVEL II

*TSI testing is required prior to first enrollment.*

#### FIRST YEAR

<b>First Semester</b>	<b>Credits</b>	
EMSP 1501	Emergency Medical Technician-Basic * .....	5
EMSP 1160	Clinical-Emergency Medical Technology/Technician .....	1
EMSP 2205	EMS Operations.....	2
EMSP 1338	Introduction to Advanced Practice .....	3
EMSP 1356	Patient Assessment and Airway Management.....	3
EMSP 1355	Trauma Management.....	3
<b>Semester Total</b>		<b>17</b>

<b>Second Semester</b>	<b>Credits</b>	
EMSP 1263	Clinical-Emergency Medical Technology/Technician .....	2
EMSP 2306	Emergency Pharmacology.....	3
EMSP 2444	Cardiology.....	4
EMSP 2160	Clinical-Emergency Medical EMT Paramedic (Cardiology).....	1
<b>Semester Total</b>		<b>10</b>

#### SECOND YEAR

<b>First Semester</b>	<b>Credits</b>	
EMSP 2434	Medical Emergencies.....	4
EMSP 2261	Clinical-Emergency Medical EMT Paramedic (Special Populations) .....	2
EMSP 2330	Special Populations .....	3
<b>Semester Total</b>		<b>9</b>

<b>Second Semester</b>	<b>Credits</b>	
EMSP 2262	Clinical-Emergency Medical EMT Paramedic (Paramedic Field).....	2
EMSP 2243	Assessment Based Management # .....	2
<b>Semester Total</b>		<b>4</b>
<b>Program Total</b>		<b>40</b>

\*Student Success Course

# Capstone Course

## Emergency Medical Services - Advanced Technician

### CERTIFICATE LEVEL I

#### FIRST YEAR

<b>First Semester</b>	<b>Credits</b>	
EMSP 1501	Emergency Medical Technician-Basic* .....	5
EMSP 1160	Clinical-Emergency Medical Technology/Technician .....	1
<b>Semester Total</b>		<b>6</b>

# Health and Medical Sciences

<b>Second Semester</b>		<b>Credits</b>
EMSP 2205	EMS Operations.....	2
EMSP 1338	Introduction to Advanced Practice .....	3
EMSP 1356	Patient Assessment and Airway Management.....	3
EMSP 1355	Trauma Management.....	3
EMSP 1263	Clinical-Emergency Medical Technology/Technician #.....	2
<b>Semester Total</b>		<b>13</b>
<b>Program Total</b>		<b>19</b>

\*Student Success Course

# Capstone Course

## Emergency Medical Services - RN to Paramedic

The RN to Paramedic Enhanced Skills Certificate will apply previous clinical knowledge to field situations and supplement it with additional knowledge and skills related to pre-hospital situations. This intensive certificate will cover such topics as patient assessment, rapid extrication, intubation, pre-hospital medications, equipment and patient management.

*This certificate is available to current RNs only.*

### ENHANCED SKILLS CERTIFICATE

#### FIRST YEAR

<b>First Semester</b>		<b>Credits</b>
EMSP 1491	Special Topics in Emergency Medical Technology/Technician.....	4
EMSP 2553	Emergency Medical Services Certification for Health Care Professionals .....	5
<b>Semester Total</b>		<b>9</b>
<b>Program Total</b>		<b>9</b>

## HEALTH INFORMATION TECHNOLOGY

The Health Information Technology program offers students three levels of completion: a two-year Health Information Technology AAS, a one-year Health Information Coding certificate, and a nine-month Health Information Analysis certificate. ENGL 1301 Composition I and EDUC 1300 Learning Framework are prerequisites to the program. Total Credits Prerequisite Semester - 6.

The program is accredited by the Commission on Accreditation for Health Informatics and Information Management Education (CAHIIM) through the American

Health Information Management Association (AHIMA), 233 N. Michigan Ave., Suite 2150, Chicago, IL, 60611-5519, 312.233.1100.

Upon completion of the AAS degree, students are eligible to sit for the national Registered Health Information Technician (RHIT) exam administered by AHIMA. Upon completion of the coding certificate, students may sit for the Certified Coding Associate (CCA) exam sponsored by AHIMA and the Certified Professional Coder (CPC) exam sponsored by the American Academy of Professional Coders (AAPC). Other associations that offer national accreditation exams for which graduates of the AAS and coding certificate may sit include the American Medical Billing Association, Alliance of Claims Assistance Professionals, National Electronic Billers Alliance, and the National Healthcareer Association.

The Health Information Technology program trains students to perform technical health information and medical record functions in various health care facilities. These functions include: maintaining, collecting, analyzing, and coding health information. Courses have both theory and competency-based educational components and are offered at Coleman College for Health Sciences and through the internet. Students are assigned to health information departments in the Texas Medical Center and other areas in Houston for their directed practice education classes. Students must maintain a "C" (75 percent) average and meet all prerequisites to continue in the program. Students may not earn a grade below a "C" (75 percent) in HITT courses and continue in the program.

Students accepted into the program are required to pay a liability insurance fee which protects students against losses resulting from malpractice claims. The insurance is available through HCC on a blanket coverage at a reduced rate. Students are required to undergo a criminal background check, physical exam, and drug test.

Applicants must meet the minimum requirements for admission into the Health Science programs including successful completion of all TSI requirements. Unless exempt from TSI, applicants must take the TSI state approved test, complete all developmental courses needed to reach college-level English, algebra, biology, psychology, and complete the application packet by the deadline.

Individuals interested in applying must attend an Essential Requirements (ER) session at Coleman College for Health Sciences. Go online or call 713.718.8959 for the dates, times and location of the sessions. For further information, please see the **General Application Procedures** for Health Science programs.

# Health and Medical Sciences

## Program Outcomes

Students will be able to:

- HITT 1311 Develop a view for an EHR (Blooms = Creating).
- Obtain CCA certification after completion of coding certificate (Blooms = Evaluating)
- Follow code of ethics for health information while practicing Release of Information in a health information department (Blooms =Applying).
- Pass RHIT exam (Blooms=Evaluating).

For more information call 713.718.8959 or e-mail carla.tyson@hccs.edu.

## Health Information Technology

### AAS

TSI testing is required prior to first enrollment.

### Prerequisites

		Credits
EDUC 1300	Learning Framework <sup>A</sup>	3
ENGL 1301	English Composition I <sup>B</sup>	3
<b>Prerequisites Total</b>		<b>6</b>

### FIRST YEAR

#### First Semester

		Credits
BIOL 2301	Anatomy & Physiology I	3
BIOL 2101	Anatomy & Physiology I (Lab)	1
HPRS 1201	Introduction to Health Professions	2
HITT 1301	Health Data Content and Structure	3
HITT 1166	Health Information Practicum I	1
POFI 1301	Computer Applications I	3
<b>Semester Total</b>		<b>13</b>

#### Second Semester

		Credits
BIOL 2302	Anatomy & Physiology II	3
BIOL 2102	Anatomy & Physiology II (Lab)	1
HITT 1305	Medical Terminology	3
HITT 1345	Health Care Delivery Systems	3
HITT 1167	Health Information Practicum II	1
HITT 1255	Health Care Statistics	2
<b>Semester Total</b>		<b>13</b>

#### Third Semester

		Credits
HITT 1249	Pharmacology	2
HPRS 2201	Pathophysiology	2
<b>Semester Total</b>		<b>4</b>

### SECOND YEAR

#### First Semester

		Credits
HITT 1341	Coding and Classification Systems	3
HITT 1253	Legal and Ethical Aspects of Health Information	2
HITT 2343	Quality Assessment and Performance Improvement	3
XXXX #3##	Humanities/Fine Arts Elective <sup>C</sup>	3
<b>Semester Total</b>		<b>11</b>

#### Second Semester

		Credits
HITT 2335	Coding and Reimbursement Methodologies	3
HITT 2239	Health Information Organization and Supervision	2
HITT 1211	Computers in Health Care	2
HITT 2166	Practicum (or Field Experience) - Health Information/Medical Records Technology/Technician	1
XXXX #3##	General Education Elective <sup>D</sup>	3
<b>Semester Total</b>		<b>11</b>

#### Third Semester

		Credits
HITT 2149	RHIT Competency Review	1
HITT 2167	Practicum (or Field Experience) - Health Information/Medical Records Technology/Technician #	1
<b>Semester Total</b>		<b>2</b>
<b>Program Total</b>		<b>60</b>

# Capstone Course

<sup>A</sup> Student Success Course: Students are required to complete EDUC 1300 within their first 12 semester credit hours of instruction. Students enrolling at HCC with 12 or more hours completed should consult with an academic advisor to select an appropriate course substitution.

<sup>B</sup> Note: May be taken prior to admission. BIOL 1406 is strongly recommended prior to BIOL 2301/2101.

<sup>C</sup> Humanities/Fine Arts: May choose from – ARTS 1301, 1303, 1304, COMM 2366, DANC 2303, DRAM 1310, 2316, 2366, ENGL 2322, 2323, 2327, 2328, 2332, 2333, 2342, 2343, 2351, HIST 1301, 1302, 2311, 2312, 2321, 2322, 2301, 2327, 2328, 2381, HUMA 1301, 1305, 1311, 2319, 2323, MUSI 1306, 1310, PHIL 1301, 1304, 2306, 2307, 2316, World Languages (ARAB 1411, 1412, CHIN 1411, 1412, FREN 1411, 1412, GERM 1411, 1412, JAPN 1411, 1412, KORE 1411, 1412, SPAN 1411, 1412).

<sup>D</sup> General Education: May choose from – ANTH 2301 (with or without 2101 = lab), 2302, 2346, 2351, ARTS 1301, 1303, 1304, ASTR 1303, 1304, 1403, 1404, BIOL 1308, 1309, 1322, 1406, 1407, (2301, 2302 – restricted to Engineering, Science, and Health Sciences majors), CHEM 1305, 1405, 1411, 1412, COMM 2366, COSC 1436, DANC 2303, DRAM 1310, 2316, 2366, ECON 1301, 2301, 2302, EDUC 1300, ENGL 2322, 2323,

# Health and Medical Sciences

2327, 2328, 2332, 2333, 2342, 2343, 2351, GEOG 1301, 1302, 1303, GEOL 1305, 1345, 1347, 1403, 1404, GOVT 2305, 2306, HIST 1301, 1302, 2311, 2312, 2321, 2322, 2301, 2327, 2328, 2381, HUMA 1301, 1305, 1311, 2319, 2323, MATH 1314, 1316, 1324, 1325, 1332, 1342, 1350, 2318, 2320, 2412, 2413, 2414, 2415, MUSI 1306, 1310, PHIL 1301, 1304, 2306, 2307, 2316, PHYS 1305, 1401, 1402, 2325 (with or without 2125 = lab), 2326 (with or without 2126 = lab), PSYC 2301, 2314, 2316, 2317, 2319, SOCI 1301, 1306, 2301, 2336, TECA 1354, World Languages (ARAB 1411, 1412, CHIN 1411, 1412, FREN 1411, 1412, GERM 1411, 1412, JAPN 1411, 1412, KORE 1411, 1412, SPAN 1411, 1412).

## Health Information Technology - Analysis

The entry level health information analyst certificate leading to the Associate of Applied Science in Health Information Technology will prepare the completer for an entry level clerical position in a medical record or health information department.

### CERTIFICATE LEVEL I

<b>Prerequisite Semester</b>		<b>Credits</b>
HPRS 1201	Introduction to Health Professions *	2
<b>Semester Total</b>		<b>2</b>
<b>First Semester</b>		<b>Credits</b>
HITT 1305	Medical Terminology I .....	3
HITT 1301	Health Data Content and Structure I.....	3
HITT 1166	Health Information Practicum I .....	1
POFI 1301	Computer Applications I.....	3
<b>Semester Total</b>		<b>10</b>
<b>Second Semester</b>		<b>Credits</b>
HITT 1345	Healthcare Delivery Systems.....	3
HITT 1255	Health Care Statistics .....	2
HITT 1167	Health Information Practicum II # .....	1
<b>Semester Total</b>		<b>6</b>
<b>Program Total</b>		<b>18</b>

\* Student Success Course

# Capstone Course

## Health Information Technology - Coding

### CERTIFICATE LEVEL II

TSI testing is required prior to first enrollment.

#### FIRST YEAR

<b>First Semester</b>		<b>Credits</b>
EDUC 1300	Learning Framework <sup>A</sup> .....	3
HPRS 1201	Introduction to Health Professions.....	2
HITT 1301	Health Data Content and Structure .....	3
BIOL 2301	Anatomy & Physiology I.....	3
BIOL 2101	Anatomy & Physiology I (Lab).....	1
<b>Semester Total</b>		<b>12</b>

<b>Second Semester</b>		<b>Credits</b>
BIOL 2302	Anatomy & Physiology II.....	3
BIOL 2102	Anatomy & Physiology II (Lab).....	1
HITT 1345	Health Care Delivery Systems.....	3
HITT 1253	Legal and Ethical Aspects of Health Information .....	2
HITT 1305	Medical Terminology .....	3
<b>Semester Total</b>		<b>12</b>

<b>Third Semester</b>		<b>Credits</b>
HITT 1249	Pharmacology.....	2
HPRS 2201	Pathophysiology.....	2
<b>Semester Total</b>		<b>4</b>

#### SECOND YEAR

<b>First Semester</b>		<b>Credits</b>
HITT 1341	Coding and Classification Systems.....	3
POFI 1301	Computer Applications I .....	3
<b>Semester Total</b>		<b>6</b>

<b>Second Semester</b>		<b>Credits</b>
HITT 2335	Coding and Reimbursement Methodologies.....	3
HITT 1211	Health Information Systems.....	2
HITT 2166	Practicum (or Field Experience) - Health Information/Medical Records Technology/Technician # .....	1
<b>Semester Total</b>		<b>6</b>
<b>Program Total</b>		<b>40</b>

# Capstone Course

<sup>A</sup> Student Success Course: Students are required to complete EDUC 1300 within their first 12 semester credit hours of instruction. Students enrolling at HCC with 12 or more hours completed should consult with an academic advisor to select an appropriate course substitution.

# Health and Medical Sciences

## HISTOLOGIC TECHNICIAN

The AAS Histologic Technician program is a two-year, five-semester course of study requiring a total of 69 semester hours of credit. The program is accredited by the National Accrediting Agency for Clinical Laboratory Sciences (NAACLS), 5600 N. River Rd. Suite 720, Rosemont, IL 60018, 773.714.8886. Graduates are eligible for certification with the American Society of Clinical Pathologists-Board of Registry (ASCP-BOR). New classes begin in the fall of each year.

Histologic technicians prepare slides of body tissue for microscopic examination by freezing and cutting tissues, mounting them on slides, and staining them with special dyes to make the details visible under the microscope. Most technicians work in clinical science laboratories, hospital laboratories, medical research laboratories, forensic labs, industrial laboratories or government agencies.

### What You Need to Apply

All applicants must meet the following admission requirements: provide proof of high school graduation or GED, pass the TSI state approved test or complete all developmental courses needed to be eligible for enrollment in EDUC 1300 Learning Framework (**Student Success Course** – Required only if new to college or transferring to HCC with less than 12 college level credits.), HPRS 1201, MATH 1314, ENGL 1301, and BIOL 1406.

**ACADEMIC COURSES** – Completion of the following courses is not required at the time of application, but is strongly recommended prior to admission

- BIOL 2301/2101 (formerly BIOL 2401) – Anatomy & Physiology I (LEC/LAB)
- BIOL 2302/2102 (formerly BIOL 2402) – Anatomy & Physiology II (LEC/LAB)
- CHEM 1305/1105 (formerly CHEM 1405) OR CHEM 1411
- 3 credits – Humanities/Fine Arts elective (PHIL 2306 highly recommended)
- 3 credits – Social/Behavioral Science elective

### Attend a Program Session

The application packet must be completed by the application deadline of June 1st. All applicants are required to attend a Program Session, which is held at HCC Coleman:

1900 Pressler Street, Houston, TX 77030.

Register at: [colemanconnection.org](http://colemanconnection.org)

### Submit Application Packet

In person to HCC Coleman – Student Services with the following:

### Application Form –

Must be typed and printed from: [hccs.edu/media/houston-community-college/coleman-college/pdfs/201507-health\\_sciences\\_application](http://hccs.edu/media/houston-community-college/coleman-college/pdfs/201507-health_sciences_application)

### Proof of Program Session attendance

Official college transcript from every University attended (unofficial from HCC is acceptable)

### Essential Functions Form

Provided at the Program Session

### Minimum cumulative GPA of 2.0

### What's Next?

Wait to be contacted by the Department.

(Be patient; it can take several weeks for admission applications to be processed).

### If Accepted?

A condition of admission is based on completion and/or submission of the following:

- Proof of personal health insurance
- Passing drug screening
- Physical examination
- Immunization record showing: Completion of Hepatitis B Immunization series (may take up to 6 months), MMR,
- Tdap, TB, Varicella, Meningitis (required for students 22 years or younger), and Influenza (please note: a titer may be required for some of these immunizations)
- Cleared Criminal Background
- Attend Program Survival Camp
- Attend Student Services Orientation

Individuals interested in applying must attend an Essential Requirements (ER) session at Coleman College for Health Sciences. Go online or call 713.718.7642 for the dates, times and location of the sessions. For further information, please see the **General Application Procedures** for Health Science programs.

# Health and Medical Sciences

## Program Outcomes

Students will be able to

- Safely apply techniques according to standard operating procedures in the collection and analysis of biological samples.
- Demonstrate the cognitive theory necessary to pass the national certification exam.
- Apply ethical and professional behavior in the clinical laboratory setting.
- Use problem solving skills to integrate laboratory data for patient results.

For more information call 713-718-5518 or e-mail [theresa.spain@hccs.edu](mailto:theresa.spain@hccs.edu).

## Histologic Technician

### AAS

TSI testing is required prior to first enrollment.

#### Prerequisite Semester

EDUC 1300	Learning Framework <sup>A</sup>	3
HPRS 1201	Introduction to Health Professions	2
MATH 1314	College Algebra <sup>B</sup>	3
ENGL 1301	Composition I <sup>B</sup>	3
BIOL 1406	General Biology I <sup>B</sup>	4
<b>Prerequisite Total</b>		<b>15</b>

#### FIRST YEAR

##### First Semester

		<b>Credits</b>
CHEM 1411	General Chemistry I <sup>B</sup> / <sup>C</sup> OR	
CHEM 1413	College Chemistry I OR	
CHEM 1405	Introduction to Chemistry	4
HLAB 1305	Functional Histology I	3
BIOL 2301	Anatomy and Physiology I <sup>B</sup> (Lecture)	3
BIOL 2101	Anatomy and Physiology I <sup>B</sup> (Lab)	1
HLAB 1301	Introduction to Histotechnology	3
<b>Semester Total</b>		<b>14</b>

##### Second Semester

		<b>Credits</b>
HLAB 1402	Histotechnology I	4
BIOL 2302	Anatomy and Physiology II <sup>B</sup> (Lecture)	3
BIOL 2102	Anatomy and Physiology II <sup>B</sup> (Lab)	1
HLAB 1346	Functional Histology II	3
<b>Semester Total</b>		<b>11</b>

##### Third Semester

		<b>Credits</b>
HLAB 1266	Practicum (or Field Experience) - Histologic Technology/ Histotechnologist	2
HLAB 1443	Histotechnology II	4
<b>Semester Total</b>		<b>6</b>

## SECOND YEAR

### First Semester

		<b>Credits</b>
HLAB 1267	Practicum (or Field Experience) - Histologic Technology/Histotechnologist	2
HLAB 2434	Histotechnology III	4
XXXX #3##	Humanities/Fine Arts Elective <sup>D</sup>	3
<b>Semester Total</b>		<b>9</b>

### Second Semester

		<b>Credits</b>
HLAB 1268	Practicum (or Field Experience) - Histologic Technology/Histotechnologist	2
HLAB 2341	Registry Review <sup>#</sup>	3
<b>Semester Total</b>		<b>5</b>
<b>Program Total</b>		<b>60</b>

<sup>#</sup> Capstone Course

<sup>A</sup> Student Success Course: Students are required to complete EDUC 1300 within their first 12 semester credit hours of instruction. Students enrolling at HCC with 12 or more hours completed should consult with an academic advisor to select an appropriate course substitution.

<sup>B</sup> Note: Maybe taken prior to admission.

<sup>C</sup> Note: Recommended for transfer.

<sup>D</sup> Humanities/Fine Arts: May choose from – ARTS 1301, 1303, 1304, COMM 2366, DANC 2303, DRAM 1310, 2316, 2366, ENGL 2322, 2323, 2327, 2328, 2332, 2333, 2342, 2343, 2351, HIST 1301, 1302, 2311, 2312, 2321, 2322, 2301, 2327, 2328, 2381, HUMA 1301, 1305, 1311, 2319, 2323, MUSI 1306, 1310, PHIL 1301, 1304, 2306, 2307, 2316, World Languages (ARAB 1411, 1412, CHIN 1411, 1412, FREN 1411, 1412, GERM 1411, 1412, JAPN 1411, 1412, KORE 1411, 1412, SPAN 1411, 1412).

## MEDICAL ASSISTANT

The Medical Assistant Program at Houston Community College, Coleman College for Health Sciences, is accredited by the Commission on Accreditation of Allied Health Education Programs (CAAHEP); 25400 U.S. Highway 19 North, Suite 158, Clearwater, FL 33763, ([www.caahep.org](http://www.caahep.org)), upon the recommendation of the Medical Assisting Education Review Board (MAERB).

The program trains individuals to function as multi-skilled technicians in ambulatory health care delivery systems. Specific skills include administrative and clinical duties. Additional skills include 12-lead electrocardiography, dysrhythmia analysis, stress testing, Holter monitor and scanning, phlebotomy, pharmacology and administration of medications and fundamentals of medical insurance with coding.

# Health and Medical Sciences

Applicants for the Medical Assistant program are accepted in both fall and spring semesters. Students may attend on a full-time or part-time basis. Courses have theory and competency-based components. Clinical experience is provided in various ambulatory health care delivery facilities. The clinical externship is a non-paid external learning experience.

Applicants must be at college-level for English and reading, If TSI not met, have completed Math 0409 or TECM 1303 and INRW 0420 or HPRS 1271 then submit a completed application packet. Attendance at an Essential Requirements session is required.

Students accepted into the Medical Assistant program are required to undergo a criminal background check and drug screening, have a physical examination and submit proof of current immunizations (see **General Application Procedures** for a listing of required immunizations), the costs of which are the students' responsibility. Felons are not eligible to sit for the CMA examination unless the AAMA Certifying Board grants a waiver. Contact the AAMA for information concerning grounds for denial of eligibility for the Certified Medical Assistant CMA (AAMA) credential.

Students who participate in the clinical external learning experience are required to pay a liability insurance fee which protects students against losses resulting from malpractice claims. The insurance is available through HCC on a blanket coverage program at a reduced rate. Current CPR Level C certification (adult, youth, and infant) and attendance at a clinical orientation are required prior to enrollment in a clinical external learning experience.

Students are eligible to sit for and encouraged to successfully pass the national Certified Medical Assistant (CMA) exam to receive the credential CMA (AAMA) or the Registered Medical Assistant (RMA) to receive the credential RMA.

The CMA examination is administered throughout the year. Contact the AAMA for testing dates and fees at 1-800-ACT-AAMA or the American Association of Medical Assistants at 20 N. Wacker Drive, Suite 1575, Chicago, IL, 60606-2903, 1-800-228-2262, [www.aama-ntl.org](http://www.aama-ntl.org)

The RMA examination is administered throughout the year. Contact the AMT for testing dates and fees at 1-847-823-5169 or the American Medical Technologists at 10700 W. Higgins Rd., Suite 150, Rosemont, IL 60018, [www.americanmedtech.org](http://www.americanmedtech.org)

Felons are not eligible to sit for either credentialing examinations. Please contact the AAMA for the information concerning grounds for denials or eligibility for the

Certified Medical Assistant CMA (AAMA) credential or contact the AMT for additional information concerning eligibility of the Registered Medical Assistant credential.

Individuals interested in applying must attend an Essential Requirements (ER) session at Coleman College for Health Sciences. Go online or call 713.718.7361 for the dates, times and location of the sessions. For further information, please see the **General Application Procedures** for Health Science programs.

## Program Outcomes

Students will be able to

- Demonstrate competency in administrative skills as a Medical Assistant.
- Demonstrate the ability to safely perform clinical skills.
- Perform entry level skills as required of a Medical Assistant.
- Differentiate between normal and abnormal laboratory reports in a clinical setting.

## Additional Information

The Medical Assistant Program at Houston Community College, Coleman College for Health Sciences has an average job placement rate of 80% over the past five years. The five year average for employer satisfaction of graduates is 97% for those hired from the Medical Assistant Program at Houston Community College.

For more information call 713.718.7361 or 713.718.7365 or e-mail [cynthia.lundgren@hccs.edu](mailto:cynthia.lundgren@hccs.edu).

## Medical Assistant

### CERTIFICATE LEVEL II

*TSI testing is required prior to first enrollment.*

<b>Prerequisite</b>	<b>Credits</b>
EDUC 1300 Learning Framework <sup>A</sup> .....	3
HPRS 1201 Introduction to Health Professions*.....	2
ENGL 1301 Composition I.....	3
<b>Prerequisite Total</b>	<b>8</b>

### FIRST YEAR

<b>First Semester</b>	<b>Credits</b>
HPRS 1304 Basic Health Profession Skills.....	3
MDCA 1205 Medical Law and Ethics.....	2
MDCA 1213 Medical Terminology.....	2
<b>Semester Total</b>	<b>7</b>

# Health and Medical Sciences

## Second Semester Credits

MDCA 1409	Anatomy and Physiology for Medical Assistants.....	4
MDCA 1343	Medical Insurance.....	3
MDCA 1352	Medical Assistant Laboratory Procedures.....	3
MDCA 1417	Procedures in a Clinical Setting.....	4

**Semester Total 14**

## Third Semester Credits

MDCA 1310	Medical Assistant Interpersonal and Communication Skills.....	3
MDCA 1321	Administrative Procedures.....	3
MDCA 1372	Electronic Medical Record Documentation for Scribes....	3
MDCA 1448	Pharmacology and Administration of Medications.....	4

**Semester Total 13**

## SECOND YEAR

### First Semester Credits

MDCA 1254	Medical Assisting Credentialing Exam Review.....	2
MDCA 1264	Practicum-Medical/Clinical Assistant#.....	2

**Semester Total 4**

**Program Total 46**

# *Capstone Course (must be taken concurrently with MDCA 1254, Medical Assisting Credentialing Exam Review)*

A *Student Success Course: Students are required to complete EDUC 1300 within their first 12 semester credit hours of instruction. Students enrolling at HCC with 12 or more hours completed should consult with an academic advisor to select an appropriate course substitution.*

## Medical Scribe

Medical Scribes are medical information managers who specialize in charting physician-patient encounters in real-time. Medical Scribes interact and collaborate with other members of the health care team, but serve as the right-hand to the physician/provider. Under the direct supervision of the provider, the scribe follows the patient workflow. Similar to the medical transcriptionist, the medical scribe provides another career pathway or stepping stone to the health care system.

### About The Program

The Medical Scribe is a six-month program. This course is designed to train the individual in the field of medical scribe. Students will learn the fundamentals of the scribe field, including medical terminology, anatomy and physiology, electronic health records, medico-legal rules and regulations for health professions, including Health Insurance Portability and Accountability Act (HIPAA), the essentials of medical coding and reimbursement, and hands-on education using practical scribe scenarios to fulfill the diversity of the scribe training program. The students are trained in

both the classroom and in the clinical area to document the history, chief complaint, physical exam, assessments and procedures dictated by the provider and patient during actual charting. The skills and knowledge of a medical scribe may be applied in an ambulatory care clinic, surgical center, hospital setting, emergency department and other health care environments within the US healthcare system.

The Medical Scribe certificate trains individuals to enter information into the electronic medical record at the direction of a physician or practitioner; charting in real time as the provider assesses and examines the patient. The scribe will ease documentation for physicians and allow them to focus on the care of the patient thus increasing the productivity and patient satisfaction in the medical office.

### Employment

According to the Bureau of Labor Statistics, the Health Information Technician field is growing faster than average at a rate of 21 percent through 2020.

Medical scribes are well-compensated, earning a national average annual salary of \$33,530. They primarily work in medical centers, emergency rooms and hospitals, as well as physician practices and private doctors' offices.

### Certification

The Medical Scribe Program at HCC Coleman College is approved by the American College of Medical Scribe Specialists (AMCCS). The program prepares the individual for the field of medical scribe. The American College of Medical Scribe Specialists (ACMSS) certifies qualifying medical scribe specialists who specialize in real-time medical record documentation. ACMSS certification is sought and earned by medical scribe specialists on a voluntary basis. ACMSS certifies only those medical scribe specialists who meet high educational, professional standing, and examination standards.

The ACMSS administers the Medical Scribe Certification & Aptitude Test, also known as the MSCAT. The test is designed to verify a medical scribe's breadth of knowledge with respect to medical terminology, technical spelling, the Patient Privacy Rule and HIPAA, the scribe's role in medico-legal risk mitigation, understanding the essential elements of documenting a physician-patient encounter, evaluation and management level, the Centers for Medicare and Medicaid Services Physician Quality Reporting System (PQRS), the Joint Commission's Accountability Measures, and general knowledge of the roles and responsibilities of general medical personnel.

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Graduates from the Houston Community College Medical Scribe Program are eligible and encouraged to sit for the MSCAT upon graduation.

See more information about the Medical Scribe Certification & Aptitude Test (MSCAT) by visiting the website [www.theacmss.org/](http://www.theacmss.org/)

## Program Outcomes

Students will be able to:

- Differentiate workflow in Healthcare Settings
- Perform application of documentation in the electronic health record
- Demonstrate knowledge of HIPAA compliance

For more information call 713-718-7361 or email [cynthia.lundgren@hccs.edu](mailto:cynthia.lundgren@hccs.edu).

## Medical Scribe

### CERTIFICATE LEVEL I

#### Prerequisite Credits

HPRS 1201	Introduction to Health Professions*	2
MDCA 1213	Medical Terminology	2
ITSC 1309	Integrated Software Applications I	3

**Prerequisite Total 7**

#### First Semester

#### Credits

MDCA 1409	Anatomy and Physiology for Medical Assistants	4
MDCA 1205	Medical Law and Ethics	2
MDCA 1391	Special Topics in Medical Assistant	3
MDCA 1343	Medical Insurance	3

**Semester Total 12**

#### Second Semester

#### Credits

MDCA 1165	Practicum (or Field Experience) - Medical/Clinical Assistant#	1
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**Semester Total 1**

**Program Total 20**

\*Student Success Course

# Capstone Course - All Prerequisite and First Semester courses must be successfully completed before taking the Capstone.

## Medical Laboratory Technician

Medical laboratory Technicians (MLT), also known as Clinical Laboratory Technicians, play a crucial role in the diagnosis, treatment and management of patients. They perform complex testing using sophisticated instruments to detect diseases and monitor treatment. Approximately 75%

of medical decisions, diagnosis, treatment and evaluations, are based on the interpretations of laboratory test results. Medical laboratory technicians might isolate and identify an infectious organism that is causing a patient's pneumonia or cross-match blood to be used in a transfusion. The laboratory testing they perform will show whether a diabetic patient's glucose is normal or too high or they may perform testing on blood to detect and identify leukemia. They interpret and analyze test results and then communicate them to physicians for patient care.

A graduate earns an Associate of Applied Science Degree and is eligible to be certified by the American Society of the Clinical Pathologists (ASCP) as a Medical Laboratory Technician. Today's Medical Laboratory Technician is employed in many diverse medical settings ranging from hospital, reference, research, forensic, or physicians' office laboratories. Other employment opportunities include working in medical businesses such as medical instrument technicians or medical supply industries. In addition, a graduate using the Associate degree could further their education by obtaining a Bachelor of Science in Clinical Laboratory Science degree in as little as 18 months and then work as a Medical Laboratory Scientist

All applicants must meet the following admission requirements: provide proof of high school graduation or GED, pass the TSI state approved test or complete all developmental courses needed to be eligible for enrollment in HPRS 1201, MATH 1314, ENGL 1301, and BIOL 2404. The completed application packet must be submitted by the application deadline of July 15. Applicants who have completed the application process will be invited to attend an interview session. The session will include written assignments and a personal interview. As a result of the applicant's written work, GPA of 2.0 and higher and personal interview, points will be earned toward admission.

The Health Sciences Division requires that all students accepted into the program provide proof of a physical examination performed by a physician, certain immunizations (see **General Application Procedures** for a listing of required immunizations), a urine drug screen, and criminal background check. Information and forms will be supplied at the time of the personal interview. Students accepted into the program are required to pay a liability insurance fee.

Individuals interested in applying must attend an Essential Requirements (ER) session at Coleman College for Health Sciences. Go online or call 713.718.5518 for the dates, times and location of the sessions. For further information, please see the **General Application Procedures** for Health Science programs.

# Health and Medical Sciences

## Program Outcomes

Students will be able to

- Safely apply techniques according to standard operating procedures in the collection and analysis of biological samples.
- Demonstrate the cognitive theory necessary to pass the national certification exam.
- Apply ethical and professional behavior in the clinical laboratory setting.
- Use problem solving skills to integrate laboratory data for patient results.

For more information call 713.718.5518 or email [theresa.spain@hccs.edu](mailto:theresa.spain@hccs.edu) or [robbe.hallmark@hccs.edu](mailto:robbe.hallmark@hccs.edu).

## Medical Laboratory Technician

### AAS

TSI testing is required prior to first enrollment.

#### Prerequisites

MLAB 1101	Introduction to Clinical Laboratory Science.....	1
MATH 1314	College Algebra.....	3
ENGL 1301	Composition I.....	3
BIOL 2301	Anatomy and Physiology I.....	3
BIOL 2101	Anatomy and Physiology I.....	1
<b>Prerequisite Total</b>		<b>11</b>

### FIRST YEAR

#### First Semester Credits

EDUC 1300	Learning Framework <sup>A</sup> .....	3
BIOL 2302	Anatomy & Physiology II <sup>B</sup> .....	3
CHEM 1405	Introductory Chemistry I OR	
CHEM 1411	General Chemistry I.....	4
MLAB 1235	Immunology/Serology.....	2
MLAB 1270	Hematology I.....	2
<b>Semester Total</b>		<b>14</b>

#### Second Semester Credits

BIOL 2320	Microbiology.....	3
MLAB 1127	Coagulation.....	1
MLAB 1271	Hematology II.....	2
MLAB 2331	Immunohematology.....	3
MLAB 2270	Clinical Chemistry I.....	2
<b>Semester Total</b>		<b>11</b>

#### Third Semester Credits

MLAB 1211	Urinalysis and Body Fluids.....	2
MLAB 2271	Clinical Chemistry II.....	2
PLAB 1173	Phlebotomy.....	1
<b>Semester Total</b>		<b>5</b>

### SECOND YEAR

#### First Semester Credits

MLAB 1166	Practicum (or Field Experience) - Clinical/Medical Laboratory Tech.....	1
MLAB 1167	Practicum (or Field Experience) - Clinical/Medical Laboratory Tech.....	1
MLAB 2434	Microbiology (Clinical).....	4
<b>Semester Total</b>		<b>6</b>

#### Second Semester Credits

MLAB 1231	Parasitology/Mycology.....	2
MLAB 1266	Practicum (or Field Experience)- Clinical/Medical Laboratory Tech.....	2
MLAB 1267	Practicum (or Field Experience)- Clinical/Medical Laboratory Tech.....	2
XXXX #3##	Humanities/Fine Arts Elective <sup>C</sup> .....	3
<b>Semester Total</b>		<b>9</b>

#### Third Semester Credits

MLAB 2232	Seminar in Medical Laboratory Technology.....	2
MLAB 2238	Advanced Topics in Medical Laboratory Technician/Assistant <sup>#</sup> .....	2
<b>Semester Total</b>		<b>4</b>
<b>Program Total</b>		<b>60</b>

<sup>#</sup> Capstone Course

<sup>A</sup> Student Success Course: Students are required to complete EDUC 1300 within their first 12 semester credit hours of instruction. Students enrolling at HCC with 12 or more hours completed should consult with an academic advisor to select an appropriate course substitution.

<sup>B</sup> Note: While not required, BIOL 2102 Anatomy & Physiology II (Lab) is recommended as a companion course to BIOL 2302 Anatomy & Physiology II (Lecture).

<sup>C</sup> Humanities/Fine Arts: May choose from – ARTS 1301, 1303, 1304, COMM 2366, DANC 2303, DRAM 1310, 2316, 2366, ENGL 2322, 2323, 2327, 2328, 2332, 2333, 2342, 2343, 2351, HIST 1301, 1302, 2311, 2312, 2321, 2322, 2301, 2327, 2328, 2381, HUMA 1301, 1305, 1311, 2319, 2323, MUSI 1306, 1310, PHIL 1301, 1304, 2306, 2307, 2316, World Languages (ARAB 1411, 1412, CHIN 1411, 1412, FREN 1411, 1412, GERM 1411, 1412, JAPN 1411, 1412, KORE 1411, 1412, SPAN 1411, 1412).

## NUCLEAR MEDICINE TECHNOLOGY

The Nuclear Medicine Technology program combines academic study with clinical laboratory experience at affiliated hospitals. Graduates of the program may find employment in the areas of nuclear imaging, nuclear cardiology, PET and fusion technology. The Joint Review Committee on Educational Programs in Nuclear Medicine Technology has granted full accreditation status to this program. (Joint Review Committee on Educational

# Health and Medical Sciences

Programs in Nuclear Medicine Technology, 2000 W. Danforth Rd., Ste. 130 #203, Edmond, OK 73003, 405.285.0546.) A graduate of this 24-month program is eligible to take a certification and/or registry examination in Nuclear Medicine Technology.

Students who are accepted in the program are required to pay a liability insurance fee which protects the students against losses resulting from malpractice claims. Students must pay a film badge fee each semester. Students must pass a physical examination, drug screening test, criminal background check and carry health insurance prior to receiving a hospital assignment.

Students must have all required immunizations (the Hepatitis B vaccination series may take up to 6 months to complete) or show serologic confirmation of immunity to specific diseases prior to the second semester of the program.

Program courses have both theory and competency-based educational components. Students may not earn a grade below "C" in RADR 2340, CTMT 2336 and all NMTT courses and continue in the program. The grading scale used by the Nuclear Medicine Technology program is: 90-100= A; 80-89=B; 75-79=C; and any grade below 75 is considered failing. In addition, each semester is a prerequisite for the following semesters, and a student will need to have a GPA of 2.0 or higher to be eligible for graduation.

Applicants must meet the following admission requirements: TSI approved tests or developmental courses confirming readiness in college-level reading, college-level English and college algebra or transcript(s) with credits in college-level math, reading and writing. A completed application must be submitted prior to the application deadline.

Individuals interested in applying and who live in Houston or the surrounding area must attend an Essential Requirements (ER) session. Go online at coleman.hccs.edu for the dates, times and location of the ER meetings. Individuals living outside the Houston area should send an e-mail to glenn.smith@hccs.edu for program information or log onto the program website at coleman.hccs.edu/nuclearmedicinetechology.

## Program Outcomes

Students will be able to

- Demonstrate patient care tasks in a laboratory setting.
- Demonstrate radiation safety techniques to minimize radiation exposure.
- Demonstrate quality control procedures.

- Prepare and administer radiopharmaceuticals.
- Competently perform imaging and non-imaging nuclear medicine procedures.
- Differentiate normal anatomy and abnormal pathology on a nuclear medicine image.

For more information call 713.718.7650 or e-mail glenn.smith@hccs.edu.

## Nuclear Medicine Technology

### AAS

TSI testing is required prior to first enrollment.

### FIRST YEAR

<b>Prerequisite Semester</b>		<b>Credits</b>
EDUC 1300	Learning Framework <sup>A</sup> .....	3
BIOL 2301	Anatomy and Physiology I <sup>B C</sup> .....	3
BIOL 2101	Anatomy and Physiology I <sup>B C</sup> .....	1
BIOL 2302	Anatomy and Physiology II <sup>B D</sup> .....	3
BIOL 2102	Anatomy and Physiology II <sup>B D</sup> .....	1
CHEM 1405	Introductory Chemistry I <sup>B</sup> .....	4
MATH 1314	College Algebra .....	3
SCIT 1320	Physics for Allied Health .....	3
<b>Prerequisite Total</b>		<b>21</b>

<b>First Semester</b>		<b>Credits</b>
NMTT 1211	Nuclear Medicine Patient Care .....	2
NMTT 1301	Introduction to Nuclear Medicine .....	3
NMTT 1166	Practicum I-Nuclear Medicine Technology .....	1
XXXX #3##	Humanities/Fine Arts Elective <sup>E</sup> .....	3
<b>Semester Total</b>		<b>9</b>

<b>Second Semester</b>		<b>Credits</b>
NMTT 1409	Nuclear Medicine Instrumentation .....	4
NMTT 1267	Practicum II-Nuclear Medicine Technology .....	2
RADR 2340	Sectional Anatomy for Medical Imaging .....	3
NMTT 2201	Radiochemistry and Radiopharmacy .....	2
<b>Semester Total</b>		<b>11</b>

<b>Third Semester</b>		<b>Credits</b>
NMTT 2309	Nuclear Medicine Methodology II .....	3
NMTT 2167	Practicum III-Nuclear Medicine Technology .....	1
<b>Semester Total</b>		<b>4</b>

### SECOND YEAR

<b>First Semester</b>		<b>Credits</b>
NMTT 2413	Nuclear Medicine Methodology III .....	4
NMTT 2266	Practicum IV-Nuclear Medicine Technology .....	2
ENGL 1301	Composition I .....	3
<b>Semester Total</b>		<b>9</b>

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<b>Second Semester</b>		<b>Credits</b>
CTMT 2336	Computed Tomography Equip. & Methodology.....	3
NMTT 2367	Practicum V-Nuclear Medicine Technology#.....	3
<b>Semester Total</b>		<b>6</b>
<b>Program Total</b>		<b>60</b>

# Capstone Course

<sup>A</sup> *Student Success Course: Students are required to complete EDUC 1300 within their first 12 semester credit hours of instruction. Students enrolling at HCC with 12 or more hours completed should consult with an academic advisor to select an appropriate course substitution.*

<sup>B</sup> *Note: May be taken prior to admission.*

<sup>C</sup> *Note: BIOL 2301/2101 would be taken Summer I, (BIOL 1406 is strongly recommended prior to BIOL 2401).*

<sup>D</sup> *Note: BIOL 2302/2102 would be taken Summer II.*

<sup>E</sup> *Humanities/Fine Arts: May choose from – ARTS 1301, 1303, 1304, COMM 2366, DANC 2303, DRAM 1310, 2316, 2366, ENGL 2322, 2323, 2327, 2328, 2332, 2333, 2342, 2343, 2351, HIST 1301, 1302, 2311, 2312, 2321, 2322, 2301, 2327, 2328, 2381, HUMA 1301, 1305, 1311, 2319, 2323, MUSI 1306, 1310, PHIL 1301, 1304, 2306, 2307, 2316, World Languages (ARAB 1411, 1412, CHIN 1411, 1412, FREN 1411, 1412, GERM 1411, 1412, JAPN 1411, 1412, KORE 1411, 1412, SPAN 1411, 1412).*

## NURSING

The Associate Degree Nursing Program (ADN) is a four semester program leading to an AAS. The program has received Full Approval from The Texas Board of Nursing (TBON, 333 Guadalupe, Suite 3-460, Austin, TX 78701, 512.305.7401, [www.bon.state.tx.us](http://www.bon.state.tx.us)). Upon satisfactory completion of all requirements in the degree program, graduates are eligible to apply to take the NCLEX-RN examination to become a registered nurse.

To be considered for acceptance into the program, applicants must complete the admission process. Licensed Vocational Nurses must meet the necessary qualifications required by the ADN program. Transfer applicants are considered for admission on an individual basis. Day and evening programs are offered at the Coleman College for Health Sciences for August admissions only. Only the day program is offered for January admissions.

Requirements for admission consideration are as follows: TEAS Student Assessment Test with a minimum of 64% on each subject area: Mathematics, Reading, English and Language Usage, and Science; or The HESI Student Assessment Test with a minimum 75% on each subject area: Anatomy and Physiology, Grammar, Mathematics, and Reading.

Applicants educated in non-English speaking countries must complete the TOEFL exam with a minimum score of 20 in each of the 4 required elements. MINIMUM grade point average (GPA) of 3.0; pass the TSI state approved test or provide proof of exemption; and provide proof of college readiness in Biology 2301/2101, Biology 2320/2120, ENGL 1301, and PSYCH 2301, with a grade of "C" OR HIGHER.

**Please note:** BIOL 2301/2101, BIOL 2302/2102, Biology 2320/2120 and PSYCH 2314 must have been taken within 5 years of admission application submission. Applicants must be able to meet the essential functions set for the by the ADN faculty. All remaining academic courses must be taken prior to, or concurrent with, the nursing curricula specified below. Criminal background checks are required prior to final admission into the program. Applicants are encouraged to complete all **REQUIRED ACADEMIC** courses prior to admission.

A grade of "C" or higher must be attained in each course to advance in the program of study. All courses must be completed in sequence according to the nursing curriculum. Due to limited space, even though applicants meet admission requirements, applicants are not automatically assured admission into the ADN program. The college may refuse admission to applicants. Applicants applying for re-admission (those students who have withdrawn from or failed any course with a RNSG prefix) must complete and submit a Re-admission Application to the Associated Degree Nursing office. Re-admission is considered on an individual basis after review by the progression admission committee. To be considered for re-admission, only one RNSG prefix course failure in the program is allowed. If students withdraw or fail a second course with a RNSG prefix, they are not permitted to continue in the program nor will they be eligible to apply to the A.D.N program again with the exception of the second failure/withdrawal in the final semester of the program. All courses with RNSG prefix must be completed within four years of initial enrollment in the nursing program.

Individuals interested in applying must attend an Information Session at Coleman College for Health Sciences. Go online or call 713.718.7230 for the dates, times and location of the sessions. For further information, please see the General Application Procedure for Health Science programs.

Students enrolled in Professional Nursing Review and Licensure Preparation (RNSG 2130) capstone course are required to complete, at a score specified by program faculty, a standardized EXIT EXAM. Failure to attain the required score will result in students not completing the program and not being certified for the NCLEX-RN Exam.

# Health and Medical Sciences

## Philosophy:

The philosophy of the Associate Degree Nursing Program is the belief that nursing is an applied science, which utilizes the principles of evidence based practice and patient-centered care to assist individuals and families to meet their health care needs while progressing through the life span.

The faculty prepares the Associate Degree nursing student in the practice of nursing using through a comprehensive educational curriculum with experiences planned in diverse health care settings. The nursing program strives to build on each student's prior experience. The nursing role is characterized by the utilization of a systematic, problem-solving approach, a caring relationship, and commitment to continuing education and professionalism in practice.

Throughout the curriculum, students are provided with experiences which prepare them to care for clients and families with common and complex well-defined health problems. The role of the Associate Degree nurse encompasses four areas: member of the profession, provider of patient-centered care, advocate of patient safety, and active member of the health care team. ([www.bon.tx.gov](http://www.bon.tx.gov))

## Program Outcomes

Students will be able to

- Demonstrate safe entry level nursing practice as defined by the four roles of the Differentiated Essential Competencies of Graduate of Texas Nursing Programs (DECs).
- Communicate effectively with patients, families, and members of the health-care team.
- Utilize a systematic problem-solving approach in caring for patients with common and complex needs.
- Demonstrate appropriate entry level Associate Degree Nursing Program didactic competencies to pass the NCLEX-RN licensure exam.

For more information call 713-718-7230 or 713-718-7231 or email: [wanda.january1@hccs.edu](mailto:wanda.january1@hccs.edu)

## Nursing

### AAS

TSI testing is required prior to first enrollment.

Prerequisite Semester		Credits
ENGL 1301	Composition I	3
BIOL 2301	Anatomy and Physiology I <sup>A</sup>	3
BIOL 2101	Anatomy and Physiology I <sup>A</sup>	1

PSYC 2301	Introduction to Psychology	3
BIOL 2320	Microbiology	3
BIOL 2120	Microbiology	1

**Prerequisite Total 14**

## FIRST YEAR

First Semester		Credits
RNSG 1413	Foundations for Nursing Practice	4
RNSG 1201	Pharmacology	2
RNSG 1360	Clinical Nursing-RNT-Foundations	3
RNSG 1105	Nursing Skills I	1
BIOL 2302	Anatomy and Physiology II	3
BIOL 2102	Anatomy and Physiology II	1

**Semester Total 14**

## Second Semester

Second Semester		Credits
RNSG 1341	Common Concepts of Adult Health	3
RNSG 2360	Clinical Nursing-RNT-Adult I	3
RNSG 2201	Care of Children and Families	2
RNSG 2261	Clinical - Registered Nursing/Registered Nurse	2
PSYC 2314	Human Growth & Development Life Span	3

**Semester Total 13**

## Third Semester

Third Semester		Credits
RNSG 1160	Clinical - Registered Nursing/Registered Nurse	1
RNSG 1251	Care of the Childbearing Family	2
RNSG 2213	Mental Health Nursing	2
RNSG 2160	Clinical - Registered Nursing/Registered Nurse	1
XXXX #3##	Humanities/Fine Arts Elective <sup>B</sup>	3

**Semester Total 9**

## SECOND YEAR

### First Semester

First Semester		Credits
RNSG 2221	Professional Nursing: Leadership and Management	2
RNSG 1144	Nursing Skills II	1
RNSG 1343	Complex Concepts of Adult Health	3
RNSG 2361	Clinical Nursing-RNT-Adult II	3
RNSG 2130	Professional Nursing Review and Licensure Preparation <sup>#</sup>	1

**Semester Total 10**

**Program Total 60**

<sup>#</sup> Capstone Course

<sup>A</sup> Note: BIOL 1406 is strongly recommended prior to BIOL 2301/2101.

<sup>B</sup> Humanities/Fine Arts: May choose from – ARTS 1301, 1303, 1304, COMM 2366, DANC 2303, DRAM 1310, 2316, 2366, ENGL 2322, 2323, 2327, 2328, 2332, 2333, 2342, 2343, 2351, HIST 1301, 1302, 2311, 2312, 2321, 2322, 2301, 2327, 2328, 2381, HUMA 1301, 1305, 1311, 2319, 2323, MUSI 1306, 1310, PHIL 1301, 1304, 2306, 2307, 2316, World Languages (ARAB 1411, 1412, CHIN 1411, 1412, FREN 1411, 1412, GERM 1411, 1412, JAPN 1411, 1412, KORE 1411, 1412, SPAN 1411, 1412).

# Health and Medical Sciences

## LVN to RN Transition

HCC offers an optional route to the AAS Nursing Degree via the LVN-to-RN transition program. To apply for the program, students must have graduated from an accredited LVN program and meet all requirements for entry into the AAS Nursing program including criminal background checks. Students must have completed the following basic required academic courses: English 1301, PSYCH 2301, Humanities/Fine Arts elective, BIOL 2301/2101, BIOL 2302/2102, BIOL 2320/2120, and PSYCH 2314. PLEASE NOTE: Biology 2301/2101, Biology 2302/2102, Biology 2320/2120, and Psych 2314 must be completed within 5 years of admission.

Individuals interested in applying must attend an Information session at Coleman College for Health Sciences. Go online or call 713.718.7230 for the dates, times and location of the sessions. For further information, please see the General Application procedures for health science programs.

Students enrolled in the RNSG 2130, Professional Nursing Review and Licensure Preparation, capstone course are required to complete, at a score specified by program faculty, a standardized EXIT EXAM. Failure to attain the required score would result in the student not completing the program and not being certified for the NCLEX-RN Exam.

### Program Outcomes

Students will be able to

- Communicate effectively with patients, families, and members of the health-care team.
- Demonstrate competency in completing a comprehensive assessment and administering medications in the clinical setting.
- Utilize a systematic problem-solving approach in caring for patients with common and complex needs.
- Function within the legal and ethical scope of practice.
- Demonstrate appropriate entry level Associate Degree Nursing Program didactic competencies to pass the NCLEX-RN licensure exam.

For more information call 713-718-7230 or 713-718-7231 or email: wanda.january1@hccs.edu.

## LVN to ADN Transition

### AAS

*TSI testing is required prior to first enrollment.*

Prerequisites	Credits
VNSG 1400 Nursing in Health and Illness I.....	4
VNSG 1227 Essentials of Medication Administration.....	2
VNSG 1409 Nursing in Health and Illness II.....	4
BIOL 2301 Anatomy and Physiology I (Lecture) <sup>A</sup> .....	3
BIOL 2101 Anatomy and Physiology I (Lab) <sup>A</sup> .....	1
BIOL 2302 Anatomy and Physiology II (Lecture).....	3
BIOL 2102 Anatomy and Physiology II (Lab).....	1
ENGL 1301 Composition I.....	3
PSYC 2301 Introduction to Psychology.....	3
XXXX #3## Humanities/Fine Arts Elective <sup>B</sup> .....	3
BIOL 2320 Microbiology (Lecture).....	3
BIOL 2120 Microbiology (Lab).....	1
PSYC 2314 Human Growth and Development: Lifespan.....	3
<b>Prerequisites Total</b>	<b>34</b>

### FIRST YEAR

First Semester	Credits
RNSG 1215 Health Assessment.....	2
RNSG 1327 Transition from Vocational Nursing to Professional Nursing.....	3
RNSG 1163 Clinical Nursing-RNT-Transition.....	1
RNSG 2201 Care of Children and Families.....	2
RNSG 2261 Clinical - Registered Nursing/Registered Nurse.....	2
RNSG 2213 Mental Health Nursing.....	2
RNSG 2160 Clinical - Registered Nursing/Registered Nurse.....	1
<b>Semester Total</b>	<b>13</b>

Second Semester	Credits
RNSG 1144 Nursing Skills II.....	1
RNSG 1251 Care of the Childbearing Family.....	2
RNSG 1161 Clinical - Registered Nursing/Registered Nurse.....	1
RNSG 1343 Complex Concepts of Adult Health.....	3
RNSG 2361 Clinical Nursing-RNT-Adult II.....	3
RSNG 2221 Professional Nursing: Leadership and Management.....	2
RNSG 2130 Professional Nursing Review and Licensure Preparation #.....	1
<b>Semester Total</b>	<b>13</b>
<b>Program Total</b>	<b>60</b>

# Capstone Course

<sup>A</sup> Note: BIOL 1406 is strongly recommended prior to BIOL 2301/2101.

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<sup>B</sup> *Humanities/Fine Arts: May choose from – ARTS 1301, 1303, 1304, COMM 2366, DANC 2303, DRAM 1310, 2316, 2366, ENGL 2322, 2323, 2327, 2328, 2332, 2333, 2342, 2343, 2351, HIST 1301, 1302, 2311, 2312, 2321, 2322, 2301, 2327, 2328, 2381, HUMA 1301, 1305, 1311, 2319, 2323, MUSI 1306, 1310, PHIL 1301, 1304, 2306, 2307, 2316, World Languages (ARAB 1411, 1412, CHIN 1411, 1412, FREN 1411, 1412, GERM 1411, 1412, JAPN 1411, 1412, KORE 1411, 1412, SPAN 1411, 1412).*

## OCCUPATIONAL THERAPY ASSISTANT

The Occupational Therapy Assistant curriculum prepares graduates to provide skilled health care services under the supervision of licensed occupational therapists. Working collaboratively, the OTA is trained to provide services to consumers across the life span, particularly those with challenges (i.e. disease, injury, illness, wellness, prevention), that prevent active independent “living life to its fullest” through daily occupations and tasks. Services may include, but are not limited to, treating a wide range of physical, developmental, psychological, social, and emotional conditions. Principles, theories and treatment interventions that emphasize best practices are the hallmark of this profession’s repertoire. Examples of types of intervention(s) include therapeutic exercises and activities, motor and life skills training, Basic Activities of Daily Living (BADL), and Instrumental Activities of Daily Living (IADL) training, adaptive technological use and training, splint construction and usage, home modification, work-related intervention, psychosocial group programs, and consumer/care-giver education.

The certificate is accredited by the Accreditation Council for Occupational Therapy Education (ACOTE) of the American Occupational Therapy Association (AOTA), 4720 Montgomery Lane, P.O. Box 31220, Bethesda, MD 20824-1220; 301.652.AOTA.

The program offers an approved twelve-month curriculum which, upon completion, allows graduates to apply and take the national certification examination for occupational therapy assistants. Administered through the National Board for Certification in Occupational Therapy (NBCOT) successful completion allows the title Certified Occupational Therapy Assistant (COTA). Most states, including Texas, require a license to practice. A license is issued by The Executive Council of Physical Therapy and Occupational Therapy Examiners (ECPTOTE), located at 333 Guadalupe St., Suite 2-510, in Austin, TX, 78701-3942; 512.305.6900. A license is issued based on the graduate’s results of the certification examination.

Note: Students may earn an AAS degree by completing

two additional semesters of academic courses. The AAS degree is under review for accreditation by the Accreditation Council for Occupational Therapy Education (ACOTE) of the American Occupational Therapy Association (AOTA); however, it is recognized by the Texas Higher Education Coordinating Board (THECB).

Applicants must meet the general requirements for admission to the Coleman College for Health Sciences as well as the OTA program.

Applicants accepted in the program are required to provide updated documents each semester of the following: proof of CPR certificate, physical examination, immunization and Hepatitis B (which may take up to 6 months to administer), drug test, criminal background check. Personal data forms are completed prior to releasing clinical placement assignments. Students are required to pay liability insurance fees which provide protection against losses resulting from malpractice claims.

Currently, there are two prerequisites: OTHA 1301 which is taught evenings and/or weekends each Fall and Spring semester, and HPRS 1201. The program is full-time day with classes offered between the hours of 7:30 am and 6:30 pm, Monday through Friday. Saturday classes may be required some semesters.

A minimum grade of “C” is required in all OTHA courses with the exception of skills and clinical courses which have a minimum requirement of the grade of “B.” Clinical internship experiences are scheduled and assigned for spring and summer semesters. Clinical level II internships must be completed within 18 months following completion of the OTHA courses per program curriculum.

Individuals interested in applying must attend an Essential Requirements (ER) session at Coleman College for Health Sciences. Go online or call 713.718.7391 for the dates, times and location of the sessions. For further information, please see the **General Application Procedures** for Health Science programs.

### Program Outcomes

Students will be able to

- Demonstrate entry-level competence through a combination of academic and fieldwork education.
- Apply occupational therapy principles and intervention tools to achieve expected outcomes as related to occupation. Assessment-The students perform a Modification Plan on selected environments (e.g., home, work, school, community) and adapt processes, including the application of ergonomic principles.

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- Demonstrate knowledge as a generalist with a broad exposure to the delivery models and systems used in settings where occupational therapy is currently practiced and where it is emerging as a service. Assessment-The students research the trends in OT delivery on a local, state and national level in a research report.
- Evaluate the OT process in the healthcare environment. Assessment-Students develop OT treatment/intervention plans, implements the plans and evaluate the plans for effectiveness using a rubric.

For more information call 713.718.7391 or 713.718.7392.

## Occupational Therapy Assistant

The AAS degree is not accredited by the Accreditation Council for Occupational Therapy Education (ACOTE) of the American Occupational Therapy Association (AOTA); however, the AAS degree is recognized by the Texas Higher Education Coordinating Board (THECB).

### AAS

TSI testing is required prior to first enrollment.

#### FIRST YEAR

Prerequisite	Credits
EDUC 1300 Learning Framework <sup>A</sup> .....	3
PSYC 2301 Introduction to Psychology.....	3
BIOL 2301 Anatomy & Physiology.....	3
BIOL 2101 Anatomy & Physiology.....	1
OTHA 1201 Introduction to Occupational Therapy.....	2
<b>Prerequisite Total</b>	<b>12</b>

#### First Semester Credits

OTHA 1305 Principles of Occupational Therapy.....	3
OTHA 1309 Human Structure and Function in Occupational Therapy.....	3
OTHA 1315 Therapeutic Use of Occupations or Activities I.....	3
PSYC 2314 Human Growth and Development: Lifespan.....	3
<b>Semester Total</b>	<b>12</b>

#### Second Semester Credits

OTHA 2301 Pathophysiology in Occupational Therapy.....	3
OTHA 2311 Abnormal Psychology in Occupational Therapy.....	3
OTHA 1319 Therapeutic Interventions I.....	3
OTHA 1241 Occupational Performance from Birth through Adolescence.....	2
<b>Semester Total</b>	<b>11</b>

#### Third Semester Credits

OTHA 2302 Therapeutic Use of Occupations or Activities II.....	3
OTHA 2305 Therapeutic Interventions II.....	3
XXXX #3## Humanities/Fine Arts Elective <sup>B</sup> .....	3
<b>Semester Total</b>	<b>9</b>

#### SECOND YEAR

##### First Semester Credits

OTHA 1253 Occupational Performance for Elders.....	2
OTHA 2331 Physical Function in Occupational Therapy.....	3
OTHA 2209 Mental Health in Occupational Therapy.....	2
OTHA 1161 Clinical - Occupational Therapy Assistant.....	1
OTHA 1162 Clinical - Occupational Therapy Assistant.....	1
<b>Semester Total</b>	<b>9</b>

##### Second Semester Credits

OTHA 2330 Workplace Skills for Occupational Therapy Assistant.....	3
OTHA 2266 Practicum (or Field Experience) - Occupational Therapy Assistant.....	2
OTHA 2267 Practicum (or Field Experience) - Occupational Therapy Assistant #.....	2
<b>Semester Total</b>	<b>7</b>
<b>Program Total</b>	<b>60</b>

# Capstone Course

<sup>A</sup> Student Success Course: Students are required to complete EDUC 1300 within their first 12 semester credit hours of instruction. Students enrolling at HCC with 12 or more hours completed should consult with an academic advisor to select an appropriate course substitution.

<sup>B</sup> Humanities/Fine Arts: May choose from – ARTS 1301, 1303, 1304, COMM 2366, DANC 2303, DRAM 1310, 2316, 2366, ENGL 2322, 2323, 2327, 2328, 2332, 2333, 2342, 2343, 2351, HIST 1301, 1302, 2311, 2312, 2321, 2322, 2301, 2327, 2328, 2381, HUMA 1301, 1305, 1311, 2319, 2323, MUSI 1306, 1310, PHIL 1301, 1304, 2306, 2307, 2316, World Languages (ARAB 1411, 1412, CHIN 1411, 1412, FREN 1411, 1412, GERM 1411, 1412, JAPN 1411, 1412, KORE 1411, 1412, SPAN 1411, 1412).

## PHARMACY TECHNICIAN

The mission of the Pharmacy Technician program is to provide workforce training which prepares individuals for life, work and employment by providing them opportunities for jobs in a variety of diverse pharmacy settings, ranging from hospital, retail to home care, with opportunities for growth in the pharmacy field once graduates are employed. Specific

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training includes the following: pharmaceutical calculations, state and federal laws, IV admixture, prepackaging, inventory control, pharmacy terminology, pharmacology, computer applications, and the practice of pharmacy.

Students must maintain a “C” average in all PHRA courses and meet all prerequisites to continue in the program.

Health facility clinical experience is provided through affiliations with area hospitals and pharmacies. Students who participate in a clinical practicum are required to pay a liability insurance fee which protects students against losses resulting from malpractice claims. The insurance is available through HCC on a blanket coverage program at a reduced rate. In addition to liability insurance, students must have a recent physical examination, current immunizations, drug screen test and have completed all pharmacy technician courses with a minimum grade of “C” or higher prior to enrolling into the clinical practicum. **Please Note:** Individuals who wish to perform duties in a pharmacy during the clinical practicum must have an ACTIVE Technician Trainee registration with the Texas State Board of Pharmacy (TSBP). A federal background check and fingerprinting are required to obtain Trainee registration. For more information on the criminal background check and registration please check the State Board website at [www.tsbp.state.tx.us](http://www.tsbp.state.tx.us).

Before the non-renewable Technician Trainee status expires, Texas trainees are required to take and pass the Pharmacy Technician Certification Board (PTCB) National Exam within two years and upgrade their status to Registered Technician. For more information on PTCB, please check the website at [www.ptcb.org](http://www.ptcb.org). The Pharmacy Technician program is accredited by the [American Society of Health-System Pharmacists \(ASHP\)](http://www.ashp.org), 7272 Wisconsin Ave., Bethesda, MD 20814, 301.664.8858.

Applicants must meet the following requirements for admission: minimum scores on the appropriate placement assessment, complete the required pre-requisite courses, complete a personal admission assessment with program faculty, and complete the application packet by the application deadline.

Before any applicant is formally accepted into the pharmacy technician program and before they are allowed to register into any pharmacy technician course (except PHRA 1301), the applicant must purchase, complete and pass a comprehensive background check. All pharmacy technician background checks are completed through Certified Background Check.

Individuals interested in applying must attend a program information session at Coleman College for Health Sciences – McGovern campus. Go online or call 713.718.7356 for the dates, times and location of the sessions. For further information, please see the **General Application Procedures** for Health Science programs.

In addition, please note that a student may only earn one Occupational Skills Award (OSA) per academic year.

## Program Outcomes

Students will be able to

- Perform the calculations necessary to accurately prepare pharmaceutical products for dispensing in retail, home care and hospital pharmacy practice settings.
- Demonstrate professional behavior, maintain confidentiality, and practice safely within the scope of practice of the pharmacy technician in retail, home care and hospital practice settings.
- Process prescriptions and prepare pharmaceutical products for dispensing in compliance with current legislation, established standards and policies and procedures in retail, home care and hospital pharmacy practice settings.
- Demonstrate proper USP <797> aseptic technique in the compounding and preparation of sterile products.
- Demonstrate the entry level pharmacy technician didactic competencies necessary to pass the PTCB certification exam.

For more information call 713.718.7356 or e-mail [janet.pena@hccs.edu](mailto:janet.pena@hccs.edu).

## Pharmacy Technician

### CERTIFICATE LEVEL II

<b>Prerequisite</b>		<b>Credits</b>
EDUC 1300	Learning Framework <sup>A</sup> .....	3
HPRS 1201	Introduction to Health Professions*.....	2
PHRA 1301	Introduction to Pharmacy.....	3
<b>Prerequisite Total</b>		<b>8</b>
<b>First Semester</b>		<b>Credits</b>
PHRA 1305	Drug Classification.....	3
PHRA 1309	Pharmaceutical Mathematics I.....	3
PHRA 1413	Community Pharmacy Practice.....	4
PHRA 1272	Professional Practices for Pharmacy Technicians.....	2
<b>Semester Total</b>		<b>12</b>

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## Second Semester Credits

PHRA 1449	Institutional Pharmacy Practice.....	4
PHRA 1304	Pharmacotherapy and Disease Process.....	3
PHRA 1445	Compounding Sterile Preparations and Aseptic Technique .....	4
PHRA 1247	Pharmaceutical Mathematics II.....	2
<b>Semester Total</b>		<b>13</b>

## Third Semester Credits

PHRA 1261	Clinical-Pharmacy Technician\Assistant .....	2
PHRA 2260	Clinical-Pharmacy Technician/Assistant .....	2
PHRA 2261	Clinical-Pharmacy Technician/Assistant <sup>#</sup> .....	2
PHRA 1243	Pharmacy Technician Certification Review .....	2
<b>Semester Total</b>		<b>8</b>
<b>Program Total</b>		<b>41</b>

<sup>#</sup> Capstone Course

<sup>A</sup> Student Success Course: Students are required to complete EDUC 1300 within their first 12 semester credit hours of instruction. Students enrolling at HCC with 12 or more hours completed should consult with an academic advisor to select an appropriate course substitution.

## Retail Pharmacy Technician

The Retail Pharmacy Technician OSA is a fast-track training program that prepares the student for entry-level employment in Retail Pharmacy settings. During the first 8 weeks of the 13 week training, the student attends lecture and lab. The remaining 5 weeks consists of 160 hours of clinical practicum in a retail pharmacy and reviewing for the national pharmacy technician certification exam.

The Texas State Board of Pharmacy registration and PTCB certification requirements are the same for the Retail Pharmacy Technician OSA as they are for the Pharmacy Technician certificate. All courses in the OSA transfer into the certificate program.

For more information call 713.718.7356 or e-mail janet.pena@hccs.edu.

## OSA

(Occupational Skills Award)

### First Semester

PHRA 1309	Pharmaceutical Mathematics I.....	3
PHRA 1413	Community Pharmacy Practice.....	4
PHRA 1243	Pharmacy Technician Certification Review .....	2
PHRA 1260	Clinical - Pharmacy Technician/Assistant .....	2
PHRA 1272	Professional Practices for Pharmacy Technicians.....	2
<b>Semester Total</b>		<b>13</b>
<b>Program Total</b>		<b>13</b>

## PHYSICAL THERAPIST ASSISTANT

The AAS Physical Therapist Assistant program is a two-year, five-semester course of study requiring a total of 66 semester hours of credit. New classes begin in the fall of each year.

The Physical Therapist Assistant (PTA) Program, leading to an Associate Degree in Applied Science, encompasses a two-year, five semester course of study requiring a total of 66 semester hours of credit. The program is designed to prepare skilled technical health workers to perform physical therapy procedures and related tasks under the direction and supervision of a physical therapist. The treatment procedures include, but are not limited to, physical agents (ie. ultrasound, electrical stimulation, and massage), rehabilitation techniques, and therapeutic exercise. Enrolled students are required to successfully complete both the academic and clinical requirements of the program to receive the AAS degree.

Graduates of the program take the National Physical Therapy Examination (NPTE) and become licensed by the Texas State Board of Physical Therapy Examiners. Graduates are employed in acute care hospitals, rehabilitation centers, outpatient clinics, school systems, and home health agencies.

A grade of "C" must be earned in every course listed in the curriculum in order to graduate. If a student earns a grade below a "C" in any course with a PTHA prefix, he/she will be withdrawn from the program. Program courses have both theory and competency-based educational components. Students must attain a 75 percent average or better in all PTHA courses and have a 2.0 GPA or higher to be eligible for graduation.

Applicants must meet the minimum requirements for admission to Health Science programs which include completion of the following requirements: TSI state approved tests or all developmental courses needed to reach college-level English, biology, psychology, and intermediate algebra, and completion of the application packet by the application deadline. Students are highly encouraged to complete the general education core requirement prior to applying for admission to the program. Students with prior college credit may be exempt from HPRS 1201 with departmental approval.

Students accepted into the program are required to pay a liability insurance fee which protects students against losses resulting from malpractice claims. Students accepted into the program must successfully pass a drug screen and a criminal background check prior to the start of classes.

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Students must have documentation of certain immunizations (please see **General Application Procedures** for list of immunizations) prior to the start of classes.

Students accepted into the Physical Therapist Assistant program are required to attend a mandatory multi-day orientation session prior to the first (fall) semester. This orientation is designed to prepare students for the demands of college, the Physical Therapist Assistant program, and for success in the world of work. The session will emphasize setting priorities, time management, effective listening, note-taking, reading comprehension techniques, and test-taking skills. The session will also incorporate information on the use of the library, financial aid, tutoring, and student support services enabling students to maximize the use of college resources.

Graduates are eligible to take the licensure examination under the direction of the Texas State Board of Physical Therapy Examiners. The program is accredited by the Commission on Accreditation in Physical Therapy Education, 1111 N. Fairfax St., Alexandria, VA 22314-9991, 800.999.2782. Some of the Physical Therapist Assistant AAS courses are approved as Tech Prep.

Individuals interested in applying must attend an Essential Requirements (ER) session at Coleman College for Health Sciences. Go online or call 713.718.7391 for dates, time and location of the sessions. For further written information, please see the **General Application Procedures** for Health Science programs.

**Vision:**

The Physical Therapist Assistant Program within the Houston Community College System will be a leader in the field of physical therapy education by using high-quality, innovative instruction to prepare students to effectively serve the current and future healthcare needs of our diverse community.

**Mission:**

The Houston Community College Physical Therapist Assistant Program uses an evidence-based curriculum founded on contemporary practice to consistently produce highly qualified, professional, and ethical physical therapist assistants committed to both a lifetime of learning and transforming our communities through optimal movement.

**Program Goals**

- Graduates will provide safe, effective, and ethical patient/client management using evidence-based practice.
- Graduates will exhibit professional behavior, cultural competence, and lifelong learning.

- The program will produce students capable of obtaining licensure and employment as a physical therapist assistant.
- Faculty will model professionalism through professional advancement, contemporary practice, and/or engagement in the profession of physical therapy.

**Program Outcomes**

Students will be able to:

- Demonstrate knowledge as a physical therapist assistant in a clinical setting.
- Exhibit safe, ethical, and legal conduct relative to patient care.
- Exhibit culturally sensitive conduct relative to patient care.
- Utilize critical thinking and problem solving skills to progress, modify, and/or withhold interventions based on plan of care and patient response as determined through patient monitoring, data collection, and clinical judgment.

For more information call 713.718.7391.

## Physical Therapist Assistant

**AAS**

*TSI testing is required prior to first enrollment.*

**FIRST YEAR**

<b>First Semester</b>		<b>Credits</b>
PTHA 1301	The Profession of Physical Therapy .....	3
BIOL 2301	Anatomy and Physiology I <sup>A</sup> .....	3
BIOL 2101	Anatomy and Physiology I <sup>A</sup> .....	1
PTHA 1405	Basic Patient Care Skills .....	4
PTHA 1413	Functional Anatomy .....	4
HPRS 1206	Essentials of Medical Terminology .....	2
<b>Semester Total</b>		<b>17</b>

<b>Second Semester</b>		<b>Credits</b>
PTHA 1321	Pathophysiology .....	3
PTHA 1431	Physical Agents .....	4
PTHA 2301	Essentials of Data Collection .....	3
BIOL 2302	Anatomy and Physiology II <sup>A</sup> .....	3
BIOL 2102	Anatomy and Physiology II <sup>A</sup> .....	1
<b>Semester Total</b>		<b>14</b>

<b>Third Semester</b>		<b>Credits</b>
PTHA 2205	Neurology .....	2
HPRS 2232	Health Care Communications .....	2
PTHA 2509	Therapeutic Exercise .....	5
<b>Semester Total</b>		<b>9</b>

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## SECOND YEAR

First Semester		Credits
PTHA 1266	Practicum I Physical Therapist Assistant .....	2
PSYC 2301	General Psychology.....	3
PTHA 2435	Rehabilitation Techniques.....	4
PTHA 2431	Management of Neurological Disorders.....	4
<b>Semester Total</b>		<b>13</b>

Second Semester		Credits
PSYC 2314	Human Growth Development: Lifespan <sup>A</sup> .....	3
PTHA 1267	Practicum II Physical Therapist Assistant.....	2
PTHA 2266	Practicum III Physical Therapist Assistant.....	2
XXXX #3##	Humanities/Fine Arts Elective <sup>B</sup> .....	3
PTHA 2339	Professional Issues <sup>#</sup> .....	3
<b>Semester Total</b>		<b>13</b>
<b>Program Total</b>		<b>66</b>

<sup>#</sup> Capstone Course

<sup>A</sup> May be taken prior to admission. BIOL 1406 is strongly recommended prior to BIOL 2301/2101 (taken within five years or department approval).

<sup>B</sup> Humanities/Fine Arts: May choose from – ARTS 1301, 1303, 1304, COMM 2366, DANC 2303, DRAM 1310, 2316, 2366, ENGL 2322, 2323, 2327, 2328, 2332, 2333, 2342, 2343, 2351, HIST 1301, 1302, 2311, 2312, 2321, 2322, 2301, 2327, 2328, 2381, HUMA 1301, 1305, 1311, 2319, 2323, MUSI 1306, 1310, PHIL 1301, 1304, 2306, 2307, 2316, World Languages (ARAB 1411, 1412, CHIN 1411, 1412, FREN 1411, 1412, GERM 1411, 1412, JAPN 1411, 1412, KORE 1411, 1412, SPAN 1411, 1412).

## RADIOGRAPHY

The two-year AAS Radiography program is accredited by the Joint Review Committee on Education in Radiologic Technology (JRCERT), 20 N. Wacker Dr., Suite 2850, Chicago, IL 60606, Telephone: 312.704.5300. Graduates of the HCCS Radiography Program may apply to take the ARRT certification exam, 1255 Northland Dr., St. Paul, MN 55120-1155. To practice in Texas, radiographers must also hold a license from the Texas Medical Board and obtain a license from the Texas Department of State Health Services, P.O. Box 149347, Austin, TX, 78714.

Any individual with a previous felony conviction should contact the ARRT for a Pre-Certification Application at (651) 687-0048 Ethics Division concerning eligibility requirements.

Radiography is the application of knowledge using a variety of imaging methods in the examination of the body for structural defects and disease processes. Courses have both theory and competency-based educational components. Students must maintain a “C” average and

meet all prerequisites to continue in the program. Students may not earn a grade below a “C” in any RADR course and continue in the program. The grading scale used by the Radiography program is as follows: 90-100 = A; 80-89 = B; 75-79 = C; and any grade below 75 is considered failing. In addition, each semester is a prerequisite for the following semesters.

Applicants must meet the following minimum requirements for admission to Health Science programs: complete the TSI state approved test or all developmental courses needed to reach college-level English, algebra, psychology, biology and complete the application packet by the application deadline.

Students accepted into the program are required to provide a physical examination report completed by a physician with documentation of required immunizations.

Students accepted into the program must successfully pass a drug screen and a criminal background check prior to the start of classes. Hepatitis B vaccinations must be completed prior to the start of the first semester (may take up to 6 months to administer).

Students who are accepted into the program will need to verify that they are covered by health insurance and are required to pay a liability insurance fee which protects students against losses resulting from malpractice claims. Students are also required to pay a radiation monitoring badge fee each semester for all clinical education courses.

Individuals interested in applying must attend an Essential Requirements (ER) session at Coleman College for Health Sciences. Go online to: <http://colemanconnection.org/> or call 713.718.7650 for the dates, times and location of the sessions. For further information, please see the **General Application Procedures** for Health Science programs.

The application deadline is February 1, and accepted students start in the fall.

### Program Outcomes

Students will be able to

- Apply safe radiation practices to minimize radiation exposure.
- Demonstrate radiographic equipment operation.
- Evaluate radiographic images for proper positioning and pathology.
- Perform radiographic imaging procedures.
- Demonstrate patient care skills.

For more information call 713.718.7650 or e-mail: roger.bumgardner@hccs.edu.

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## Radiography

### AAS

TSI testing is required prior to first enrollment.

Prerequisites		Credits
EDUC 1300	Learning Framework <sup>A</sup>	3
MATH 1314	College Algebra	3
ENGL 1301	Composition I	3
BIOL 2301	Anatomy and Physiology I	3
BIOL 2101	Anatomy and Physiology I (Lab)	1
<b>Prerequisites Total</b>		<b>13</b>

### FIRST YEAR

First Semester		Credits
RADR 1303	Patient Care	3
RADR 1313	Principles of Radiographic Imaging I	3
RADR 1411	Basic Radiographic Procedures	4
RADR 1160	Clinical-Radiologic Technology/Science-Radiographer	1
XXXX #3##	Humanities/Fine Arts Elective <sup>B</sup>	3
<b>Semester Total</b>		<b>14</b>

Second Semester		Credits
RADR 2309	Radiographic Imaging Equipment	3
RADR 2401	Intermediate Radiographic Procedures	4
RADR 1266	Practicum (or Field Experience) Radiologic Technology/ Science-Radiographer	2
<b>Semester Total</b>		<b>9</b>

Third Semester		Credits
RADR 2260	Clinical-Radiologic Technology/Science-Radiographer	2
RADR 2331	Advanced Radiographic Procedures	3
<b>Semester Total</b>		<b>5</b>

### SECOND YEAR

First Semester		Credits
RADR 2333	Advanced Medical Imaging	3
RADR 2366	Practicum (or Field Experience) Radiologic Technology/ Science-Radiographer	3
PSYC 2301	Introduction to Psychology OR	
SOCI 1301	Introduction to Sociology	3
RADR 2340	Sectional Anatomy for Medical Imaging	3
<b>Semester Total</b>		<b>12</b>

Second Semester		Credits
RADR 2217	Radiographic Pathology	2
RADR 2367	Practicum (or Field Experience) Radiologic Technology/ Science-Radiographer <sup>#</sup>	3
RADR 2213	Radiation Biology and Protection	2
<b>Semester Total</b>		<b>7</b>

### Third Semester

		Credits
RADR 2335	Radiologic Technology Seminar <sup>#</sup>	3
RADR 2167	Practicum Radiologic Technology/ Science-Radiographer	1
<b>Semester Total</b>		<b>4</b>
<b>Program Total</b>		<b>64</b>

\*Student Success Course

<sup>#</sup> Capstone Course

<sup>A</sup> Student Success Course: Students are required to complete EDUC 1300 within their first 12 semester credit hours of instruction. Students enrolling at HCC with 12 or more hours completed should consult with an academic advisor to select an appropriate course substitution.

<sup>B</sup> Humanities/Fine Arts: May choose from – ARTS 1301, 1303, 1304, COMM 2366, DANC 2303, DRAM 1310, 2316, 2366, ENGL 2322, 2323, 2327, 2328, 2332, 2333, 2342, 2343, 2351, HIST 1301, 1302, 2311, 2312, 2321, 2322, 2301, 2327, 2328, 2381, HUMA 1301, 1305, 1311, 2319, 2323, MUSI 1306, 1310, PHIL 1301, 1304, 2306, 2307, 2316, World Languages (ARAB 1411, 1412, CHIN 1411, 1412, FREN 1411, 1412, GERM 1411, 1412, JAPN 1411, 1412, KORE 1411, 1412, SPAN 1411, 1412).

## Computed Tomography

Computed Tomography is a specialized x-ray imaging technique that creates the image by using an array of individual small x-ray sensors and a computer. By moving the x-ray source and the sensor/detectors around the patient, data is collected from multiple angles. A computer then processes this information to create an image on the monitor.

The Computed Tomography program is a one-semester evening program leading to an Enhanced Skills Certificate. Courses have both theory and a competency-based clinical component. All CT courses must be enrolled in concurrently. Students accepted into the program are required to pay for the following:

- a liability insurance fee which protects students against losses resulting from malpractice claims;
- a radiation monitoring badge fee which is required for all clinical education courses;
- a drug screen and criminal background check; and
- a physical exam conducted by a licensed physician with documentation of required immunizations including Hepatitis B.

# Health and Medical Sciences

All classes are held at Coleman College for Health Sciences with the exception of clinicals which are held in the Texas Medical Center or medical facilities across the Houston area.

Requirements for the Enhanced Skills Certificate include graduating from an approved Joint Review Committee accredited program with an AAS or above in one of the Radiologic Sciences (Radiography, Radiation Therapy, or Nuclear Medicine).

Computed Tomography is a specialized x-ray imaging technique that creates the image by using an array of individual small x-ray sensors and a computer. By moving the x-ray source and the sensor/detectors around the patient, data is collected from multiple angles. A computer then processes this information to create an image on the monitor.

Only individuals who have passed the registry can be accepted into the program. Copies of ARRT or NMTCB certification must be provided to the program along with a current copy of the MRT License prior to start of program.

Individuals interested in applying must attend an Essential Requirements (ER) session at Coleman College for Health Sciences. Go online for the dates, times and location of the sessions. The program starts each fall and spring with 16 students accepted in each class. The application deadline for fall is June 1 and for spring, October 1. For further information, please see the **General Application Procedures** for Health Science programs.

### Program Outcomes

Student will be able to

- Demonstrate Clinical competence in Computed Tomography.
- Demonstrate age and situation appropriate communication skills.
- Demonstrate critical thinking skills in a medical imaging situation.
- Demonstrate appropriate radiation safety protocols.
- Demonstrate professional and ethical behavior, embracing diversity.

For more information e-mail [roger.bumgardner@hccs.edu](mailto:roger.bumgardner@hccs.edu).

## ENHANCED SKILLS CERTIFICATE

First Semester		Credits
RADR 2340	Sectional Anatomy for Medical Imaging .....	3
CTMT 2336	Computed Tomography Equipment and Methodology #...	3
CTMT 2460	Clinical-Radiologic Technology/Science-Radiographer ...	4
CTMT 2461	Clinical-Radiologic Technology/Science-Radiographer ...	4
<b>Semester Total</b>		<b>14</b>
<b>Program Total</b>		<b>14</b>

# Capstone Course

## RESPIRATORY THERAPIST

The two-year Respiratory Therapist (RSPT) program is designed to prepare individuals for entry-level certification (CRT) and advanced-level registry (RRT) board exams administered by the National Board for Respiratory Care (NBRC), 18000 W. 105th St, Olathe, KS 66061, 913.599.4200. The program is fully accredited by the Commission on Accreditation for Respiratory Care (COARC), 1248 Harwood Rd., Bedford, TX 76021-4244, Telephone: 800.874.5615.

The program is a full time two year (24 month) program. Students completing the 65 semester hour credit program receive an Associate in Applied Science Degree and are eligible to sit for national exams administered by the NBRC (National Board for Respiratory Care). Additionally graduates are eligible to apply for the RCP license to practice Respiratory Care in the state of Texas. The registry exam contains both a written and clinical simulation exam.

The program is designed with classroom instruction complimenting clinical instruction and practice every semester. Clinical training is done throughout the Houston metropolitan area with a focus in the Texas Medical Center.

The RSPT program's curriculum is designed to orient students to entry and advanced-level respiratory care as it relates to the treatment, management, control, diagnostic evaluation, and prevention of cardiopulmonary abnormalities. Courses reflect the Entry/Advanced Practitioner Certification/Registry content as summarized in the NBRC's composite examination matrices. Advanced-standing credit may be awarded for relevant education and/or experience.

# Health and Medical Sciences

## A Career as a Respiratory Therapist

For thousands of Americans who suffer from breathing problems, each breath is a major accomplishment. These people include patients with chronic lung problems, such as emphysema, asthma, and bronchitis, but they also include heart attack and accident victims; premature infants; and people with cystic fibrosis, lung cancer, or AIDS. In each case, the person will most likely receive treatment from a Respiratory therapist under the direction of a physician. Respiratory therapists work to evaluate, treat and care for patients with breathing disorders.

Diagnostic procedures performed by respiratory therapists include: obtaining and analyzing sputum specimens; obtaining and analyzing blood specimens to determine acid base balance and levels of oxygen and carbon dioxide; measuring the capacity of a patient's lungs to determine the level of impairment and studying disruptive sleep disorders. Therapeutic procedures performed by respiratory therapists include: administration of supplemental oxygen, initiating and maintaining mechanical ventilation; monitoring and managing therapy that will help a patient recover lung function; administering medications in aerosol form and monitoring patient's response to therapy; maintaining a patient's artificial airway; and conducting smoking cessation programs.

The need for respiratory therapists is expected to grow in the coming years due to the large increase in the elderly population; the impact of environmental problems that have already contributed to the yearly rise in number of reported asthma cases; and technological advances in the treatment of heart attack, cancer, and accident victims, as well as premature babies.

While U.S. employment in general is forecast to increase by 15 percent, the need for Respiratory Therapists will grow by up to 26 percent!

With demand for Respiratory Therapists on the rise, salaries are following suit. According to the 2005 Human Resources study from the AARC, the projected average annual earnings of Respiratory Therapists working in the U.S. is \$56,222. In this study, therapists just beginning their careers reported average annual earnings of \$41,538.

As registered respiratory therapists, the RSPT graduates can expect to gain employment as crucial members of the health care team in adult, pediatric and neonatal care areas of the hospital, as well as in long term acute care facilities and in home care companies. Many registered therapists work in intensive care unit areas and emergency rooms as well as in management and education.

## For Example:

- In hospitals giving breathing treatments to people with asthma and other respiratory conditions.
- In intensive care units managing ventilators that keep the critically ill alive.
- In emergency rooms delivering life-saving treatments.
- In newborn and pediatric units helping kids with conditions ranging from premature birth to cystic fibrosis.
- In operating rooms working with anesthesiologists to monitor patients' breathing during surgery.
- In patient's homes providing regular check-ups and making sure people have what they need to stay out of the hospital.
- In sleep laboratories helping to diagnose disorders like sleep apnea.
- In skilled nursing facilities and pulmonary rehabilitation programs helping older people breathe easier and get more out of life.

Students accepted into the RSPT program pay a liability insurance fee which protects students against losses resulting from malpractice claims. All classes, with the exception of clinical practicums, are held at Coleman College for Health Sciences, 1900 Pressler. Students should be prepared to rotate among the many clinical affiliates the program utilizes for clinical training. Transportation between locations is the responsibility of the student.

All candidates must attend an Essential Requirements (ER) session which is held on campus every first and third Thursday at 5:30 pm and every second and fourth Tuesday at 12:00 noon of the month (excluding college holidays) in the auditorium. Please pre-register by going to <http://coleman.hccs.edu/coleman> and click on ER meetings to register. Seating is limited. Note: Please arrive on time. Students will not be allowed entry once the session begins. No children allowed.

Applicants must submit a "Health Science Program Application" to Student Services at Coleman College for Health Sciences Admission Office at 1900 Pressler St., Houston, TX 77030. If no previous enrollment or testing activity has taken place at HCC, the applicant must also complete and submit an "HCC Application for Admission" online at <http://saweb.hccs.edu>.

# Health and Medical Sciences

All of the items listed below should be submitted no later than May 1 each year in order for the file to be reviewed:

- Official high school transcript or official GED scores;
- Official high school transcript or official GED scores;
- Application for Health Sciences;
- College transcript(s);
- Passing TSI scores, unless exempt;
- Transcripts showing completion of BIOL 2301/2101, BIOL 2302/2102 and RSPT 1201 with a grade of "C" or higher;
- Completion of MATH 1314, ENGL 1301, PSYC 2301, and 3 hours of Humanities and Fine Arts elective is highly recommended;
- Verification of completion of the Hepatitis B vaccination, and
- A foreign transcript, both high school and college, must be evaluated by an approved HCC evaluation service. For a list of transcript evaluation services, please visit the following website:

<http://www.hccs.edu/continuing-education/departments/accelerated-teacher-certification-program/international-transcripts/>

Click on **Foreign Credentials Evaluation** to view the list.

A representative from the Respiratory Therapist program will evaluate all completed application files. The number of positions available in each class is 40.

Qualified applicants for the Respiratory Therapist program will be required to take a program entrance exam. The student will be notified of the results via US mail. If accepted, students must pass a criminal background check and drug screening at an HCC approved agency and must provide proof of health insurance to remain in the program.

## Program Outcomes

Students will be able to

- Will demonstrate Universal Precaution Protocol.
- Will demonstrate Ethical behavior in the clinical setting.
- Will demonstrate good communication skills.
- Will perform Assigned Entry Level Competencies in Clinical/Practicum.
- Will perform Assigned Entry Level Competencies in Lab.

For more information call 713.718.7385 or e-mail [teddy.tovar@hccs.edu](mailto:teddy.tovar@hccs.edu)

## Respiratory Therapist

### AAS

TSI testing is required prior to first enrollment.

The following prerequisite courses must be completed prior to admission to the program.

### Prerequisites

EDUC 1300	Learning Framework <sup>A</sup>	3
RSPT 1201	Introduction to Respiratory Care	2
BIOL 2301	Anatomy & Physiology I	3
BIOL 2101	Anatomy & Physiology I	1
BIOL 2302	Anatomy & Physiology II	3
BIOL 2102	Anatomy & Physiology II	1
MATH 1314	College Algebra	3
<b>Prerequisites Total</b>		<b>16</b>

### FIRST YEAR

First Semester		Credits
RSPT 2258	Respiratory Care Patient Assessment	2
RSPT 1310	Respiratory Care Procedures I	3
RSPT 1360	Clinical- Respiratory Care Therapy/Therapist	3
RSPT 1240	Advanced Cardiopulmonary Anatomy and Physiology	2
<b>Semester Total</b>		<b>10</b>

Second Semester		Credits
RSPT 1311	Respiratory Care Procedures II	3
RSPT 1361	Clinical- Respiratory Care Therapy/Therapist	3
RSPT 1225	Respiratory Care Sciences	2
RSPT 1213	Basic Respiratory Care Pharmacology	2
<b>Semester Total</b>		<b>10</b>

Third Semester (Summer)		Credits
RSPT 1262	Clinical - Respiratory Care Therapy/Therapist	2
RSPT 2314	Mechanical Ventilation	3
<b>Semester Total</b>		<b>5</b>

### SECOND YEAR

First Semester		Credits
RSPT 2361	Clinical - Respiratory Care Therapy/Therapist	3
RSPT 2255	Critical Care Monitoring	2
RSPT 2210	Cardiopulmonary Disease	2
XXXX #3##	Humanities/Fine Arts Elective <sup>B</sup>	3
<b>Semester Total</b>		<b>10</b>

Second Semester		Credits
RSPT 2362	Clinical - Respiratory Care Therapy/Therapist	3
RSPT 2325	Cardiopulmonary Diagnostics	3
RSPT 2353	Neonatal/Pediatric Cardiopulmonary Care	3
<b>Semester Total</b>		<b>9</b>

# Health and Medical Sciences

<b>Third Semester</b>			<b>Credits</b>
RSPT	2262	Clinical - Respiratory Care Therapy/Therapist.....	2
RSPT	2230	Respiratory Care Examination Preparation # .....	2
RSPT	2239	Advanced Cardiac Life Support .....	2
<b>Semester Total</b>			<b>6</b>
<b>Program Total</b>			<b>66</b>

# *Capstone Course*

<sup>A</sup> *Student Success Course: Students are required to complete EDUC 1300 within their first 12 semester credit hours of instruction. Students enrolling at HCC with 12 or more hours completed should consult with an academic advisor to select an appropriate course substitution.*

<sup>B</sup> *Humanities/Fine Arts: May choose from – ARTS 1301, 1303, 1304, COMM 2366, DANC 2303, DRAM 1310, 2316, 2366, ENGL 2322, 2323, 2327, 2328, 2332, 2333, 2342, 2343, 2351, HIST 1301, 1302, 2311, 2312, 2321, 2322, 2301, 2327, 2328, 2381, HUMA 1301, 1305, 1311, 2319, 2323, MUSI 1306, 1310, PHIL 1301, 1304, 2306, 2307, 2316, World Languages (ARAB 1411, 1412, CHIN 1411, 1412, FREN 1411, 1412, GERM 1411, 1412, JAPN 1411, 1412, KORE 1411, 1412, SPAN 1411, 1412).*

## SURGICAL TECHNOLOGY

The Surgical Technology program is designed for individuals interested in caring for the surgical patient. Upon completion of the program, graduates may gain employment as the primary scrub person who handles the instruments, supplies, and equipment during all types of surgical procedures. Portions of this program meet the needs of the registered nurse who is seeking employment in a surgically affiliated field. Upon completion of the courses, graduates receive a certificate of completion and are eligible to take the national certification exam through the National Board of Surgical Technology & Surgical Assisting (NBSTSA), 6 West Dry Creek, Suite 100, Littleton, CO, 80120, www.NBSTSA.org to become Certified Surgical Technologists.

Applicants must meet the following admission requirements: minimum scores on the ASSET/CELSA examination, successful completion of any required developmental courses, and completion of the application packet by the application deadline.

Students accepted into the program are required to pay a liability insurance fee which protects students against losses resulting from malpractice claims. Prior to entering the clinical area, students must provide a completed physical examination form including current immunizations and completion of Hepatitis-B series. Health Science students are also required to have a criminal background check and a drug screening prior to clinical training. All clinical trainings are non-paid experiences.

The Surgical Technology program meets the essentials and guidelines of an accredited program established by the Commission on Accreditation of Allied Health Education Programs (CAAHEP), 1361 Park St. Clearwater, FL 33756-6039, Telephone: 727.210.2350, Fax: 727.210.2354, www.caahep.org.

Individuals interested in applying must attend an Essential Requirements (ER) session at Coleman College for Health Sciences. Go online for the dates, times and location of the sessions. For further information, please see the **General Application Procedures** for Health Science programs.

In addition, please note that a student may only earn one Occupational Skills Award (OSA) per academic year.

### Program Outcomes

Students will be able to

- Demonstrate clinical competencies in surgical technology.
- Apply documented skills in surgical technology.
- Exhibit safe, ethical, and legal behavior as it relates to the patient.
- Demonstrate appropriate aseptic techniques in a clinical setting.

For more information call 713.718.7362 or e-mail [christine.castillo@hccs.edu](mailto:christine.castillo@hccs.edu).

## Surgical Technology

### CERTIFICATE LEVEL I

<b>Prerequisite</b>	<b>Credits</b>
HPRS 1201 Introduction to Health Professions*.....	2
<b>Prerequisite Total</b>	<b>2</b>

<b>First Semester</b>	<b>Credits</b>
HPRS 1206 Medical Terminology .....	2
SRGT 1361 Clinical I-Surgical Technology/Technologist.....	3
SRGT 1409 Fundamentals of Perioperative Concepts and Techniques .....	4
SRGT 1405 Introduction to Surgical Technology .....	4
SCIT 1407 Human Anatomy and Physiology I .....	4
<b>Semester Total</b>	<b>17</b>

<b>Second Semester</b>	<b>Credits</b>
SCIT 1408 Human Anatomy and Physiology II.....	4
SRGT 1441 Surgical Procedures I.....	4
SRGT 1463 Clinical II-Surgical Technology/Technologist.....	4
<b>Semester Total</b>	<b>12</b>

# Health and Medical Sciences

<b>Third Semester</b>		<b>Credits</b>
SRGT 1442	Surgical Procedures II.....	4
SRGT 2463	Clinical III-Surgical Technology/Technologist #.....	4
<b>Semester Total</b>		<b>8</b>
<b>Program Total</b>		<b>39</b>

\* Student Success Course

# Capstone Course

## Surgical Technology-Accelerated Alternative Delivery (AAD)

The Accelerated Alternate Delivery (AAD) Occupational Skills Award (OSA) is designed to make available to the on-the-job trained surgical technologists or graduates from non-CAAHEP accredited programs an accelerated route in which to become eligible to sit for the national certification exam for surgical technology. To qualify for the program, prospective applicants must have completed on-the-job training for surgical technology or non-CAAHEP training before March 1, 2000.

### OCCUPATIONAL SKILLS AWARD

#### **First Semester**

HPRS 1206	Medical Terminology.....	2
SRGT 1372	Comprehensive Anatomy and Physiology for Surgical Technologists.....	3
SRGT 1405	Introduction to Surgical Technology.....	4
SRGT 2130	Professional Readiness.....	1
<b>Semester Total</b>		<b>10</b>
<b>Program Total</b>		<b>10</b>

## Surgical Technology - Sterile Processing Technician

The Sterile Processing Technician Occupational Skills Award (OSA) is designed for individuals interested in processing surgical instrumentation. The completer of this award will be eligible to work in an entry-level position alongside health care professionals with supervision in a surgical instrumentation central processing department.

### OCCUPATIONAL SKILLS AWARD

#### **First Semester**

HPRS 1201	Introduction to Health Professions.....	2
HITT 1305	Medical Terminology.....	3
SRGT 1371	Sterile Processing.....	3
<b>Semester Total</b>		<b>8</b>

<b>Second Semester</b>		<b>Credits</b>
SRGT 1560	Clinical-Surgical Technology/Technologist.....	5
<b>Semester Total</b>		<b>5</b>
<b>Program Total</b>		<b>13</b>

## Health Care Career Academy

(Deactivation pending SACSCOC Approval. Enrollment is closed to new students.)

The Health Care Career Academy (HCCA) educates students about the health care industry in preparation for entry-level employment and selection of an appropriate educational program. Students will explore and determine their personal fit to various occupations within the health care industry and create a health career educational plan to achieve their professional goals. All learning and skill developments will be completed in preparation for entry-level employment and completion of a health career program leading to certification, licensure, and/or degree.

### CERTIFICATE LEVEL I

#### **First Semester**

		<b>Credits</b>
HPRS 1201	Introduction to Health Professions*.....	2
HPRS 1206	Essentials of Medical Terminology.....	2
VNSG 1320	Anatomy and Physiology for Allied Health.....	3
HPRS 1271	Health Science Literacy.....	2
TECM 1303	Technical Calculations.....	3
PLAB 1323	Phlebotomy OR.....	
SRGT 1371	Sterile Processing.....	3
<b>Semester Total</b>		<b>15</b>

#### **Second Semester**

		<b>Credits</b>
PLAB 1260	Clinical - Phlebotomy/Phlebotomist OR.....	2
SRGT 1560	Clinical - Surgical Technology/Technologist.....	5
<b>Semester Total</b>		<b>2</b>
<b>Program Total</b>		<b>17</b>

\*Student Success Course

## VOCATIONAL NURSING

The Vocational Nursing program prepares the graduate to perform specific nursing duties under the supervision of a registered nurse, advanced practice registered nurse, physician's assistant, physician, podiatrist, or dentist. Responsibilities include direct patient care in acute-care settings, community health agencies, nursing homes, and other healthcare institutions. Graduates of the program are eligible to apply to take the NCLEX-PN Examination to become Licensed Vocational Nurses (LVN).The Texas

# Health and Medical Sciences

Board of Nursing has granted full approval status to the program, 333 Guadalupe, Suite 3-460, Austin, TX 78701, 512.305.7400.

The one-year, full-time program is divided into three semesters. Classes begin in fall and spring semesters. Applicants must complete the admissions criteria in order to be accepted into the program. Applicants must submit the following documents to the admissions office:

- Health Science program application;
- Official high school transcript or GED scores. Foreign transcripts (high school and college) must be evaluated by an approved evaluation service. Cumulative high school GPA or college GPA of 2.5 or higher, if applicable. For list of transcript evaluation services please visit the following website: <http://www.hccs.edu/hccs/faculty-staff/employment-opportunities/transcript-evaluation-services>; and
- Test of Essential Academic Skills (TEAS) minimum reading of 64% and a minimum math score of 60%. TEAS must be taken within the past 3 years.

For additional information call 713.718.7330.

Completion and submission of the above documents does not guarantee acceptance into the program. Due to the popular demand and competitiveness of the program, a selection process has been implemented that consists of the following: test results, personal interview, and healthcare experience or observation/interview. Students are rated based on the above criteria. Students are required to attend an Essential Requirements (ER) session to learn more about the program and selection process.

A grade of “C” or higher must be maintained in each course to advance in the program of study. All courses must be completed in sequence according to the nursing curriculum. Re-entry applicants (those students who have withdrawn from or failed any course) must complete a re-admission application prior to students re-entering the program. One time re-admission will be considered based on previous performance, available space, attendance, recommendation of readmission committee, interview and successful course completion as recommended during the “EXIT INTERVIEW.” If a student fails or withdraws a second time, the student is not permitted to continue in the program. All courses in the nursing curriculum must be completed one year from the date of a student’s registration.

Individuals interested in applying must attend an Essential Requirements (ER) session at Coleman College for Health Sciences. Go online for the dates, times and location of the sessions. Students accepted into the program must successfully pass a drug screen and a criminal background check prior to the start of classes. Hepatitis B vaccinations (may take up to 6 months to administer) must be completed prior to the start of the first semester.

In an effort to promote retention, students are required to attend the Vocational Nursing “Survival Camp” hosted prior to the first week of classes. This camp is designed to equip students with the tools of organization, test-taking strategies, time management techniques and other essential skills needed to function in a diverse community and global society.

The Vocational Nursing program is currently seeking program accreditation from the National League for Nursing Accrediting Commission. This accreditation is awarded to those programs which are recognized as meeting and/or exceeding criteria for educational excellence.

## Program Outcomes

Students will be able to

- Utilize the nursing process, as a provider of patient centered care, to deliver effective patient care in a variety of healthcare settings.
- Demonstrate the ability to perform all level competencies as outlined in the Differentiated Essential Competencies of Graduates of Texas Nursing Programs Evidenced by Knowledge, Clinical Judgment and Behaviors for LVN graduates.
- Function as a patient safety advocate by minimizing patient risk for injury and harm.
- Utilize effective communication with patients, families and healthcare personnel.

For more information call 713.718.7330 or see [www.hccs.edu/vocationalnursing](http://www.hccs.edu/vocationalnursing).

## Vocational Nursing

### CERTIFICATE LEVEL I

*TSI testing is required prior to first enrollment.*

<b>Prerequisites</b>	<b>Credits</b>
VNSG 1216 Nutrition.....	2
VNSG 1320 Anatomy and Physiology for Allied Health .....	3
<b>Prerequisites Total</b>	<b>5</b>

# Health and Medical Sciences

**First Semester** **Credits**

VNSG 1400	Nursing in Health and Illness I .....	4
VNSG 1122	Vocational Nursing Concepts.....	1
VNSG 1227	Essentials of Medication Administration.....	2
VNSG 1423	Basic Nursing Skills .....	4
VNSG 1161	Clinical-Licensed Vocational Nurse Training I.....	1

**Semester Total** **12**

**Second Semester** **Credits**

VNSG 1330	Maternal Neonatal Nursing .....	3
VNSG 1162	Clinical-Licensed Vocational Nurse Training II.....	1
VNSG 1266	Practicum I-Licensed Vocational Nurse .....	2
VNSG 1409	Nursing in Health and Illness II .....	4
VNSG 2331	Advanced Nursing Skills .....	3
VNSG 1238	Mental Illness.....	2

**Semester Total** **15**

**Third Semester** **Credits**

VNSG 1219	Leadership and Professional Development .....	2
VNSG 1163	Clinical-Licensed Vocational Nurse Training III.....	1
VNSG 1334	Pediatrics .....	3
VNSG 2410	Nursing in Health and Illness III .....	4
VNSG 1267	Practicum II-Licensed Vocational Nurse <sup>#</sup> .....	2

**Semester Total** **12**

**Program Total** **44**

<sup>#</sup> *Capstone Course*

ARCHIVE

# Hospitality and Tourism

## **Culinary Arts (12.0501, 12.0503) Hotel/Restaurant Management (52.0904) Travel & Tourism (52.0903)**

A Career Cluster is a grouping of occupations and broad industries based on commonalities. The Hospitality and Tourism career cluster is concerned with providing knowledge and skills related to the management, marketing and operations of restaurants and other food services, lodging, attractions, recreation events and travel related services. This includes the following HCC programs: Culinary Arts and Hotel/Restaurant Management.

All new semester hour students, who have earned less than 12 semester hours of college level credit, are required to take a first-year student success course in their first term at HCC. Through research and experience, Houston Community College has determined that many life and career management skills are necessary for students to make the most of their college investment. A student success course is designed to prepare students for the demands of college and for success in the world of work. The course emphasizes setting priorities, time management, effective listening, note-taking, concentration techniques, and retention of information, book analysis, comprehension techniques, and test-taking skills. This course also incorporates units that are designed to facilitate the use of library databases in conducting research, planning and setting educational objectives, lifelong career assessment, decision-making, financial aid, tutoring, and student support services, enabling the student to maximize the use of college resources.

Every HCC Career and Technology Education program contains a "capstone," an experience for the student to "put it all together." The capstone is a learning experience resulting in a consolidation of a student's educational experience and certifies mastery of entry level workplace competencies. The capstone experience must occur during the last semester of the student's educational program. The capstone consists of an external learning experience or an advanced course especially designed to help students synthesize knowledge and skills or other licensure as appropriate.

## **CULINARY ARTS**

Specialized classroom and practical laboratory work experiences in the preparation and cooking of a variety of foods are included in the Culinary Arts program. Emphasis is placed on the use and care of commercial equipment used in food preparation, sanitation in food handling, cooking and baking methods, preparation of special dishes, food standards, aspects of nutrition, and gourmet cooking.

Since this program is designed to prepare graduates for a career in Culinary Arts, tools and materials are expected to be purchased by students in order to perform routine class and laboratory assignments.

Upon completion of CHEF 1205, Sanitation and Safety, students are eligible to take the National Restaurant Association Education Foundation ServSafe Certification exam. After receiving a passing grade on the exam, students are awarded the ServSafe Health Certificate that is valid for five years.

**Please note that a student may only earn one Occupational Skills Award (OSA) per academic year.**

### **Program Outcomes**

Students will be able to

- Demonstrate professional behavior and work ethic necessary to compete and advance in the hospitality industry.
- Construct, present, and evaluate a variety of culinary dishes.
- Demonstrate competence in applying culinary techniques that are necessary in the food service industry.
- Differentiate the purpose of ingredients used in the preparation of baked goods.
- Identify, produce and present professional quality baked goods which is marketable in a professional pastry shop.
- Employ a solid foundation of techniques for baked and non baked pastry goods.

*For more information on Culinary Arts call 713.718.6069 or e-mail [christy.sykes@hccs.edu](mailto:christy.sykes@hccs.edu).*

# Hospitality and Tourism

## Culinary Arts

The Culinary Arts, AAS program is designed to equip graduates for leadership positions in the food industry. The program provides students with the necessary theoretical knowledge and technical skills to become successful culinary professionals.

Students develop competencies in food preparation, fundamental cooking and baking methods, cold kitchen preparation, and ala carte kitchen operations and cooking.

Concepts of healthy cooking and nutrition, food safety and sanitation, food service operations, food and beverage cost control, supervision skills, and general education courses focus on professional and management skills development necessary for success in the workplace.

## AAS

*TSI testing is required prior to first enrollment.*

### FIRST YEAR

#### First Semester

	<b>Credits</b>
EDUC 1300 Learning Framework <sup>A</sup>	3
CHEF 1301 Basic Food Preparation	3
CHEF 2201 Intermediate Food Preparation	2
CHEF 2231 Advanced Food Preparation	2
CHEF 1205 Sanitation and Safety	2

**Semester Total 12 Credits**

#### Second Semester

	<b>Credits</b>
CHEF 2302 Saucier	3
CHEF 1310 Garde Manger	3
RSTO 1325 Purchasing for Hospitality Operations	3
PSTR 1301 Fundamentals of Baking	3
HAMG 1321 Introduction to Hospitality Industry	3

**Semester Total 15 Credits**

#### Third Semester

	<b>Credits</b>
GEOL 1305 Environmental Science	3
XXXX #3## General Education Elective <sup>D</sup>	3
RSTO 1301 Beverage Management	3

**Semester Total 9 Credits**

### SECOND YEAR

#### First Semester

	<b>Credits</b>
CHEF 1302 Principles of Healthy Cuisine	3
CHEF 1314 A' La Carte Cooking	3
CHEF 1313 Food Service Operation/Systems	3
HAMG 1324 Hospitality Human Resources Management	3
XXXX #3## Humanities/Fine Arts Elective <sup>B</sup>	3

**Semester Total 15 Credits**

## Second Semester

	<b>Credits</b>
XXXX #3## General Education Elective <sup>D</sup> OR	3
ENGL 1301 Composition I	3
XXXX #3## Social/Behavioral Sciences Elective <sup>C</sup>	3
CHEF 2171 Culinary Capstone Projects Laboratory <sup>#</sup>	1
CHEF 2265 Practicum (or Field Experience) - Culinary Arts/Chef Training	2

**Semester Total 9**

**Program Total 60**

<sup>#</sup> Capstone Course

<sup>A</sup> Student Success Course: Students are required to complete EDUC 1300 within their first 12 semester credit hours of instruction. Students enrolling at HCC with 12 or more hours completed should consult with an academic advisor to select an appropriate course substitution.

<sup>B</sup> Humanities/Fine Arts: May choose from – ARTS 1301, 1303, 1304, COMM 2366, DANC 2303, DRAM 1310, 2316, 2366, ENGL 2322, 2323, 2327, 2328, 2332, 2333, 2342, 2343, 2351, HIST 1301, 1302, 2311, 2312, 2321, 2322, 2301, 2327, 2328, 2381, HUMA 1301, 1305, 1311, 2319, 2323, MUSI 1306, 1310, PHIL 1301, 1304, 2306, 2307, 2316, World Languages (ARAB 1411, 1412, CHIN 1411, 1412, FREN 1411, 1412, GERM 1411, 1412, JAPN 1411, 1412, KORE 1411, 1412, SPAN 1411, 1412).

<sup>C</sup> Social/Behavioral Sciences: May choose from – ANTH 2346, 2351, ECON 1301, 2301, 2302, EDUC 1300, GEOG 1302, 1303, GOVT 2305, 2306, PSYC 2301, 2314, 2316, 2319, SOCI 1301, 1306, 2301, 2336, TECA 1354.

<sup>D</sup> General Education: May choose from – ANTH 2301 (with or without 2101 = lab), 2302, 2346, 2351, ARTS 1301, 1303, 1304, ASTR 1303, 1304, 1403, 1404, BIOL 1308, 1309, 1322, 1406, 1407, (2301, 2302 – restricted to Engineering, Science, and Health Sciences majors), CHEM 1305, 1405, 1411, 1412, COMM 2366, COSC 1436, DANC 2303, DRAM 1310, 2316, 2366, ECON 1301, 2301, 2302, EDUC 1300, ENGL 2322, 2323, 2327, 2328, 2332, 2333, 2342, 2343, 2351, GEOG 1301, 1302, 1303, GEOL 1305, 1345, 1347, 1403, 1404, GOVT 2305, 2306, HIST 1301, 1302, 2311, 2312, 2321, 2322, 2301, 2327, 2328, 2381, HUMA 1301, 1305, 1311, 2319, 2323, MATH 1314, 1316, 1324, 1325, 1332, 1342, 1350, 2318, 2320, 2412, 2413, 2414, 2415, MUSI 1306, 1310, PHIL 1301, 1304, 2306, 2307, 2316, PHYS 1305, 1401, 1402, 2325 (with or without 2125 = lab), 2326 (with or without 2126 = lab), PSYC 2301, 2314, 2316, 2317, 2319, SOCI 1301, 1306, 2301, 2336, TECA 1354, World Languages (ARAB 1411, 1412, CHIN 1411, 1412, FREN 1411, 1412, GERM 1411, 1412, JAPN 1411, 1412, KORE 1411, 1412, SPAN 1411, 1412).

## Culinary Arts Certificate

The Culinary Arts Certificate provides students with the necessary theoretical knowledge and technical skills to become successful culinary professionals. Students develop competencies in food preparation, fundamental cooking and baking methods, cold kitchen preparation, and ala carte kitchen operations and cooking. Concepts

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of healthy cooking and nutrition, food safety and sanitation, food service operations, food and beverage cost control, and supervision skills focus on professional and management skills development necessary for success in the workplace.

## CERTIFICATE - LEVEL II

*TSI testing is required prior to first enrollment.*

<b>First Semester</b>		<b>Credits</b>
EDUC 1300	Learning Framework <sup>A</sup>	3
CHEF 1301	Basic Food Preparation	3
CHEF 2201	Intermediate Food Preparation	2
CHEF 2231	Advanced Food Preparation	2
CHEF 1205	Sanitation and Safety	2
<b>Semester Total</b>		<b>12</b>
<b>Second Semester</b>		<b>Credits</b>
PSTR 1301	Fundamentals of Baking	3
CHEF 2302	Saucier	3
CHEF 1310	Garde Manger	3
HAMG 1321	Introduction to Hospitality Industry	3
RSTO 1325	Purchasing for Hospitality Operations	3
<b>Semester Total</b>		<b>15</b>
<b>Third Semester</b>		<b>Credits</b>
RSTO 1301	Beverage Management	3
CHEF 1314	A' La Carte Cooking <sup>#</sup>	3
<b>Semester Total</b>		<b>6</b>
<b>Program Total</b>		<b>33</b>

<sup>#</sup> *Capstone Course*

<sup>A</sup> *Student Success Course: Students are required to complete EDUC 1300 within their first 12 semester credit hours of instruction. Students enrolling at HCC with 12 or more hours completed should consult with an academic advisor to select an appropriate course substitution.*

## Baking and Pastry Arts

The Baking & Pastry Arts AAS program is designed to equip graduates for leadership positions in the food industry. The program provides students with the necessary theoretical knowledge and technical skills to become successful pastry professionals.

Students develop competencies in breads, rolls, cake production and decoration, chocolates and confections, contemporary plated desserts and production pastry techniques.

Concepts of baking theory and nutrition, food safety and sanitation, bakery service operations, supervision skills, and general education courses focus on professional and

management skills development necessary for success in the workplace.

## AAS

*TSI testing is required prior to first enrollment.*

### FIRST YEAR

<b>First Semester</b>		<b>Credits</b>
EDUC 1300	Learning Framework <sup>A</sup>	3
PSTR 1301	Fundamentals of Baking	3
PSTR 1306	Cake Decorating I	3
PSTR 1310	Pies, Tarts, Teacakes and Cookies	3
CHEF 1205	Sanitation and Safety	2
<b>Semester Total</b>		<b>14</b>

<b>Second Semester</b>		<b>Credits</b>
GEOL 1305	Environmental Science	3
PSTR 1312	Laminated Dough, Pate a Choux and Donuts	3
PSTR 2301	Chocolates and Confections	3
PSTR 1305	Breads and Rolls	3
<b>Semester Total</b>		<b>12</b>

<b>Third Semester</b>		<b>Credits</b>
XXXX #3##	Social/Behavioral Sciences Elective <sup>C</sup>	3
PSTR 1343	Bakery Operations and Management	3
PSTR 1340	Plated Desserts	3
<b>Semester Total</b>		<b>9</b>

### SECOND YEAR

<b>First Semester</b>		<b>Credits</b>
XXXX #3##	Humanities/Fine Arts Elective <sup>B</sup>	3
PSTR 2307	Cake Decorating II OR	3
PSTR 2350	Wedding Cakes	3
HAMG 1324	Hospitality Human Resources Management	3
PSTR 1471	Baking for Special Dietary Needs	4
<b>Semester Total</b>		<b>13</b>

<b>Second Semester</b>		<b>Credits</b>
SPCH #3##	Speech Elective <sup>E</sup>	3
XXXX #3##	General Education Elective <sup>D</sup>	3
PSTR 2370	Supervised Study: Capstone in Baking and Pastry <sup>#</sup>	3
PSTR 2331	Advanced Pastry Shop	3
<b>Semester Total</b>		<b>12</b>
<b>Program Total</b>		<b>60</b>

<sup>#</sup> *Capstone Course*

<sup>A</sup> *Student Success Course: Students are required to complete EDUC 1300 within their first 12 semester credit hours of instruction. Students enrolling at HCC with 12 or more hours completed should consult with an academic advisor to select an appropriate course substitution.*

<sup>B</sup> *Humanities/Fine Arts: May choose from – ARTS 1301, 1303, 1304, COMM 2366, DANC 2303, DRAM 1310, 2316, 2366, ENGL 2322, 2323, 2327, 2328, 2332, 2333, 2342, 2343, 2351, HIST 1301, 1302, 2311, 2312, 2321, 2322, 2301, 2327, 2328,*

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2381, HUMA 1301, 1305, 1311, 2319, 2323, MUSI 1306, 1310, PHIL 1301, 1304, 2306, 2307, 2316, World Languages (ARAB 1411, 1412, CHIN 1411, 1412, FREN 1411, 1412, GERM 1411, 1412, JAPN 1411, 1412, KORE 1411, 1412, SPAN 1411, 1412).

<sup>C</sup> Social/Behavioral Sciences: May choose from – ANTH 2346, 2351, ECON 1301, 2301, 2302, EDUC 1300, GEOG 1302, 1303, GOVT 2305, 2306, PSYC 2301, 2314, 2316, 2319, SOCI 1301, 1306, 2301, 2336, TECA 1354.

<sup>D</sup> General Education: May choose from – ANTH 2301 (with or without 2101 = lab), 2302, 2346, 2351, ARTS 1301, 1303, 1304, ASTR 1303, 1304, 1403, 1404, BIOL 1308, 1309, 1322, 1406, 1407, (2301, 2302 – restricted to Engineering, Science, and Health Sciences majors), CHEM 1305, 1405, 1411, 1412, COMM 2366, COSC 1436, DANC 2303, DRAM 1310, 2316, 2366, ECON 1301, 2301, 2302, EDUC 1300, ENGL 2322, 2323, 2327, 2328, 2332, 2333, 2342, 2343, 2351, GEOG 1301, 1302, 1303, GEOL 1305, 1345, 1347, 1403, 1404, GOVT 2305, 2306, HIST 1301, 1302, 2311, 2312, 2321, 2322, 2301, 2327, 2328, 2381, HUMA 1301, 1305, 1311, 2319, 2323, MATH 1314, 1316, 1324, 1325, 1332, 1342, 1350, 2318, 2320, 2412, 2413, 2414, 2415, MUSI 1306, 1310, PHIL 1301, 1304, 2306, 2307, 2316, PHYS 1305, 1401, 1402, 2325 (with or without 2125 = lab), 2326 (with or without 2126 = lab), PSYC 2301, 2314, 2316, 2317, 2319, SOCI 1301, 1306, 2301, 2336, TECA 1354, World Languages (ARAB 1411, 1412, CHIN 1411, 1412, FREN 1411, 1412, GERM 1411, 1412, JAPN 1411, 1412, KORE 1411, 1412, SPAN 1411, 1412).

<sup>E</sup> Speech Elective: May choose from – SPCH 1311, 135, 1318, 1321, 1342, 2333, 2335, 2341.

## Baking and Pastry

The Baking & Pastry Arts, Certificate provides students with the necessary theoretical knowledge and technical skills to become successful pastry professionals.

Students develop competencies in breads, rolls, cake production and decoration, chocolates and confections, contemporary plated desserts and production pastry techniques.

Concepts of baking theory and nutrition, food safety and sanitation, bakery service operations, and supervision skills focus on professional and management skills development necessary for success in the workplace.

### CERTIFICATE LEVEL II

First Semester	Credits
EDUC 1300 Learning Framework <sup>A</sup>	3
PSTR 1301 Fundamentals of Baking	3
PSTR 1306 Cake Decorating I	3
PSTR 1310 Pies, Tarts, Teacakes and Cookies	3
CHEF 1205 Sanitation and Safety	2
<b>Semester Total</b>	<b>14</b>

### Second Semester

	Credits
PSTR 1343 Bakery Operations and Management	3
PSTR 1305 Breads and Rolls	3
PSTR 2307 Cake Decorating II OR	
PSTR 2350 Wedding Cakes	3
PSTR 1312 Laminated Dough, Pate a Choux and Donuts	3
HAMG 1324 Hospitality Human Resources Management	3
<b>Semester Total</b>	<b>15</b>

### Third Semester

	Credits
PSTR 2331 Advanced Pastry Shop	3
PSTR 2301 Chocolates and Confections	3
PSTR 2370 Supervised Study: Capstone in Baking and Pastry #	3
PSTR 1340 Plated Desserts	3
<b>Semester Total</b>	<b>12</b>
<b>Program Total</b>	<b>41</b>

# Capstone Course

<sup>A</sup> Student Success Course: Students are required to complete EDUC 1300 within their first 12 semester credit hours of instruction. Students enrolling at HCC with 12 or more hours completed should consult with an academic advisor to select an appropriate course substitution

## Baker

The Baker Certificate Level I Award is designed to train students in bread making, breakfast pastries, and American style cakes. The hands-on instruction focuses on using the latest technology, techniques, and raw food materials to prepare students for today's contemporary bakery. Instruction is taught in specialized classrooms and practical labs and include work experience in the preparation and cooking of a variety of breads, rolls, pastries, pies, and cakes. Emphasis is placed on the use and care of commercial equipment used in food preparation, sanitation in food handling, cooking and baking methods, preparation of special dishes, food standards, aspects of nutrition, and gourmet baking.

### CERTIFICATE LEVEL I

First Semester	Credits
PSTR 1301 Fundamentals of Baking	3
CHEF 1205 Sanitation and Safety	2
<b>Semester Total</b>	<b>5</b>

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<b>Second Semester</b>			<b>Credits</b>
PSTR 1305	Bread and Rolls		3
PSTR 1312	Laminated Dough, Pate Choux and Donuts		3
PSTR 1310	Pies, Tarts, Tea Cakes and Cookies #		3
PSTR #3##	Department Approved Elective <sup>A</sup>		3
<b>Semester Total</b>			<b>12</b>
<b>Program Total</b>			<b>17</b>

# Capstone Course

<sup>A</sup> Department Approved Electives: May choose from – PSTR 1340, 1391, 2301, 2307, 2331, 2350.

## Pastry Cook

The Pastry Cook Certificate Level I Award is designed to prepare students for challenging positions in contemporary bakeries of restaurants, hotels, country clubs, hospitals, and large scale baking operations. Hands-on instruction is taught in specialized classrooms and practical labs and include work experience in the preparation and cooking of a variety of breads, rolls, pastries, pies, and cakes. Emphasis is placed on the use and care of commercial equipment used in food preparation, sanitation in food handling, cooking and baking methods, preparation of special dishes, food standards, aspects of nutrition, and gourmet baking.

### **CERTIFICATE LEVEL I**

<b>First Semester</b>			<b>Credits</b>
PSTR 1301	Fundamentals of Baking		3
CHEF 1205	Sanitation and Safety		2
<b>Semester Total</b>			<b>5</b>

<b>Second Semester</b>			<b>Credits</b>
PSTR 1305	Bread and Rolls		3
PSTR 1306	Cake Decorating I		3
PSTR 1310	Pies, Tarts, Tea Cakes and Cookies #		3
PSTR #3##	Department Approved Elective <sup>A</sup>		3
<b>Semester Total</b>			<b>12</b>
<b>Program Total</b>			<b>17</b>

# Capstone Course

<sup>A</sup> Department Approved Electives: May choose from – PSTR 1340, 1391, 2301, 2307, 2331, 2350.

## HOSPITALITY ADMINISTRATION

### Program Overview

The Hospitality Administration Program is designed to prepare graduates for entry level management positions in the hospitality industry. Students acquire a broad base of knowledge and skills for a successful career in a challenging business service environment. The program focuses on courses such as front office procedures, hospitality marketing, food and beverage management, hospitality human resource management, and hospitality facilities management. All of these courses are uniquely designed for the hospitality service industry.

Program offerings include an AAS degree in Hospitality Management in addition to certificate options in both Hotel Management and Restaurant Management.

### Hospitality Administration Program Mission Statement

*“The Hospitality Administration Program successfully prepares graduates for career advancement in a global industry and for lifelong learning in our diverse community.”*

### Accreditation

Houston Community College (HCC) has become the only higher education institution in the city to have an accredited Hospitality Administration Program. The Accreditation Commission of Programs in Hospitality Administration (ACPHA) recently awarded HCC an initial accreditation that will last for seven years (winter 2016–winter 2023).

### Contact information for ACPHA:

#### ACPHA

PO Box 400

Oxford, MD 21654

Phone: (410) 226 – 5527

Email: [info@acpha-cahm.org](mailto:info@acpha-cahm.org)

Web: [www.acpha-cahm.org](http://www.acpha-cahm.org)

### Program Outcomes.

Students will be able to

- Evaluate functional systems (accounting, finance, marketing and management) in the lodging and travel industry.
- Apply human, financial, technical and facilities resources management into food service/lodging and travel operations.

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- Demonstrate problem solving and critical thinking by applying skills and knowledge to different contexts in the hospitality and travel industry.
- Apply communication skills effectively involving diverse individuals in the hospitality and travel industry.

For more information about the program, you may contact the division at 713-718-6152 or e-mail Suzette Brimmer, Division Chair, Lifestyle Arts & Design Careers at [suzette.brimmer@hccs.edu](mailto:suzette.brimmer@hccs.edu)

## Hospitality Management AAS

The Hospitality Management Degree is designed to prepare graduates for entry level management positions in the hospitality industry. Students acquire a broad base of knowledge and skills for a successful career in a challenging business service environment. The program focuses on courses such as front office procedures, hospitality marketing, food and beverage management, hospitality resource management, and hospitality legal issues. All of these courses are uniquely designed for the hospitality service industry.

The capstone for the AAS in Hospitality Management is HAMG 2380 Cooperative Education-Hospitality Administration Management, General, a 336-hour combination of practical, workplace training and face-to-face instruction. Experience is documented through an individualized learning plan developed by the employer, college, and student.

### At the conclusion of the program, students will:

- be exposed to the technical knowledge of operations required for career advancement in the global hospitality industry.
- demonstrate social, critical thinking, and communication skills necessary for successful careers and for becoming lifelong learners.
- practice hands-on and real-world experiences necessary to become successful professionals.
- examine the importance of community and social responsibilities.

For more information about the program, you may contact the division at 713-718-6152 or e-mail Suzette Brimmer, Division Chair, Lifestyle Arts & Design Careers at [suzette.brimmer@hccs.edu](mailto:suzette.brimmer@hccs.edu)

## Hospitality Management

### AAS

TSI testing is required prior to first enrollment.

#### FIRST YEAR

First Semester			Credits
EDUC 1300	Learning Framework <sup>A</sup>		3
HAMG 1321	Introduction to Hospitality Industry		3
ENGL 1301	Composition I		3
MATH 1314	College Algebra		3
BMGT 1327	Principles of Management		3
<b>Semester Total</b>			<b>15</b>

Second Semester			Credits
CHEF 1205	Sanitation and Safety		2
CHEF 1471	Introduction to Food Preparation for Hospitality		4
HAMG 1313	Front Office Procedures		3
ENGL 1302	Composition II OR		3
ENGL 2311	Technical & Business Writing		3
ITSC 1309	Integrated Software Applications I		3
<b>Semester Total</b>			<b>15</b>

Third Semester			Credits
ECON 2301	Principles of Macroeconomics		3
XXXX #3##	Math/Natural Science Elective <sup>B</sup>		3
SPCH 1315	Public Speaking		3
<b>Semester Total</b>			<b>9</b>

#### SECOND YEAR

First Semester			Credits
GEOG 1302	Human Geography		3
HAMG 1324	Hospitality Human Resources Management		3
HAMG 2307	Hospitality Marketing and Sales		3
ACNT 1303	Introduction to Accounting <sup>***</sup>		3
<b>Semester Total</b>			<b>12</b>

Second Semester			Credits
HAMG 1340	Hospitality Legal Issues		3
XXXX #3##	Humanities/Fine Arts Elective <sup>C</sup>		3
HAMG 2380	Cooperative Education- Hospitality Administration/ Management, General <sup>#</sup>		3
<b>Semester Total</b>			<b>9</b>
<b>Program Total</b>			<b>60</b>

<sup>#</sup> Capstone Course

<sup>\*\*\*</sup> Students who plan to pursue a Bachelor's degree should consider taking ACNT 2301 in addition to ACNT 1303

<sup>A</sup> Student Success Course: Students are required to complete EDUC 1300 within their first 12 semester credit hours of instruction. Students enrolling at HCC with 12 or more hours completed should consult with an academic advisor to select an appropriate course substitution.

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<sup>B</sup> *Math/Natural Science: May choose from – ANTH 2301 (with or without 2101 = lab), 2302, ASTR 1303, 1304, 1403, 1404, BIOL 1308, 1309, 1322, 1406, 1407, (2301, 2302 – restricted to Engineering, Science, and Health Sciences majors), CHEM 1305, 1405, 1411, 1412, COSC 1436, GEOG 1301, GEOL 1305, 1345, 1347, 1403, 1404, MATH 1314, 1316, 1324, 1325, 1332, 1342, 1350, 2318, 2320, 2412, 2413, 2414, 2415, PHYS 1305, 1401, 1402, 2325 (with or without 2125= lab), 2326 (with or without 2126 = lab), PSYC 2317.*

<sup>C</sup> *Humanities/Fine Arts: May choose from – ARTS 1301, 1303, 1304, COMM 2366, DANC 2303, DRAM 1310, 2316, 2366, ENGL 2322, 2323, 2327, 2328, 2332, 2333, 2342, 2343, 2351, HIST 1301, 1302, 2311, 2312, 2321, 2322, 2301, 2327, 2328, 2381, HUMA 1301, 1305, 1311, 2319, 2323, MUSI 1306, 1310, PHIL 1301, 1304, 2306, 2307, 2316, World Languages (ARAB 1411, 1412, CHIN 1411, 1412, FREN 1411, 1412, GERM 1411, 1412, JAPN 1411, 1412, KORE 1411, 1412, SPAN 1411, 1412).*

## Hotel Management Certificate

The Hotel Management certificate introduces students to the basic management techniques and administrative practices and procedures of the hotel industry. Individuals completing this course of study are prepared for entry-level management positions within the industry. The certificate program focuses on areas of study exclusive to hotels.

The capstone for the Certificate in Hospitality Management is HAMG 1166 Practicum (or Field Experience)-Hospitality Administration Management, General, a 160-hour combination of practical, workplace training and face-to-face instruction. Experience is documented through an individualized learning plan developed by the employer, college, and student.

Eighteen (18) credit hours within this certificate apply to the AAS degree in Hospitality Management.

### At the conclusion of the program, students will:

- summarize management practices
- explain basic hotel departments and functions
- identify building systems, facilities management, and security and safety features
- determine appropriate guest services and strategies

*For more information about the program, you may contact the division at 713-718-6152 or e-mail Suzette Brimmer, Division Chair, Lifestyle Arts & Design Careers at [suzette.brimmer@hccs.edu](mailto:suzette.brimmer@hccs.edu)*

## CERTIFICATE LEVEL I

### First Semester

	Credits
HAMG 1321 Introduction to Hospitality Industry	3
ACNT 1303 Introduction to Accounting I	3
HAMG 1313 Front Office Procedures	3
BMGT 1327 Principles of Management	3

**Semester Total 12**

### Second Semester

	Credits
HAMG 1324 Hospitality Human Resources Management	3
HAMG 2337 Hospitality Facilities Management	3
HAMG 1340 Hospitality Legal Issues	3
HAMG 1342 Guest Room Management	3
HAMG 1166 Practicum (or Field Experience) - Hospitality Administration/Management, General #	1

**Semester Total 13**

**Program Total 25**

# *Capstone Course*

## Restaurant Management Certificate

The Restaurant Management certificate introduces students to the basic management techniques and administrative practices and procedures of the restaurant and food service industry. Individuals completing this course of study are prepared for entry-level management positions within the industry. This certificate program focuses areas of study exclusive to restaurant management.

The capstone for the Certificate in Restaurant Management is HAMG 1166 Practicum (or Field Experience)-Hospitality Administration Management, General, a 160-hour combination of practical, workplace training and face-to-face instruction. Experience is documented through an individualized learning plan developed by the employer, college, and student.

Eighteen (18) credit hours within this certificate apply to the AAS degree in Hospitality Management.

### At the conclusion of the program, students will:

- summarize management practices
- explain basic restaurant departments and functions
- participate in and manage work teams in food preparation
- determine appropriate customer services and strategies

*For more information about the program, you may contact the division at 713-718-6152 or e-mail Suzette Brimmer, Division Chair, Lifestyle Arts & Design Careers at [suzette.brimmer@hccs.edu](mailto:suzette.brimmer@hccs.edu)*

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## **CERTIFICATE LEVEL I**

<b>First Semester</b>	<b>Credits</b>
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HAMG 1321	Introduction to Hospitality Industry	3
ACNT 1303	Introduction to Accounting I	3
CHEF 1205	Sanitation and Safety	2
BMGT 1327	Principles of Management	3

<b>Semester Total</b>	<b>11</b>
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<b>Second Semester</b>	<b>Credits</b>
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HAMG 1324	Hospitality Human Resources Management	3
RSTO 2301	Principles of Food and Beverage Controls	3
CHEF 1313	Food Service Operation/Systems	3
CHEF 1471	Principles of Food Preparation for Hospitality	4
HAMG 1166	Practicum (or Field Experience) - Hospitality Administration/Management, General #	1

<b>Semester Total</b>	<b>14</b>
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<b>Program Total</b>	<b>25</b>
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# *Capstone Course*

# Human Services and Social Sciences

**Cosmetology (12.0401, 12.0408, 12.0412, 12.0413)**

**Human Service Technology (51.1501, 51.1502)**

**Sign Language/Interpretation & Translation (16.1603)**

A Career Cluster is a grouping of occupations and broad industries based on commonalities. The Human Services and Social Sciences career cluster is concerned with providing knowledge and skills related to families and human needs. This includes the following HCC programs: Cosmetology, Human Services and Sign Language/ Interpretation & Translation.

All new semester hour students, who have earned less than 12 semester hours of college level credit, are required to take a first-year student success course in their first term at HCC. Through research and experience, Houston Community College has determined that many life and career management skills are necessary for students to make the most of their college investment. A student success course is designed to prepare students for the demands of college and for success in the world of work. The course emphasizes setting priorities, time management, effective listening, note-taking, concentration techniques, and retention of information, book analysis, comprehension techniques, and test-taking skills. This course also incorporates units that are designed to facilitate the use of library databases in conducting research, planning and setting educational objectives, lifelong career assessment, decision-making, financial aid, tutoring, and student support services, enabling the student to maximize the use of college resources.

Every HCC Career and Technology Education program contains a "capstone," an experience for the student to "put it all together." The capstone is a learning experience resulting in a consolidation of a student's educational experience and certifies mastery of entry level workplace competencies. The capstone experience must occur during the last semester of the student's educational program. The capstone consists of an external learning experience or an advanced course especially designed to help students synthesize knowledge and skills or other licensure as appropriate.

## COSMETOLOGY

The Cosmetology program provides the theory and practical instruction designed to prepare students for employment as a licensed cosmetologist. Students who successfully complete the entire curriculum are qualified to sit for the examination given by the Texas Department of Licensing and Regulation (T.D.L.R.) P.O. Box 12157 Austin, TX 78711. Those who are approved by the State are licensed as cosmetologists and are eligible for placement.

Due to Texas Department of Licensing and Regulation (T.D.L.R.) requirements limiting the number of students permitted at each location, students must have instructor approval before registering in any cosmetology/barber stylist course. Students may not go through the College registration process without specific instructor approval. Enrolled students are required to purchase tools, books, and uniforms. Students must maintain strong attendance. Students absent more than two days in a semester are dropped from the program.

In addition, please note that a student may only earn one Occupational Skills Award (OSA) per academic year.

### Program Outcomes

Students will be able to

- Project a positive attitude and a sense of personal integrity and self-confidence.
- Practice effective communication skills, visual poise, and proper grooming.
- Demonstrate safety and sanitation procedures for use of equipment, implements, and treatments.
- Perform basic manipulative skills in the areas of hairstyling, hair shaping, hair coloring, texture services, scalp and hair conditioning, skin and makeup, manicure and pedicures.
- Apply learned theory, technical information and related matter to assure sound judgments, decisions, and procedures.
- Apply learned theory, manipulative skills and analytical skills to obtain licensure and competency in entry-level positions in cosmetology or a related career field.
- Perform the basic analytical skills to determine proper makeup, hairstyle, and color application for the client's overall image.

For more information call 713.718.7501 or e-mail [hilda.sustaita@hccs.edu](mailto:hilda.sustaita@hccs.edu).

# Human Services and Social Sciences

## Cosmetology Operator

The Houston Community College Cosmetology Operator program is designed for students to obtain basic fundamentals as well as advanced techniques, people skills and product knowledge using current salon technology that meets the state licensure requirements and provides entry level skills to students who desire to have a career in the cosmetology profession. A career in cosmetology can take the trained professional to all parts of the nation and the world. This field allows individuals the opportunity to open their own business as well. A student in the Cosmetology Operator program may earn a vocational certificate and/or an Associate of Applied Science degree.

### AAS

*TSI testing is required prior to first enrollment.*

#### FIRST YEAR

##### First Semester

	<b>Credits</b>
EDUC 1300 Learning Framework <sup>A</sup> .....	3
XXXX #3## Humanities/Fine Arts Elective <sup>C</sup> .....	3
CSME 1410 Introduction to Haircutting and Related Theory.....	4
CSME 1405 Fundamentals of Cosmetology.....	4
CSME 2204 Introduction to the Theory and Chemistry of Hair Color...2	
<b>Semester Total</b>	<b>16</b>

##### Second Semester

	<b>Credits</b>
CMSE 1491 Special Topics in Cosmetology/Cosmetologist, General.....	4
XXXX #3## Math/Natural Science Elective <sup>B</sup> .....	3
CSME 1453 Chemical Reformation and Related Theory.....	4
CSME 2501 The Principles of Hair Coloring and Related Theory.....	5
<b>Semester Total</b>	<b>16</b>

##### Third Semester

	<b>Credits</b>
CSME 2439 Advanced Hair Design.....	4
CSME 2343 Salon Development.....	3
<b>Semester Total</b>	<b>7</b>

#### SECOND YEAR

##### First Semester

	<b>Credits</b>
CSME 2337 Advanced Cosmetology Techniques.....	3
CSME 2410 Advanced Haircutting and Related Theory.....	4
GOVT 2306 Texas Government.....	3
PSYC 2301 General Psychology.....	3
<b>Semester Total</b>	<b>13</b>

##### Second Semester

	<b>Credits</b>
CSME 1451 Artistry of Hair, Theory and Practice.....	4
CSME 2541 Preparation for the State Licensing Examination #.....	5
<b>Semester Total</b>	<b>9</b>
<b>Program Total</b>	<b>61</b>

# Capstone Course

<sup>A</sup> Student Success Course: Students are required to complete EDUC 1300 within their first 12 semester credit hours of instruction. Students enrolling at HCC with 12 or more hours completed should consult with an academic advisor to select an appropriate course substitution.

<sup>B</sup> Math/Natural Science: May choose from – ANTH 2301 (with or without 2101 = lab), 2302, ASTR 1303, 1304, 1403, 1404, BIOL 1308, 1309, 1322, 1406, 1407, (2301, 2302 – restricted to Engineering, Science, and Health Sciences majors), CHEM 1305, 1405, 1411, 1412, COSC 1436, GEOG 1301, GEOL 1305, 1345, 1347, 1403, 1404, MATH 1314, 1316, 1324, 1325, 1332, 1342, 1350, 2318, 2320, 2412, 2413, 2414, 2415, PHYS 1305, 1401, 1402, 2325 (with or without 2125= lab), 2326 (with or without 2126 = lab), PSYC 2317.

<sup>C</sup> Humanities/Fine Arts: May choose from – ARTS 1301, 1303, 1304, COMM 2366, DANC 2303, DRAM 1310, 2316, 2366, ENGL 2322, 2323, 2327, 2328, 2332, 2333, 2342, 2343, 2351, HIST 1301, 1302, 2311, 2312, 2321, 2322, 2301, 2327, 2328, 2381, HUMA 1301, 1305, 1311, 2319, 2323, MUSI 1306, 1310, PHIL 1301, 1304, 2306, 2307, 2316, World Languages (ARAB 1411, 1412, CHIN 1411, 1412, FREN 1411, 1412, GERM 1411, 1412, JAPN 1411, 1412, KORE 1411, 1412, SPAN 1411, 1412).

## Cosmetology Operator

### CERTIFICATE LEVEL II

*TSI testing is required prior to first enrollment.*

##### First Semester

	<b>Credits</b>
EDUC 1300 Learning Framework <sup>A</sup> .....	3
CSME 1405 Fundamentals of Cosmetology.....	4
CSME 1410 Introduction to Haircutting and Related Theory.....	4
CSME 1453 Chemical Reformation and Related Theory.....	4
CSME 2204 Introduction to the Theory and Chemistry of Hair Color...2	
<b>Semester Total</b>	<b>17</b>

##### Second Semester

	<b>Credits</b>
CSME 2501 The Principles of Hair Coloring and Related Theory.....	5
CSME 2337 Advanced Cosmetology Techniques.....	3
CSME 2439 Advanced Hair Design.....	4
CSME 1491 Special Topics in Cosmetology/Cosmetologist, General..4	
<b>Semester Total</b>	<b>16</b>

##### Third Semester

	<b>Credits</b>
CSME 2343 Salon Development.....	3
CSME 2410 Advanced Haircutting and Related Theory.....	4
CSME 1451 Artistry of Hair, Theory and Practice.....	4
CSME 2541 Preparation for the State Licensing Examination #.....	5
<b>Semester Total</b>	<b>16</b>
<b>Program Total</b>	<b>49</b>

# Capstone Course

# Human Services and Social Sciences

<sup>A</sup> *Student Success Course: Students are required to complete EDUC 1300 within their first 12 semester credit hours of instruction. Students enrolling at HCC with 12 or more hours completed should consult with an academic advisor to select an appropriate course substitution.*

## Cosmetology Instructor

The Cosmetology Instructor program is designed to allow students to earn the Cosmetology Instructor license from the Texas Department of Licensing and Regulation (T.D.L.R.). To enroll in this program, students must have a valid operator's license and three years experience in salon work.

Due to the Texas Department of Licensing and Regulation (T.D.L.R.) requirements limiting the number of students allowed at each location, students must obtain the approval of the Department Chair before registering for any cosmetology instructor course. Students are required to purchase tools and books.

### AAS

*TSI testing is required prior to first enrollment.*

#### FIRST YEAR

##### First Semester

	<b>Credits</b>
EDUC 1300 Learning Framework <sup>A</sup> .....	3
CSME 1535 Orientation to the Instruction of Cosmetology.....	5
CSME 1534 Cosmetology Instructor I.....	5
XXXX #3## Computer Applications Elective <sup>B</sup> .....	3
<b>Semester Total</b>	<b>16</b>

##### Second Semester

	<b>Credits</b>
XXXX #3## Math/Natural Science Elective <sup>C</sup> .....	3
CSME 2514 Cosmetology Instructor II.....	5
CSME 2549 Cosmetology Instructor III.....	5
XXXX #3## General Education Elective <sup>E</sup> .....	3
<b>Semester Total</b>	<b>16</b>

#### SECOND YEAR

##### First Semester

	<b>Credits</b>
CSME 2544 Cosmetology Instructor IV.....	5
CSME 2545 Instructional Theory and Clinic Operation <sup>#</sup> .....	5
XXXX #3## Humanities/Fine Arts Elective <sup>D</sup> .....	3
BMGT 1301 Supervision.....	3
<b>Semester Total</b>	<b>16</b>

##### Second Semester

	<b>Credits</b>
BUSG 2309 Small Business Management.....	3
GOVT 2306 Texas Government.....	3
SPCH 1321 Business & Professional Communication OR	
SPCH 1315 Public Speaking.....	3
PSYC 2301 Introduction to Psychology.....	3
<b>Semester Total</b>	<b>12</b>
<b>Program Total</b>	<b>60</b>

<sup>#</sup> *Capstone Course*

<sup>A</sup> *Student Success Course: Students are required to complete EDUC 1300 within their first 12 semester credit hours of instruction. Students enrolling at HCC with 12 or more hours completed should consult with an academic advisor to select an appropriate course substitution.*

<sup>B</sup> *The Computer Applications Elective: May choose from – ITSC 1309 Integrated Software Applications I, POFI 1301 Computer Applications I, or BCIS 1405 Business Computer Application.*

<sup>C</sup> *Math/Natural Science: May choose from – ANTH 2301 (with or without 2101 = lab), 2302, ASTR 1303, 1304, 1403, 1404, BIOL 1308, 1309, 1322, 1406, 1407, (2301, 2302 – restricted to Engineering, Science, and Health Sciences majors), CHEM 1305, 1405, 1411, 1412, COSC 1436, GEOG 1301, GEOL 1305, 1345, 1347, 1403, 1404, MATH 1314, 1316, 1324, 1325, 1332, 1342, 1350, 2318, 2320, 2412, 2413, 2414, 2415, PHYS 1305, 1401, 1402, 2325 (with or without 2125 = lab), 2326 (with or without 2126 = lab), PSYC 2317.*

<sup>D</sup> *Humanities/Fine Arts: May choose from – ARTS 1301, 1303, 1304, COMM 2366, DANC 2303, DRAM 1310, 2316, 2366, ENGL 2322, 2323, 2327, 2328, 2332, 2333, 2342, 2343, 2351, HIST 1301, 1302, 2311, 2312, 2321, 2322, 2301, 2327, 2328, 2381, HUMA 1301, 1305, 1311, 2319, 2323, MUSI 1306, 1310, PHIL 1301, 1304, 2306, 2307, 2316, World Languages (ARAB 1411, 1412, CHIN 1411, 1412, FREN 1411, 1412, GERM 1411, 1412, JAPN 1411, 1412, KORE 1411, 1412, SPAN 1411, 1412).*

<sup>E</sup> *General Education: May choose from – ANTH 2301 (with or without 2101 = lab), 2302, 2346, 2351, ARTS 1301, 1303, 1304, ASTR 1303, 1304, 1403, 1404, BIOL 1308, 1309, 1322, 1406, 1407, (2301, 2302 – restricted to Engineering, Science, and Health Sciences majors), CHEM 1305, 1405, 1411, 1412, COMM 2366, COSC 1436, DANC 2303, DRAM 1310, 2316, 2366, ECON 1301, 2301, 2302, EDUC 1300, ENGL 2322, 2323, 2327, 2328, 2332, 2333, 2342, 2343, 2351, GEOG 1301, 1302, 1303, GEOL 1305, 1345, 1347, 1403, 1404, GOVT 2305, 2306, HIST 1301, 1302, 2311, 2312, 2321, 2322, 2301, 2327, 2328, 2381, HUMA 1301, 1305, 1311, 2319, 2323, MATH 1314, 1316, 1324, 1325, 1332, 1342, 1350, 2318, 2320, 2412, 2413, 2414, 2415, MUSI 1306, 1310, PHIL 1301, 1304, 2306, 2307, 2316, PHYS 1305, 1401, 1402, 2325 (with or without 2125 = lab), 2326 (with or without 2126 = lab), PSYC 2301, 2314, 2316, 2317, 2319, SOCI 1301, 1306, 2301, 2336, TECA 1354, World Languages (ARAB 1411, 1412, CHIN 1411, 1412, FREN 1411, 1412, GERM 1411, 1412, JAPN 1411, 1412, KORE 1411, 1412, SPAN 1411, 1412).*

## Cosmetology Instructor

### CERTIFICATE LEVEL I

#### First Semester

	<b>Credits</b>
CSME 1535 Orientation to the Instruction of Cosmetology.....	5
CSME 1534 Cosmetology Instructor I.....	5
CSME 2514 Cosmetology Instructor II.....	5
<b>Semester Total</b>	<b>15</b>

# Human Services and Social Sciences

<b>Second Semester</b>		<b>Credits</b>
CSME 2549	Cosmetology Instructor III .....	5
CSME 2544	Cosmetology Instructor IV .....	5
CSME 2545	Instructional Theory and Clinic Operation # .....	5
<b>Semester Total</b>		<b>15</b>
<b>Program Total</b>		<b>30</b>

# Capstone Course

## Facial Specialist

The Facial Specialist program is designed to provide students with the knowledge and technical skills required for successful entry into the facial/esthetic profession. After satisfactory completion of all courses and meeting the 750 clock hour requirement students are eligible to take the Texas Department of Licensing and Regulation (T.D.L.R.) Facialist/Esthetic Specialty Examination.

### CERTIFICATE LEVEL I

<b>First Semester</b>		<b>Credits</b>
CSME 1420	Orientation to Facial Specialist .....	4
CSME 1421	Principles of Facial and Skin Care Technology I .....	4
CSME 1447	Principles of Skin Care/Facials and Related Theory .....	4
<b>Semester Total</b>		<b>12</b>
<b>Second Semester</b>		<b>Credits</b>
CSME 1545	Principles of Facial/Esthetic Technology II .....	5
CSME 2531	Principles of Facial/Esthetic Technology III # .....	5
CSME 1491	Special Topics in Cosmetology/Cosmetologist, General..	4
<b>Semester Total</b>		<b>14</b>
<b>Program Total</b>		<b>26</b>

# Capstone Course

## Styling/Salon Management Entrepreneur

The Styling/Salon Management Entrepreneur certificate program prepares students with the concepts, principles, and skills necessary to establish a cosmetology salon. The certificate is designed for students who have experience in cosmetology and desire to obtain the skills necessary for the administration of a styling salon, facial or nail boutique. The certificate focuses on entrepreneurial business management skills, interpersonal communication and supervision, as well as human relations.

### CERTIFICATE LEVEL I

<b>First Semester</b>		<b>Credits</b>
BUSG 2309	Small Business Management/Entrepreneurship .....	3
BUSG 1307	Entrepreneurship and Economic Development .....	3
POFI 1301	Computer Applications I .....	3
BMGT 1301	Supervision .....	3
<b>Semester Total</b>		<b>12</b>

<b>Second Semester</b>		<b>Credits</b>
HRPO 1311	Human Relations .....	3
MRKG 1311	Principles of Marketing .....	3
ACNT 1303	Introduction to Accounting I OR	
ACCT 2301	Principles of Financial Accounting .....	3
CSME 2343	Salon Development # .....	3
<b>Semester Total</b>		<b>12</b>
<b>Program Total</b>		<b>24</b>

# Capstone Course

## Hair Weaving & Braiding Entrepreneur

The Hair Weaving Entrepreneur certificate prepares the student with the training and skills necessary to work as a specialist in hair weaving and braiding in the natural hair care industry or a styling salon. Students are trained in hair additions, wigs and hairpieces, basic hair weaving including hair weaving repair and removal of weft, sizing and finishing hair ends by hand or the use of mechanical equipment.

### CERTIFICATE LEVEL I

<b>FIRST YEAR</b>		<b>Credits</b>
<b>First Semester</b>		<b>Credits</b>
CSME 1452	Orientation to Hair Weaving and Braiding .....	4
CSME 1557	Applications of Hair Weaving and Braiding .....	5
CSME 1491	Special Topics in Cosmetology/Cosmetologist, General..	4
CSME 2343	Salon Development # .....	3
<b>Semester Total</b>		<b>16</b>
<b>Program Total</b>		<b>16</b>

# Capstone Course

# Human Services and Social Sciences

## HUMAN SERVICE TECHNOLOGY

The Human Service Technology Program was developed in 1986 because of the severe shortage of trained psychiatric technicians to meet the growing demands in the mental health field. Since that time the program has grown from 12 students to over 200 specializing in Human Service Technology, Chemical Dependency Counseling, Community Health Worker and Prevention Specialist.

The Human Service Technology program is designed for students interested in the broad field of human services. This degree equips students for employment as technicians in a wide range of human service facilities offering services to varied populations. Lectures place a strong emphasis on ethics and multiculturalism. This program is approved by the Texas Department of State Health Services, Substance Abuse Division and has been a member of the South Southwest Addiction Technology Transfer Center consortium (SSWATTC) funded by Substance Abuse Mental Health Services Administration (SAMHSA) since 1993.

Classes are offered both during the day or in the evening. Students can be enrolled full-time or part-time. Classes taken under the certificate program transfer into the associate degree program. Students must write at the ENGL 0310 level, must read at the JUST 0342 level and must have mathematical reasoning skills at the MATH 0308 level.

Students participate in clinical experiences in various affiliated hospitals and human service agencies in the area. Currently there are over 65 affiliates. Students are required to purchase liability insurance through the HCC blanket policy before beginning practicum rotations. All students have weekly supervision during clinical training by the staff.

Individuals interested in the program should attend an Essential Requirements (ER) session at Coleman College for Health Sciences. Go online or call 713.718.5539 for the dates, times and location of the sessions.

In addition, please note that a student may only earn one Occupational Skills Award (OSA) per academic year.

### Program Outcomes

Students will be able to

- Identify various roles of a human service professional and scope of practice.
- Assess an individual's stage of change and apply appropriate intervention techniques.
- Demonstrate Motivational Interviewing principles.

- Assess identified individual's needs and identify appropriate referral sources to meet those needs.

For more information call 713.718.5539 or e-mail [virginia.stehr@hccs.edu](mailto:virginia.stehr@hccs.edu).

## Human Service Technology

### AAS

*TSI testing is required prior to first enrollment.*

### FIRST YEAR

<b>First Semester</b>		<b>Credits</b>
EDUC 1300	Learning Framework <sup>A</sup> .....	3
HPRS 1201	Introduction to Health Professions.....	2
PSYC 2301	Introduction to Psychology.....	3
SCWK 1321	Orientation to Social Services.....	3
DAAC 1417	Basic Counseling Skills.....	4
<b>Semester Total</b>		<b>15</b>

<b>Second Semester</b>		<b>Credits</b>
CMSW 1313	Assessment and Service Delivery.....	3
DAAC 2354	Dynamics of Group Counseling.....	3
ENGL 1301	Composition I.....	3
PSYC 2316	Psychology of Personality.....	3
XXXX #3##	Directed Elective <sup>D</sup> .....	3
<b>Semester Total</b>		<b>12</b>

<b>Third Semester</b>		<b>Credits</b>
CMSW 1266	Practicum-Clinical and Medical Social Work.....	2
PSYC 2314	Human Growth and Development: Lifespan.....	3
XXXX #3##	Humanities/Fine Arts Elective <sup>C</sup> .....	3
<b>Semester Total</b>		<b>8</b>

### SECOND YEAR

<b>First Semester</b>		<b>Credits</b>
CMSW 1267	Practicum-Clinical and Medical Social Work.....	2
DAAC 1311	Counseling Theories.....	3
POFI 1301	Computer Applications I.....	3
XXXX #3##	Directed Elective <sup>D</sup> .....	3
<b>Semester Total</b>		<b>11</b>

<b>Second Semester</b>		<b>Credits</b>
CMSW 1353	Family Intervention Strategies.....	3
XXXX #3##	Math/Natural Science Elective <sup>B</sup> .....	3
XXXX #3##	Directed Elective <sup>D</sup> .....	3
CMSW 2266	Practicum-Clinical and Medical Social Work <sup>#</sup> .....	2
<b>Semester Total</b>		<b>11</b>
<b>Program Total</b>		<b>60</b>

<sup>#</sup> Capstone Course

# Human Services and Social Sciences

<sup>A</sup> *Student Success Course: Students are required to complete EDUC 1300 within their first 12 semester credit hours of instruction. Students enrolling at HCC with 12 or more hours completed should consult with an academic advisor to select an appropriate course substitution.*

<sup>B</sup> *Math/Natural Science: May choose from – ANTH 2301 (with or without 2101 = lab), 2302, ASTR 1303, 1304, 1403, 1404, BIOL 1308, 1309, 1322, 1406, 1407, (2301, 2302 – restricted to Engineering, Science, and Health Sciences majors), CHEM 1305, 1405, 1411, 1412, COSC 1436, GEOG 1301, GEOL 1305, 1345, 1347, 1403, 1404, MATH 1314, 1316, 1324, 1325, 1332, 1342, 1350, 2318, 2320, 2412, 2413, 2414, 2415, PHYS 1305, 1401, 1402, 2325 (with or without 2125= lab), 2326 (with or without 2126 = lab), PSYC 2317.*

<sup>C</sup> *Humanities/Fine Arts: May choose from – ARTS 1301, 1303, 1304, COMM 2366, DANC 2303, DRAM 1310, 2316, 2366, ENGL 2322, 2323, 2327, 2328, 2332, 2333, 2342, 2343, 2351, HIST 1301, 1302, 2311, 2312, 2321, 2322, 2301, 2327, 2328, 2381, HUMA 1301, 1305, 1311, 2319, 2323, MUSI 1306, 1310, PHIL 1301, 1304, 2306, 2307, 2316, World Languages (ARAB 1411, 1412, CHIN 1411, 1412, FREN 1411, 1412, GERM 1411, 1412, JAPN 1411, 1412, KORE 1411, 1412, SPAN 1411, 1412).*

<sup>D</sup> *Directed Electives: May choose from – CMSW 2303, DAAC 1304, DAAC 1305, DAAC 1319, DAAC 2306, DAAC 2353, GERS 1301.*

## Second Semester

		<b>Credits</b>
DAAC	1319 Introduction to the Studies of Alcohol and Other Drugs...	3
DAAC	1305 Co-occurring Disorders.....	3
XXXX	#3## Directed Elective <sup>A</sup> .....	3
XXXX	#3## Directed Elective <sup>A</sup> .....	3

**Semester Total 12**

## Third Semester

		<b>Credits</b>
DAAC	2267 Practicum-Substance Abuse/Addiction Counseling #.....	2

**Semester Total 2**

**Program Total 26**

*\*Student Success Course*

*# Capstone Course*

<sup>A</sup> *Directed Electives: May choose from – CMSW 1353, DAAC 1311, DAAC 2354.*

## Human Service Technology Certified Prevention Specialist

The Certified Prevention Specialist Occupational Skills Award (OSA) completes the educational requirement of the Texas Certification Board of Addiction Professionals (TCBAP), Certified Prevention Specialist. In order to obtain the complete certification, a student must take an additional 2000 hours of field work and pass a written exam. For complete requirements, go to the TCBAP website, <http://www.tcbap.org>. The Department of State Health Services (DSHS) requires the Prevention Certification in order to administer prevention programs funded by DSHS.

### OCCUPATIONAL SKILLS AWARD

#### FIRST YEAR

<b>First Semester</b>		<b>Credits</b>
DAAC	2306 Substance Abuse Prevention I.....	3
DAAC	1304 Pharmacology of Addiction.....	3
<b>Semester Total</b>		<b>6</b>

#### Second Semester

		<b>Credits</b>
DAAC	2353 Substance Abuse Prevention II.....	3
<b>Semester Total</b>		<b>3</b>

#### Third Semester

		<b>Credits</b>
DAAC	1264 Practicum.....	2
<b>Semester Total</b>		<b>2</b>
<b>Program Total</b>		<b>11</b>

## Chemical Dependency Counselor

As of September 1, 2004, an associate degree from a Behavioral Science program is required to become a Licensed Chemical Dependency Counselor (LCDC) in the State of Texas. Students are qualified for employment at a clinical training institute after completing the Chemical Dependency Counselor certificate. For complete information on other requirements to become a LCDC, contact the Department of State Health Services, Substance Abuse Services at 1.888.963.7111, or visit the web site @ <http://www.dshs.state.tx.us/sa>.

*For more information call 713.718.5539 or e-mail [virginia.stehr@hccs.edu](mailto:virginia.stehr@hccs.edu).*

### CERTIFICATE LEVEL I

<b>First Semester</b>		<b>Credits</b>
HPRS	1201 Introduction to Health Professions *.....	2
DAAC	1304 Pharmacology of Addiction.....	3
DAAC	1417 Basic Counseling Skills.....	4
CMSW	1313 Assessment and Service Delivery.....	3
<b>Semester Total</b>		<b>12</b>

# Human Services and Social Sciences

## Human Service Technology Community Health Worker

Community Health Workers are individuals who work either for pay or as volunteers in association with the local health care system in both urban and rural environments and usually share ethnicity, language, socioeconomic status and life experiences with the community members they serve. In various settings, Community Health Workers (CHWs) have been identified by many titles such as community health advisors, lay health advocates, “promotores(as)” outreach educators, community health representatives, peer health promoters, patient navigators, and peer health educators. CHWs offer interpretation and translation services, provide culturally appropriate health education and information, assist people in receiving the care they need, give informal counseling and guidance on health behaviors, advocate for individual and community health needs, and provide some direct services such as first aid and blood pressure screening.

The Community Health Worker Occupational Skills Award (OSA) meets the certification standards for the Department of State Health Services for Community Health Worker. For more information on DSHS, Community Health Worker certification, go to: <http://www.dshs.state.tx.us/chpr/chw/default.shtm> or call 512.458.7111.

### **OCCUPATIONAL SKILLS AWARD**

#### **FIRST YEAR**

##### **First Semester Credits**

CHLT 1302	Wellness and Health Promotion.....	3
CHLT 1401	Introduction fo Community Health.....	4

**Semester Total 7**

##### **Second Semester Credits**

CHLT 1291	Special Topics in Community Health Liaison .....	2
CHLT 1342	Community Health Field Methods.....	3

**Semester Total 5**

##### **Third Semester Credits**

CHLT 1266	Practicum (or Field Experience) - Community Health Services/Liaison/Counseling.....	2
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**Semester Total 2**

**Program Total 14**

## **SIGN LANGUAGE/INTERPRETATION & TRANSLATION**

The curriculum for the AAS degree in Interpreting Training/ American Sign Language Program is a two year course of study that prepares students for employment in the interpreting profession. The Interpreter Training Program is designed to prepare students to be eligible to take the entry-level state certification exam with the Board for Evaluation of Interpreters as a sign language interpreter.

**Attention BEI Office**  
**P. O. Box 12306**  
**Austin, TX 78711**  
**512.451.8494**  
**email: [dhhs.bei@hhsc.state.tx.us](mailto:dhhs.bei@hhsc.state.tx.us)**

Students must attain an overall GPA of 2.0 in all work attempted at HCC, however, students enrolled in the Interpreter Training Program must maintain a cumulative GPA of 3.0 in all American Sign Language classes as well as interpreter training classes. Students will be tested on Benchmarks for each segment of American Sign Language class and Interpreting classes. (See Program Benchmarks)

### **Program Outcomes**

Students will be able to

- Develop receptive and expressive skills in American Sign Language and Fingerspelling.
- Demonstrate knowledge and awareness of the differences between the Deaf culture/deaf community and the hearing community.
- Accurately interpret and transliterate between ASL and English in a variety of settings: face-to-face, small group settings, monologue and/or large group settings.
- Apply professional standards, practices, and ethics, not limited to the tenets of the Code of Professional Conduct, to their work.

*For more information call 713.718.7616 or e-mail [michael.lee@hccs.edu](mailto:michael.lee@hccs.edu) or 713.718.6845 or e-mail [britny.greensage1@hccs.edu](mailto:britny.greensage1@hccs.edu).*

### **Program Benchmarks**

The Interpreter Training Program at Houston Community College has in place a series of benchmarks to assure that students are progressing appropriately through the American Sign Language and Interpreting curriculum. Each benchmark assessment is an opportunity to assess where students are in their development of American Sign Language and Interpreting to identify potential problems

# Human Services and Social Sciences

early so that tutoring can occur if it is needed. Each of these imperative checkpoints is briefly described below.

**American Sign Language Assessment**-The ASL Benchmark Assessment will be administered as the final exam for SGNL 1401 (ASL I), SGNL 1402 (ASL II), SGNL 2301 (ASL III), and SGNL 2402 (ASL IV), therefore the benchmark is weighted heavily in calculating the students' grade for the course. Students must pass each ASL Benchmark Assessment with a "B" or better prior to registering for the next ASL course. If a student does not pass the final benchmark assessment, remediation/tutoring will be required and the ASL Benchmark Assessment will be administered a second time prior to the start of the next semester.

**Mid-Program Evaluation** – The mid-program evaluation consists of three parts. The first is a written exam over course content for the core departmental courses taken during the first year. This is followed by a written exam that assesses students' ability to watch a signed discourse and answer questions based on that stimulus. Finally, students are asked to demonstrate their ability to express themselves in American Sign Language. Students are required to have completed the following courses prior to sitting for the mid-program evaluation: SGNL 1401 (ASL I), SGNL 1402 (ASL II), SGNL 2301 (ASL III), SGNL 2402 (ASL IV), SLNG 1317 (Introduction to the Deaf Community),

SLNG 1311 (Fingerspelling and Numbers), SLNG 1307 (Intra-lingual Skills), and SLNG 1321 (Introduction to the Interpreting Profession).

**English Proficiency Exam** – The English Proficiency Exam is administered at the end of the semester by Board for Evaluation of Interpreters (BEI) while the student is registered for SLNG 1248-Vocabulary Development for Interpreters. When the student receives their TEP exam results from BEI, they must turn in a copy of test results to the ITP department.

Benchmark Evaluation for Students at the conclusion of Interpreting I, Interpreting II, and Interpreting III. – The Benchmark Evaluation for Students is meant to serve as a mock evaluation experience. Interpreting I, II, and III Benchmark Evaluation is geared to the students expected skill level at the end of the semester. This evaluation serves as the final exam for the course and is weighted heavily in calculating the students' grade for the course. The Benchmark Evaluation is intended to ensure that students have mastered the necessary skills to move on to the next higher interpreting course.

**Exit Evaluation** – The exit evaluation is a comprehensive exam taken as the final exam during the internship. The

purpose of this comprehensive exam is to assess students' mastery of the entire curriculum. This exam is similar to the course content written exam in the mid-program evaluation with the exception that this exam also includes core courses taken after the mid-program evaluation.

## Interpreting/Sign Language Transliteration Technology

### AAS

*TSI testing is required prior to first enrollment.*

#### FIRST YEAR

<b>First Semester</b>		<b>Credits</b>
EDUC 1300	Learning Framework <sup>A</sup> .....	3
SGNL 1401	Beginning American Sign Language I.....	4
SLNG 1211	Fingerspelling and Numbers.....	2
SLNG 1248	Vocabulary Development for Interpreters .....	2
ENGL 1301	Composition I.....	3
<b>Semester Total</b>		<b>14</b>

<b>Second Semester</b>		<b>Credits</b>
SGNL 1402	Beginning American Sign Language II.....	4
SLNG 1317	Introduction to the Deaf Community .....	3
SLNG 1350	Sign-to-Voice.....	3
XXXX #3##	Humanities/Fine Arts Elective <sup>C</sup> .....	3
<b>Semester Total</b>		<b>13</b>

<b>Third Semester</b>		<b>Credits</b>
XXXX #3##	Math/Natural Science Elective <sup>B</sup> .....	3
XXXX #3##	General Education Elective <sup>D</sup> .....	3
<b>Semester Total</b>		<b>6</b>

#### SECOND YEAR

<b>First Semester</b>		<b>Credits</b>
SGNL 2301	American Sign Language (ASL): Intermediate I .....	3
SLNG 2301	Interpreting I.....	3
SLNG 1207	Intra-lingual Skills Development For Interpreters.....	2
PSYC 2301	General Psychology.....	3
SLNG 1321	Introduction to the Interpreting Profession.....	3
<b>Semester Total</b>		<b>13</b>

<b>Second Semester</b>		<b>Credits</b>
SLNG 2302	Interpreting II.....	3
SLNG 1391	Special Topics in Sign Language Interpreting.....	3
SLNG 2315	Interpreting in Educational Settings .....	3
SGNL 2302	American Sign Language (ASL): Intermediate II .....	3
<b>Semester Total</b>		<b>12</b>

<b>Third Semester</b>		<b>Credits</b>
SLNG 2380	Cooperative Education -Sign Language Interpretation and Translation #.....	3
SLNG 2331	Interpreting III.....	3
<b>Semester Total</b>		<b>6</b>
<b>Program Total</b>		<b>65</b>

# Human Services and Social Sciences

# Capstone Course

<sup>A</sup> *Student Success Course: Students are required to complete EDUC 1300 within their first 12 semester credit hours of instruction. Students enrolling at HCC with 12 or more hours completed should consult with an academic advisor to select an appropriate course substitution.*

<sup>B</sup> *Math/Natural Science: May choose from – ANTH 2301 (with or without 2101 = lab), 2302, ASTR 1303, 1304, 1403, 1404, BIOL 1308, 1309, 1322, 1406, 1407, (2301, 2302 – restricted to Engineering, Science, and Health Sciences majors), CHEM 1305, 1405, 1411, 1412, COSC 1436, GEOG 1301, GEOL 1305, 1345, 1347, 1403, 1404, MATH 1314, 1316, 1324, 1325, 1332, 1342, 1350, 2318, 2320, 2412, 2413, 2414, 2415, PHYS 1305, 1401, 1402, 2325 (with or without 2125= lab), 2326 (with or without 2126 = lab), PSYC 2317.*

<sup>C</sup> *Humanities/Fine Arts: May choose from – ARTS 1301, 1303, 1304, COMM 2366, DANC 2303, DRAM 1310, 2316, 2366, ENGL 2322, 2323, 2327, 2328, 2332, 2333, 2342, 2343, 2351, HIST 1301, 1302, 2311, 2312, 2321, 2322, 2301, 2327, 2328, 2381, HUMA 1301, 1305, 1311, 2319, 2323, MUSI 1306, 1310, PHIL 1301, 1304, 2306, 2307, 2316, World Languages (ARAB 1411, 1412, CHIN 1411, 1412, FREN 1411, 1412, GERM 1411, 1412, JAPN 1411, 1412, KORE 1411, 1412, SPAN 1411, 1412).*

<sup>D</sup> *General Education: May choose from – ANTH 2301 (with or without 2101 = lab), 2302, 2346, 2351, ARTS 1301, 1303, 1304, ASTR 1303, 1304, 1403, 1404, BIOL 1308, 1309, 1322, 1406, 1407, (2301, 2302 – restricted to Engineering, Science, and Health Sciences majors), CHEM 1305, 1405, 1411, 1412, COMM 2366, COSC 1436, DANC 2303, DRAM 1310, 2316, 2366, ECON 1301, 2301, 2302, EDUC 1300, ENGL 2322, 2323, 2327, 2328, 2332, 2333, 2342, 2343, 2351, GEOG 1301, 1302, 1303, GEOL 1305, 1345, 1347, 1403, 1404, GOVT 2305, 2306, HIST 1301, 1302, 2311, 2312, 2321, 2322, 2301, 2327, 2328, 2381, HUMA 1301, 1305, 1311, 2319, 2323, MATH 1314, 1316, 1324, 1325, 1332, 1342, 1350, 2318, 2320, 2412, 2413, 2414, 2415, MUSI 1306, 1310, PHIL 1301, 1304, 2306, 2307, 2316, PHYS 1305, 1401, 1402, 2325 (with or without 2125 = lab), 2326 (with or without 2126 = lab), PSYC 2301, 2314, 2316, 2317, 2319, SOCI 1301, 1306, 2301, 2336, TECA 1354, World Languages (ARAB 1411, 1412, CHIN 1411, 1412, FREN 1411, 1412, GERM 1411, 1412, JAPN 1411, 1412, KORE 1411, 1412, SPAN 1411, 1412).*

## Sign Language- American Sign Language/ Deaf Studies

*Deactivation pending SACSCOC approval. Enrollment closed to new students.*

Students who are Deaf Education majors can earn a certificate in American Sign Language Studies. Courses taken at HCC Interpreter Training Program can transfer to any university in Texas that has a Deaf Education Program. Students wishing to complete an AAS in Interpreting/ Transliteration can apply to the program after successful passing of the mid-point exam.

### CERTIFICATE LEVEL II

*TSI testing is required prior to first enrollment.*

#### FIRST YEAR

First Semester		Credits
EDUC 1300	Learning Framework*	3
SGNL 1401	American Sign Language (ASL): Beginning I	4
SLNG 1317	Introduction to the Deaf Community	3
SLNG 1311	Fingerspelling and Numbers	3

**Semester Total 13**

SGNL 1402	American Sign Language (ASL): Beginning II	4
SLNG 1350	Sign-to-Voice	3
SPCH 1315	Public Speaking	3
ENGL 1301	Composition I	3

**Semester Total 13**

SGNL 2301	American Sign Language (ASL): Intermediate I	3
SLNG 1321	Introduction to the Interpreting Profession	3
PSYC 2301	Introduction to Psychology	3
SLNG 1248	Vocabulary Development for Interpreters	2

**Semester Total 11**

#### SECOND YEAR

First Semester		Credits
XXXX #3##	Math/Science General Education Elective	3
DRAM 1351	Acting I	3
SLNG 1307	Intra-lingual Skills Development For Interpreters	3
SGNL 2302	American Sign Language (ASL): Intermediate II**	3

**Semester Total 12**

**Program Total 49**

\*Student Success Course

\*\*Capstone

# Information Technology

**Computer Programming (11.0201, 11.0202)**  
**Computer Systems Networking & Telecommunications (11.0901)**  
**Digital Gaming & Simulation (10.0304)**  
**Geographic Information Science (45.0702)**

A Career Cluster is a grouping of occupations and broad industries based on commonalities. The Information Technology career cluster is concerned with providing knowledge and skills related to the design, development, support and management of hardware, software, multimedia, and systems integration services. This includes the following HCC programs: Computer Programming, Computer Systems Networking and Telecommunications, Digital Gaming and Simulation and Geographic Information Science. Students intending to transfer to a four-year university rather than entering the workforce should consult a counselor for an AA or AS transfer degree plan.

All new semester hour students, who have earned less than 12 semester hours of college level credit, are required to take a first-year student success course in their first term at HCC. Through research and experience, Houston Community College has determined that many life and career management skills are necessary for students to make the most of their college investment. A student success course is designed to prepare students for the demands of college and for success in the world of work. The course emphasizes setting priorities, time management, effective listening, note-taking, concentration techniques, and retention of information, book analysis, comprehension techniques, and test-taking skills. This course also incorporates units that are designed to facilitate the use of library databases in conducting research, planning and setting educational objectives, lifelong career assessment, decision-making, financial aid, tutoring, and student support services, enabling the student to maximize the use of college resources.

Every HCC Career and Technology Education program contains a “capstone,” an experience for the student to “put it all together.” The capstone is a learning experience resulting in a consolidation of a student’s educational experience and certifies mastery of entry level workplace competencies. The capstone experience must occur during the last semester of the student’s educational program. The capstone consists of an external learning experience or an advanced course especially designed to help students synthesize knowledge and skills or other licensure as appropriate.

## COMPUTER SCIENCE TECHNOLOGY

Houston Community College’s Computer Science Technology program offers Associate of Applied Science (AAS) degrees and certificates that help students develop the knowledge, communication and creative skills, critical thinking, and technical competencies required in the modern workplace.

### What kind of training will I need?

The program graduate will be able to secure entry-level work with a computer-related associate degree; other jobs require a bachelor’s degree in computer science or information systems. IT professionals can also demonstrate their skills and expertise through voluntary computer certification.

The Computer Science Technology Department at Houston Community College (HCC) has two distinct programs in the Career and Technical Education (CTE) field that offer Associate of Applied Science (AAS) degrees, certificates and Occupational Skills Awards (OSA):

- **Computer Systems Networking and Telecommunications**
- **Computer Programming (Applications Development)**

In addition, please note that a student may only earn one Occupational Skills Award (OSA) per academic year.

### Transfer Path to Four-Year Degree

The Associate of Science (AS) transfer degree is designed to prepare computer science majors for transfer to a four-year institution with junior standing. The AS degree provides transferring students 50-60 semester credits when admitted to a four-year institution. This transfer degree will satisfy some, but not all, of the general education requirements at the receiving institution.

Department website: <http://csci.hccs.edu>. Some courses are offered online.

Completing any of the above programs accomplishes the following objectives:

- Increases students’ value on the job;
- Earns the students’ credentials for proof of concentrated efforts;
- Helps explore a career or career change;

# Information Technology

- Updates and strengthens students' current computing knowledge and skills; and
- Helps students pursue a personal interest or hobby.

By graduation time, students will have learned to be good communicators, team players, and will have the skills to respond to the complexities of evolving hardware, software and integrated systems. Depending on the area of specialization graduates can work as:

- PC Support Specialists (Help Desk)
- Network Administrators (Microsoft, Linux)
- Programmers or Software testers
- Oracle Database Administrators
- Unified Communications Cisco Specialists
- Network Security Specialists

## Prerequisites

The curriculum is continually evolving to keep pace with the changing needs of business and technology. Students seeking a degree or certificate in computer science must be college ready. College ready simply means academically prepared to take ENGL 1301, Composition I and MATH 1314, College Algebra. Many professionals from industry may meet prerequisites through equivalent experience. Do not allow the lack of a prerequisite to hold you back. Make sure you contact the department chair or counselor.

## COMPUTER PROGRAMMING (APPLICATIONS DEVELOPMENT)

This option is best suited for persons who want to focus on software analysis, development, and implementation. It prepares Information Technology (IT) students and professionals in developing software products and services for industry and government through software analysis, design, and architecture; system verification; data storage and retrieval.

The Texas Higher Education Coordinating Board (THECB) allows students to earn only one AAS in Computer Programming-Applications Development. Students may choose from one of the following specializations: Microsoft C#, C++ or Java.

## Program Outcomes

Students will be able to:

- Understand the fundamental principles of programming, including those of algorithm analysis, software design, operating systems, and database.
- Design and write computer programs that are correct, simple, clear, efficient, well organized, and well documented.
- Know and be able to apply important data structures and algorithms.
- Identify the hardware and software aspects of computer systems that support application software development.
- Demonstrate knowledge of technology applicable to the field, and a proficiency in appropriate software.

For more information call 713.718.5294 or 713.718.5731 (SW) or 713.718.6457 (CE) or e-mail [csci@hccs.edu](mailto:csci@hccs.edu).

## Applications Development-Microsoft C# Specialization

The AAS in Applications Development-Microsoft C# Specialization prepares students with skills to produce high quality sustainable codes through all stages of a software life cycle: project planning and estimating, gathering requirements, functional specifications, use case tools, design specifications, coding, testing, integrating, and maintenance. Microsoft C# (C Sharp) is an object-oriented programming language developed by Microsoft as part of their .NET initiative.

## AAS

*TSI testing is required prior to first enrollment.*

### FIRST YEAR

First Semester		Credits
EDUC 1300	Learning Framework <sup>A</sup> .....	3
ENGL 1301	Composition I.....	3
MATH 1314	College Algebra.....	3
BCIS 1405	Business Computer Applications OR	
COSC 1401	Introduction to Computing.....	4
COSC 1436	Programming Fundamentals I (with C#).....	4
<b>Semester Total</b>		<b>17</b>

# Information Technology

## Second Semester Credits

MATH 1324	Mathematics for Business & Social Sciences	3
COSC 1437	Programming Fundamentals II (with C#)	4
ITSE 1346	Database Theory and Design OR	
ITSE 1345	Introduction to Oracle SQL	3
XXXX #3##	Humanities/Fine Arts Elective <sup>B</sup>	3

**Semester Total 13**

## Third Semester Credits

XXXX #3##	Social/Behavioral Sciences Elective <sup>C</sup>	3
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**Semester Total 3**

## SECOND YEAR

### First Semester Credits

ITSE 1456	Extensible Markup Language (XML)	4
ITSE 2402	Intermediate Web Programming OR	
ITSE 2471	Mobile Application Programming I	4
INEW 1340	ASP.NET Programming	3
XXXX #3##	Program Approved Business Elective <sup>D</sup>	3

**Semester Total 14**

### Second Semester Credits

XXXX #3##	General Education Elective <sup>E</sup>	3
ITSE 2453	Advanced C# Programming	4
ITSE 1380	Cooperative Education - Computer Programming/Programmer, General** OR	
INEW 2332	Comprehensive Software Project: Coding, Testing, and Implementation <sup>#</sup>	3
XXXX #3##	Program Approved Business Elective <sup>D</sup>	3

**Semester Total 13**

**Program Total 60**

<sup>#</sup> Capstone Course

<sup>A</sup> Student Success Course: Students are required to complete EDUC 1300 within their first 12 semester credit hours of instruction. Students enrolling at HCC with 12 or more hours completed should consult with an academic advisor to select an appropriate course substitution.

<sup>B</sup> Humanities/Fine Arts: May choose from – ARTS 1301, 1303, 1304, COMM 2366, DANC 2303, DRAM 1310, 2316, 2366, ENGL 2322, 2323, 2327, 2328, 2332, 2333, 2342, 2343, 2351, HIST 1301, 1302, 2311, 2312, 2321, 2322, 2301, 2327, 2328, 2381, HUMA 1301, 1305, 1311, 2319, 2323, MUSI 1306, 1310, PHIL 1301, 1304, 2306, 2307, 2316, World Languages (ARAB 1411, 1412, CHIN 1411, 1412, FREN 1411, 1412, GERM 1411, 1412, JAPN 1411, 1412, KORE 1411, 1412, SPAN 1411, 1412).

<sup>C</sup> Social/Behavioral Sciences: May choose from – ANTH 2346, 2351, ECON 1301, 2301, 2302, EDUC 1300, GEOG 1302, 1303, GOVT 2305, 2306, PSYC 2301, 2314, 2316, 2319, SOCI 1301, 1306, 2301, 2336, TECA 1354.

<sup>D</sup> Program Approved Business Electives: May choose from – ACCT 2301, 2302, BUSG 1301, 2305, 2317, BMGT 1301, 1303, 1325, ECON 1301, 2301, 2302, HRPO 1311, 2307.

<sup>E</sup> General Education: May choose from – ANTH 2301 (with or without 2101 = lab), 2302, 2346, 2351, ARTS 1301, 1303, 1304, ASTR 1303, 1304, 1403, 1404, BIOL 1308, 1309, 1322, 1406, 1407, (2301, 2302 – restricted to Engineering, Science,

and Health Sciences majors), CHEM 1305, 1405, 1411, 1412, COMM 2366, COSC 1436, DANC 2303, DRAM 1310, 2316, 2366, ECON 1301, 2301, 2302, EDUC 1300, ENGL 2322, 2323, 2327, 2328, 2332, 2333, 2342, 2343, 2351, GEOG 1301, 1302, 1303, GEOL 1305, 1345, 1347, 1403, 1404, GOVT 2305, 2306, HIST 1301, 1302, 2311, 2312, 2321, 2322, 2301, 2327, 2328, 2381, HUMA 1301, 1305, 1311, 2319, 2323, MATH 1314, 1316, 1324, 1325, 1332, 1342, 1350, 2318, 2320, 2412, 2413, 2414, 2415, MUSI 1306, 1310, PHIL 1301, 1304, 2306, 2307, 2316, PHYS 1305, 1401, 1402, 2325 (with or without 2125 = lab), 2326 (with or without 2126 = lab), PSYC 2301, 2314, 2316, 2317, 2319, SOCI 1301, 1306, 2301, 2336, TECA 1354, World Languages (ARAB 1411, 1412, CHIN 1411, 1412, FREN 1411, 1412, GERM 1411, 1412, JAPN 1411, 1412, KORE 1411, 1412, SPAN 1411, 1412).

## Applications Development-Microsoft C#-Certificate Level I

(Deactivation pending SACSCOC approval. Enrollment is closed to new students.)

The Microsoft C# Certificate (Level I) provides experienced information technology professionals (professionals who have been employed continuously in a job related to the award for at least two of the past four years prior to enrollment) the opportunity to enhance their skills and/or learn new skills related to the information technology field.

Students must have significant recent work experience (usually two years or more) coupled with appropriate entrance level educational backgrounds. Prerequisite courses may be needed to successfully complete the beginning course(s).

Students interested in applying should contact the Computer Science Technology department prior to starting classes.

## CERTIFICATE LEVEL I

### FIRST YEAR

#### First Semester Credits

COSC 1436	Programming Fundamentals I (with C#)	4
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**Semester Total 4**

#### Second Semester Credits

COSC 1437	Programming Fundamentals II (with C#)	4
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**Semester Total 4**

#### Third Semester Credits

INEW 1340	ASP.NET Programming	3
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ITSE 2453	Advanced C# Programming	4
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**Semester Total 7**

**Program Total 15**

# Information Technology

## Applications Development-Microsoft C++ Specialization

C++, a general purpose programming language, is designed to make programming more enjoyable for the serious programmer. Except for minor details, C++ is a superset of the C programming language. In addition to the facilities provided by C, C++ provides flexible and efficient facilities for defining new types. Programmers can partition an application into manageable pieces by defining new types that closely match the concepts of the application. This technique for program construction is often called data abstraction. Objects of some user-defined types contain type information. Such objects can be used conveniently and safely in contexts in which their type cannot be determined at compile time. Programs using objects of such types are often called object based. When used well, these techniques result in shorter, easier to understand, and easier to maintain programs.

The key concept in C++ is class. A class is a user-defined type. Classes provide data hiding, guaranteed initialization of data, implicit type conversion for user defined types, dynamic typing, user-controlled memory management, and mechanisms for overloading operators. C++ provides much better facilities for type checking and for expressing modularity than C does. It also contains improvements that are not directly related to classes, including symbolic constants, inline substitution of functions, default function arguments, overloaded function names, free store management operators, and a reference type. C++ retains C's ability to deal efficiently with the fundamental objects of the hardware (bits, bytes, words, addresses, etc.) This allows the user-defined types to be implemented with a pleasing degree of efficiency.

### AAS

*TSI testing is required prior to first enrollment.*

#### FIRST YEAR

First Semester		Credits
EDUC 1300	Learning Framework <sup>A</sup> .....	3
ENGL 1301	Composition I.....	3
MATH 1314	College Algebra.....	3
BCIS 1405	Business Computer Applications OR	
COSC 1401	Introduction to Computing.....	4
COSC 1436	Programming Fundamentals I (with C++).....	4
<b>Semester Total</b>		<b>17</b>

#### Second Semester Credits

MATH 1324	Mathematics for Business & Social Sciences.....	3
COSC 1437	Programming Fundamentals II - C++.....	4
ITSE 1346	Database Theory and Design OR	
ITSE 1345	Introduction to Oracle SQL.....	3
XXXX #3##	Humanities/Fines Arts Elective <sup>B</sup> .....	3

**Semester Total 13**

#### Third Semester Credits

XXXX #3##	Social/Behavioral Sciences Elective <sup>C</sup> .....	3
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**Semester Total 3**

#### SECOND YEAR

##### First Semester Credits

ITSE 1456	Extensible Markup Language.....	4
COSC 2425	Computer Organization and Machine Language.....	4
COSC 2436	Programming Fundamentals III - C++.....	4
XXXX #3##	Program Approved Business Elective <sup>D</sup> .....	3

**Semester Total 15**

##### Second Semester Credits

ITSE 2343	Advanced Mobile Programming.....	3
ITSE 1380	Cooperative Education - Computer Programming/Programmer, General** OR.....	
INEW 2332	Comprehensive Software Project: Coding, Testing, and Implementation**.....	3
XXXX #3##	General Education Elective <sup>E</sup> .....	3
XXXX #3##	Program Approved Business Elective <sup>D</sup> .....	3

**Semester Total 12**

**Program Total 60**

# Capstone Course

<sup>A</sup> Student Success Course: Students are required to complete EDUC 1300 within their first 12 semester credit hours of instruction. Students enrolling at HCC with 12 or more hours completed should consult with an academic advisor to select an appropriate course substitution.

<sup>B</sup> Humanities/Fine Arts: May choose from – ARTS 1301, 1303, 1304, COMM 2366, DANC 2303, DRAM 1310, 2316, 2366, ENGL 2322, 2323, 2327, 2328, 2332, 2333, 2342, 2343, 2351, HIST 1301, 1302, 2311, 2312, 2321, 2322, 2301, 2327, 2328, 2381, HUMA 1301, 1305, 1311, 2319, 2323, MUSI 1306, 1310, PHIL 1301, 1304, 2306, 2307, 2316, World Languages (ARAB 1411, 1412, CHIN 1411, 1412, FREN 1411, 1412, GERM 1411, 1412, JAPN 1411, 1412, KORE 1411, 1412, SPAN 1411, 1412).

<sup>C</sup> Social/Behavioral Sciences: May choose from – ANTH 2346, 2351, ECON 1301, 2301, 2302, EDUC 1300, GEOG 1302, 1303, GOVT 2305, 2306, PSYC 2301, 2314, 2316, 2319, SOCI 1301, 1306, 2301, 2336, TECA 1354.

<sup>D</sup> Program Approved Business Electives: May choose from – ACCT 2301, 2302, BUSG 1301, 2305, 2317, BMGT 1301, 1303, 1325, ECON 1301, 2301, 2302, HRPO 1311, 2307.

# Information Technology

<sup>E</sup> General Education: May choose from – ANTH 2301 (with or without 2101 = lab), 2302, 2346, 2351, ARTS 1301, 1303, 1304, ASTR 1303, 1304, 1403, 1404, BIOL 1308, 1309, 1322, 1406, 1407, (2301, 2302 – restricted to Engineering, Science, and Health Sciences majors), CHEM 1305, 1405, 1411, 1412, COMM 2366, COSC 1436, DANC 2303, DRAM 1310, 2316, 2366, ECON 1301, 2301, 2302, EDUC 1300, ENGL 2322, 2323, 2327, 2328, 2332, 2333, 2342, 2343, 2351, GEOG 1301, 1302, 1303, GEOL 1305, 1345, 1347, 1403, 1404, GOVT 2305, 2306, HIST 1301, 1302, 2311, 2312, 2321, 2322, 2301, 2327, 2328, 2381, HUMA 1301, 1305, 1311, 2319, 2323, MATH 1314, 1316, 1324, 1325, 1332, 1342, 1350, 2318, 2320, 2412, 2413, 2414, 2415, MUSI 1306, 1310, PHIL 1301, 1304, 2306, 2307, 2316, PHYS 1305, 1401, 1402, 2325 (with or without 2125 = lab), 2326 (with or without 2126 = lab), PSYC 2301, 2314, 2316, 2317, 2319, SOCI 1301, 1306, 2301, 2336, TECA 1354, World Languages (ARAB 1411, 1412, CHIN 1411, 1412, FREN 1411, 1412, GERM 1411, 1412, JAPN 1411, 1412, KORE 1411, 1412, SPAN 1411, 1412).

## Applications Development - Java Specialization

The AAS in Applications Development-Java Specialization prepares students with skills to produce high quality sustainable code through all stages of a software life cycle: project planning and estimating, gathering requirements, functional specifications, use case tools, design specifications, coding, testing, integrating, and maintenance. Java is a high-level object-oriented programming language and software development platform. Students learn Java to develop platform-independent applications that can run on a single computer or be distributed among servers and clients in a network. Java is also used to build small application modules (applets) for use on a web page.

### AAS

TSI testing is required prior to first enrollment.

#### FIRST YEAR

First Semester	Credits
EDUC 1300 Learning Framework <sup>A</sup> .....	3
ENGL 1301 Composition I .....	3
MATH 1314 College Algebra .....	3
BCIS 1405 Business Computer Applications .....	4
COSC 1436 Programming Fundamentals I (with Java) .....	4
<b>Semester Total</b>	<b>17</b>

Second Semester	Credits
MATH 1324 Mathematics for Business & Social Sciences .....	3
COSC 1437 Programming Fundamentals II (with Java) .....	4
ITSE 1346 Database Theory and Design OR	
ITSE 1345 Introduction to Oracle SQL .....	3
XXXX #2## Elective <sup>B</sup> .....	2
<b>Semester Total</b>	<b>12</b>

Third Semester	Credits
XXXX #3## Humanities/Fine Arts Elective <sup>C</sup> .....	3
<b>Semester Total</b>	<b>3</b>

#### SECOND YEAR

First Semester	Credits
ITSE 1456 Extensible Markup Language (XML) .....	4
COSC 2436 Programming Fundamentals III (with Java) .....	4
INEW 2434 Advanced Web Programming .....	4
XXXX #3## Program Approved Business Elective <sup>E</sup> .....	3
<b>Semester Total</b>	<b>15</b>

Second Semester	Credits
INEW 2438 Advanced Java Programming .....	4
XXXX #3## Social/Behavioral Sciences Elective <sup>D</sup> .....	3
ITSE 1380 Cooperative Education-Computer Programming # OR	
INEW 2332 Comprehensive Software Project: Coding, Testing, and Implementation # .....	3
XXXX #3## Program Approved Business Elective <sup>E</sup> .....	3
<b>Semester Total</b>	<b>13</b>
<b>Program Total</b>	<b>60</b>

# Capstone Course

<sup>A</sup> Student Success Course: Students are required to complete EDUC 1300 within their first 12 semester credit hours of instruction. Students enrolling at HCC with 12 or more hours completed should consult with an academic advisor to select an appropriate course substitution.

<sup>B</sup> Elective: May choose – Any course or combination of 1 hr courses to fulfill this requirement.

<sup>C</sup> Humanities/Fine Arts: May choose from – ARTS 1301, 1303, 1304, COMM 2366, DANC 2303, DRAM 1310, 2316, 2366, ENGL 2322, 2323, 2327, 2328, 2332, 2333, 2342, 2343, 2351, HIST 1301, 1302, 2311, 2312, 2321, 2322, 2301, 2327, 2328, 2381, HUMA 1301, 1305, 1311, 2319, 2323, MUSI 1306, 1310, PHIL 1301, 1304, 2306, 2307, 2316, World Languages (ARAB 1411, 1412, CHIN 1411, 1412, FREN 1411, 1412, GERM 1411, 1412, JAPN 1411, 1412, KORE 1411, 1412, SPAN 1411, 1412).

<sup>D</sup> Social/Behavioral Sciences: May choose from – ANTH 2346, 2351, ECON 1301, 2301, 2302, EDUC 1300, GEOG 1302, 1303, GOVT 2305, 2306, PSYC 2301, 2314, 2316, 2319, SOCI 1301, 1306, 2301, 2336, TECA 1354.

<sup>E</sup> Program Approved Business Electives: May choose from – ACCT 2301, 2302, BUSG 1301, 2305, 2317, BMGT 1301, 1303, 1325, ECON 1301, 2301, 2302, HRPO 1311, 2307.

# Information Technology

## Applications Development - Java

(Deactivation pending SACSCOC approval. Enrollment is closed to new students.)

### CERTIFICATE LEVEL I

#### FIRST YEAR

First Semester	Credits
COSC 1436 Programming Fundamentals I (with Java) .....	4
<b>Semester Total</b>	<b>4</b>

Second Semester	Credits
COSC 1437 Programming Fundamentals II (with Java) .....	4
<b>Semester Total</b>	<b>4</b>

Third Semester	Credits
INEW 2418 Web Programming Using Java Server Pages and Servlets .....	4
INEW 2438 Advanced Java Programming .....	4
<b>Semester Total</b>	<b>8</b>
<b>Program Total</b>	<b>16</b>

## Computer Programming - Database Administrator

The Database Administrator Certificate is designed to provide students the skills and knowledge required to administer database systems including installing, configuring, maintaining, troubleshooting, and optimizing the performance of database systems in the Oracle or MS SQL Server environments.

### CERTIFICATE LEVEL II

*TSI testing is required prior to first enrollment.*

#### FIRST YEAR

First Semester	Credits
EDUC 1300 Learning Framework <sup>A</sup> .....	3
ITSC 1309 Integrated Software Applications OR	
BCIS 1405 Business Computer Applications .....	3
COSC 1436 Programming Fundamentals I .....	4
MATH 1314 College Algebra .....	3
<b>Semester Total</b>	<b>13</b>

Second Semester	Credits
ITSC 1307 UNIX Operating System I OR	
ITMT 1370 Windows Client OS .....	3
ITSE 1345 Introduction to Oracle SQL .....	3
ITSE 1456 Extensible Markup Language (XML) .....	4
<b>Semester Total</b>	<b>10</b>

#### Third Semester

ITSE 2456 Oracle Database Administration I OR	
ITMT 2403 Administering a Microsoft SQL Server Database .....	4
<b>Semester Total</b>	<b>4</b>

#### SECOND YEAR

First Semester	Credits
ITSE 2458 Oracle Database Administration II <sup>#</sup> OR	
ITSE 2333 Implementing a Database on Microsoft SQL Server <sup>#</sup> .....	4
<b>Semester Total</b>	<b>4</b>
<b>Program Total</b>	<b>31</b>

<sup>#</sup> Capstone Course

<sup>A</sup> Student Success Course: Students are required to complete EDUC 1300 within their first 12 semester credit hours of instruction. Students enrolling at HCC with 12 or more hours completed should consult with an academic advisor to select an appropriate course substitution.

## Computer Programming - Mobile Application Developer

The Mobile Application Developer Certificate is designed to provide students the skills and knowledge required to design, develop, and deploy applications for one of the mobile devices platform (iOS, Android, or Windows Mobile) using current development tools and frameworks.

### CERTIFICATE LEVEL II

*TSI testing is required prior to first enrollment.*

#### FIRST YEAR

First Semester	Credits
EDUC 1300 Learning Framework <sup>A</sup> .....	3
ITSC 1309 Integrated Software Applications I OR	
BCIS 1405 Business Computer Applications .....	3
COSC 1436 Programming Fundamentals I .....	4
MATH 1314 College Algebra .....	3
<b>Semester Total</b>	<b>13</b>

Second Semester	Credits
COSC 1437 Programming Fundamentals II .....	4
ITSE 1346 Database Theory and Design OR	
ITSE 1345 Introduction to Oracle SQL .....	3
ITSE 2471 Mobile Application Programming I .....	4
<b>Semester Total</b>	<b>11</b>

# Information Technology

## SECOND YEAR

### First Semester

ITSE 2402	Intermediate Web Programming	4
ITSE 2472	Mobile Application Programming II #	4
<b>Semester Total</b>		<b>4</b>
<b>Program Total</b>		<b>32</b>

# Capstone Course

<sup>A</sup> Student Success Course: Students are required to complete EDUC 1300 within their first 12 semester credit hours of instruction. Students enrolling at HCC with 12 or more hours completed should consult with an academic advisor to select an appropriate course substitution.

## Computer Programming - Sharepoint Administrator

The SharePoint Administrator Certificate is designed to provide students the skills and knowledge required to assume the responsibilities of a SharePoint Administrator in an organization, including the ability to install, configure, and secure SharePoint enterprise server to support the organization's document management, file sharing, workflows, and collaborations needs.

### CERTIFICATE LEVEL II

TSI testing is required prior to first enrollment.

#### FIRST YEAR

##### First Semester

EDUC 1300	Learning Framework <sup>A</sup>	3
COSC 1436	Programming Fundamentals I	4
ITSC 1319	Internet/Web Page Development	3
MATH 1314	College Algebra	3
<b>Semester Total</b>		<b>13</b>

##### Second Semester

INEW 2475	SharePoint Administration I	4
ITSE 1346	Database Theory and Design OR	
ITSE 1345	Introduction to Oracle SQL	3
ITSE 2402	Intermediate Web Programming	4
<b>Semester Total</b>		<b>11</b>

## SECOND YEAR

### First Semester

INEW 1340	ASP.NET Programming	3
INEW 2476	SharePoint Administration II #	4
<b>Semester Total</b>		<b>7</b>
<b>Program Total</b>		<b>31</b>

# Capstone Course

<sup>A</sup> Student Success Course: Students are required to complete EDUC 1300 within their first 12 semester credit hours of instruction. Students enrolling at HCC with 12 or more hours completed should consult with an academic advisor to select an appropriate course substitution.

## Computer Programming - Web Application Developer

The Web Application Developer Certificate is designed to provide students the skills and knowledge required to use current web development tools and languages to develop websites with the functionalities and performance to meet requirements specifications.

### CERTIFICATE LEVEL II

TSI testing is required prior to first enrollment.

#### FIRST YEAR

##### First Semester

EDUC 1300	Learning Framework <sup>A</sup>	3
COSC 1436	Programming Fundamentals I	4
ITSC 1319	Internet/Web Page Development	3
MATH 1314	College Algebra	3
<b>Semester Total</b>		<b>13</b>

##### Second Semester

ITSE 2402	Intermediate Web Programming	4
COSC 1437	Programming Fundamentals II	4
ITSC 1309	Integrated Software Applications I OR	
BCIS 1405	Business Computer Applications	3
ITSC 1307	UNIX Operating System I OR	
ITMT 1370	Windows Client OS	3
<b>Semester Total</b>		<b>14</b>

## SECOND YEAR

### First Semester

ITSE 1346	Database Theory and Design # OR	
ITSE 1345	Introduction to Oracle SQL #	3
<b>Semester Total</b>		<b>3</b>
<b>Program Total</b>		<b>30</b>

# Capstone Course

<sup>A</sup> Student Success Course: Students are required to complete EDUC 1300 within their first 12 semester credit hours of instruction. Students enrolling at HCC with 12 or more hours completed should consult with an academic advisor to select an appropriate course substitution.

# Information Technology

## COMPUTER SYSTEMS NETWORKING AND TELECOMMUNICATIONS

Computer Systems Networking and Telecommunications is a growing field that will only get bigger as businesses embrace and rely on remote communications and wireless technology. A Networking Technology degree from HCC is a great way to get started in the Networking field.

The Networking program has five tracks to give students the specific knowledge and skills needed for today's job market:

- **Network and Computer Systems Administration (MCITP)**
- **Network Systems and Cyber Security**
- **Network Systems and Unified Communication (Cisco)**
- **Network and Computer Systems Help Desk**
- **Linux Server Administrator**

In addition, the Computer Systems Networking and Telecommunications offers the PC Support certificate and AAS degree and the UNIX Specialization AAS Degree.

### Program Outcomes

Students will be able to:

- Install and configure workstations, servers and networked printers;
- Install and configure internet working devices such as switches and routers;
- Install and configure a variety of network operating systems and provide for interoperability between them;
- Administer an organization's computer network infrastructure;
- Understand network security issues and use appropriate tools to insure network integrity;
- Understand fundamental networking theory, terminology, and industry recognized standards; and
- Use appropriate library and information resources to research network management issues and tools and support lifelong technical learning.

## Computer Systems Networking - Information Technology Core

### CERTIFICATE LEVEL I

#### FIRST YEAR

##### First Semester

	<b>Credits</b>
ITSC 1301 Introduction to Computers.....	3
ITSC 1425 Personal Computer Hardware .....	4
ITSC 1321 Intermediate PC Operating Systems .....	3

**Semester Total 10**

##### Second Semester

	<b>Credits</b>
ITNW 1425 Fundamentals of Networking Technologies .....	4
ITNW 1313 Computer Virtualization.....	3
ITSY 1342 Information Technology Security.....	3
ITSC 2339 Personal Computer Help Desk Support # .....	3

**Semester Total 13**

**Program Total 23**

# *Capstone Course*

## Computer Systems Networking - Microsoft Server Administration

A server administrator is responsible for the operations and day-to-day management of an infrastructure of servers for an enterprise organization. Windows server administrators manage the infrastructure, Web and IT application servers. The Windows server administrators use scripts and batch files written by others or those that they occasionally write themselves to accomplish tasks on a regular basis. They conduct most server management tasks remotely by using Terminal Server or administration tools installed on their local workstation.

A server administrator's primary tasks include:

- Managing the server operating system, file, and directory services;
- Software distribution and updates;
- Profiling and monitoring assigned servers; and
- Troubleshooting.

# Information Technology

## AAS

TSI testing is required prior to first enrollment.

### FIRST YEAR

<b>First Semester</b>		<b>Credits</b>
EDUC 1300	Learning Framework <sup>A</sup> .....	3
ITSC 1309	Integrated Software Applications I OR.....	3
BCIS 1405	Computer Business Applications	
MATH 1314	College Algebra.....	3
ITSC 1425	Personal Computer Hardware.....	4
ITMT 1370	Windows Client Operating System.....	3
<b>Semester Total</b>		<b>16</b>

<b>Second Semester</b>		<b>Credits</b>
ENGL 1301	Composition I.....	3
ITSY 1342	Information Technology Security.....	3
ITMT 2371	Installing and Configuring Windows Server 2012.....	3
ITNW 1425	Fundamentals of Networking Technologies OR	
ITCC 1414	CCNA 1: Introduction to Networks.....	4
<b>Semester Total</b>		<b>13</b>

<b>Third Semester</b>		<b>Credits</b>
SPCH #3##	SPCH Elective, SPCH 1311, 1321 or 1315.....	3
ITSC 1319	Internet/Web Page Development.....	3
<b>Semester Total</b>		<b>6</b>

### SECOND YEAR

<b>First Semester</b>		<b>Credits</b>
XXXX #3##	Social/Behavioral Sciences Elective <sup>C</sup> .....	3
ITNW 1313	Computer Virtualization.....	3
ITMT 2372	Administering Windows Server 2012.....	3
COSC 1436	Programming Fundamentals I.....	4
<b>Semester Total</b>		<b>13</b>

<b>Second Semester</b>		<b>Credits</b>
XXXX #3##	Humanities/Fine Arts Elective <sup>B</sup> .....	3
ITMT 2373	Configuring Advanced Windows Server 2012.....	3
ITSY 2330	Intrusion Detection.....	3
ITNW 1380	Cooperative Education - Computer Systems Networking and Telecommunications <sup>#</sup> OR.....	
ITNW 2335	Network Troubleshooting and Support <sup>#</sup> .....	3
<b>Semester Total</b>		<b>12</b>
<b>Program Total</b>		<b>60</b>

# Capstone Course

<sup>A</sup> Student Success Course: Students are required to complete EDUC 1300 within their first 12 semester credit hours of instruction. Students enrolling at HCC with 12 or more hours completed should consult with an academic advisor to select an appropriate course substitution.

<sup>B</sup> Humanities/Fine Arts: May choose from – ARTS 1301, 1303,

1304, COMM 2366, DANC 2303, DRAM 1310, 2316, 2366, ENGL 2322, 2323, 2327, 2328, 2332, 2333, 2342, 2343, 2351, HIST 1301, 1302, 2311, 2312, 2321, 2322, 2301, 2327, 2328, 2381, HUMA 1301, 1305, 1311, 2319, 2323, MUSI 1306, 1310, PHIL 1301, 1304, 2306, 2307, 2316, World Languages (ARAB 1411, 1412, CHIN 1411, 1412, FREN 1411, 1412, GERM 1411, 1412, JAPN 1411, 1412, KORE 1411, 1412, SPAN 1411, 1412).

<sup>C</sup> Social/Behavioral Sciences: May choose from – ANTH 2346, 2351, ECON 1301, 2301, 2302, EDUC 1300, GEOG 1302, 1303, GOVT 2305, 2306, PSYC 2301, 2314, 2316, 2319, SOCI 1301, 1306, 2301, 2336, TECA 1354.

## Computer Systems Networking- Microsoft Server Administration

The Microsoft Server Administration Certificates Level I and Level II provide experienced IT professionals interested in enhancing their skills to take a few courses in specialized areas of Software Development or Networking to receive an HCC Certificate. The courses prepare individuals to take vendor certification exams for CCNA and MCITP in Security and Computer programming. For further information, contact the department @ 713.718.6776.

### CERTIFICATE LEVEL II

<b>First Semester</b>		<b>Credits</b>
EDUC 1300	Learning Framework <sup>A</sup> .....	3
ITNW 1358	Network+ OR	
ITNW 1425	Fundamentals of Networking Technologies OR	
ITCC 1414	CCNA 1: Introduction to Networks.....	4
ITMT 1370	Windows Client Operating System.....	3
<b>Semester Total</b>		<b>9</b>

<b>Second Semester</b>		<b>Credits</b>
ITMT 2371	Installing and Configuring Windows Server 2012.....	3
ITSY 1342	Information Technology Security.....	3
ITSC 1425	Personal Computer Hardware.....	4
<b>Semester Total</b>		<b>10</b>

<b>Third Semester</b>		<b>Credits</b>
ITSC 1319	Internet/Web Page Development.....	3
<b>Semester Total</b>		<b>3</b>

### SECOND YEAR

<b>First Semester</b>		<b>Credits</b>
ITNW 1313	Computer Virtualization.....	3
ITSY 2330	Intrusion Detection.....	3
ITMT 2372	Administering Windows Server 2012 <sup>#</sup> .....	3
<b>Semester Total</b>		<b>9</b>
<b>Program Total</b>		<b>31</b>

# Capstone Course

# Information Technology

<sup>A</sup> *Student Success Course: Students are required to complete EDUC 1300 within their first 12 semester credit hours of instruction. Students enrolling at HCC with 12 or more hours completed should consult with an academic advisor to select an appropriate course substitution.*

## CERTIFICATE LEVEL I

<b>First Semester</b>			<b>Credits</b>
ITNW	1358	Network+ OR	
ITNW	1425	Fundamentals of Networking Technologies OR	
ITCC	1414	CCNA 1: Introduction to Networks .....	4
ITMT	1370	Windows Client Operating System .....	3
ITSC	1309	Integrated Software Applications I OR	
BCIS	1405	Computer Business Applications .....	3
<b>Semester Total</b>			<b>9</b>
<b>Second Semester</b>			<b>Credits</b>
ITMT	2371	Installing and Configuring Windows Server 2012 <sup>#</sup> .....	3
ITSY	1342	Information Technology Security .....	3
ITSC	1425	Personal Computer Hardware .....	4
<b>Semester Total</b>			<b>10</b>
<b>Program Total</b>			<b>19</b>

<sup>#</sup> *Capstone Course*

## Computer Systems Networking - Cyber Security - AAS

The goal of the Network Systems and Cyber Security is to train and educate students in the various technical areas associated with Computer Network Operations that encompasses Computer Network Defense, Computer Network Exploitation, and Computer Network Attacks.

Students will be able to:

- Understand the security fundamentals required to help safeguard computer networks;
- Implement wireless network security protections;
- Identify and counteract attacks on workstations, servers, and other networking devices;
- Identify vulnerabilities, discuss their resolutions, and generate vulnerability reports
- Install and utilize various security industry accepted tools.
- Install and configure firewalls and Virtual Private Networks.

## AAS

*TSI testing is required prior to first enrollment.*

### FIRST YEAR

<b>First Semester</b>			<b>Credits</b>
EDUC	1300	Learning Framework <sup>A</sup> .....	3
ENGL	1301	Composition I .....	3
MATH	1314	College Algebra .....	3
ITSC	1309	Integrated Software Applications I OR .....	3
BCIS	1405	Computer Business Applications .....	4
ITSC	1316	Linux Installation and Configuration OR	
ITSC	1307	UNIX Operating System I OR	
ITMT	1370	Windows Client Operating System .....	3
<b>Semester Total</b>			<b>15</b>

<b>Second Semester</b>			<b>Credits</b>
ITNW	1358	Network+ OR .....	3
ITNW	1425	Fundamentals of Networking Technologies OR	
ITCC	1414	CCNA 1: Introduction to Networks .....	4
ITSC	1458	UNIX System Administration I .....	4
ITSY	1342	Information Technology Security .....	3
ITSC	1319	Internet/Web Page Development .....	3
<b>Semester Total</b>			<b>13</b>

<b>Third Semester</b>			<b>Credits</b>
ITNW	1313	Computer Virtualization .....	3
XXXX	#3##	Humanities/Fine Arts Elective <sup>B</sup> .....	3
<b>Semester Total</b>			<b>6</b>

### SECOND YEAR

<b>First Semester</b>			<b>Credit</b>
XXXX	#3##	Social/Behavioral Sciences Elective <sup>C</sup> .....	3
ITSY	2330	Intrusion Detection .....	3
ITSY	2401	Firewalls and Network Security .....	4
ITMT	2371	Installing and Configuring Windows Server 2012 .....	3
<b>Semester Total</b>			<b>13</b>

<b>Second Semester</b>			<b>Credits</b>
XXXX	#3##	General Education Elective <sup>D</sup> .....	3
ITMT	2372	Administering Windows Server 2012 .....	3
ITNW	1380	Cooperative Education - Computer Systems Networking and Telecommunications <sup>#</sup> OR .....	
ITNW	2335	Network Troubleshooting and Support <sup>#</sup> .....	3
ITSY	2443	Computer System Forensics .....	4
<b>Semester Total</b>			<b>13</b>
<b>Program Total</b>			<b>60</b>

<sup>#</sup> *Capstone Course*

<sup>A</sup> *Student Success Course: Students are required to complete EDUC 1300 within their first 12 semester credit hours of instruction. Students enrolling at HCC with 12 or more hours completed should consult with an academic advisor to select an appropriate course substitution.*

# Information Technology

<sup>B</sup> Humanities/Fine Arts: May choose from – ARTS 1301, 1303, 1304, COMM 2366, DANC 2303, DRAM 1310, 2316, 2366, ENGL 2322, 2323, 2327, 2328, 2332, 2333, 2342, 2343, 2351, HIST 1301, 1302, 2311, 2312, 2321, 2322, 2301, 2327, 2328, 2381, HUMA 1301, 1305, 1311, 2319, 2323, MUSI 1306, 1310, PHIL 1301, 1304, 2306, 2307, 2316, World Languages (ARAB 1411, 1412, CHIN 1411, 1412, FREN 1411, 1412, GERM 1411, 1412, JAPN 1411, 1412, KORE 1411, 1412, SPAN 1411, 1412).

<sup>C</sup> Social/Behavioral Sciences: May choose from – ANTH 2346, 2351, ECON 1301, 2301, 2302, EDUC 1300, GEOG 1302, 1303, GOVT 2305, 2306, PSYC 2301, 2314, 2316, 2319, SOCI 1301, 1306, 2301, 2336, TECA 1354.

<sup>D</sup> General Education: May choose from – ANTH 2301 (with or without 2101 = lab), 2302, 2346, 2351, ARTS 1301, 1303, 1304, ASTR 1303, 1304, 1403, 1404, BIOL 1308, 1309, 1322, 1406, 1407, (2301, 2302 – restricted to Engineering, Science, and Health Sciences majors), CHEM 1305, 1405, 1411, 1412, COMM 2366, COSC 1436, DANC 2303, DRAM 1310, 2316, 2366, ECON 1301, 2301, 2302, EDUC 1300, ENGL 2322, 2323, 2327, 2328, 2332, 2333, 2342, 2343, 2351, GEOG 1301, 1302, 1303, GEOL 1305, 1345, 1347, 1403, 1404, GOVT 2305, 2306, HIST 1301, 1302, 2311, 2312, 2321, 2322, 2301, 2327, 2328, 2381, HUMA 1301, 1305, 1311, 2319, 2323, MATH 1314, 1316, 1324, 1325, 1332, 1342, 1350, 2318, 2320, 2412, 2413, 2414, 2415, MUSI 1306, 1310, PHIL 1301, 1304, 2306, 2307, 2316, PHYS 1305, 1401, 1402, 2325 (with or without 2125 = lab), 2326 (with or without 2126 = lab), PSYC 2301, 2314, 2316, 2317, 2319, SOCI 1301, 1306, 2301, 2336, TECA 1354, World Languages (ARAB 1411, 1412, CHIN 1411, 1412, FREN 1411, 1412, GERM 1411, 1412, JAPN 1411, 1412, KORE 1411, 1412, SPAN 1411, 1412).

## Computer Systems Networking - Cyber Security Certificates

The Network Systems and Cyber Security Certificates Level I and Level II are designed to help students learn the basics of Networking and Telecommunications. The courses taken in these certificates apply toward the AAS degree in Network Systems and Cyber Security. For further information, contact the department @ 713.718.6776.

### CERTIFICATE LEVEL II

<b>First Semester</b>		<b>Credits</b>
EDUC 1300	Learning Framework <sup>A</sup>	3
ITSC 1301	Introduction to Computers	3
ITCC 1414	CCNA 1: Introduction to Networks <sup>B</sup>	4
<b>Semester Total</b>		<b>10</b>
<b>Second Semester</b>		<b>Credits</b>
ITSY 1342	Information Technology Security	3
ITSC 1321	Intermediate PC Operating Systems	3
ITNW 1313	Computer Virtualization	3
<b>Semester Total</b>		<b>9</b>

<b>Third Semester</b>		<b>Credits</b>
ITSC 1307	UNIX Operating System I	3
<b>Semester Total</b>		<b>3</b>

### SECOND YEAR

<b>First Semester</b>		<b>Credit</b>
ITSY 2401	Firewalls and Network Security	4
ITSY 2330	Intrusion Detection	3
<b>Semester Total</b>		<b>7</b>

<b>Second Semester</b>		<b>Credits</b>
ITSC 1458	UNIX System Administration I	4
ITSY 2345	Network Defense and Countermeasures #	3
<b>Semester Total</b>		<b>7</b>
<b>Program Total</b>		<b>36</b>

# Capstone Course

<sup>A</sup> Student Success Course: Students are required to complete EDUC 1300 within their first 12 semester credit hours of instruction. Students enrolling at HCC with 12 or more hours completed should consult with an academic advisor to select an appropriate course substitution.

<sup>B</sup> Students may sub ITCC 1414 with: ITNW 1425 Fundamentals of Networking Technologies.

### CERTIFICATE LEVEL I

<b>First Semester</b>		<b>Credits</b>
ITSC 1301	Introduction to Computers	3
ITNW 1425	Fundamentals of Networking Technologies	4
<b>Semester Total</b>		<b>7</b>

<b>Second Semester</b>		<b>Credits</b>
ITSY 1342	Information Technology Security #	3
ITSC 1321	Intermediate PC Operating Systems	3
ITNW 1313	Computer Virtualization	3
<b>Semester Total</b>		<b>9</b>
<b>Program Total</b>		<b>16</b>

# Capstone Course

## Computer Systems Networking - Cisco Specialization

The AAS in Computer Systems Networking - Cisco Specialization encompasses several communication systems or models including the handling of voice, fax, and regular text messages as objects in a single mailbox that a user can access either with a regular e-mail client or by telephone collaboration, and interaction systems; real-time and near real-time communications; and transactional applications.

# Information Technology

Students will be able to:

- Help employees access and share video on the desktop, on the road, and on-demand, as easily as making a phone call;
- Facilitate better team interactions, dynamically bringing together individuals, virtual workgroups, and teams; and
- Make mobile devices extensions of the corporate network so mobile workers can be productive anywhere.

## AAS

*TSI testing is required prior to first enrollment.*

### FIRST YEAR

First Semester		Credits
EDUC 1300	Learning Framework <sup>A</sup>	3
ENGL 1301	Composition I	3
MATH 1314	College Algebra	3
ITSC 1309	Integrated Software Applications I OR	
BCIS 1405	Computer Business Applications	3
ITSC 1316	Linux Installation and Configuration OR	
ITSC 1307	UNIX Operating System I OR	
ITMT 1370	Windows Client Operating System	3
<b>Semester Total</b>		<b>15</b>

Second Semester		Credits
ITSC 1319	Internet/Web Page Development	3
ITSC 1425	Personal Computer Hardware	4
ITCC 1414	CCNA 1: Introduction to Networks	4
ITSY 1342	Information Technology Security	3
<b>Semester Total</b>		<b>14</b>

Third Semester		Credits
ITCC 1440	CCNA 2: Routing and Switching Essentials	4
XXXX #3##	Humanities/Fine Arts Elective <sup>B</sup>	3
<b>Semester Total</b>		<b>7</b>

### SECOND YEAR

First Semester		Credit
XXXX #3##	Social/Behavioral Sciences Elective <sup>C</sup>	3
ITCC 2412	CCNA 3: Scaling Networks	4
XXXX #3##	General Education Elective <sup>D</sup>	3
ITSC 1358	UNIX System Administration I	3
<b>Semester Total</b>		<b>13</b>

Second Semester		Credits
ITCC 2441	CCNA Security	4
ITCC 2413	CCNA 4: Connecting Networks	4
ITNW 1380	Cooperative Education - Computer Systems Networking and Telecommunications <sup>#</sup> OR	
ITNW 2335	Network Troubleshooting and Support <sup>#</sup>	3
<b>Semester Total</b>		<b>11</b>
<b>Program Total</b>		<b>60</b>

<sup>#</sup> Capstone Course

<sup>A</sup> Student Success Course: Students are required to complete EDUC 1300 within their first 12 semester credit hours of instruction. Students enrolling at HCC with 12 or more hours completed should consult with an academic advisor to select an appropriate course substitution.

<sup>B</sup> Humanities/Fine Arts: May choose from – ARTS 1301, 1303, 1304, COMM 2366, DANC 2303, DRAM 1310, 2316, 2366, ENGL 2322, 2323, 2327, 2328, 2332, 2333, 2342, 2343, 2351, HIST 1301, 1302, 2311, 2312, 2321, 2322, 2301, 2327, 2328, 2381, HUMA 1301, 1305, 1311, 2319, 2323, MUSI 1306, 1310, PHIL 1301, 1304, 2306, 2307, 2316, World Languages (ARAB 1411, 1412, CHIN 1411, 1412, FREN 1411, 1412, GERM 1411, 1412, JAPN 1411, 1412, KORE 1411, 1412, SPAN 1411, 1412).

<sup>C</sup> Social/Behavioral Sciences: May choose from – ANTH 2346, 2351, ECON 1301, 2301, 2302, EDUC 1300, GEOG 1302, 1303, GOVT 2305, 2306, PSYC 2301, 2314, 2316, 2319, SOCI 1301, 1306, 2301, 2336, TECA 1354.

<sup>D</sup> General Education: May choose from – ANTH 2301 (with or without 2101 = lab), 2302, 2346, 2351, ARTS 1301, 1303, 1304, ASTR 1303, 1304, 1403, 1404, BIOL 1308, 1309, 1322, 1406, 1407, (2301, 2302 – restricted to Engineering, Science, and Health Sciences majors), CHEM 1305, 1405, 1411, 1412, COMM 2366, COSC 1436, DANC 2303, DRAM 1310, 2316, 2366, ECON 1301, 2301, 2302, EDUC 1300, ENGL 2322, 2323, 2327, 2328, 2332, 2333, 2342, 2343, 2351, GEOG 1301, 1302, 1303, GEOL 1305, 1345, 1347, 1403, 1404, GOVT 2305, 2306, HIST 1301, 1302, 2311, 2312, 2321, 2322, 2301, 2327, 2328, 2381, HUMA 1301, 1305, 1311, 2319, 2323, MATH 1314, 1316, 1324, 1325, 1332, 1342, 1350, 2318, 2320, 2412, 2413, 2414, 2415, MUSI 1306, 1310, PHIL 1301, 1304, 2306, 2307, 2316, PHYS 1305, 1401, 1402, 2325 (with or without 2125 = lab), 2326 (with or without 2126 = lab), PSYC 2301, 2314, 2316, 2317, 2319, SOCI 1301, 1306, 2301, 2336, TECA 1354, World Languages (ARAB 1411, 1412, CHIN 1411, 1412, FREN 1411, 1412, GERM 1411, 1412, JAPN 1411, 1412, KORE 1411, 1412, SPAN 1411, 1412).

# Information Technology

## Computer Systems Networking - Certified Cisco Network Professional

The Network and Computer Systems Administration Level I Certificate provides experienced IT professionals interested in enhancing their skills to take few courses in specialized areas of Software Development or Networking to receive an HCC Certificate. The courses prepare individuals to take vendor certification exams for CCNA, CCNP, and MCITP in Security and Computer programming. For further information, contact the department @ 713.718.6776.

### CERTIFICATE LEVEL I

First Semester		Credits
ITCC 1414	CCNA 1: Introduction to Networks	4
<b>Semester Total</b>		<b>4</b>

Second Semester		Credits
ITCC 1440	CCNA 2: Routing and Switching Essentials	4
ITCC 2412	CCNA 3: Scaling Networks	4
<b>Semester Total</b>		<b>8</b>

Third Semester		Credits
ITCC 2413	CCNA 4: Connecting Networks	4
<b>Semester Total</b>		<b>4</b>

### SECOND YEAR

First Semester		Credits
ITCC 2454	CCNP Routing-Implementing IP Routing	4
ITCC 2455	CCNP Switch-Implementing IP Switching	4
<b>Semester Total</b>		<b>8</b>

Second Semester		Credits
ITCC 2456	CCNP TSHOOT-Maintaining and Trouble-shooting IP Networks #	4
ITSC 1307	UNIX Operating System I	3
<b>Semester Total</b>		<b>7</b>
<b>Program Total</b>		<b>31</b>

# Capstone Course

## Computer Systems Networking - Certified Cisco Network Associate

### CERTIFICATE LEVEL I

First Semester		Credits
ITCC 1414	CCNA 1: Introduction to Networks	4
<b>Semester Total</b>		<b>4</b>

Second Semester		Credits
ITCC 1440	CCNA 2: Routing and Switching Essentials	4
ITCC 2412	CCNA 3: Scaling Networks	4
<b>Semester Total</b>		<b>8</b>

Third Semester		Credits
ITCC 2413	CCNA 4: Connecting Networks #	4
<b>Semester Total</b>		<b>4</b>
<b>Program Total</b>		<b>16</b>

# Capstone Course

## Computer Systems Networking - Help Desk

Computer support specialists provide help and advice to people and organizations using computer software or equipment. Some, called computer network support specialists, support information technology (IT) employees within their organization. Others, called computer user support specialists, assist non-IT users who are having computer problems.

Help-desk technicians may solve a range of problems that vary with the industry and the particular firm. Some technicians work for large software companies or for support service firms and must give instructions to business customers on how to use complex programs. Sometimes they work with other technicians to resolve a problem.

### AAS

*TSI testing is required prior to first enrollment.*

### FIRST YEAR

First Semester		Credits
EDUC 1300	Learning Framework <sup>A</sup>	3
ENGL 1301	Composition I	3
MATH 1314	College Algebra	3
ITNW 1425	Fundamentals of Networking Technologies	4
<b>Semester Total</b>		<b>13</b>

Second Semester		Credits
XXXX #3##	Social/Behavioral Sciences Elective <sup>C</sup>	3
ITNW 1492	Special Topics in Computer Systems Networking and Telecommunications	4
ITSC 2339	Personal Computer Help Desk Support	3
XXXX #3##	Humanities/Fine Arts Elective <sup>B</sup>	3
ITNW 1308	Implementing and Supporting Client Operating Systems	3
<b>Semester Total</b>		<b>16</b>

# Information Technology

<b>Third Semester</b>		<b>Credits</b>
ITSY 1342	Information Technology Security.....	3
ITSC 1307	UNIX Operating System I.....	3
<b>Semester Total</b>		<b>6</b>

## SECOND YEAR

<b>First Semester</b>		<b>Credits</b>
XXXX #3##	General Education Elective <sup>D</sup> .....	3
ITSC 1319	Internet/Web Page Development .....	3
ITMT 2302	Windows Server 2008 Active Directory Configuration .....	3
ITSC 1358	UNIX System Administration I.....	3
<b>Semester Total</b>		<b>12</b>

<b>Second Semester</b>		<b>Credits</b>
ITNW 1313	Computer Virtualization.....	3
ITNW 1392	Special Topics in Computer Systems Networking and Telecommunications .....	3
ITMT 2301	Windows Server 2008 Network Infrastructure Configuration #.....	3
ITSC 1447	UNIX System Administration II.....	4
<b>Semester Total</b>		<b>13</b>
<b>Program Total</b>		<b>60</b>

# Capstone Course

<sup>A</sup> Student Success Course: Students are required to complete EDUC 1300 within their first 12 semester credit hours of instruction. Students enrolling at HCC with 12 or more hours completed should consult with an academic advisor to select an appropriate course substitution.

<sup>B</sup> Humanities/Fine Arts: May choose from – ARTS 1301, 1303, 1304, COMM 2366, DANC 2303, DRAM 1310, 2316, 2366, ENGL 2322, 2323, 2327, 2328, 2332, 2333, 2342, 2343, 2351, HIST 1301, 1302, 2311, 2312, 2321, 2322, 2301, 2327, 2328, 2381, HUMA 1301, 1305, 1311, 2319, 2323, MUSI 1306, 1310, PHIL 1301, 1304, 2306, 2307, 2316, World Languages (ARAB 1411, 1412, CHIN 1411, 1412, FREN 1411, 1412, GERM 1411, 1412, JAPN 1411, 1412, KORE 1411, 1412, SPAN 1411, 1412).

<sup>C</sup> Social/Behavioral Sciences: May choose from – ANTH 2346, 2351, ECON 1301, 2301, 2302, EDUC 1300, GEOG 1302, 1303, GOVT 2305, 2306, PSYC 2301, 2314, 2316, 2319, SOCI 1301, 1306, 2301, 2336, TECA 1354.

<sup>D</sup> General Education: May choose from – ANTH 2301 (with or without 2101 = lab), 2302, 2346, 2351, ARTS 1301, 1303, 1304, ASTR 1303, 1304, 1403, 1404, BIOL 1308, 1309, 1322, 1406, 1407, (2301, 2302 – restricted to Engineering, Science, and Health Sciences majors), CHEM 1305, 1405, 1411, 1412, COMM 2366, COSC 1436, DANC 2303, DRAM 1310, 2316, 2366, ECON 1301, 2301, 2302, EDUC 1300, ENGL 2322, 2323, 2327, 2328, 2332, 2333, 2342, 2343, 2351, GEOG 1301, 1302, 1303, GEOL 1305, 1345, 1347, 1403, 1404, GOVT 2305, 2306, HIST 1301, 1302, 2311, 2312, 2321, 2322, 2301, 2327, 2328, 2381, HUMA 1301, 1305, 1311, 2319, 2323, MATH 1314, 1316, 1324, 1325, 1332, 1342, 1350, 2318, 2320, 2412, 2413, 2414, 2415, MUSI 1306, 1310, PHIL 1301, 1304, 2306, 2307, 2316, PHYS 1305, 1401, 1402, 2325 (with or without 2125 = lab),

2326 (with or without 2126 = lab), PSYC 2301, 2314, 2316, 2317, 2319, SOCI 1301, 1306, 2301, 2336, TECA 1354, World Languages (ARAB 1411, 1412, CHIN 1411, 1412, FREN 1411, 1412, GERM 1411, 1412, JAPN 1411, 1412, KORE 1411, 1412, SPAN 1411, 1412).

## Computer Systems Networking - Help Desk

### CERTIFICATE LEVEL II

#### FIRST YEAR

<b>First Semester</b>		<b>Credits</b>
EDUC 1300	Learning Framework <sup>A</sup> .....	3
ITNW 1313	Computer Virtualization.....	3
ITNW 1358	Network+.....	3
ITNW 1308	Implementing and Supporting Client Operating Systems .....	3
<b>Semester Total</b>		<b>12</b>

<b>Second Semester</b>		<b>Credits</b>
ITSC 1307	UNIX Operating System I.....	3
ITSY 1342	Information Technology Security.....	3
ITMT 2302	Windows Server 2008 Active Directory Configuration .....	3
<b>Semester Total</b>		<b>9</b>

#### SECOND YEAR

<b>First Semester</b>		<b>Credits</b>
ITSC 1358	UNIX System Administration I.....	3
ITSC 1447	UNIX System Administration II **.....	4
ITMT #3##	Computer Systems and Networking Elective.....	3
<b>Semester Total</b>		<b>10</b>
<b>Program Total</b>		<b>31</b>

# Capstone Course

<sup>A</sup> Student Success Course: Students are required to complete EDUC 1300 within their first 12 semester credit hours of instruction. Students enrolling at HCC with 12 or more hours completed should consult with an academic advisor to select an appropriate course substitution.

# Information Technology

## Computer Systems Networking - Help Desk

### CERTIFICATE LEVEL I

#### FIRST YEAR

<b>First Semester</b>		<b>Credits</b>
ITSC 1307	UNIX Operating System I.....	3
ITNW 1358	Network+.....	3
ITNW 1308	Implementing and Supporting Client Operating Systems .....	3
<b>Semester Total</b>		<b>9</b>

<b>Second Semester</b>		<b>Credits</b>
ITMT 2302	Windows Server 2008 Active Directory Configuration .....	3
ITSY 1342	Information Technology Security.....	3
ITSC 1358	UNIX System Administration I #.....	3
ITNW 1313	Computer Virtualization.....	3
<b>Semester Total</b>		<b>12</b>
<b>Program Total</b>		<b>21</b>

# Capstone Course

## Linux Server Administrator

A Linux system administrator is responsible for maintaining the continued operational status of the Linux-based computers or networks. In some organizations, Linux powers the company's web and file servers. As part of the information technology department, Linux system administrators work closely with many different elements within the department. Duties include making adjustments on every level of the operating system and controlling the day-to-day functions of the entire network.

### AAS

TSI testing is required prior to first enrollment.

#### FIRST YEAR

<b>First Semester</b>		<b>Credits</b>
EDUC 1300	Learning Framework <sup>A</sup> .....	3
ITSC 1309	Integrated Software Applications I OR.....	3
BCIS 1405	Computer Business Applications .....	3
MATH 1314	College Algebra.....	3
ITSC 1316	Linux Installation and Configuration OR.....	3
ITSC 1307	UNIX Operating System I.....	3
<b>Semester Total</b>		<b>12</b>

#### Second Semester

		<b>Credits</b>
ENGL 1301	Composition I .....	3
ITSC 1458	UNIX System Administration I.....	4
ITNW 1358	Network+ OR.....	4
ITNW 1425	Fundamentals of Networking Technologies OR.....	4
ITCC 1414	CCNA 1: Introduction to Networks .....	4
ITSY 1342	Information Technology Security.....	3
<b>Semester Total</b>		<b>12</b>

#### Third Semester

		<b>Credits</b>
ITSC 1319	Internet/Web Page Development .....	3
XXXX #3##	Humanities/Fine Arts Elective <sup>B</sup> .....	3
<b>Semester Total</b>		<b>6</b>

### SECOND YEAR

<b>First Semester</b>		<b>Credits</b>
XXXX #3##	Social/Behavioral Sciences Elective <sup>C</sup> .....	3
ITSC 1425	Personal Computer Hardware .....	4
ITSC 1342	Shell Programming.....	3
XXXX #3##	General Education Elective <sup>D</sup> .....	3
ITSC 1447	UNIX System Administration II.....	4
<b>Semester Total</b>		<b>17</b>

#### Second Semester

		<b>Credits</b>
ITNW 1313	Computer Virtualization.....	3
XXXX #3##	Program Approved Business Elective <sup>E</sup> .....	3
ITSY 2330	Intrusion Detection.....	3
ITNW 2380	Cooperative Education - Computer Systems Networking and Telecommunications # OR.....	3
ITNW 2432	UNIX Network Integration #.....	4
<b>Semester Total</b>		<b>12</b>
<b>Program Total</b>		<b>60</b>

# Capstone Course

<sup>A</sup> Student Success Course: Students are required to complete EDUC 1300 within their first 12 semester credit hours of instruction. Students enrolling at HCC with 12 or more hours completed should consult with an academic advisor to select an appropriate course substitution.

<sup>B</sup> Humanities/Fine Arts: May choose from – ARTS 1301, 1303, 1304, COMM 2366, DANC 2303, DRAM 1310, 2316, 2366, ENGL 2322, 2323, 2327, 2328, 2332, 2333, 2342, 2343, 2351, HIST 1301, 1302, 2311, 2312, 2321, 2322, 2301, 2327, 2328, 2381, HUMA 1301, 1305, 1311, 2319, 2323, MUSI 1306, 1310, PHIL 1301, 1304, 2306, 2307, 2316, World Languages (ARAB 1411, 1412, CHIN 1411, 1412, FREN 1411, 1412, GERM 1411, 1412, JAPN 1411, 1412, KORE 1411, 1412, SPAN 1411, 1412).

<sup>C</sup> Social/Behavioral Sciences: May choose from – ANTH 2346, 2351, ECON 1301, 2301, 2302, EDUC 1300, GEOG 1302, 1303, GOVT 2305, 2306, PSYC 2301, 2314, 2316, 2319, SOCI 1301, 1306, 2301, 2336, TECA 1354.

# Information Technology

<sup>D</sup> General Education: May choose from – ANTH 2301 (with or without 2101 = lab), 2302, 2346, 2351, ARTS 1301, 1303, 1304, ASTR 1303, 1304, 1403, 1404, BIOL 1308, 1309, 1322, 1406, 1407, (2301, 2302 – restricted to Engineering, Science, and Health Sciences majors), CHEM 1305, 1405, 1411, 1412, COMM 2366, COSC 1436, DANC 2303, DRAM 1310, 2316, 2366, ECON 1301, 2301, 2302, EDUC 1300, ENGL 2322, 2323, 2327, 2328, 2332, 2333, 2342, 2343, 2351, GEOG 1301, 1302, 1303, GEOL 1305, 1345, 1347, 1403, 1404, GOVT 2305, 2306, HIST 1301, 1302, 2311, 2312, 2321, 2322, 2301, 2327, 2328, 2381, HUMA 1301, 1305, 1311, 2319, 2323, MATH 1314, 1316, 1324, 1325, 1332, 1342, 1350, 2318, 2320, 2412, 2413, 2414, 2415, MUSI 1306, 1310, PHIL 1301, 1304, 2306, 2307, 2316, PHYS 1305, 1401, 1402, 2325 (with or without 2125 = lab), 2326 (with or without 2126 = lab), PSYC 2301, 2314, 2316, 2317, 2319, SOCI 1301, 1306, 2301, 2336, TECA 1354, World Languages (ARAB 1411, 1412, CHIN 1411, 1412, FREN 1411, 1412, GERM 1411, 1412, JAPN 1411, 1412, KORE 1411, 1412, SPAN 1411, 1412).

<sup>E</sup> Business Electives: May choose from – ACCT 2301, 2302; BMGT 1301, 1325, 1327; BUSG 1301, 2305, 2317; ECON 1301; HRPO 1311, 2307; MRKG 1391 - Women's Entrepreneurship, MRKG 1391 - Marketing in Asia, MRKG 1391 - Sports and Entertainment, MRKG 2372; Any 2300 ECON course.

## Linux Administrator

### CERTIFICATE LEVEL II

#### FIRST YEAR

First Semester		Credits
EDUC 1300	Learning Framework <sup>A</sup> .....	3
ITSC 1309	Integrated Software Applications I OR	
BCIS 1405	Computer Business Applications .....	3
ITSC 1425	Personal Computer Hardware .....	4
ITSC 1316	Linux Installation and Configuration OR	
ITSC 1307	UNIX Operating System I.....	3
<b>Semester Total</b>		<b>13</b>

Second Semester		Credits
ITSC 1458	UNIX System Administration I.....	4
ITNW 1358	Network+ OR	
ITNW 1425	Fundamentals of Networking Technologies OR	
ITCC 1414	CCNA 1: Introduction to Networks .....	4
ITSY 1342	Information Technology Security.....	3
<b>Semester Total</b>		<b>10</b>

Third Semester		Credits
ITSC 1319	Internet/Web Page Development .....	3
<b>Semester Total</b>		<b>3</b>

#### SECOND YEAR

First Semester		Credits
ITSC 2339	Personal Computer Help Desk Support.....	3
ITSC 1447	UNIX System Administration II <sup>#</sup> .....	4
ITNW 1313	Computer Virtualization.....	3
<b>Semester Total</b>		<b>10</b>
<b>Program Total</b>		<b>36</b>

<sup>#</sup> Capstone Course

<sup>A</sup> Student Success Course: Students are required to complete EDUC 1300 within their first 12 semester credit hours of instruction. Students enrolling at HCC with 12 or more hours completed should consult with an academic advisor to select an appropriate course substitution.

## Linux System Administration Specialization

### CERTIFICATE LEVEL I

#### FIRST YEAR

First Semester		Credits
ITSC 1309	Integrated Software Applications I OR	
BCIS 1405	Computer Business Applications .....	3
ITSC 1425	Personal Computer Hardware .....	4
ITSC 1316	Linux Installation and Configuration OR	
ITSC 1307	UNIX Operating System I.....	3
<b>Semester Total</b>		<b>10</b>

Second Semester		Credits
ITSC 1458	UNIX System Administration I <sup>#</sup> .....	4
ITNW 1358	Network+ OR	
ITNW 1425	Fundamentals of Networking Technologies OR	
ITCC 1414	CCNA 1: Introduction to Networks .....	4
ITSY 1342	Information Technology Security.....	3
<b>Semester Total</b>		<b>10</b>

Third Semester		Credits
ITSC 1319	Internet/Web Page Development .....	3
<b>Semester Total</b>		<b>3</b>
<b>Program Total</b>		<b>23</b>

<sup>#</sup> Capstone Course

## DIGITAL GAMING AND SIMULATION

The gaming and simulation industry is not a "future" industry nor is it a "future" market. It is here now, and it has an impact on all individuals. Computer and video game software sales are steadily growing. The simulation market is growing steadily. The gaming and simulation industries want skilled artists and programmers to meet the employment needs of these rapidly growing industry.

The Digital Gaming and Simulation program offers career training that leads to employment in the industry as a game and simulation artist and/or programmer. Students use state-of-the-art technologies to help reach their personal and professional goals

# Information Technology

The game artist develops skills in 2D and 3D art, modeling and animation, illustration, graphic design, layout, and interface design in the development of games. The game programmer develops skills in design, programming, performance diagnostics, optimization, and game libraries during the development of games and simulations. The game and simulation artists and programmers work together in teams to develop games and/or simulations as a requirement for completing the program.

All students interested in entry into this program should be ready to take college English (ENGL 1301, Composition I) and college Math (MATH 1314, College Algebra). Students are required to maintain a "C" or better grade in all GAME courses to get credit for the course for the completion of their degree and/or certificate programs.

## Accreditation:

National Association of Schools of Art & Design (NASAD) accreditation: AAS in Digital Gaming and Simulation for Artists.

Texas Skill Standards (TSS) recognized programs:

- AAS in Digital Gaming and Simulation for Artists
- AAS in Digital Gaming and Simulation for Programmers

TSI testing required prior to first enrollment for all AAS degrees and Level II certificates.

## Program Outcomes

Students will be able to:

- Define and identify terminologies used in the gaming and simulation industry.
- Demonstrate the use of appropriate tools to develop the assets.
- Create documentation for game or simulation.
- Develop assets for game or simulation.

For more information call 713.718.6743 or e-mail [reni.abraham@hccs.edu](mailto:reni.abraham@hccs.edu) or visit the department's website at: <http://swc2.hccs.edu/digiGame>.

## Degree Programs Offered

- Digital Gaming and Simulation for Artists (AAS)
- Digital Gaming and Simulation for Programmers (AAS)

## Certificate - Level II

- Digital Gaming and Simulation for Artists
- Digital Gaming and Simulation for Programmers

## Certificate - Level I

- Digital Gaming and Simulation for Artists
- Digital Gaming and Simulation for Programmers

The certificates are designed to be stepping stones toward completing the AAS degree.

## Digital Gaming and Simulation for Artists

The game artist degree and certificates prepare students to enter the game and/or simulation industry with skills in traditional art and hands-on experience developing games and simulations using the latest software and hardware tools.

## AAS

TSI testing is required prior to first enrollment.

### FIRST YEAR

<b>First Semester</b>		<b>Credits</b>
EDUC 1300	Learning Framework <sup>A</sup> .....	3
GAME 1306	Design and Creation of Games.....	3
GAME 1378	Art for 2D Games.....	3
GAME 1373	Introduction to Perspective Drawing .....	3
GAME 1336	Introduction to 3D Game Modeling.....	3
<b>Semester Total</b>		<b>15</b>

<b>Second Semester</b>		<b>Credits</b>
ARTS 1303	Art History I OR	
ARTS 1304	Art History II.....	3
GAME 1302	Interactive Storyboarding.....	3
GAME 1375	Principles of Game Concept Art.....	3
GAME 1304	Level Design I.....	3
GAME 2336	Lighting, Shading, and Texture .....	3
<b>Semester Total</b>		<b>15</b>

<b>Third Semester</b>		<b>Credits</b>
XXXX #3##	Math/Natural Science Elective <sup>B</sup> .....	3
XXXX #3##	Social/Behavioral Sciences Elective <sup>C</sup> .....	3
<b>Semester Total</b>		<b>6</b>

### SECOND YEAR

<b>First Semester</b>		<b>Credits</b>
GAME 1314	Character Sculpting .....	3
GAME 2332	Project Development I.....	3
GAME 1374	Introduction to 3D Game Animation.....	3
GAME 2304	Level Design II .....	3
<b>Semester Total</b>		<b>12</b>

# Information Technology

<b>Second Semester</b>		<b>Credits</b>
GAME 2374	3D Rigging for Games and Simulation.....	3
GAME 2334	Project Development II #.....	3
GAME 2308	Portfolio for Game Development.....	3
PSYC 2301	General Psychology.....	3
<b>Semester Total</b>		<b>12</b>
<b>Program Total</b>		<b>60</b>

# Capstone Course

<sup>A</sup> *Student Success Course: Students are required to complete EDUC 1300 within their first 12 semester credit hours of instruction. Students enrolling at HCC with 12 or more hours completed should consult with an academic advisor to select an appropriate course substitution.*

<sup>B</sup> *Math/Natural Science: May choose from – ANTH 2301 (with or without 2101 = lab), 2302, ASTR 1303, 1304, 1403, 1404, BIOL 1308, 1309, 1322, 1406, 1407, (2301, 2302 – restricted to Engineering, Science, and Health Sciences majors), CHEM 1305, 1405, 1411, 1412, COSC 1436, GEOG 1301, GEOL 1305, 1345, 1347, 1403, 1404, MATH 1314, 1316, 1324, 1325, 1332, 1342, 1350, 2318, 2320, 2412, 2413, 2414, 2415, PHYS 1305, 1401, 1402, 2325 (with or without 2125= lab), 2326 (with or without 2126 = lab), PSYC 2317.*

<sup>C</sup> *Social/Behavioral Sciences: May choose from – ANTH 2346, 2351, ECON 1301, 2301, 2302, EDUC 1300, GEOG 1302, 1303, GOVT 2305, 2306, PSYC 2301, 2314, 2316, 2319, SOCI 1301, 1306, 2301, 2336, TECA 1354.*

## Digital Gaming and Simulation for Artists

### CERTIFICATE LEVEL II

#### FIRST YEAR

<b>First Semester</b>		<b>Credits</b>
EDUC 1300	Learning Framework <sup>A</sup> .....	3
GAME 1306	Design and Creation of Games.....	3
GAME 1336	Introduction 3D Game Modeling.....	3
GAME 1373	Introduction to Perspective Drawing.....	3
GAME 1378	Art for 2D Games.....	3
<b>Semester Total</b>		<b>15</b>

#### Second Semester

		<b>Credits</b>
ARTS 1303	Art History I OR	
ARTS 1304	Art History II.....	3
GAME 1302	Interactive Storyboarding.....	3
GAME 1304	Level Design.....	3
GAME 1375	Principles of Game Concept Art.....	3
GAME 2336	Lighting, Shading, and Texture.....	3
<b>Semester Total</b>		<b>12</b>

## SECOND YEAR

<b>First Semester</b>		<b>Credits</b>
GAME 1314	Character Sculpting.....	3
GAME 1374	Introduction to 3D Game Animation.....	3
GAME 2304	Level Design II.....	3
GAME 2332	Project Development I #.....	3
<b>Semester Total</b>		<b>9</b>
<b>Program Total</b>		<b>36</b>

# Capstone Course

<sup>A</sup> *Student Success Course: Students are required to complete EDUC 1300 within their first 12 semester credit hours of instruction. Students enrolling at HCC with 12 or more hours completed should consult with an academic advisor to select an appropriate course substitution.*

## Digital Gaming and Simulation for Artists

(Deactivation pending SACSCOC approval. Enrollment is closed to new students.)

### CERTIFICATE LEVEL I

#### FIRST YEAR

<b>First Semester</b>		<b>Credits</b>
GAME 1212	Game Theory.....	2
GAME 1306	Design and Creation of Games.....	3
ARTC 1302	Digital Imaging I.....	3
GAME 1336	Introduction to 3D Game Modeling.....	3
ARTC 1309	Basic Illustration.....	3
<b>Semester Total</b>		<b>13</b>

#### Second Semester

		<b>Credits</b>
GAME 1314	Character Sculpting.....	3
GAME 1334	Video Game Art I.....	3
<b>Semester Total</b>		<b>6</b>
<b>Program Total</b>		<b>19</b>

\*Student Success Course

# Capstone Course

## Digital Gaming and Simulation for Programmers

The game programmer degree and certificates prepare students to enter the game and simulation industry with skills in structured and object-oriented programming, scripting languages and hands-on experience in game development using specialized software and hardware tools.

# Information Technology

## AAS

*TSI testing is required prior to first enrollment.*

### FIRST YEAR

<b>First Semester</b>		<b>Credits</b>
EDUC 1300	Learning Framework <sup>A</sup> .....	3
GAME 1306	Design and Creation of Games.....	3
GAME 1378	Art for 2D Games.....	3
GAME 1379	Introduction to Game Programming.....	3
MATH 1314	College Algebra.....	3
<b>Semester Total</b>		<b>12</b>

<b>Second Semester</b>		<b>Credits</b>
XXXX #3##	Humanities/Fine Arts Elective <sup>B</sup> .....	3
GAME 1304	Level Design I.....	3
GAME 1336	Introduction to 3D Game Modeling.....	3
GAME 2347	Advanced Game Programming.....	3
GAME 2302	Mathematical Applications for Game Development.....	3
<b>Semester Total</b>		<b>12</b>

<b>Third Semester</b>		<b>Credits</b>
GAME 2373	2D Game Programming.....	3
XXXX #3##	Social/Behavioral Sciences Elective <sup>C</sup> .....	3
<b>Semester Total</b>		<b>6</b>

### SECOND YEAR

<b>First Semester</b>		<b>Credits</b>
GAME 2319	Game Engine.....	3
GAME 2304	Level Design II.....	3
GAME 2332	Project Development I.....	3
GAME 2342	Game Development Using C++.....	3
<b>Semester Total</b>		<b>15</b>

<b>Second Semester</b>		<b>Credits</b>
ENGL 1301	Composition I.....	3
GAME 2308	Portfolio for Game Development.....	3
GAME 2334	Project Development II <sup>#</sup> .....	3
GAME 2341	Game Scripting.....	3
<b>Semester Total</b>		<b>15</b>
<b>Program Total</b>		<b>60</b>

<sup>#</sup> Capstone Course

<sup>A</sup> Student Success Course: Students are required to complete EDUC 1300 within their first 12 semester credit hours of instruction. Students enrolling at HCC with 12 or more hours completed should consult with an academic advisor to select an appropriate course substitution.

<sup>B</sup> Humanities/Fine Arts: May choose from – ARTS 1301, 1303, 1304, COMM 2366, DANC 2303, DRAM 1310, 2316, 2366, ENGL 2322, 2323, 2327, 2328, 2332, 2333, 2342, 2343, 2351, HIST 1301, 1302, 2311, 2312, 2321, 2322, 2301, 2327, 2328,

2381, HUMA 1301, 1305, 1311, 2319, 2323, MUSI 1306, 1310, PHIL 1301, 1304, 2306, 2307, 2316, World Languages (ARAB 1411, 1412, CHIN 1411, 1412, FREN 1411, 1412, GERM 1411, 1412, JAPN 1411, 1412, KORE 1411, 1412, SPAN 1411, 1412).

<sup>C</sup> Social/Behavioral Sciences: May choose from – ANTH 2346, 2351, ECON 1301, 2301, 2302, EDUC 1300, GEOG 1302, 1303, GOVT 2305, 2306, PSYC 2301, 2314, 2316, 2319, SOCI 1301, 1306, 2301, 2336, TECA 1354.

## Digital Gaming and Simulation for Programmers

### CERTIFICATE LEVEL II

#### FIRST YEAR

<b>First Semester</b>		<b>Credits</b>
EDUC 1300	Learning Framework <sup>A</sup> .....	3
GAME 1306	Design and Creation of Games.....	3
GAME 1378	Art for 2D Games.....	3
GAME 1379	Introduction to Game Programming.....	3
MATH 1314	College Algebra.....	3
<b>Semester Total</b>		<b>15</b>

<b>Second Semester</b>		<b>Credits</b>
GAME 1304	Level Design.....	3
GAME 1336	Introduction to 3D Game Modeling.....	3
GAME 2302	Mathematical Applications for Game Development.....	3
GAME 2347	Advanced Game Programming.....	3
<b>Semester Total</b>		<b>12</b>

<b>Third Semester</b>		<b>Credits</b>
GAME 2373	2D Game Programming.....	3
<b>Semester Total</b>		<b>3</b>

#### SECOND YEAR

<b>First Semester</b>		<b>Credits</b>
GAME 2304	Level Design II.....	3
GAME 2319	Game Engine.....	3
GAME 2332	Project Development I <sup>**</sup> .....	3
GAME 2342	Game Development Using C++.....	3
<b>Semester Total</b>		<b>12</b>
<b>Program Total</b>		<b>42</b>

<sup>#</sup> Capstone Course

<sup>A</sup> Student Success Course: Students are required to complete EDUC 1300 within their first 12 semester credit hours of instruction. Students enrolling at HCC with 12 or more hours completed should consult with an academic advisor to select an appropriate course substitution.

# Information Technology

## Digital Gaming and Simulation for Programmers

(Deactivation pending SACSCOC approval. Enrollment is closed to new students.)

### CERTIFICATE LEVEL I

#### FIRST YEAR

<b>First Semester</b>		<b>Credits</b>
GAME #3##	Mathematical Concepts in Game Programming .....	3
GAME 1328	Video Game Design .....	3
<b>Semester Total</b>		<b>6</b>
<b>Second Semester</b>		<b>Credits</b>
GAME 1343	Game and Simulation Programming I .....	3
GAME 2302	Mathematical Applications for Game Development .....	3
GAME 2341	Game Scripting .....	3
<b>Semester Total</b>		<b>9</b>
<b>Program Total</b>		<b>15</b>

\*Student Success Course

# Capstone Course

## GEOGRAPHIC INFORMATION SCIENCE

Geographic Information Science works in partnership with industry to provide quality workforce education in the new, rapidly expanding fields of Geographic Information Systems (GIS) and Global Positioning Systems (GPS). The programs use up-to-date technology and afford students a wide variety of employment opportunities in the corporate world and government agencies. GIS specialists work with GIS computer programs that enable the user to create maps and other graphics that can be "layered" with other data.

### Program Outcomes

Students will be able to:

- Demonstrate knowledge of the global natural and cultural environments and the geographic methods by which they are studied.
- Recognize, evaluate, and analyze critical issues that deal with diversity of people, places, and events globally as well as within specific geographic regions.
- Interpret maps and mapped data utilizing basic map elements, including scales, common coordinate systems, and map symbols.
- Use a computer effectively to research, map and analyze geographic information and communicate geographic information.

- Compare and contrast common geographic technologies such as geographic information systems (GIS) and the global positioning system (GPS).

For more information e-mail [getachew.haile@hccs.edu](mailto:getachew.haile@hccs.edu).

## Geographic Information Science Analyst

### CERTIFICATE LEVEL II

TSI Testing is required prior to first enrollment.

<b>First Semester</b>		<b>Credits</b>
EDUC 1300	Learning Framework <sup>A</sup> .....	3
GISC 1411	Introduction to GIS .....	4
MATH 1314	College Algebra .....	3
COSC 1436	Programming Fundamentals I OR	
ITSE 1402	Computer Programming .....	4
<b>Semester Total</b>		<b>14</b>

<b>Second Semester</b>		<b>Credits</b>
GISC 1401	Cartography and Geography in GIS/GPS .....	4
GISC 1421	Introduction to Raster-Based GIS .....	4
ITSE 1345	Introduction to Oracle SQL .....	3
<b>Semester Total</b>		<b>11</b>

<b>Third Semester</b>		<b>Credits</b>
GISC 2401	Data Acquisition and Analysis in GIS .....	4
GISC 2411	Geographic Information Systems (GIS) Applications .....	4
<b>Semester Total</b>		<b>8</b>

#### SECOND YEAR

<b>First Semester</b>		<b>Credits</b>
GISC 2250	Scripting for Geographic Information Systems (GIS) .....	2
GISC 2359	Web-Served Geographic Information Systems (GIS) # .....	3
<b>Semester Total</b>		<b>5</b>
<b>Program Total</b>		<b>38</b>

# Capstone Course

<sup>A</sup> Student Success Course: Students are required to complete EDUC 1300 within their first 12 semester credit hours of instruction. Students enrolling at HCC with 12 or more hours completed should consult with an academic advisor to select an appropriate course substitution.

# Information Technology

## Geographic Information Science Technician

Students may complete the GIS certificate or may apply for up to 15 hours of advanced placement of GIS credit based on successful completion of 36 months of work experience reviewed by the program chair.

### **CERTIFICATE LEVEL I**

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<b>First Semester</b>		<b>Credits</b>
GISC 1411	Introduction to GIS.....	4
ITSE 1402	Computer Programming.....	4
<b>Semester Total</b>		<b>8</b>
<b>Second Semester</b>		<b>Credits</b>
GISC 1401	Cartography and Geography in GIS/GPS #.....	4
GISC 1421	Introduction to Raster-Based GIS.....	4
ITSE 1345	Introduction to Oracle SQL.....	3
<b>Semester Total</b>		<b>11</b>
<b>Program Total</b>		<b>19</b>

# *Capstone Course*

ARCHIVE

# Manufacturing

**Corrosion Technology (15.0611)**  
**Machining Technology (48.0503)**  
**Manufacturing Engineering Technology (15.0613)**  
**Welding Technology (48.0508)**

A Career Cluster is a grouping of occupations and broad industries based on commonalities. The Manufacturing career cluster is concerned with providing knowledge and skills related to planning, managing and performing the processing of materials into intermediate or final products and related professional and technical support activities such as production planning and control, maintenance and manufacturing/process engineering. This includes the following HCC programs: Machining Technology, Manufacturing Engineering Technology and Welding Technology.

All new semester hour students, who have earned less than 12 semester hours of college level credit, are required to take a first-year student success course in their first term at HCC. Through research and experience, Houston Community College has determined that many life and career management skills are necessary for students to make the most of their college investment. A student success course is designed to prepare students for the demands of college and for success in the world of work. The course emphasizes setting priorities, time management, effective listening, note-taking, concentration techniques, and retention of information, book analysis, comprehension techniques, and test-taking skills. This course also incorporates units that are designed to facilitate the use of library databases in conducting research, planning and setting educational objectives, lifelong career assessment, decision-making, financial aid, tutoring, and student support services, enabling the student to maximize the use of college resources.

Every HCC Career and Technology Education program contains a "capstone," an experience for the student to "put it all together." The capstone is a learning experience resulting in a consolidation of a student's educational experience and certifies mastery of entry level workplace competencies. The capstone experience must occur during the last semester of the student's educational program. The capstone consists of an external learning experience or an advanced course especially designed to help students synthesize knowledge and skills or other licensure as appropriate.

## CORROSION TECHNOLOGY

Corrosion Technology utilizes chemistry, electricity, physics, metallurgy and other sciences to prevent or control corrosion damage. The technician applies these sciences to control the chemical and mechanical aspects that are involved in the deterioration of properties.

Corrosion Technicians have a basic understanding of electricity, chemistry, metallurgy and the properties of materials. Corrosion Technicians work both indoors and outdoors installing, maintaining, inspecting and troubleshooting all sorts of facilities such as pipelines, storage tanks, building components, industrial equipment, airplanes, ships, railcars, etc. Corrosion technicians may specialize in coating inspection, cathodic protection (use of electricity to control corrosion), chemical inhibition, material selection, or design to control the corrosion processes.

Corrosion technology is a stable occupation due to the fact that corrosion will never go away. New government regulations over the past 10 years have focused on increased corrosion control which is steadily increasing the demand for trained Corrosion Technicians. Pipeline Integrity regulations, Underground Storage Tank (UST) regulations, and Operator Qualification regulations are examples of the emphasis that is increasing the need for Corrosion Technicians.

### Program Outcomes

Students will be able to:

- Students will identify and explain the various types of corrosion using the correct terminology.
- Demonstrate knowledge of corrosion control methods that are appropriate for different circumstances.
- Apply corrosion theory to assess at least one corrosion problem and recommend a suitable remedy.
- Match corrosion processes to the appropriate materials which include metals, plastics, ceramics, bricks, stoneware, porcelain, clay, glass, concrete, graphite, wood, etc.
- Identify the major job markets in corrosion technology and recall the types and levels of certification in each field.

# Manufacturing

## Corrosion Technology

### AAS

#### FIRST YEAR

<b>First Semester</b>		<b>Credits</b>
EDUC 1300	Learning Framework <sup>A</sup> .....	3
METL 1313	Introduction to Corrosion.....	3
ENGL 1301	Composition I.....	3
ENTC 2331	Manufacturing Materials.....	3
MATH 1314	College Algebra.....	3
<b>Semester Total</b>		<b>15</b>

<b>Second Semester</b>		<b>Credits</b>
XXXX #3##	Natural Science Elective <sup>B</sup> .....	3
METL 1301	Introduction to Metallurgy.....	3
METL 2441	Cathodic Protection.....	4
DFTG 1305	Technical Drafting.....	3
<b>Semester Total</b>		<b>13</b>

#### SECOND YEAR

<b>First Semester</b>		<b>Credits</b>
XXXX #3##	Humanities/Fine Arts Elective <sup>C</sup> .....	3
INMT 1311	Computer Integrated Manufacturing.....	3
HYDR 1345	Hydraulics and Pneumatics.....	3
NDTE 1405	Introduction to Ultrasonics.....	4
ENTC 1347	Safety and Ergonomics OR	
OSHT 1301	Introduction to Safety and Health.....	3
<b>Semester Total</b>		<b>16</b>

<b>Second Semester</b>		<b>Credits</b>
INMT 1343	Computer Aided Design/Computer Aided Manufacturing (CAD-CAM).....	3
METL 2305	Atmospheric Corrosion Control <sup>#</sup> .....	3
INMT 1317	Industrial Automation.....	3
CETT 1409	DC-AC Circuits.....	4
XXXX #3##	Social/Behavioral Sciences Elective <sup>D</sup> .....	3
<b>Semester Total</b>		<b>16</b>
<b>Program Total</b>		<b>60</b>

<sup>#</sup> Capstone Course

<sup>A</sup> Student Success Course: Students are required to complete EDUC 1300 within their first 12 semester credit hours of

instruction. Students enrolling at HCC with 12 or more hours completed should consult with an academic advisor to select an appropriate course substitution.

<sup>B</sup> Natural Science: May choose from – ANTH 2301 (with or without 2101 = lab), 2302, ASTR 1303, 1304, 1403, 1404, BIOL 1308, 1309, 1322, 1406, 1407, (2301, 2302 – restricted to Engineering, Science, and Health Sciences majors), CHEM 1305, 1405, 1411, 1412, COSC 1436, GEOG 1301, GEOL 1305, 1345, 1347, 1403, 1404, MATH 1314, 1316, 1324, 1325, 1332, 1342, 1350, 2318, 2320, 2412, 2413, 2414, 2415, PHYS 1305, 1401, 1402, 2325 (with or without 2125= lab), 2326 (with or without 2126 = lab), PSYC 2317.

<sup>C</sup> Humanities/Fine Arts: May choose from – ARTS 1301, 1303, 1304, COMM 2366, DANC 2303, DRAM 1310, 2316, 2366, ENGL 2322, 2323, 2327, 2328, 2332, 2333, 2342, 2343, 2351, HIST 1301, 1302, 2311, 2312, 2321, 2322, 2301, 2327, 2328, 2381, HUMA 1301, 1305, 1311, 2319, 2323, MUSI 1306, 1310, PHIL 1301, 1304, 2306, 2307, 2316, World Languages (ARAB 1411, 1412, CHIN 1411, 1412, FREN 1411, 1412, GERM 1411, 1412, JAPN 1411, 1412, KORE 1411, 1412, SPAN 1411, 1412).

<sup>D</sup> Social/Behavioral Sciences: May choose from – ANTH 2346, 2351, ECON 1301, 2301, 2302, EDUC 1300, GEOG 1302, 1303, GOVT 2305, 2306, PSYC 2301, 2314, 2316, 2319, SOCI 1301, 1306, 2301, 2336, TECA 1354.

## Atmospheric Corrosion

### CERTIFICATE LEVEL I

#### FIRST YEAR

<b>First Semester</b>		<b>Credits</b>
METL 1313	Introduction to Corrosion.....	3
OSHT 1301	Introduction to Safety and Health.....	3
DFTG #3##	OR Drafting Elective	
WLDG 1407	OR Introduction to Welding Using Multiple Processes	
ITSC 1309	Integrated Software Applications I.....	3
DFTG 1305	Technical Drafting.....	3
<b>Semester Total</b>		<b>12</b>

<b>Second Semester</b>		<b>Credits</b>
METL 2305	Atmospheric Corrosion Control <sup>#</sup> .....	3
METL 1301	Introduction to Metallurgy.....	3
NDTE 1405	Introduction to Ultrasonics.....	4
<b>Semester Total</b>		<b>10</b>
<b>Program Total</b>		<b>22</b>

<sup>#</sup> Capstone Course

# Manufacturing

## Cathodic Protection

### CERTIFICATE LEVEL I

#### FIRST YEAR

<b>First Semester</b>		<b>Credits</b>
METL 1313	Introduction to Corrosion.....	3
DFTG 1305	Technical Drafting .....	3
CETT 1409	DC - AC Circuits OR	
ELPT 1311	Basic Electrical Theory .....	3-4
ITSC 1309	Integrated Software Applications I .....	3
<b>Semester Total</b>		<b>12-13</b>

<b>Second Semester</b>		<b>Credits</b>
METL 2441	Cathodic Protection # .....	4
METL 1301	Introduction to Metallurgy.....	3
NDTE 1405	Introduction to Ultrasonics .....	4
<b>Semester Total</b>		<b>11</b>
<b>Program Total</b>		<b>23-24</b>

# Capstone Course

## MACHINING TECHNOLOGY

The Machining Technology program is designed to meet the industry's continued and growing need for trained machine operators and programmers. The program prepares students for employment in machine shops, manufacturing facilities and in the maintenance of industrial plants. The AAS degree in Machining Technology is designed to develop competent support technicians for employment in the field of machine shop and related occupations. The curricula are based on the National Institute for Metalworking Skills (NIMS) recommendation to provide a broad-based education with opportunities for specific employment and personal interest goals.

The laboratories have more than twenty pieces of equipment such as manual lathes, drilling and milling machines, hydraulic and pneumatic trainers. Additionally, a computer lab is equipped with sixty personal computers with up-to-date training materials.

### Program Outcomes

Students will be able to:

- Demonstrate knowledge of Safety Rules and Regulations as they apply to a machining environment.
- Interpret and Decode Information Found in Blueprints, Specifications, and Applicable Documents Related to Machining Projects.

- Exhibit knowledge in the proper use, selection, and applications of machine equipment and measuring instruments.
- Fabricate parts and components utilizing information provided in blueprints and specifications.

For more information call 713.718.6898 or 713.718.6822 or e-mail james.neal@hccs.edu.

## Machining Technology

### AAS

TSI testing required prior to first enrollment.

#### FIRST YEAR

<b>First Semester</b>		<b>Credits</b>
EDUC 1300	Learning Framework <sup>A</sup> .....	3
MCHN 1343	Machine Shop Mathematics.....	3
MCHN 1302	Print Reading for Machining Trades.....	3
ENTC 1347	Safety and Ergonomics.....	3
MCHN 1338	Basic Machine Shop I .....	3
<b>Semester Total</b>		<b>15</b>

<b>Second Semester</b>		<b>Credits</b>
HYDR 1345	Hydraulics and Pneumatics .....	3
MCHN 1308	Basic Lathe .....	3
MCHN 1313	Basic Milling Operations .....	3
MCHN 1320	Precision Tools and Measurement.....	3
MCHN 1305	Metals and Heat Treatment.....	3
<b>Semester Total</b>		<b>15</b>

#### SECOND YEAR

<b>First Semester</b>		<b>Credits</b>
MCHN 2333	Advanced Lathe Operations .....	3
MCHN 2337	Advanced Milling Operations .....	3
INMT 1370	Lean Manufacturing-Machinist .....	3
MCHN 2331	Operation of CNC Turning Centers OR	
INMT 1345	Computer Numerical Controls.....	3
<b>Semester Total</b>		<b>12</b>

<b>Second Semester</b>		<b>Credits</b>
XXXX #3##	Social/Behavioral Sciences Elective <sup>D</sup> .....	3
HUMA 1301	Introduction to Humanities OR	
XXXX #3##	Humanities/Fine Arts Elective <sup>C</sup> .....	3
XXXX #3##	General Education Elective <sup>E</sup> .....	3
XXXX #3##	General Education Elective <sup>E</sup> .....	3
XXXX #3##	Math/Natural Science Elective <sup>B</sup> .....	3
<b>Semester Total</b>		<b>15</b>

<b>Third Semester</b>		<b>Credits</b>
MCHN 2341	Advanced Machining # .....	3
<b>Semester Total</b>		<b>3</b>
<b>Program Total</b>		<b>60</b>

# Manufacturing

## # Capstone Course

<sup>A</sup> *Student Success Course: Students are required to complete EDUC 1300 within their first 12 semester credit hours of instruction. Students enrolling at HCC with 12 or more hours completed should consult with an academic advisor to select an appropriate course substitution.*

<sup>B</sup> *Math/Natural Science: May choose from – ANTH 2301 (with or without 2101 = lab), 2302, ASTR 1303, 1304, 1403, 1404, BIOL 1308, 1309, 1322, 1406, 1407, (2301, 2302 – restricted to Engineering, Science, and Health Sciences majors), CHEM 1305, 1405, 1411, 1412, COSC 1436, GEOG 1301, GEOL 1305, 1345, 1347, 1403, 1404, MATH 1314, 1316, 1324, 1325, 1332, 1342, 1350, 2318, 2320, 2412, 2413, 2414, 2415, PHYS 1305, 1401, 1402, 2325 (with or without 2125= lab), 2326 (with or without 2126 = lab), PSYC 2317.*

<sup>C</sup> *Humanities/Fine Arts: May choose from – ARTS 1301, 1303, 1304, COMM 2366, DANC 2303, DRAM 1310, 2316, 2366, ENGL 2322, 2323, 2327, 2328, 2332, 2333, 2342, 2343, 2351, HIST 1301, 1302, 2311, 2312, 2321, 2322, 2301, 2327, 2328, 2381, HUMA 1301, 1305, 1311, 2319, 2323, MUSI 1306, 1310, PHIL 1301, 1304, 2306, 2307, 2316, World Languages (ARAB 1411, 1412, CHIN 1411, 1412, FREN 1411, 1412, GERM 1411, 1412, JAPN 1411, 1412, KORE 1411, 1412, SPAN 1411, 1412).*

<sup>D</sup> *Social/Behavioral Sciences: May choose from – ANTH 2346, 2351, ECON 1301, 2301, 2302, EDUC 1300, GEOG 1302, 1303, GOVT 2305, 2306, PSYC 2301, 2314, 2316, 2319, SOCI 1301, 1306, 2301, 2336, TECA 1354.*

<sup>E</sup> *General Education: May choose from – ANTH 2301 (with or without 2101 = lab), 2302, 2346, 2351, ARTS 1301, 1303, 1304, ASTR 1303, 1304, 1403, 1404, BIOL 1308, 1309, 1322, 1406, 1407, (2301, 2302 – restricted to Engineering, Science, and Health Sciences majors), CHEM 1305, 1405, 1411, 1412, COMM 2366, COSC 1436, DANC 2303, DRAM 1310, 2316, 2366, ECON 1301, 2301, 2302, EDUC 1300, ENGL 2322, 2323, 2327, 2328, 2332, 2333, 2342, 2343, 2351, GEOG 1301, 1302, 1303, GEOL 1305, 1345, 1347, 1403, 1404, GOVT 2305, 2306, HIST 1301, 1302, 2311, 2312, 2321, 2322, 2301, 2327, 2328, 2381, HUMA 1301, 1305, 1311, 2319, 2323, MATH 1314, 1316, 1324, 1325, 1332, 1342, 1350, 2318, 2320, 2412, 2413, 2414, 2415, MUSI 1306, 1310, PHIL 1301, 1304, 2306, 2307, 2316, PHYS 1305, 1401, 1402, 2325 (with or without 2125 = lab), 2326 (with or without 2126 = lab), PSYC 2301, 2314, 2316, 2317, 2319, SOCI 1301, 1306, 2301, 2336, TECA 1354, World Languages (ARAB 1411, 1412, CHIN 1411, 1412, FREN 1411, 1412, GERM 1411, 1412, JAPN 1411, 1412, KORE 1411, 1412, SPAN 1411, 1412).*

## Basic Manufacturing/Machining

### CERTIFICATE LEVEL I

First Semester	Credits
ENTC 1347 Safety and Ergonomics.....	3
MCHN 1302 Print Reading for Machining Trades.....	3
MCHN 1338 Basic Machine Shop I.....	3
MCHN 1343 Machine Shop Mathematics.....	3
<b>Semester Total</b>	<b>12</b>

## Second Semester

	Credits
HYDR 1345 Hydraulics and Pneumatics .....	3
MCHN 1308 Basic Lathe .....	3
MCHN 1313 Basic Milling Operations # .....	3
<b>Semester Total</b>	<b>9</b>
<b>Program Total</b>	<b>21</b>

## # Capstone Course

## Machining Technology

### CERTIFICATE LEVEL II

#### FIRST YEAR

First Semester	Credits
EDUC 1300 Learning Framework*.....	3
ENTC 1347 Safety and Ergonomics.....	3
MCHN 1343 Machine Shop Mathematics.....	3
MCHN 1302 Print Reading for Machining Trades.....	3
MCHN 1338 Basic Machine Shop I.....	3
<b>Semester Total</b>	<b>15</b>

#### Second Semester

	Credits
HYDR 1345 Hydraulics and Pneumatics .....	3
MCHN 1308 Basic Lathe .....	3
MCHN 1313 Basic Milling Operations .....	3
MCHN 1320 Precision Tools and Measurements .....	3
MCHN 1305 Metals and Heat Treatment.....	3
<b>Semester Total</b>	<b>15</b>

#### SECOND YEAR

First Semester	Credits
MCHN 2337 Advanced Milling Operations .....	3
MCHN 2333 Advanced Lathe Operations .....	3
INMT 1370 Lean Manufacturing .....	3
MCHN 2331 Operation of CNC Turning Centers OR	
INMT 1345 Computer Numerical Controls.....	3
MCHN 2341 Advanced Machining I # .....	3
<b>Semester Total</b>	<b>15</b>
<b>Program Total</b>	<b>45</b>

## # Capstone Course

<sup>A</sup> *Student Success Course: Students are required to complete EDUC 1300 within their first 12 semester credit hours of instruction. Students enrolling at HCC with 12 or more hours completed should consult with an academic advisor to select an appropriate course substitution.*

# Manufacturing

## MANUFACTURING ENGINEERING TECHNOLOGY

The Manufacturing Engineering Technology program is designed to develop competent technicians for employment in the field of manufacturing engineering and related occupations. It prepares students for real world manufacturing techniques including computer methods, and mechanical, electronic, hydraulic, and pneumatic systems.

Houston Community College currently offers two certificates in Manufacturing Engineering Technology that can be completed in two to three semesters. They prepare students for entry level work in the Manufacturing and related industries. The program also offers an AAS in Manufacturing Engineering Technology for students who wish to further their education. The AAS degree in Manufacturing Engineering Technology is designed to develop competent technicians and CNC operators for employment in various manufacturing fields.

In addition, Houston Community College has developed a Level II Certificate in High Value Manufacturing to meet the needs of those students seeking a higher level of instruction and training to fill positions in established and developing manufacturing industries across the nation.

The program has several State-of-the Art laboratories with modern equipment. The computer labs are constantly updated to provide the latest software including AutoCAD, FeatureCAM, SolidWorks, and Automation Studio.

### Program Outcomes

Students will be able to:

- Demonstrate knowledge of Safety Rules and Regulations as they apply to a manufacturing environment.
- Interpret and Decode Information Found in Blueprints, Specifications, and Applicable Documents Related to Manufacturing Projects.
- Exhibit Knowledge in the Proper Selection, Use, and Application, of Manufacturing Equipment and Measuring Instruments.
- Fabricate parts and components utilizing information provided in blueprints and specifications.

For more information call 713.718.6898 or e-mail [max.saravia@hccs.edu](mailto:max.saravia@hccs.edu)

## Manufacturing Engineering Technology

### AAS

*TSI testing required prior to first enrollment.*

### FIRST YEAR

<b>First Semester</b>		<b>Credits</b>
EDUC 1300	Learning Framework*	3
MCHN 1343	Machine Shop Mathematics	3
MCHN 1302	Print Reading for Machining Trades	3
ENTC 1347	Safety and Ergonomics	3
MCHN 1338	Basic Machine Shop I	3
<b>Semester Total</b>		<b>15</b>

<b>Second Semester</b>		<b>Credits</b>
HYDR 1345	Hydraulics and Pneumatics	3
ELPT 1311	Basic Electrical Theory	3
MCHN 1308	Basic Lathe	3
MCHN 1313	Basic Milling Operations	3
INMT 1345	Computer Numerical Controls	3
<b>Semester Total</b>		<b>15</b>

### SECOND YEAR

<b>First Semester</b>		<b>Credits</b>
INMT 1317	Industrial Automation	3
MCHN 2335	Advanced CNC Machining	3
MCHN 2331	Operation of CNC Turning Centers	3
INMT 1343	Computer Aided Design/Computer Aided Manufacturing (CAD/CAM)	3
INMT 1370	Lean Manufacturing - Manufacturing Engineering**	3
<b>Semester Total</b>		<b>15</b>

<b>Second Semester</b>		<b>Credits</b>
XXXX #3##	Social/Behavioral Science Elective	3
ARTS 2341	Art Metals I OR	
XXXX #3##	General Education Elective	3
ARTS 1316	Foundation Drawing I	3
HUMA 1301	Introduction to Humanities OR	
XXXX #3##	General Education Elective	3
XXXX #3##	Math/Natural Science General Education Elective	3
<b>Semester Total</b>		<b>15</b>
<b>Program Total</b>		<b>60</b>

\*Student Success Course

\*\*Capstone

# Manufacturing

## Manufacturing Engineering Technology Technician

### CERTIFICATE LEVEL II

*TSI testing required prior to first enrollment.*

#### FIRST YEAR

<b>First Semester</b>	<b>Credits</b>
EDUC 1300 Learning Framework*	3
MCHN 1343 Machine Shop Mathematics	3
MCHN 1302 Print Reading for Machining Trades	3
ENTC 1347 Safety and Ergonomics	3
MCHN 1338 Basic Machine Shop I	3
<b>Semester Total</b>	<b>15</b>

<b>Second Semester</b>	<b>Credits</b>
HYDR 1345 Hydraulics and Pneumatics	3
ELPT 1311 Basic Electrical Theory	3
MCHN 1308 Basic Lathe	3
MCHN 1313 Basic Milling Operations	3
INMT 1345 Computer Numerical Controls	3
INMT 1370 Lean Manufacturing**	3
<b>Semester Total</b>	<b>18</b>

<b>Third Semester</b>	<b>Credits</b>
MCHN 2331 Operation of CNC Turning Centers	3
INMT 1343 Computer Aided Design/Computer Aided Manufacturing (CAD/CAM)	3
INMT 1317 Industrial Automation	3
<b>Semester Total</b>	<b>9</b>
<b>Program Total</b>	<b>42</b>

*\*Student Success Course*

*\*\*Capstone*

## Manufacturing Engineering Technology Helper

*Deactivation pending SACSCOC approval. Enrollment is closed to new students.*

### CERTIFICATE LEVEL I

<b>First Semester</b>	<b>Credits</b>
TECM 1301 Industrial Mathematics	3
MCHN 1302 Print Reading for Machining Trades	3
ENTC 1347 Safety and Ergonomics	3
MCHN 1338 Basic Machine Shop I	3
<b>Semester Total</b>	<b>12</b>

#### **Second Semester** **Credits**

HYDR 1345 Hydraulics and Pneumatics	3
ELPT 1311 Basic Electrical Theory	3
MCHN 1308 Basic Lathe	3
MCHN 1313 Basic Milling Operations	3
<b>Semester Total</b>	<b>12</b>
<b>Program Total</b>	<b>24</b>

*\*Student Success Course*

*\*\*Capstone*

## Manufacturing Technology - High Value Manufacturing

The High Value Manufacturing certificate program combines manufacturing, machining and petroleum engineering courses to provide the necessary technical background focused on the energy industry. For students to appreciate the needs and unique demands of the energy industry, students must understand the use and importance of the products they will be responsible for in energy exploration and production. The interplay among design, materials, and manufacturing is extremely important in any product, but becomes even more crucial in high value manufacturing.

By incorporating the new Engineering Academy paradigm, this certificate will provide a novel pathway for community college students to transition to a four-year degree program.

### CERTIFICATE LEVEL II

<b>First Semester</b>	<b>Credits</b>
ENTC 1347 Safety and Ergonomics	3
MATH 1314 College Algebra	3
MCHN 1302 Print Reading for Machining Trades	3
MCHN 1338 Basic Machine Shop I	3
PTRT 1301 Introduction to Petroleum Industry	3
<b>Semester Total</b>	<b>15</b>

<b>Second Semester</b>	<b>Credits</b>
INCR 1302 Physics of Instrumentation	3
INMT 1345 Computer Numerical Controls	3
INMT 1371 Materials and Applications	3
MCHN 1308 Basic Lathe	3
MCHN 1313 Basic Milling Operations	3
PTRT 1470 Petroleum Data Management	4
<b>Semester Total</b>	<b>19</b>

# Manufacturing

## Third Semester

			Credits
INMT	1343	Computer Aided Design/Computer Aided Manufacturing (CAD/CAM).....	3
INMT	1372	Quality and Assessment .....	3
INMT	1373	Machine Shop Logistics .....	3
INMT	2370	Project Management ** .....	3
PTRT	2370	Petroleum Operations.....	3
<b>Semester Total</b>			<b>15</b>
<b>Program Total</b>			<b>49</b>

\*\*Capstone Course

## WELDING TECHNOLOGY

The Welding Technology program is designed to offer students the necessary skills for entry level positions in the welding industry. There is an increasing demand for skilled welders in the fields of MIG (Metal Inert Gas), TIG (Tungsten Inert Gas), and Pipe welding.

Houston Community College offers two certificates in welding, the Basic Welding Helper certificate which can be completed in one semester and prepares students for entry level work, and the Advanced Welding certificate which enhances the skills learned in the helper certificate by providing more advanced training in advanced MIG, TIG, and Pipe welding techniques.

Students successfully completing any of the certificates listed may apply a maximum of 21 semester hours towards an AAS degree in Construction Technology – Craft Management Specialization. For certificates with fewer than 21 semester hours, additional courses in Construction Technology, Business Administration, or other related disciplines may be required

### Program Outcomes

Students will be able to:

- Demonstrate knowledge of Safety Rules and Regulations as they apply to a welding environment.
- Interpret and Decode Information Found in Blueprints, Specifications, and Applicable Documents Related to Welding Projects.
- Exhibit Knowledge in the proper selection, Use, and Application of Welding Apparatus and Equipment.
- Fabricate parts and components using information provided in blueprints and specifications.

For more information call 713.718.6899 or e-mail [james.owens@hccs.edu](mailto:james.owens@hccs.edu)

## Basic Welding Helper

### CERTIFICATE LEVEL I

#### First Semester

			Credits
TECM	1301	Industrial Mathematics.....	3
WLDG	1407	Introduction to Welding Using Multiple Process.....	4
WLDG	1413	Introduction to Blueprint Reading for Welders.....	4
WLDG	1428	Introduction to Shielded Metal Arc Welding (SMAW) #.....	4

**Semester Total**      **15**

**Program Total**      **15**

# Capstone Course

## Advanced Welding

### CERTIFICATE LEVEL I

#### First Semester

			Credits
TECM	1301	Industrial Mathematics.....	3
WLDG	1407	Introduction to Welding Using Multiple Process.....	4
WLDG	1413	Introduction to Blueprint Reading for Welders.....	4
WLDG	1428	Introduction to Shielded Metal Arc Welding (SMAW).....	4

**Semester Total**      **12**

#### Second Semester

			Credits
WLDG	1434	Introduction to Gas Tungsten Arc TIG Welding (GTAW).....	4
WLDG	1435	Introduction to Pipe Welding.....	4
WLDG	1457	Intermediate Shielded Metal Arc Welding (SMAW).....	4

**Semester Total**      **12**

#### Third Semester

			Credits
WLDG	2447	Advanced Gas Metal Arc Welding (GMAW).....	4
WLDG	2451	Advanced Gas Tungsten Arc TIG Welding (GTAW).....	4
WLDG	2453	Advanced Pipe Welding #.....	4

**Semester Total**      **12**

**Program Total**      **38**

# Capstone Course

# Science, Technology, Engineering and Mathematics

**Drafting & Design Engineering Technology (15.1301)**  
**Electronics Engineering Technology (15.0303)**  
**Instrumentation and Controls Engineering Technology (15.0404)**  
**Petroleum Engineering Technology (15.0903)**  
**Process Technology (41.0301)**

A Career Cluster is a grouping of occupations and broad industries based on commonalities. The Science, Technology, Engineering and Mathematics career cluster is concerned with providing knowledge and skills related to planning, managing, and providing scientific research and professional and technical services (e.g., physical science, social science, engineering) including laboratory and testing services, and research and development services. This includes the following HCC programs: Electronics Engineering Technology, Drafting & Design Engineering Technology, Instrumentation and Controls Engineering Technology, Petroleum Engineering Technology, and Process Technology.

All new semester hour students, who have earned less than 12 semester hours of college level credit, are required to take a first-year student success course in their first term at HCC. Through research and experience, Houston Community College has determined that many life and career management skills are necessary for students to make the most of their college investment. A student success course is designed to prepare students for the demands of college and for success in the world of work. The course emphasizes setting priorities, time management, effective listening, note-taking, concentration techniques, and retention of information, book analysis, comprehension techniques, and test-taking skills. This course also incorporates units that are designed to facilitate the use of library databases in conducting research, planning and setting educational objectives, lifelong career assessment, decision-making, financial aid, tutoring, and student support services, enabling the student to maximize the use of college resources.

Every HCC Career and Technology Education program contains a “capstone,” an experience for the student to “put it all together.” The capstone is a learning experience resulting in a consolidation of a student’s educational experience and certifies mastery of entry level workplace competencies. The capstone experience must occur during the last semester of the student’s educational program. The capstone consists of an external learning experience or an advanced course especially designed to help students synthesize knowledge and skills or other licensure as appropriate.

## DRAFTING & DESIGN ENGINEERING TECHNOLOGY

The Drafting and Design Engineering Technology program offers the technical training necessary for students choosing a drafting/design career in the fields of architecture, construction, manufacturing, and engineering. This program provides a strong academic and technical base, giving the graduate the needed skills and knowledge for immediate employment and the foundation for professional growth. It also provides professional growth for the experienced drafter/designer needing academic enrichment and knowledge of computer-aided drafting technology.

Advanced placement credit (21 credit hours max) is available to students who can provide written documentation of a minimum of two years, continuous related industry experience within the past ten years. This advanced placement credit is awarded after the student completes 9 semester hours at HCC.

The Texas Higher Education Coordinating Board (THECB) allows students to earn only one AAS in Drafting and Design Engineering Technology. Students must choose one of the following six specializations: General Computer-Aided Design Drafting, Architectural Drafting, Civil Design Drafting, Electrical Design Drafting, Mechanical Design, or Piping Design Drafting.

Likewise the THECB allows students to earn only one **Certificate** in Computer-Aided Drafting. Students must choose from one of the following five specializations: Computer-Aided Drafting-General Drafting, Architectural Drafting, Civil/Structural Drafting, Electro-Mechanical Drafting or Pipe Drafting.

Accredited with the ADDA (American Drafting and Design Association) Level: Drafter

### Program Outcomes

Students will be able to

- Produce technical drawings using geometric techniques with Drafting examples.
- Apply dimensional concepts, in accordance with industry standards in the production of technical drawings that are of the appropriate scale and proportion. Four to Five standards will be examined.
- Identify, analyze, and categorize complex two-dimensional models and three-dimensional models in the planning of a drawing solution. Models will include Multi-View, Isometric, and Projection drawings.

# Science, Technology, Engineering and Mathematics

- Utilize computer-aided design software in the production of civil, electrical, mechanical, or architectural drawings. Navigation of software specifics for each discipline will be demonstrated.
- Demonstrate knowledge of industry design standards in the production of civil, electrical, mechanical, or architectural drawings. Specific design standards will be tested for each discipline.

For more information call 713.718.5255 or 713.718.5219 or e-mail [morteza.sameei@hccs.edu](mailto:morteza.sameei@hccs.edu).

## Drafting & Design Engineering Technology - Computer-Aided Drafting - General

### AAS

TSI Testing is required prior to first enrollment.

#### FIRST YEAR

##### First Semester

	<b>Credits</b>
EDUC 1300 Learning Framework <sup>A</sup> .....	3
ENGL 1301 Composition I.....	3
DFTG 1305 Technical Drafting.....	3
DFTG 1309 Basic Computer-Aided Drafting.....	3
MATH 1314 College Algebra.....	3
<b>Semester Total</b>	<b>15</b>

##### Second Semester

	<b>Credits</b>
DFTG 2319 Intermediate Computer-Aided Drafting.....	3
DFTG 2317 Descriptive Geometry.....	3
ENGL 2311 Technical & Business Writing OR	
ENGL 1302 Composition II.....	3
DFTG 1333 Mechanical Drafting.....	3
XXXX #3## Social/Behavioral Sciences Elective <sup>B</sup> .....	3
<b>Semester Total</b>	<b>15</b>

#### SECOND YEAR

##### First Semester

	<b>Credits</b>
DFTG 1358 Electrical/Electronics Drafting OR	
DFTG 1329 Electro-Mechanical Drafting.....	3
DFTG 1310 Specialized Basic Computer Aided Drafting (CAD).....	3
DFTG 2323 Pipe Drafting.....	3
DFTG 2330 Civil Drafting.....	3
MATH 1316 Plane Trigonometry.....	3
<b>Semester Total</b>	<b>15</b>

##### Second Semester

	<b>Credits</b>
DFTG 1317 Architectural Drafting-Residential.....	3
ARCE 1352 Structural Drafting.....	3
DFTG 2335 Advanced Technologies in Mechanical Design and Drafting OR	
DFTG 2340 Solid Modeling/Design.....	3
XXXX #3## Humanities/Fine Arts Elective <sup>C</sup> .....	3
DFTG 2338 Final Project - Advanced Drafting #.....	3
<b>Semester Total</b>	<b>15</b>
<b>Program Total</b>	<b>60</b>

# Capstone Course

<sup>A</sup> Student Success Course: Students are required to complete EDUC 1300 within their first 12 semester credit hours of instruction. Students enrolling at HCC with 12 or more hours completed should consult with an academic advisor to select an appropriate course substitution.

<sup>B</sup> Humanities/Fine Arts: May choose from – ARTS 1301, 1303, 1304, COMM 2366, DANC 2303, DRAM 1310, 2316, 2366, ENGL 2322, 2323, 2327, 2328, 2332, 2333, 2342, 2343, 2351, HIST 1301, 1302, 2311, 2312, 2321, 2322, 2301, 2327, 2328, 2381, HUMA 1301, 1305, 1311, 2319, 2323, MUSI 1306, 1310, PHIL 1301, 1304, 2306, 2307, 2316, World Languages (ARAB 1411, 1412, CHIN 1411, 1412, FREN 1411, 1412, GERM 1411, 1412, JAPN 1411, 1412, KORE 1411, 1412, SPAN 1411, 1412).

<sup>C</sup> Social/Behavioral Sciences: May choose from – ANTH 2346, 2351, ECON 1301, 2301, 2302, EDUC 1300, GEOG 1302, 1303, GOVT 2305, 2306, PSYC 2301, 2314, 2316, 2319, SOCI 1301, 1306, 2301, 2336, TECA 1354.

## Drafting & Design Engineering Technology - Computer-Aided Drafting - General

### CERTIFICATE LEVEL I

#### FIRST YEAR

##### First Semester

	<b>Credits</b>
DFTG 1309 Basic Computer-Aided Drafting.....	3
DFTG 1305 Technical Drafting.....	3
<b>Semester Total</b>	<b>6</b>

##### Second Semester

	<b>Credits</b>
DFTG 1358 Electrical/Electronics Drafting OR	
DFTG 1329 Electro-Mechanical Drafting.....	3
DFTG 2319 Intermediate Computer-Aided Drafting OR	
DFTG 1310 Specialized Basic Computer Aided Drafting (CAD).....	3
DFTG 1333 Mechanical Drafting.....	3
DFTG 1317 Architectural Drafting-Residential.....	3
<b>Semester Total</b>	<b>12</b>

# Science, Technology, Engineering and Mathematics

<b>Third Semester</b>			<b>Credits</b>
DFTG	2323	Pipe Drafting .....	3
DFTG	2330	Civil Drafting # .....	3
ARCE	1352	Structural Drafting .....	3
<b>Semester Total</b>			<b>9</b>
<b>Program Total</b>			<b>27</b>

\*Student Success Course

# Capstone Course (Department approval prior to enrollment in a capstone course)

## Drafting & Design Engineering Technology - Computer-Aided Drafting-Architectural Specialization

### AAS

TSI testing is required prior to first enrollment.

#### FIRST YEAR

<b>First Semester</b>			<b>Credits</b>
EDUC	1300	Learning Framework <sup>A</sup> .....	3
ENGL	1301	Composition I .....	3
DFTG	1305	Technical Drafting .....	3
DFTG	1309	Basic Computer-Aided Drafting .....	3
MATH	1314	College Algebra .....	3
<b>Semester Total</b>			<b>15</b>

<b>Second Semester</b>			<b>Credits</b>
DFTG	2319	Intermediate Computer-Aided Drafting .....	3
DFTG	1317	Architectural Drafting-Residential .....	3
XXXX	#3##	Social/Behavioral Sciences Elective <sup>B</sup> .....	3
MATH	1316	Plane Trigonometry .....	3
ARCE	1352	Structural Drafting .....	3
<b>Semester Total</b>			<b>15</b>

#### SECOND YEAR

<b>First Semester</b>			<b>Credits</b>
XXXX	#3##	Humanities/Fine Arts Elective <sup>C</sup> .....	3
DFTG	2300	Intermediate Architectural Drafting - Residential .....	3
ENGL	2311	Technical & Business Writing OR .....	3
ENGL	1302	Composition II .....	3
DFTG	2330	Civil Drafting .....	3
DFTG	1376	Revit Residential .....	3
<b>Semester Total</b>			<b>15</b>

<b>Second Semester</b>			<b>Credits</b>
DFTG	2331	Advanced Technologies in Architectural Design and Drafting .....	3
DFTG	1392	Special Topics in Architectural Drafting and Architectural CAD/CADD .....	3
DFTG	2328	Architectural Drafting - Commercial # .....	3
ARCE	2352	Mechanical and Electrical Systems OR .....	3
DFTG	#3##	Program Related Elective <sup>D</sup> .....	3

DFTG	2388	Final Project - Advanced Drafting OR .....	3
DFTG	2381	Cooperative Education - Drafting and Design Technology/Technician, General .....	3
<b>Semester Total</b>			<b>15</b>
<b>Program Total</b>			<b>60</b>

# Capstone Course (Department approval prior to enrollment in a capstone course)

<sup>A</sup> Student Success Course: Students are required to complete EDUC 1300 within their first 12 semester credit hours of instruction. Students enrolling at HCC with 12 or more hours completed should consult with an academic advisor to select an appropriate course substitution.

<sup>B</sup> Humanities/Fine Arts: May choose from – ARTS 1301, 1303, 1304, COMM 2366, DANC 2303, DRAM 1310, 2316, 2366, ENGL 2322, 2323, 2327, 2328, 2332, 2333, 2342, 2343, 2351, HIST 1301, 1302, 2311, 2312, 2321, 2322, 2301, 2327, 2328, 2381, HUMA 1301, 1305, 1311, 2319, 2323, MUSI 1306, 1310, PHIL 1301, 1304, 2306, 2307, 2316, World Languages (ARAB 1411, 1412, CHIN 1411, 1412, FREN 1411, 1412, GERM 1411, 1412, JAPN 1411, 1412, KORE 1411, 1412, SPAN 1411, 1412).

<sup>C</sup> Social/Behavioral Sciences: May choose from – ANTH 2346, 2351, ECON 1301, 2301, 2302, EDUC 1300, GEOG 1302, 1303, GOVT 2305, 2306, PSYC 2301, 2314, 2316, 2319, SOCI 1301, 1306, 2301, 2336, TECA 1354.

<sup>D</sup> Program Approved Electives: May choose from – ARCE 2352, DFTG 1301, 302, 1305, 1309, 1310, 1313, 1315, 1317, 1329, 1331, 1333, 1335, 1341, 1344, 1345, 1348, 1352, 1354, 1356, 1358, 1370, 1376, 1391, 1391 - Auto-ISO, 1392 - Architectural Desktop I, 1392 - Green Building, 1392 - Revit Residential, 1393, 1394, 1395, 1396 - Piping Design Systems (PDS), 1396 - Smart Plant 3D (SP3D), 2300, 2302, 2304, 2305, 2306, 2307, 2308, 2310, 2316, 2317, 2319, 2321, 2323, 2328, 2330, 2331, 2332, 2335, 2336, 2338, 2340, 2345, 2352, 2358, 2370, 2371, 2372, 2373, 2374, 2375, 2380, 2381.

## Drafting & Design Engineering Technology - Computer-Aided Drafting-Architectural Specialization

### CERTIFICATE LEVEL I

#### FIRST YEAR

<b>First Semester</b>			<b>Credits</b>
DFTG	1309	Basic Computer-Aided Drafting .....	3
DFTG	1305	Technical Drafting .....	3
<b>Semester Total</b>			<b>6</b>

<b>Second Semester</b>			<b>Credits</b>
ARCE	1352	Structural Drafting .....	3
DFTG	1317	Architectural Drafting-Residential .....	3
DFTG	2319	Intermediate Computer-Aided Drafting .....	3
DFTG	2330	Civil Drafting .....	3
<b>Semester Total</b>			<b>12</b>

# Science, Technology, Engineering and Mathematics

<b>Third Semester</b>			<b>Credits</b>
DFTG 1376	Revit Residential.....		3
ARCE 2352	Mechanical and Electrical Systems OR		
DFTG #3##	Program Related Elective.....		3
DFTG 2328	Architectural Drafting-Commercial #.....		3
<b>Semester Total</b>			<b>9</b>
<b>Program Total</b>			<b>27</b>

# Capstone Course (Department approval prior to enrollment in a capstone course)

<sup>A</sup> Program Approved Electives: May choose from – ARCE 2352, DFTG 1301, 302, 1305, 1309, 1310, 1313, 1315, 1317, 1329, 1331, 1333, 1335, 1341, 1344, 1345, 1348, 1352, 1354, 1356, 1358, 1370, 1376, 1391, 1391 - Auto-ISO, 1392 - Architectural Desktop I, 1392 - Green Building, 1392 - Revit Residential, 1393, 1394, 1395, 1396 - Piping Design Systems (PDS), 1396 - Smart Plant 3D(SP3D), 2300, 2302, 2304, 2305, 2306, 2307, 2308, 2310, 2316, 2317, 2319, 2321, 2323, 2328, 2330, 2331, 2332, 2335, 2336, 2338, 2340, 2345, 2352, 2358, 2370, 2371, 2372, 2373, 2374, 2375, 2380, 2381.

## Drafting & Design Engineering Technology - Computer-Aided Drafting- Civil Specialization

### AAS

TSI testing is required prior to first enrollment.

#### FIRST YEAR

<b>First Semester</b>			<b>Credits</b>
EDUC 1300	Learning Framework <sup>A</sup> .....		3
ENGL 1301	Composition I.....		3
DFTG 1305	Technical Drafting.....		3
DFTG 1309	Basic Computer-Aided Drafting.....		3
MATH 1314	College Algebra.....		3
<b>Semester Total</b>			<b>15</b>

<b>Second Semester</b>			<b>Credits</b>
DFTG 2319	Intermediate Computer-Aided Drafting.....		3
SRVY 1301	Introduction to Surveying.....		3
DFTG 1310	Specialized Basic Computer Aided Drafting (CAD) OR		
DFTG #3##	Drafting Elective <sup>D</sup> .....		3
DFTG 2317	Descriptive Geometry.....		3
MATH 1316	Plane Trigonometry.....		3
<b>Semester Total</b>			<b>15</b>

#### SECOND YEAR

<b>First Semester</b>			<b>Credits</b>
XXXX #3##	Social/Behavioral Sciences Elective <sup>C</sup> .....		3
SRVY 1341	Land Surveying.....		3
DFTG 2321	Topographical Drafting OR		
DFTG 2375	Introduction to GIS.....		3

ENGL 2311	Technical & Business Writing OR		
ENGL 1302	Composition II.....		3
DFTG 2330	Civil Drafting.....		3
<b>Semester Total</b>			<b>15</b>

<b>Second Semester</b>			<b>Credits</b>
ARCE 1352	Structural Drafting.....		3
DFTG 2370	Intermediate CAD (Microstation).....		3
XXXX #3##	Humanities/Fine Arts Elective <sup>B</sup> .....		3
SRVY 2348	Plane Surveying.....		3
DFTG 2374	Civil 3D #.....		3
<b>Semester Total</b>			<b>15</b>
<b>Program Total</b>			<b>60</b>

# Capstone Course (Department approval prior to enrollment in a capstone course)

<sup>A</sup> Student Success Course: Students are required to complete EDUC 1300 within their first 12 semester credit hours of instruction. Students enrolling at HCC with 12 or more hours completed should consult with an academic advisor to select an appropriate course substitution.

<sup>B</sup> Humanities/Fine Arts: May choose from – ARTS 1301, 1303, 1304, COMM 2366, DANC 2303, DRAM 1310, 2316, 2366, ENGL 2322, 2323, 2327, 2328, 2332, 2333, 2342, 2343, 2351, HIST 1301, 1302, 2311, 2312, 2321, 2322, 2301, 2327, 2328, 2381, HUMA 1301, 1305, 1311, 2319, 2323, MUSI 1306, 1310, PHIL 1301, 1304, 2306, 2307, 2316, World Languages (ARAB 1411, 1412, CHIN 1411, 1412, FREN 1411, 1412, GERM 1411, 1412, JAPN 1411, 1412, KORE 1411, 1412, SPAN 1411, 1412).

<sup>C</sup> Social/Behavioral Sciences: May choose from – ANTH 2346, 2351, ECON 1301, 2301, 2302, EDUC 1300, GEOG 1302, 1303, GOVT 2305, 2306, PSYC 2301, 2314, 2316, 2319, SOCI 1301, 1306, 2301, 2336, TECA 1354.

<sup>D</sup> Drafting Electives: May choose from – DFTG 1301, 1302, 1310, 1313, 1315, 1317, 1329, 1331, 1333, 1335, 1341, 1344, 1345, 1348, 1352, 1354, 1356, 1358, 1370, 1376, 1391, 1391 - Auto-ISO, 1392 - Architectural Desktop I, 1392 - Green Building, 1392 - Revit Residential, 1393, 1394, 1395, 1396 - Piping Design Systems (PDS), 2300, 2302, 2304, 2305, 2306, 2307, 2308, 2310, 2316, 2321, 2323, 2328, 2331, 2332, 2335, 2336, 2338, 2340, 2345, 2352, 2358, 2371, 2372, 2373, 2375, 2380, 2381.

## Drafting & Design Engineering Technology - Computer-Aided Drafting- Civil Specialization

### CERTIFICATE LEVEL I

#### FIRST YEAR

<b>First Semester</b>			<b>Credits</b>
DFTG 1309	Basic Computer-Aided Drafting.....		3
DFTG 1305	Technical Drafting.....		3
<b>Semester Total</b>			<b>6</b>

# Science, Technology, Engineering and Mathematics

<b>Second Semester</b>		<b>Credits</b>
DFTG 1310	Specialized Basic Computer Aided Drafting (CAD) .....	3
DFTG 2319	Intermediate Computer-Aided Drafting .....	3
SRVY 1301	Introduction to Surveying .....	3
DFTG 2330	Civil Drafting.....	3
<b>Semester Total</b>		<b>12</b>

<b>Third Semester</b>		<b>Credits</b>
SRVY 1341	Land Surveying.....	3
DFTG 2374	Civil 3-D # .....	3
ARCE 1352	Structural Drafting.....	3
<b>Semester Total</b>		<b>9</b>
<b>Program Total</b>		<b>27</b>

# Capstone Course (Department approval prior to enrollment in a capstone course)

## Drafting & Design Engineering Technology - Computer-Aided Drafting- Electrical Specialization

### AAS

TSI testing is required prior to first enrollment.

#### FIRST YEAR

<b>First Semester</b>		<b>Credits</b>
EDUC 1300	Learning Framework <sup>A</sup> .....	3
ENGL 1301	Composition I .....	3
DFTG 1305	Technical Drafting .....	3
DFTG 1309	Basic Computer-Aided Drafting .....	3
MATH 1314	College Algebra.....	3
<b>Semester Total</b>		<b>15</b>

<b>Second Semester</b>		<b>Credits</b>
DFTG 1333	Mechanical Drafting .....	3
DFTG 2319	Intermediate Computer-Aided Drafting .....	3
XXXX #3##	Humanities/Fine Arts Elective <sup>B</sup> .....	3
DFTG 1329	Electro-Mechanical Drafting.....	3
MATH 1316	Plane Trigonometry.....	3
<b>Semester Total</b>		<b>15</b>

#### SECOND YEAR

<b>First Semester</b>		<b>Credits</b>
DFTG 1310	Specialized Basic Computer Aided Drafting (CAD) .....	3
DFTG 2317	Descriptive Geometry .....	3
DFTG 1358	Electrical/Electronics Drafting .....	3
DFTG 2302	Machine Drafting.....	3
XXXX #3##	Social/Behavioral Sciences Elective <sup>C</sup> .....	3
<b>Semester Total</b>		<b>15</b>

<b>Second Semester</b>		<b>Credits</b>
DFTG 2335	Advanced Technologies in Mechanical Design and Drafting (Inventor).....	3
DFTG 2340	Solid Modeling/Design .....	3
DFTG 2305	Printed Circuit Board Design OR	
DFTG #3##	Drafting Related Elective <sup>D</sup> .....	3
ENGL 2311	Technical & Business Writing OR	
ENGL 1302	Composition II.....	3
DFTG 2307	Electrical Drafting # .....	3
<b>Semester Total</b>		<b>15</b>
<b>Program Total</b>		<b>60</b>

# Capstone Course (Department approval prior to enrollment in a capstone course)

<sup>A</sup> Student Success Course: Students are required to complete EDUC 1300 within their first 12 semester credit hours of instruction. Students enrolling at HCC with 12 or more hours completed should consult with an academic advisor to select an appropriate course substitution.

<sup>B</sup> Humanities/Fine Arts: May choose from – ARTS 1301, 1303, 1304, COMM 2366, DANC 2303, DRAM 1310, 2316, 2366, ENGL 2322, 2323, 2327, 2328, 2332, 2333, 2342, 2343, 2351, HIST 1301, 1302, 2311, 2312, 2321, 2322, 2301, 2327, 2328, 2381, HUMA 1301, 1305, 1311, 2319, 2323, MUSI 1306, 1310, PHIL 1301, 1304, 2306, 2307, 2316, World Languages (ARAB 1411, 1412, CHIN 1411, 1412, FREN 1411, 1412, GERM 1411, 1412, JAPN 1411, 1412, KORE 1411, 1412, SPAN 1411, 1412).

<sup>C</sup> Social/Behavioral Sciences: May choose from – ANTH 2346, 2351, ECON 1301, 2301, 2302, EDUC 1300, GEOG 1302, 1303, GOVT 2305, 2306, PSYC 2301, 2314, 2316, 2319, SOCI 1301, 1306, 2301, 2336, TECA 1354.

<sup>D</sup> Drafting Electives: May choose from – DFTG 1301, 1302, 1313, 1315, 1317, 1331, 1335, 1341, 1344, 1345, 1348, 1352, 1354, 1356, 1370, 1376, 1391, 1391 - Auto-ISO, 1392 - Architectural Desktop I, 1392 - Green Building, 1392 - Revit Residential, 1393, 1394, 1395, 1396 - Piping Design Systems (PDS), 1396 - Smart Plant 3D(SP3D), 2300, 2304, 2305, 2306, 2308, 2310, 2316, 2321, 2323, 2328, 2330, 2331, 2332, 2336, 2338, 2345, 2352, 2358, 2370, 2371, 2372, 2373, 2374, 2375, 2380, 2381.

## Drafting & Design Engineering Technology - Computer-Aided Drafting- Electrical Specialization

### CERTIFICATE LEVEL I

#### FIRST YEAR

<b>First Semester</b>		<b>Credits</b>
DFTG 1309	Basic Computer-Aided Drafting .....	3
DFTG 1305	Technical Drafting .....	3
<b>Semester Total</b>		<b>6</b>

# Science, Technology, Engineering and Mathematics

<b>Second Semester</b>		<b>Credits</b>
DFTG 1310	Specialized Basic Computer Aided Drafting (CAD) .....	3
DFTG 2319	Intermediate Computer-Aided Drafting .....	3
DFTG 1333	Mechanical Drafting .....	3
DFTG 1358	Electrical/Electronics Drafting .....	3
<b>Semester Total</b>		<b>12</b>

<b>Third Semester</b>		<b>Credits</b>
DFTG 2302	Machine Drafting .....	3
DFTG 2335	Advanced Technologies in Mechanical Design and Drafting (Solid Modeling) OR	
DFTG 2340	Solid Modeling/Design .....	3
DFTG 1329	Electro-Mechanical Drafting # .....	3
<b>Semester Total</b>		<b>9</b>
<b>Program Total</b>		<b>27</b>

# Capstone Course (Department approval prior to enrollment in a capstone course)

## Drafting & Design Engineering Technology - Computer-Aided Drafting - Mechanical Specialization

### AAS

TSI testing is required prior to first enrollment.

#### FIRST YEAR

<b>First Semester</b>		<b>Credits</b>
EDUC 1300	Learning Framework <sup>A</sup> .....	3
ENGL 1301	Composition I .....	3
DFTG 1305	Technical Drafting .....	3
DFTG 1309	Basic Computer-Aided Drafting .....	3
MATH 1314	College Algebra .....	3
<b>Semester Total</b>		<b>15</b>

<b>Second Semester</b>		<b>Credits</b>
DFTG 1333	Mechanical Drafting .....	3
DFTG 2319	Intermediate Computer-Aided Drafting .....	3
XXXX #3##	Humanities/Fine Arts Elective <sup>B</sup> .....	3
DFTG 2302	Machine Drafting .....	3
MATH 1316	Plane Trigonometry .....	3
<b>Semester Total</b>		<b>15</b>

#### SECOND YEAR

<b>First Semester</b>		<b>Credits</b>
DFTG 2335	Advanced Technologies in Mechanical Design and Drafting (Inventor) .....	3
DFTG 2317	Descriptive Geometry .....	3
DFTG 2306	Machine Design .....	3
DFTG 1310	Specialized Basic Computer Aided Drafting (CAD) .....	3
XXXX #3##	Social/Behavioral Sciences Elective <sup>C</sup> .....	3
<b>Semester Total</b>		<b>15</b>

<b>Second Semester</b>		<b>Credits</b>
DFTG 2340	Solid Modeling/Design .....	3
DFTG 2338	Final Project - Advanced Drafting # OR	
DFTG 2381	Cooperative Education - Drafting and Design Technology/Technician, General # .....	3
DFTG 2358	Advanced Machine Design .....	3
ENGL 2311	Technical & Business Writing OR	
ENGL 1302	Composition II .....	3
DFTG #3##	Program Related Elective <sup>D</sup> .....	3
<b>Semester Total</b>		<b>15</b>
<b>Program Total</b>		<b>60</b>

# Capstone Course (Department approval prior to enrollment in a capstone course)

<sup>A</sup> Student Success Course: Students are required to complete EDUC 1300 within their first 12 semester credit hours of instruction. Students enrolling at HCC with 12 or more hours completed should consult with an academic advisor to select an appropriate course substitution.

<sup>B</sup> Humanities/Fine Arts: May choose from – ARTS 1301, 1303, 1304, COMM 2366, DANC 2303, DRAM 1310, 2316, 2366, ENGL 2322, 2323, 2327, 2328, 2332, 2333, 2342, 2343, 2351, HIST 1301, 1302, 2311, 2312, 2321, 2322, 2301, 2327, 2328, 2381, HUMA 1301, 1305, 1311, 2319, 2323, MUSI 1306, 1310, PHIL 1301, 1304, 2306, 2307, 2316, World Languages (ARAB 1411, 1412, CHIN 1411, 1412, FREN 1411, 1412, GERM 1411, 1412, JAPN 1411, 1412, KORE 1411, 1412, SPAN 1411, 1412).

<sup>C</sup> Social/Behavioral Sciences: May choose from – ANTH 2346, 2351, ECON 1301, 2301, 2302, EDUC 1300, GEOG 1302, 1303, GOVT 2305, 2306, PSYC 2301, 2314, 2316, 2319, SOCI 1301, 1306, 2301, 2336, TECA 1354.

<sup>D</sup> Program Related Elective: May choose from – DFTG 1301, 1302, 1305, 1309, 1310, 1313, 1315, 1317, 1329, 1331, 1333, 1335, 1341, 1344, 1345, 1348, 1352, 1354, 1356, 1358, 1370, 1376, 1391, 1391 - Auto-ISO, 1392 - Architectural Desktop I, 1392 - Green Building, 1392 - Revit Residential, 1393, 1394, 1395, 396 - Piping Design Systems (PDS), 1396 - Smart Plant 3D(SP3D), 2300, 2302, 2304, 2305, 2306, 2307, 2308, 2310, 2316, 2317, 2319, 2321, 2323, 2328, 2330, 2331, 2332, 2335, 2336, 2345, 2352, 2370, 2371, 2372, 2373, 2374, 2375, 2380.

## Drafting & Design Engineering Technology - Computer-Aided Drafting - Mechanical Specialization

### CERTIFICATE LEVEL I

#### FIRST YEAR

<b>First Semester</b>		<b>Credits</b>
DFTG 1309	Basic Computer-Aided Drafting .....	3
DFTG 1305	Technical Drafting .....	3
<b>Semester Total</b>		<b>6</b>

# Science, Technology, Engineering and Mathematics

<b>Second Semester</b>		<b>Credits</b>
DFTG 1333	Mechanical Drafting .....	3
DFTG 2319	Intermediate Computer-Aided Drafting .....	3
DFTG 2302	Machine Drafting .....	3
DFTG 2340	Solid Modeling/Design .....	3
<b>Semester Total</b>		<b>12</b>

<b>Third Semester</b>		<b>Credits</b>
DFTG 2306	Machine Design .....	3
DFTG 2317	Descriptive Geometry .....	3
DFTG 2335	Advanced Technologies in Mechanical Design and Drafting (Inventor) # .....	3
<b>Semester Total</b>		<b>9</b>
<b>Program Total</b>		<b>27</b>

# Capstone Course (Department approval prior to enrollment in a capstone course)

## Drafting & Design Engineering Technology - Computer-Aided Drafting - Pipe Specialization

### AAS

TSI testing is required prior to first enrollment.

#### FIRST YEAR

<b>First Semester</b>		<b>Credits</b>
EDUC 1300	Learning Framework <sup>A</sup> .....	3
ENGL 1301	Composition I .....	3
DFTG 1305	Technical Drafting .....	3
DFTG 1309	Basic Computer-Aided Drafting .....	3
MATH 1314	College Algebra .....	3
<b>Semester Total</b>		<b>15</b>

<b>Second Semester</b>		<b>Credits</b>
DFTG 2319	Intermediate Computer-Aided Drafting .....	3
XXXX #3##	Humanities/Fine Arts Elective <sup>B</sup> .....	3
DFTG 2323	Pipe Drafting .....	3
DFTG 1333	Mechanical Drafting .....	3
DFTG 2317	Descriptive Geometry .....	3
<b>Semester Total</b>		<b>15</b>

#### SECOND YEAR

<b>First Semester</b>		<b>Credits</b>
DFTG 1395	Special Topics in Mechanical Drafting and Mechanical Drafting CAD/CADD .....	3
DFTG 2308	Instrumentation Drafting .....	3
DFTG #3##	Drafting Related Elective <sup>D</sup> .....	3
MATH 1316	Plane Trigonometry .....	3
XXXX #3##	Social/Behavioral Sciences Elective <sup>C</sup> .....	3
<b>Semester Total</b>		<b>15</b>

<b>Second Semester</b>		<b>Credits</b>
ENGL 2311	Technical & Business Writing OR .....	3
ENGL 1302	Composition II .....	3
DFTG 2340	Solid Modeling/Design .....	3
DFTG 2345	Advanced Pipe Drafting # .....	3
DFTG 2373	Piping Design Management Systems (PDMS) .....	3
ARCE 1352	Structural Drafting .....	3
<b>Semester Total</b>		<b>15</b>
<b>Program Total</b>		<b>60</b>

# Capstone Course (Department approval prior to enrollment in a capstone course)

<sup>A</sup> Student Success Course: Students are required to complete EDUC 1300 within their first 12 semester credit hours of instruction. Students enrolling at HCC with 12 or more hours completed should consult with an academic advisor to select an appropriate course substitution.

<sup>B</sup> Humanities/Fine Arts: May choose from – ARTS 1301, 1303, 1304, COMM 2366, DANC 2303, DRAM 1310, 2316, 2366, ENGL 2322, 2323, 2327, 2328, 2332, 2333, 2342, 2343, 2351, HIST 1301, 1302, 2311, 2312, 2321, 2322, 2301, 2327, 2328, 2381, HUMA 1301, 1305, 1311, 2319, 2323, MUSI 1306, 1310, PHIL 1301, 1304, 2306, 2307, 2316, World Languages (ARAB 1411, 1412, CHIN 1411, 1412, FREN 1411, 1412, GERM 1411, 1412, JAPN 1411, 1412, KORE 1411, 1412, SPAN 1411, 1412).

<sup>C</sup> Social/Behavioral Sciences: May choose from – ANTH 2346, 2351, ECON 1301, 2301, 2302, EDUC 1300, GEOG 1302, 1303, GOVT 2305, 2306, PSYC 2301, 2314, 2316, 2319, SOCI 1301, 1306, 2301, 2336, TECA 1354.

<sup>D</sup> Drafting Related Elective: May choose from – DFTG 1301, 1302, 1310, 1313, 1315, 1317, 1329, 1331, 1335, 1341, 1344, 1345, 1348, 1352, 1354, 1356, 1358, 1370, 1376, 1391, 1391 - Auto-ISO, 1392 - Architectural Desktop I, 1392 - Green Building, 1392 - Revit Residential, 1393, 1394, 2300, 2302, 2304, 2305, 2306, 2307, 2310, 2316, 2321, 2328, 2330, 2331, 2332, 2335, 2336, 2338, 2352, 2358, 2370, 2371, 2372, 2374, 2375, 2380, 2381.

## Drafting & Design Engineering Technology - Computer-Aided Drafting - Pipe Specialization

### CERTIFICATE LEVEL I

#### FIRST YEAR

<b>First Semester</b>		<b>Credits</b>
DFTG 1309	Basic Computer-Aided Drafting .....	3
DFTG 1305	Technical Drafting .....	3
<b>Semester Total</b>		<b>6</b>

# Science, Technology, Engineering and Mathematics

<b>Second Semester</b>		<b>Credits</b>
DFTG 2319	Intermediate Computer-Aided Drafting .....	3
DFTG 2323	Pipe Drafting .....	3
DFTG 1333	Mechanical Drafting .....	3
DFTG 2308	Instrumentation Drafting.....	3
<b>Semester Total</b>		<b>12</b>

<b>Third Semester</b>		<b>Credits</b>
ARCE 1352	3	
DFTG 1395	Special Topics in Mechanical Drafting and Mechanical Drafting CAD / CADD AutoPlant .....	
	Isometrics .....	3
DFTG 2345	Advanced Pipe Drafting # .....	3
<b>Semester Total</b>		<b>9</b>
<b>Program Total</b>		<b>27</b>

# Capstone Course (Department approval prior to enrollment in a capstone course)

## ELECTRONICS ENGINEERING TECHNOLOGY

In addition to a solid core of academic and technical courses, the Electronics Engineering Technology program requires a focus specialization in one of the following areas to complete the AAS degree: Biomedical Electronics, Computer Engineering Technology and Electrical Power Technology.

Graduates of this program may secure entry-level employment in positions such as electronics technician, field service representative, technical writer, sales representative, computer technician and network technician.

Areas of employment may include research and development, servicing and maintenance, manufacturing and sales. Job responsibilities may require technicians to install and test newly designed equipment, operate and maintain complex electronic systems, write servicing or operating manuals, as well as represent manufacturers and wholesale/retail establishments.

The AAS in Electronics Engineering Technology is accredited by Engineering Technology Accreditation Commission of ABET, [www.abet.org](http://www.abet.org). The Electronics Engineering Technology department is a certified test site by the International Association for Radio, Telecommunications and Electromagnetics, Inc., (INARTE), 840 Queen Street, New Bern, NC 28560, 252.727.0200.

All of the Electronics Engineering Technology AAS degrees are approved for Tech Prep. Qualified high school students

may earn up to six credit hours toward the AAS degree through Tech Prep or dual credit. See an HCC counselor for information.

Students may transfer credits for the following courses to an Engineering Technology program at a four-year university in Texas: CETT 1403, DC Circuits; CETT 1405, AC Circuits; CETT 1425, Digital Fundamentals; CETT 1429, Solid State Devices; CETT 1457, Solid State Circuits.

## Major Programs Offered

### Electronics Engineering Technology AAS Degree

- Biomedical Electronics Specialization
- Computer Engineering Technology Specialization
- Electrical Power Technology Specialization

### Electronics Engineering Technology Certificates

- Basic Electronics Certificate
- Computer Servicing/Networks Certificate

### Program Objectives

Electronics Engineering Technology students will

- Solve Problems. Solve basic electric/electronic problems.
- Design Circuits. Build/design a circuit given a set of design criteria.
- Conduct Lab Experiments. Apply theory to practice in analyzing laboratory experiments results.
- Communicate Circuit Operation. Demonstrate strong oral and written communication skills in laboratory reports.
- Demonstrate Teamwork Skills in laboratory projects. Students will be able demonstrate teamwork in laboratory projects.
- Explain Ethics in Engineering Profession. Students will be able to explain ethical and professional engineering practices.

### Program Outcomes

Students must demonstrate that they have achieved the following outcomes upon graduation:

- Solve basic electric/electronic problems.
- Build/design a circuit given a set of design criteria.
- Apply theory to practice in analyzing laboratory experiments results.

# Science, Technology, Engineering and Mathematics

- Demonstrate strong oral and written communication skills in laboratory reports.
- Students will be able demonstrate teamwork in laboratory projects.
- Students will be able to explain ethical and professional engineering practices.

For more information call 713.718.5251 or email [morteza.sameei@hccs.edu](mailto:morteza.sameei@hccs.edu)

## Biomedical Electronics Specialization

The Biomedical Technology field has a growing need for technicians trained to maintain, troubleshoot, and repair medical equipment for health care facilities or research institutions. The Biomedical Electronics specialization includes a one-semester internship in a medical center, hospital, or medical equipment manufacturer, ensuring exposure to the latest equipment.

### AAS

TSI testing is required prior to first enrollment.

#### FIRST YEAR

##### First Semester

	<b>Credits</b>
EDUC 1300 Learning Framework <sup>A</sup> .....	3
MATH 1314 College Algebra.....	3
CETT 1321 Electronic Fabrication.....	3
CPMT 1449 Computer Networking Technology.....	4
<b>Semester Total</b>	<b>13</b>

##### Second Semester

	<b>Credits</b>
CETT 1403 DC Circuits.....	4
CETT 1425 Digital Fundamentals.....	4
MATH 1316 Plane Trigonometry.....	3
XXXX #3## Social/Behavioral Sciences Elective <sup>C</sup> .....	3
<b>Semester Total</b>	<b>14</b>

##### Third Semester

	<b>Credits</b>
PHYS 1401 College Physics I.....	4
XXXX #3## Humanities/Fine Arts Elective <sup>B</sup> .....	3
<b>Semester Total</b>	<b>7</b>

#### SECOND YEAR

##### First Semester

	<b>Credits</b>
CETT 1405 AC Circuits.....	4
CETT 1429 Solid State Devices.....	4
BIOM 1309 Applied Biomedical Equipment Technology.....	3
XXXX #3## Program Related Elective <sup>D</sup> .....	3
<b>Semester Total</b>	<b>14</b>

##### Second Semester

	<b>Credits</b>
BIOM 2331 Biomedical Clinical Instrumentation.....	3
HPRS 1206 Essentials of Medical Terminology.....	2
BIOM 2489 Internship - Biomedical Technology/Technician.....	4
CETT 1357 Linear Integrated Circuits #.....	3
<b>Semester Total</b>	<b>12</b>
<b>Program Total</b>	<b>60</b>

# Capstone Course

<sup>A</sup> Student Success Course: Students are required to complete EDUC 1300 within their first 12 semester credit hours of instruction. Students enrolling at HCC with 12 or more hours completed should consult with an academic advisor to select an appropriate course substitution.

<sup>B</sup> Humanities/Fine Arts: May choose from – ARTS 1301, 1303, 1304, COMM 2366, DANC 2303, DRAM 1310, 2316, 2366, ENGL 2322, 2323, 2327, 2328, 2332, 2333, 2342, 2343, 2351, HIST 1301, 1302, 2311, 2312, 2321, 2322, 2301, 2327, 2328, 2381, HUMA 1301, 1305, 1311, 2319, 2323, MUSI 1306, 1310, PHIL 1301, 1304, 2306, 2307, 2316, World Languages (ARAB 1411, 1412, CHIN 1411, 1412, FREN 1411, 1412, GERM 1411, 1412, JAPN 1411, 1412, KORE 1411, 1412, SPAN 1411, 1412).

<sup>C</sup> Social/Behavioral Sciences: May choose from – ANTH 2346, 2351, ECON 1301, 2301, 2302, EDUC 1300, GEOG 1302, 1303, GOVT 2305, 2306, PSYC 2301, 2314, 2316, 2319, SOCI 1301, 1306, 2301, 2336, TECA 1354.

<sup>D</sup> Program Related Electives: May choose from – CETT 1303, 1331, 1357, 1402, 1409, 1415, 1431, 1441, 1445, 1449, 1491, 2433, 2435, 2439, 2449; CPMT 1303, 1403, 1407, 1411, 1491, 1492, 2350, 2389, 2433, 2434, 2445, 2449.

## Electrical Power Technology Specialization

(Deactivation pending SACSCOC approval. Enrollment is closed to new students.)

Electrical Power Technology prepares students for jobs in power, oil and gas, and other power related services. In this specialization students learn about electrical machines (generators, motors, transformers) in single and multi-phase systems.

### AAS

TSI testing is required prior to first enrollment.

#### FIRST YEAR

##### First Semester

	<b>Credits</b>
ENGR 1201 Introduction to Engineering *.....	2
MATH 1314 College Algebra.....	3
CETT 1321 Electronic Fabrication.....	3
CPMT 1449 Computer Networking Technology.....	4
<b>Semester Total</b>	<b>12</b>

# Science, Technology, Engineering and Mathematics

<b>Second Semester</b>			<b>Credits</b>
CETT	1403	DC Circuits.....	4
CETT	1425	Digital Fundamentals.....	4
MATH	1316	Plane Trigonometry.....	3
XXXX	#3##	Social/Behavioral Science General Education Elective...	3
ENGL	1301	Composition I.....	3
<b>Semester Total</b>			<b>17</b>

<b>Third Semester</b>			<b>Credits</b>
PHYS	1401	College Physics I.....	4
XXXX	#3##	Humanities/Fine Arts General Education Elective.....	3
<b>Semester Total</b>			<b>7</b>

## SECOND YEAR

<b>First Semester</b>			<b>Credits</b>
CETT	1405	AC Circuits.....	4
CETT	1429	Solid State Devices.....	4
CETT	1431	Programming for Discrete Electronic Devices.....	4
<b>Semester Total</b>			<b>12</b>

<b>Second Semester</b>			<b>Credits</b>
XXXX	#4##	Program Related Elective.....	4
XXXX	#4##	Program Related Elective.....	4
CETT	1457	Linear Integrated Circuits*.....	4
<b>Semester Total</b>			<b>12</b>
<b>Program Total</b>			<b>60</b>

\*Student Success Course

\*\*Capstone

## Computer Engineering Specialization

Computer Engineering Technology is perhaps the most flexible of the specializations offered. In this program you learn practical skills needed for immediate employment as an electronics technician, or to continue to higher levels of education. The basic theory and skills learned allow the individual to grow in the ever changing field of electronics technology.

## AAS

TSI testing is required prior to first enrollment.

### FIRST YEAR

<b>First Semester</b>			<b>Credits</b>
EDUC	1300	Learning Framework <sup>A</sup> .....	3
ENGL	1301	Composition I.....	3
MATH	1314	College Algebra.....	3
CETT	1321	Electronic Fabrication.....	3
CPMT	1449	Computer Networking Technology.....	4
<b>Semester Total</b>			<b>16</b>

<b>Second Semester</b>			<b>Credits</b>
CETT	1403	DC Circuits.....	4
CETT	1425	Digital Fundamentals.....	4
MATH	1316	Plane Trigonometry.....	3
XXXX	#3##	Social/Behavioral Sciences Elective <sup>C</sup> .....	3
<b>Semester Total</b>			<b>14</b>

<b>Third Semester</b>			<b>Credits</b>
PHYS	1401	College Physics I.....	4
<b>Semester Total</b>			<b>4</b>

## SECOND YEAR

<b>First Semester</b>			<b>Credits</b>
CETT	1405	AC Circuits.....	4
CETT	1429	Solid State Devices.....	4
CETT	1431	Programming for Discrete Electronic Devices.....	4
XXXX	#3##	Humanities/Fine Arts Elective <sup>B</sup> .....	3
<b>Semester Total</b>			<b>15</b>

<b>Second Semester</b>			<b>Credits</b>
XXXX	#4##	Program Related Elective <sup>D</sup> .....	4
XXXX	#4##	Program Related Elective <sup>D</sup> .....	4
CETT	1357	Linear Integrated Circuits <sup>#</sup> .....	3
<b>Semester Total</b>			<b>11</b>
<b>Program Total</b>			<b>60</b>

# Capstone Course

<sup>A</sup> Student Success Course: Students are required to complete EDUC 1300 within their first 12 semester credit hours of instruction. Students enrolling at HCC with 12 or more hours completed should consult with an academic advisor to select an appropriate course substitution.

<sup>B</sup> Humanities/Fine Arts: May choose from – ARTS 1301, 1303, 1304, COMM 2366, DANC 2303, DRAM 1310, 2316, 2366, ENGL 2322, 2323, 2327, 2328, 2332, 2333, 2342, 2343, 2351, HIST 1301, 1302, 2311, 2312, 2321, 2322, 2301, 2327, 2328, 2381, HUMA 1301, 1305, 1311, 2319, 2323, MUSI 1306, 1310, PHIL 1301, 1304, 2306, 2307, 2316, World Languages (ARAB 1411, 1412, CHIN 1411, 1412, FREN 1411, 1412, GERM 1411, 1412, JAPN 1411, 1412, KORE 1411, 1412, SPAN 1411, 1412).

<sup>C</sup> Social/Behavioral Sciences: May choose from – ANTH 2346, 2351, ECON 1301, 2301, 2302, EDUC 1300, GEOG 1302, 1303, GOVT 2305, 2306, PSYC 2301, 2314, 2316, 2319, SOCI 1301, 1306, 2301, 2336, TECA 1354.

<sup>D</sup> Program Related Electives: May choose from – BIOM 1309, 2331, 2489, CETT 1303, 1357, 1402, 1409, 1415, 1441, 1445, 1449, 1491, 2433, 2435, 2439, 2449, CPMT 1303, 1403, 1407, 1411, 1491, 1492, 2350, 2389, 2433, 2434, 2445, 2449, ITCC 1401, 1402, 1404, 1406, 1408, 1442, 1446, 2407, 2408, 2410, 2432, 2436, 2440, 2441, 2444, 2454, 2455, 2456, ITSY 1417, 1427, 2401, 2417, 2443.

# Science, Technology, Engineering and Mathematics

## Basic Electronics

### CERTIFICATE LEVEL II

*TSI testing is required prior to first enrollment.*

#### First Semester Credits

EDUC 1300	Learning Framework*	3
MATH 1314	College Algebra	3
CETT 1321	Electronic Fabrication	3
CPMT 1449	Computer Networking Technology	4

**Semester Total 13**

#### Second Semester Credits

CETT 1403	DC Circuits	4
CETT 1425	Digital Fundamentals	4
MATH 1316	Plane Trigonometry	3

**Semester Total 11**

#### Third Semester Credits

CETT 1405	AC Circuits	4
CETT 1429	Solid State Devices #	4
CPMT 1303	Introduction To Computer Technology	3
XXXX #4##	Program Related Elective	4
XXXX #4##	Program Related Elective	4

**Semester Total 19**

**Program Total 43**

# Capstone Course

<sup>A</sup> Student Success Course: Students are required to complete EDUC 1300 within their first 12 semester credit hours of instruction. Students enrolling at HCC with 12 or more hours completed should consult with an academic advisor to select an appropriate course substitution.

<sup>B</sup> Program Related Electives: May choose from – CETT 1402, 1409, 1415, 1431, 1441, 1445, 1449, 1457, 1491, 2433, 2435, 2439, 2449, CPMT 1403, 1407, 1411, 1491, 1492, 2433, 2434, 2445, 2449.

## Computer Servicing/Networks

### CERTIFICATE LEVEL I

#### First Semester Credits

CPMT 1303	Introduction to Computer Technology	3
CPMT 1411	Introduction to Computer Maintenance OR	4
XXXX #4##	Program-Related Elective <sup>A</sup>	4

**Semester Total 11**

#### Second Semester

#### Credits

CETT 1321	Electronic Fabrication	3
TECM 1301	Industrial Mathematics OR	3
XXXX #3##	Program-Related Elective <sup>B</sup>	
CPMT 1449	Computer Networking Technology #	4

**Semester Total 10**

**Program Total 21**

# Capstone Course

<sup>A</sup> Program Related Electives: May choose from – CETT 1303, 1331, 1357, 1402, 1403, 1405, 1409, 1415, 1425, 1429, 1431, 1441, 1445, 1449, 1457, 1491, 2433, 2435, 2439, 2449, CPMT 1403, 1407, 1411, 1491, 1492, 2350, 2389, 2433, 2434, 2445, 2449.

<sup>B</sup> Program Related Electives: May choose from – CETT 1303, 1331, 1357, 1402, 1403, 1405, 1409, 1415, 1425, 1429, 1431, 1441, 1445, 1449, 1457, 1491, 2433, 2435, 2439, 2449, CPMT 1403, 1407, 1491, 1492, 2350, 2389, 2433, 2434, 2445, 2449, TECM 1301, 1303.

## INSTRUMENTATION AND CONTROLS ENGINEERING TECHNOLOGY

The Instrumentation and Controls Engineering Technology program prepares individuals to install, calibrate, troubleshoot and maintain process control equipment and systems. A wide variety of equipment is learned, from traditional pneumatics to digital devices using different protocols.

#### Program Outcomes

Students will be able to

- Interpret and sketch diagrams used in industrial automatic control.
- Configure a smart transmitter using a field communicator.
- Compose a working PLC program using ladder logic and then install and troubleshoot it.
- Troubleshoot process upsets caused by control equipment using simulation.
- Troubleshoot and repair process control faults in plant process equipment caused by tuning, control valves, transmitters and controller.

For more information call 713.718.5251 or e-mail [morteza.sameei@hccs.edu](mailto:morteza.sameei@hccs.edu).

# Science, Technology, Engineering and Mathematics

## Instrumentation and Controls Engineering Technology

### AAS

*TSI testing is required prior to first enrollment.*

#### FIRST YEAR

First Semester		Credits
EDUC 1300	Learning Framework <sup>A</sup>	3
PTAC 1302	Introduction To Process Technology	3
PTAC 1308	Safety, Health, and Environment I	3
CETT 1403	DC Circuits	4
MATH 1314	College Algebra	3
<b>Semester Total</b>		<b>16</b>

Second Semester		Credits
INTC 1456	Instrumentation Calibration	4
ENGL 1301	Composition I	3
MATH 1316	Trigonometry	3
INTC 1441	Principles of Automatic Control	4
CPMT 1449	Computer Networking Technology OR	
ITNW 1425	Fundamentals of Networking Technologies OR	
ITCC 1401	Cisco Exploration I - Networking Fundamentals	4
<b>Semester Total</b>		<b>18</b>

#### SECOND YEAR

First Semester		Credits
INTC 1343	Application of Industrial Automatic Control	3
INTC 2330	Instrumentation Systems Troubleshooting	3
XXXX #4##	Program-Related Elective <sup>D</sup>	4
PHYS 1401	College Physics	4
<b>Semester Total</b>		<b>14</b>

Second Semester		Credits
XXXX #3##	Humanities/Fine Arts Elective <sup>B</sup>	3
XXXX #3##	Social/Behavioral Sciences Elective <sup>C</sup>	3
RBTC 1301	Programmable Logic Controllers	3
INTC 2370	Linking Process Control Systems OR	
INTC 2336	Distributed Control and Programmable Logic OR	
INTC 2380	Cooperative Education-Instrumentation Technology/Technician <sup>#</sup>	3
<b>Semester Total</b>		<b>12</b>
<b>Program Total</b>		<b>60</b>

<sup>#</sup> Capstone Course

<sup>A</sup> Student Success Course: Students are required to complete EDUC 1300 within their first 12 semester credit hours of instruction. Students enrolling at HCC with 12 or more hours completed should consult with an academic advisor to select an appropriate course substitution.

<sup>B</sup> Humanities/Fine Arts: May choose from – ARTS 1301, 1303, 1304, COMM 2366, DANC 2303, DRAM 1310, 2316, 2366, ENGL 2322, 2323, 2327, 2328, 2332, 2333, 2342, 2343, 2351, HIST 1301, 1302, 2311, 2312, 2321, 2322, 2301, 2327, 2328, 2381, HUMA 1301, 1305, 1311, 2319, 2323, MUSI 1306, 1310, PHIL 1301, 1304, 2306, 2307, 2316, World Languages (ARAB 1411, 1412, CHIN 1411, 1412, FREN 1411, 1412, GERM 1411, 1412, JAPN 1411, 1412, KORE 1411, 1412, SPAN 1411, 1412).

<sup>C</sup> Social/Behavioral Sciences: May choose from – ANTH 2346, 2351, ECON 1301, 2301, 2302, EDUC 1300, GEOG 1302, 1303, GOVT 2305, 2306, PSYC 2301, 2314, 2316, 2319, SOCI 1301, 1306, 2301, 2336, TECA 1354.

<sup>D</sup> Program Related Elective: May choose from – INTC 1305, 1312, 1343, 1371, 1401, 1441, 1450, 1456, 1491, 2330, 2339, 2370, 2436, 2473; all INTC, CETT and CPMT courses.

## Instrumentation and Controls Engineering Technology

### CERTIFICATE LEVEL II

*TSI testing is required prior to first enrollment.*

#### FIRST YEAR

First Semester		Credits
EDUC 1300	Learning Framework <sup>A</sup>	3
PTAC 1302	Introduction To Process Technology	3
TAC 1308	Safety, Health and Environment I	3
CETT 1403	DC Circuits	4
MATH 1314	College Algebra	3
<b>Semester Total</b>		<b>16</b>

Second Semester		Credits
INTC 1456	Instrumentation Calibration	4
INTC 1441	Principles of Automatic Control	4
MATH 1316	Plane Trigonometry	3
<b>Semester Total</b>		<b>11</b>

Third Semester		Credits
INTC 1343	Application of Industrial Automatic Controls	3
RBTC 1301	Programmable Logic Controllers	3
INTC 2370	Linking Process Control Systems	3
INTC 2336	Distributed Control and Programmable Logic <sup>#</sup>	3
XXXX #4##	Approved Department Elective <sup>B</sup>	4
<b>Semester Total</b>		<b>16</b>
<b>Program Total</b>		<b>43</b>

<sup>#</sup> Capstone Course

<sup>A</sup> Student Success Course: Students are required to complete EDUC 1300 within their first 12 semester credit hours of instruction. Students enrolling at HCC with 12 or more hours completed should consult with an academic advisor to select an appropriate course substitution.

# Science, Technology, Engineering and Mathematics

<sup>B</sup> Program Related Elective: May choose from – CETT 1402, 1405, 1409, 1415, 1425, 1429, 1431, 1441, 1445, 1449, 1457, 1491, 2433, 2435, 2439, 2449, CPMT 1403, 1407, 1411, 1449, 1491, 1492, 2433, 2434, 2445, 2449, ELPT 1441, 1445, 1451, 1457, 2419, 2449, 2455, ENTC 1423, 1445, 1447, 1491, 2410, 2431, 2433, INTC 1401, 1450, 1491, 2436, 2473, 2480, PTAC 1410, 2410, 2420, 2438, 2446, RBTC 2401.

## PETROLEUM ENGINEERING TECHNOLOGY

Petroleum Engineering Technology is a program designed to prepare individuals to work as Petroleum Engineering Technicians in the oil and gas and related industries. The petroleum industry hires these highly skilled individuals for multiple field and office positions. This challenging program is designed to train petroleum engineering technicians in all areas of down and mid stream operations. Students complete an intense core curriculum in areas that include hydrocarbon safety, drilling, petroleum geology, oil and gas exploration and production, reservoir operations, well head completions, petroleum data management operations and analysis, natural gas production, and economics. In conjunction with these courses, students employ the latest computer software in E&P, operations, data mining, and geological mapping.

The curriculum is based upon the core duties and related tasks identified by industry organizations such as BP (primarily), Shell, Chevron/Texaco, ExxonMobil, Bechtel Corporation, Conoco, Halliburton and others. Graduates of Petroleum Engineering Technology are employed in process design, data entry and evaluation, well operations, environmental control, plant engineering, geological surveys, engineering sales, research and development, and manufacturing. Common industries for employment include: power, gas processing, refineries, petrochemical processing, oil and gas mining, manufacturing, drilling and exploration services.

### Program Outcomes

Students will be able to

- Explain Exploration, Production, and Operation concepts associated with the Petroleum Industry.
- Describe basic geological concepts, surveys, and maps relevant to the exploration and production.
- Analyze petroleum data analysis associated with exploration & production, well completions and facilities operations.
- Explain data acquisition by in using relevant software in Petroleum industry.

- Describe natural gas production and enhanced oil recovery.
- Identify basic petrochemicals and describe their technology of production.

For more information call 713.718.5251 or e-mail [morteza.sameei@hccs.edu](mailto:morteza.sameei@hccs.edu).

## Petroleum Engineering Technology

### AAS

TSI testing is required prior to first enrollment.

#### FIRST YEAR

First Semester		Credits
EDUC 1300	Learning Framework <sup>A</sup> .....	3
PTRT 1301	Introduction to Petroleum Industry .....	3
MATH 1314	College Algebra .....	3
CPMT 1303	Introduction to Computer Technology .....	3
<b>Semester Total</b>		<b>12</b>

Second Semester		Credits
PTRT 1470	Petroleum Data Management I-Exploration .....	4
PTRT 1370	Petroleum Geology .....	3
ENGL 1301	Composition I .....	3
PTRT 1313	Industrial Safety .....	3
<b>Semester Total</b>		<b>13</b>

Third Semester		Credits
PTRT	1472	
Petroleum Data Management II-Drilling and Production		4
<b>Semester Total</b>		<b>4</b>

#### SECOND YEAR

First Semester		Credits
PTRT 1473	Exploration and Production II .....	4
MATH 1325	Calculus for Business & Social Sciences .....	3
PTRT 2370	Petroleum Operations .....	3
XXXX #2##	Program Related Elective <sup>B</sup> .....	2
<b>Semester Total</b>		<b>12</b>

Second Semester		Credits
PTRT 2331	Well Completions .....	3
XXXX #3##	Social/Behavioral Sciences Elective <sup>D</sup> .....	3
PTRT 2323	Natural Gas Production .....	3
XXXX #3##	Humanities/Fine Arts Elective <sup>C</sup> .....	3
<b>Semester Total</b>		<b>12</b>

Third Semester		Credits
PTRT 2372	Internship/Petroleum Technology/Technician .....	3
PTRT 2470	Petroleum Data Management III - Facilities and Performance <sup>#</sup> .....	4
<b>Semester Total</b>		<b>7</b>
<b>Program Total</b>		<b>60</b>

# Science, Technology, Engineering and Mathematics

# Capstone Course

<sup>A</sup> Student Success Course: Students are required to complete EDUC 1300 within their first 12 semester credit hours of instruction. Students enrolling at HCC with 12 or more hours completed should consult with an academic advisor to select an appropriate course substitution.

<sup>B</sup> Program Electives: May choose from – ENGR 2301, 2302, 2304, 2305, 2332, PTAC 1302, 1308, 1332, 1350, 1352, 1354, 2314, 2334, 2336, 2346, 2348, 2386, PTRT 2371, 2373, 2380.

<sup>C</sup> Humanities/Fine Arts: May choose from – ARTS 1301, 1303, 1304, COMM 2366, DANC 2303, DRAM 1310, 2316, 2366, ENGL 2322, 2323, 2327, 2328, 2332, 2333, 2342, 2343, 2351, HIST 1301, 1302, 2311, 2312, 2321, 2322, 2301, 2327, 2328, 2381, HUMA 1301, 1305, 1311, 2319, 2323, MUSI 1306, 1310, PHIL 1301, 1304, 2306, 2307, 2316, World Languages (ARAB 1411, 1412, CHIN 1411, 1412, FREN 1411, 1412, GERM 1411, 1412, JAPN 1411, 1412, KORE 1411, 1412, SPAN 1411, 1412).

<sup>D</sup> Social/Behavioral Sciences: May choose from – ANTH 2346, 2351, ECON 1301, 2301, 2302, EDUC 1300, GEOG 1302, 1303, GOVT 2305, 2306, PSYC 2301, 2314, 2316, 2319, SOCI 1301, 1306, 2301, 2336, TECA 1354.

<sup>A</sup> Student Success Course: Students are required to complete EDUC 1300 within their first 12 semester credit hours of instruction. Students enrolling at HCC with 12 or more hours completed should consult with an academic advisor to select an appropriate course substitution.

## PROCESS TECHNOLOGY

The Process Technology program educates and trains technicians who control and monitor various industrial and plant processes. Areas of employment include: petrochemicals and refining, food and beverage processing, pharmaceuticals and biomanufacturing, paper and pulp, oil and gas exploration, energy and power generation, water and waste water treatment, chemical and agricultural manufacturing, environmental safety, and brewing and distilling process industries.

Process technicians ensure safety, health and other environmental practices and standards in all areas of plant activities. They also provide routine and preventive maintenance and service to process equipment, systems, and other plant units. They may also monitor and operate manufacturing instrumentation. Process technicians generally interface with other technical personnel such as chemical laboratory technicians in inspecting, troubleshooting, repairing and testing process related equipment.

### Program Outcomes

Students will be able to

- Describe operation of process control equipment such as an analyzer, control loop, transducer, transmitter, detector, flow indicator, pressure alarm, Pressure control valve, and recorders.
- Operate process systems and equipment.
- Describe safety, health, and environmental standards in the plant.
- Troubleshoot process abnormalities and equipment malfunctions.
- Explain operation of plant systems and equipment.
- Analyze plant reaction systems.
- Demonstrate maintenance procedures in process systems and equipment.

For more information call 713.718.5251 or e-mail [morteza.sameei@hccs.edu](mailto:morteza.sameei@hccs.edu).

## Petroleum Engineering Technology

### CERTIFICATE LEVEL II

#### FIRST YEAR

##### First Semester

	<b>Credits</b>
EDUC 1300 Learning Framework <sup>A</sup> .....	3
PTRT 1301 Introduction to Petroleum Industry .....	3
MATH 1314 College Algebra .....	3
PTRT 1313 Industrial Safety .....	3
CPMT 1303 Introduction to Computer Technology .....	3

**Semester Total 15**

##### Second Semester

	<b>Credits</b>
ENGL 1301 Composition I .....	3
PTRT 1470 Petroleum Data Management I-Exploration .....	4
MATH 1325 Calculus for Business & Social Sciences .....	3
PTRT 1471 Exploration and Production I .....	4
PTRT 1370 Petroleum Geology .....	3

**Semester Total 17**

##### Third Semester

	<b>Credits</b>
PTRT 1473 Exploration and Production II .....	4
PTRT 1472 Petroleum Data Management II-Drilling and Production ..	4
PTRT 2370 Petroleum Operations # .....	3

**Semester Total 11**

**Program Total 43**

# Capstone Course

# Science, Technology, Engineering and Mathematics

## Process Technology

### AAS

TSI testing is required prior to first enrollment.

#### FIRST YEAR

First Semester		Credits
EDUC 1300	Learning Framework <sup>A</sup> .....	3
PTAC 1302	Introduction to Process Technology.....	3
ENGL 1301	Composition I.....	3
MATH 1314	College Algebra.....	3
PTAC 1308	Safety, Health and Environment I.....	3
XXXX #3##	Social/Behavioral Sciences Elective <sup>C</sup> .....	3
<b>Semester Total</b>		<b>18</b>

Second Semester		Credits
SCIT 1418	Applied Physics OR	
PHYS 1401	College Physics I.....	4
SCIT 1414	Applied General Chemistry I OR.....	
CHEM 1411	General Chemistry I.....	4
PTAC 1410	Process Technology I-Equipment.....	4
PTAC 1332	Process Instrumentation I.....	3
<b>Semester Total</b>		<b>15</b>

#### SECOND YEAR

First Semester		Credits
SPCH 1311	Introduction to Speech Communication.....	3
PTAC 2314	Principles of Quality.....	3
PTAC 2420	Process Technology II-Systems.....	4
PTAC 1354	Industrial Processes.....	3
<b>Semester Total</b>		<b>16</b>

Second Semester		Credits
PTAC 2438	Process Technology III - Operations <sup>#</sup> .....	
PTAC 1350	Industrial Economics.....	3
XXXX #3##	Humanities/Fine Arts Elective <sup>B</sup> .....	3
PTAC 2446	Process Troubleshooting.....	4
<b>Semester Total</b>		<b>14</b>
<b>Program Total</b>		<b>60</b>

<sup>#</sup> Capstone Course

<sup>A</sup> Student Success Course: Students are required to complete EDUC 1300 within their first 12 semester credit hours of instruction. Students enrolling at HCC with 12 or more hours completed should consult with an academic advisor to select an appropriate course substitution.

<sup>B</sup> Humanities/Fine Arts: May choose from – ARTS 1301, 1303, 1304, COMM 2366, DANC 2303, DRAM 1310, 2316, 2366, ENGL 2322, 2323, 2327, 2328, 2332, 2333, 2342, 2343, 2351, HIST 1301, 1302, 2311, 2312, 2321, 2322, 2301, 2327, 2328, 2381, HUMA 1301, 1305, 1311, 2319, 2323, MUSI 1306, 1310, PHIL 1301, 1304, 2306, 2307, 2316, World Languages (ARAB 1411, 1412, CHIN 1411, 1412, FREN 1411, 1412, GERM 1411, 1412, JAPN 1411, 1412, KORE 1411, 1412, SPAN 1411, 1412).

<sup>C</sup> Social/Behavioral Sciences: May choose from – ANTH 2346, 2351, ECON 1301, 2301, 2302, EDUC 1300, GEOG 1302, 1303, GOVT 2305, 2306, PSYC 2301, 2314, 2316, 2319, SOCI 1301, 1306, 2301, 2336, TECA 1354.

## Process Technology-Process Operator

### CERTIFICATE LEVEL II

First Semester		Credits
EDUC 1300	Learning Framework <sup>A</sup> .....	3
PTAC 1302	Introduction to Process Technology.....	3
PTAC 1308	Safety, Health and Environment I.....	3
MATH 1314	College Algebra.....	3
<b>Semester Total</b>		<b>12</b>

Second Semester		Credits
PTAC 1410	Process Technology I-Equipment.....	4
PTAC 1332	Process Instrumentation I.....	3
PTAC 1354	Industrial Processes.....	3
SCIT 1414	Applied General Chemistry I OR	
CHEM 1411	General Chemistry I.....	4
<b>Semester Total</b>		<b>14</b>

Third Semester		Credits
PTAC 2420	Process Technology II-Systems <sup>#</sup> .....	4
PTAC 1350	Industrial Economics.....	3
PTAC 2314	Principles of Quality.....	3
SCIT 1418	Applied Physics OR	
PHYS 1401	College Physics.....	4
<b>Semester Total</b>		<b>14</b>
<b>Program Total</b>		<b>40</b>

<sup>#</sup> Capstone

<sup>A</sup> Student Success Course: Students are required to complete EDUC 1300 within their first 12 semester credit hours of instruction. Students enrolling at HCC with 12 or more hours completed should consult with an academic advisor to select an appropriate course substitution.

# Transportation, Distribution and Logistics

**Automotive Technology (47.0604)**  
**Heavy Vehicle & Truck Repair (47.0613)**  
**Logistics (52.0203) See Business**  
**Administration for Logistics**

A Career Cluster is a grouping of occupations and broad industries based on commonalities. The Transportation, Distribution and Logistics career cluster is concerned with providing knowledge and skills related to planning, management, and movement of people, materials, and goods by road, pipeline, air, rail and water and related professional and technical support services such as transportation infrastructure planning and management, logistics services, mobile equipment and facility maintenance. This includes the following HCC programs: Automotive Technology and Heavy Vehicle & Truck Repair.

All new semester hour students, who have earned less than 12 semester hours of college level credit, are required to take a first-year student success course in their first term at HCC. Through research and experience, Houston Community College has determined that many life and career management skills are necessary for students to make the most of their college investment. A student success course is designed to prepare students for the demands of college and for success in the world of work. The course emphasizes setting priorities, time management, effective listening, note-taking, concentration techniques, and retention of information, book analysis, comprehension techniques, and test-taking skills. This course also incorporates units that are designed to facilitate the use of library databases in conducting research, planning and setting educational objectives, lifelong career assessment, decision-making, financial aid, tutoring, and student support services, enabling the student to maximize the use of college resources.

Every HCC Career and Technology Education program contains a "capstone," an experience for the student to "put it all together." The capstone is a learning experience resulting in a consolidation of a student's educational experience and certifies mastery of entry level workplace competencies. The capstone experience must occur during the last semester of the student's educational program. The capstone consists of an external learning experience or an advanced course especially designed to help students synthesize knowledge and skills or other licensure as appropriate.

## AUTOMOTIVE TECHNOLOGY

The technological changes in the automotive industry require that the automotive technician receives state-of-the-art instruction. The technician is required to not only analyze high-tech electronic and mechanical systems, but is also required to keep updated on changing materials and construction techniques used in vehicles. Using meters, testing equipment and procedures, the automotive technician must determine what component parts or systems are malfunctioning and make the appropriate repairs. Skilled automotive technicians are in great demand and command high salaries for their expertise. The Automotive Technology program and curriculum are certified by the National Automotive Technicians Education Foundation (NATEF), 101 Blue Seal Drive, SE, Suite 101, Leesburg, VA 20175, 703.669.6650 Fax: 703.669.6125, [www.natef.org](http://www.natef.org).

Students receiving the AAS degree can look forward to a variety of employment opportunities in the automotive industry as repair technicians, service writers, service managers, shop foremen, and/or business owners. All instructors are certified by the National Institute for Automotive Service Excellence (ASE), 101 Blue Seal Drive, SE, Suite 101, Leesburg, VA 20175, [www.ase.com](http://www.ase.com).

**Please note that a student may only earn one Occupational Skills Award (OSA) per academic year.**

### Program Outcomes

Students will be able to

- Demonstrate competency in automotive brake and suspension service procedures.
- Demonstrate competency in automotive automatic and manual transmission service and related systems.
- Demonstrate competency in automotive engine repair and replacement service procedures.
- Demonstrate competency in automotive electrical and electronic systems service and procedure.
- Demonstrate competency in automotive air-conditioning service and repair.
- Demonstrate professional work habits and technical skills necessary for success in the automotive repair industry.

*For more information call 713.718.8100 or e-mail [carl.clark@hccs.edu](mailto:carl.clark@hccs.edu).*

# Transportation, Distribution and Logistics

## Automotive Technology - Technician

Classes in the AAS Automotive Technician program are taught in “blocks.” Students must register for all classes in a given semester at the same time. Any registration other than “blocks” of instruction requires departmental approval. This policy does not pertain to evening (6:00 p.m. to 10:00 p.m.) classes. **Students are required to purchase textbooks and tools.**

### AAS

*TSI testing is required prior to first enrollment.*

#### FIRST YEAR

##### First Semester

	<b>Credits</b>
EDUC 1300 Learning Framework <sup>A</sup> .....	3
AUMT 1305 Introduction to Automotive Technology.....	3
AUMT 2328 Automotive Service.....	3
AUMT 1310 Automotive Brake Systems.....	3
AUMT 1316 Automotive Suspension and Steering Systems.....	3

**Semester Total 15**

##### Second Semester

	<b>Credits</b>
AUMT 1307 Automotive Electrical Systems.....	3
AUMT 1345 Automotive Heating and Air-Conditioning.....	3
AUMT 2321 Automotive Electrical Diagnosis and Repair.....	3
AUMT 2317 Automotive Engine Performance Analysis I.....	3
XXXX #3## Math/Natural Science Elective <sup>B</sup> .....	3

**Semester Total 15**

#### SECOND YEAR

##### First Semester

	<b>Credits</b>
ENGL 1301 Composition I.....	3
AUMT 2313 Manual Drivetrain and Axles.....	3
AUMT 1306 Automotive Engine Removal and Installation.....	3
AUMT 2325 Automatic Transmission and Transaxle.....	3
AUMT 2334 Automotive Engine Performance Analysis II.....	3

**Semester Total 15**

##### Second Semester

	<b>Credits</b>
XXXX #3## General Education Elective <sup>E*</sup> .....	3
XXXX #3## Social/Behavioral Sciences Elective <sup>D</sup> .....	3
AUMT 1319 Automotive Engine Repair.....	3
XXXX #3## Humanities/Fine Arts Elective <sup>C</sup> .....	3
AUMT 2380 Cooperative Education - Auto/Automotive Mechanic/Technician <sup>#</sup> .....	3

**Semester Total 15**

**Program Total 60**

<sup>#</sup> Capstone Course

<sup>A</sup> Student Success Course: Students are required to complete EDUC 1300 within their first 12 semester credit hours of instruction. Students enrolling at HCC with 12 or more hours completed should consult with an academic advisor to select an appropriate course substitution.

<sup>B</sup> Math/Natural Science: May choose from – ANTH 2301 (with or without 2101 = lab), 2302, ASTR 1303, 1304, 1403, 1404, BIOL 1308, 1309, 1322, 1406, 1407, (2301, 2302 – restricted to Engineering, Science, and Health Sciences majors), CHEM 1305, 1405, 1411, 1412, COSC 1436, GEOG 1301, GEOL 1305, 1345, 1347, 1403, 1404, MATH 1314, 1316, 1324, 1325, 1332, 1342, 1350, 2318, 2320, 2412, 2413, 2414, 2415, PHYS 1305, 1401, 1402, 2325 (with or without 2125 = lab), 2326 (with or without 2126 = lab), PSYC 2317.

<sup>C</sup> Humanities/Fine Arts: May choose from – ARTS 1301, 1303, 1304, COMM 2366, DANC 2303, DRAM 1310, 2316, 2366, ENGL 2322, 2323, 2327, 2328, 2332, 2333, 2342, 2343, 2351, HIST 1301, 1302, 2311, 2312, 2321, 2322, 2301, 2327, 2328, 2381, HUMA 1301, 1305, 1311, 2319, 2323, MUSI 1306, 1310, PHIL 1301, 1304, 2306, 2307, 2316, World Languages (ARAB 1411, 1412, CHIN 1411, 1412, FREN 1411, 1412, GERM 1411, 1412, JAPN 1411, 1412, KORE 1411, 1412, SPAN 1411, 1412).

<sup>D</sup> Social/Behavioral Sciences: May choose from – ANTH 2346, 2351, ECON 1301, 2301, 2302, EDUC 1300, GEOG 1302, 1303, GOVT 2305, 2306, PSYC 2301, 2314, 2316, 2319, SOCI 1301, 1306, 2301, 2336, TECA 1354.

<sup>E</sup> General Education: May choose from – ASTR 1303, 1304, 1403, 1404, BIOL 1308, 1309, 1322, 1406, 1407, (2301, 2302 – restricted to Engineering, Science, and Health Sciences majors), CHEM 1305, 1405, 1411, 1412, COSC 1436, GEOG 1301, 1303, GEOL 1305, 1345, 1347, 1403, 1404, HIST 1301, 1302, 2311, 2312, 2321, 2322, 2301, 2327, 2328, 2381, 2325 (with or without 2125 = lab), 2326 (with or without 2126 = lab), TECA 1354.

\* Note – Humanities/Fine Arts or Social/Behavioral Sciences, English Composition, Speech, Foreign Language, and Physical Education courses Do Not fulfill the General Education requirements for this program.

## Automotive Technology - Technician

The Automotive Technology - Technician certificate program provides students with the same automotive technology core as the AAS degree and in some instances, the same employment opportunities including repair technician, service writer, service manager, shop foreman, and business owner. The certificate program does not include the academic classes which are required for the degree. The program is NATEF certified, and all instructors are certified by the National Institute for Automotive Service Excellence (ASE).

### CERTIFICATE LEVEL I

*TSI testing is required prior to first enrollment.*

#### FIRST YEAR

##### First Semester

	<b>Credits</b>
AUMT 1305 Introduction to Automotive Technology.....	3
AUMT 2328 Automotive Service.....	3
AUMT 1310 Automotive Brake Systems.....	3
AUMT 1316 Automotive Suspension and Steering Systems.....	3

**Semester Total 12**

# Transportation, Distribution and Logistics

## Second Semester

	<b>Credits</b>
AUMT 1307 Automotive Electrical Systems.....	3
AUMT 1345 Automotive Climate Control Systems .....	3
AUMT 2321 Automotive Electrical Diagnosis and Repair.....	3
AUMT 2317 Automotive Engine Performance Analysis I.....	3
<b>Semester Total</b>	<b>12</b>

## Third Semester

	<b>Credits</b>
AUMT 2313 Automotive Drive Train and Axles .....	3
AUMT 1306 Automotive Engine Removal and Installation .....	3
AUMT 2325 Automotive Automatic Transmission and Transaxle .....	3
AUMT 2334 Automotive Engine Performance Analysis II .....	3
AUMT 1380 Cooperative Education - Auto/Automotive Mechanic/Technician # .....	3
<b>Semester Total</b>	<b>15</b>
<b>Program Total</b>	<b>39</b>

# Capstone Course

## Light Automotive Maintenance Technician

The Light Automotive Maintenance Technician Occupational Skills Award (OSA) is designed to provide students with basic knowledge in servicing practices, shop safety, rules, basic shop tools, test equipment, and gasoline engines and systems basics.

### OCCUPATIONAL SKILLS AWARD

(Occupational Skills Award)

#### FIRST YEAR

	<b>Credits</b>
AUMT 1305 Introduction to Automotive Technology .....	3
AUMT 1310 Automotive Brake Systems.....	3
AUMT 1316 Automotive Suspension and Steering Systems.....	3
AUMT 2328 Automotive Service.....	3
<b>Semester Total</b>	<b>12</b>
<b>Program Total</b>	<b>12</b>

## Autobody/Collision Repair Technician

The Autobody/Collision Repair Technician certificate program prepares individuals to apply technical knowledge and skills to repair, reconstruct and finish automobile bodies, fenders, and external features. The program includes instruction in structure analysis, damage repair, non-structural analysis, mechanical and electrical components, plastics and adhesives, painting and refinishing techniques, and damage analysis and estimating.

Classes in the Autobody/Collision Repair Technician certificate are taught in "blocks." Students must register for all classes in a given semester at the same time. Any registration other than "blocks" of instruction requires departmental approval.

### CERTIFICATE LEVEL I

#### FIRST YEAR

	<b>Credits</b>
ABDR 2441 Major Collision Repair and Panel Replacement.....	4
ABDR 1431 Basic Refinishing .....	4
ABDR 1207 Collision Repair Welding.....	2
ABDR 1215 Vehicle Trim and Hardware.....	2
<b>Semester Total</b>	<b>12</b>

#### Second Semester

	<b>Credits</b>
ABDR 1458 Intermediate Refinishing .....	4
ABDR 1441 Structural Analysis and Damage Repair I .....	4
ABDR 1442 Structural Analysis and Damage Repair II .....	4
<b>Semester Total</b>	<b>12</b>

#### Third Semester

	<b>Credits</b>
ABDR 2449 Advanced Refinishing .....	4
ABDR 2431 Structural Analysis and Damage Repair III .....	4
ABDR 1291 Special Topics in Auto/Automotive Body Repairer.....	2
ABDR 1280 Cooperative Education- Autobody/Collision and Repair Technology/Technician # .....	2
<b>Semester Total</b>	<b>12</b>
<b>Program Total</b>	<b>36</b>

# Capstone Course

## HEAVY VEHICLE & TRUCK REPAIR

The Heavy Vehicle & Truck Repair program provides skilled and knowledgeable entry-level employees to heavy equipment industries all over Texas. Employers actively seek HCC Heavy Vehicle & Truck Repair graduates to work as engine or maintenance specialists and field technicians.

With the increased use of highly sophisticated pneumatic, hydraulic, and electronic systems on heavy equipment today, successful students find many opportunities for employment. Cooperative work opportunities within the industry allow students to experience different types of jobs before graduating.

**Please note that a student may only earn one Occupational Skills Award (OSA) per academic year.**

# Transportation, Distribution and Logistics

## Program Outcomes

Students will be able to

- Demonstrate competency in Heavy Vehicle brake and suspension service procedures.
- Demonstrate competency in Heavy Vehicle transmission service and related systems.
- Demonstrate competency in Heavy Vehicle engine repair and replacement service procedures.
- Demonstrate competency in Heavy Vehicle electrical and electronic systems service and procedures.
- Demonstrate competency in Heavy Vehicle air-conditioning service and repair.
- Demonstrate professional work habits and technical skills necessary for success in the Heavy Vehicle repair industry.

For more information call 713.718.8100 or e-mail [michael.cleveland@hccs.edu](mailto:michael.cleveland@hccs.edu).

## Heavy Vehicle & Truck Repair

Classes in the Heavy Vehicle & Truck Repair certificate program are taught in "blocks." Students must register for all five of the first semester classes at the same time. Any registration other than "blocks" of instruction requires departmental approval. **Students are required to purchase textbooks and tools.**

### CERTIFICATE LEVEL I

*TSI testing is required prior to first enrollment.*

<b>First Semester</b>	<b>Credits</b>
DEMR 1301 Shop Safety and Procedures .....	3
DEMR 1317 Basic Brake Systems .....	3
DEMR 1310 Diesel Engine Testing and Repair I .....	3
DEMR 2312 Diesel Engine Testing and Repair II .....	3
<b>Semester Total</b>	<b>12</b>

<b>Second Semester</b>	<b>Credits</b>
DEMR 1305 Basic Electrical Systems .....	3
DEMR 2332 Electronic Controls .....	3
DEMR 2439 Automotive Electronics .....	4
DEMR 1323 Heating, Ventilation, and Air Conditioning (HVAC) Troubleshooting and Repair .....	3
<b>Semester Total</b>	<b>13</b>

## Third Semester

	<b>Credits</b>
DEMR 1329 Preventative Maintenance .....	3
DEMR 1316 Basic Hydraulics .....	3
DEMR 1330 Steering and Suspension I .....	3
DEMR 1342 Power Train Applications I .....	3
DEMR 1381 Cooperative Education - Diesel Mechanics Technology/Technician # .....	3
<b>Semester Total</b>	<b>15</b>
<b>Program Total</b>	<b>40</b>

# Capstone Course

## Diesel Preventative Maintenance

### OCCUPATIONAL SKILLS AWARD

#### FIRST YEAR

<b>First Semester</b>	<b>Credits</b>
DEMR 1301 Shop Safety and Procedures .....	3
DEMR 1317 Basic Brake Systems .....	3
DEMR 1310 Diesel Engine Testing and Repair I .....	3
DEMR 2312 Diesel Engine Testing and Repair II .....	3
<b>Semester Total</b>	<b>12</b>
<b>Program Total</b>	<b>12</b>

# Course Descriptions

## Academic Courses

*Will transfer to baccalaureate programs*

Course	AA-Academic Course Area Title
ACCT	Accounting
AFSC	Air Force Science
AGRI	Agriculture
ANTH	Anthropology
ARAB	Arabic
ARTS	Studio Art/Art History
ASTR	Astronomy
BCIS	Business Computer Applications
BIOL	Biology
CHEM	Chemistry
CHIN	Chinese
COMM	Communications
COSC	Computer Science
CRJ	Criminal Justice
DANC	Dance
DRAM	Drama
ECON	Economics
EDUC	Teacher Education
ENGL	English
ENVR	Environmental Science
ESOL	Intensive English
ENGR	Engineering
FREN	French
GEOG	Geography
GEOL	Geology
GERM	German
GOVT	Government
GUST	Guided Studies
HIST	History
HUMA	Humanities
JAPN	Japanese
KORE	Korean
PHED	Physical Education
MATH	Mathematics
MLSC	Military Science
MUAP	Music Applied Performance
MUSI	Music
PHED	Physical Education
PHIL	Philosophy
PHYS	Physics
PSYC	Psychology
READ	Reading (Developmental)
RUSS	Russian
SGNL	Sign Language
SOCI	Sociology
SPAN	Spanish
SPCH	Speech
TECA	Teacher Education

## Career and Technology Education Courses

*May or may not transfer to baccalaureate programs. Check with HCC Counselors*

Course	Career and Technical Program Titles
ACNT	Accounting
MUSC	Audio Recording
RTVB	Audio Recording
ABDR	Automotive Technology
AUMT	Automotive Technology
PSTR	Baker/Pastry Arts
BITC	Biotechnology
BUSG	Business Administration
BUSG	Business, General
BMGT	Business Management
BUSI	Business Management
INSR	Business Management
MART	Business Management
MRKG	Business Management
BMGT	Business Technology - PeopleSoft
MRMT	Business Technology
POFI	Business Technology - Microsoft Office Technology
POFL	Business Technology - Legal
POFM	Business Technology
POFT	Business Technology
CTEC	Chemical Laboratory Technology
SCIT	Chemical Laboratory Technology
CDEC	Child Development
MUSC	Commercial Music
CTMT	Computed Tomography
INEW	Computer Science Technology
ITCC	Computer Science Technology
ITMT	Computer Science Technology
ITNW	Computer Science Technology
ITSC	Computer Science Technology
ITSE	Computer Science Technology
ITSW	Computer Science Technology
ITSY	Computer Science Technology
CNBT	Construction Technology
CSME	Cosmetology
CJLE	Criminal Justice - Law Enforcement
CJSA	Criminal Justice - Law Enforcement Administration
CJCR	Criminal Justice - Corrections
CHEF	Culinary Arts
PSTR	Culinary Arts
DNTA	Dental Assisting
DHYG	Dental Hygiene
DMSO	Diagnostic Medical Sonography
ARTC	Digital Communication
ARTV	Digital Communication
IMED	Digital Communication
PHTC	Digital Communication
GAME	Digital Gaming and Simulation

# Course Descriptions

ARCE.....	Drafting/Design Engineering Technology	IBUS.....	International Business
DFTG.....	Drafting/Design Engineering Technology	TRAI.....	International Business
BIOM.....	Electronic Engineering Technology	INDS.....	Interior Design
CETT.....	Electronic Engineering Technology	SLNG.....	Interpreting/Translating Technology
CPMT.....	Electronics Engineering Technology	LMGT.....	Logistics and Global Supply Chain Management
EECT.....	Electronics Engineering Technology	MCHN.....	Machining Technology
ITCC.....	Electronics Engineering Technology	ENTC.....	Manufacturing Engineering Technology
ITSY.....	Electronics Engineering Technology	HYDR.....	Manufacturing Engineering Technology
LOTT.....	Electronics Engineering Technology	INMT.....	Manufacturing Engineering Technology
EMSP.....	Emergency Medical Services	PLTC.....	Manufacturing Engineering Technology
FSDH.....	Fashion Design	MRKG.....	Marketing
FSHN.....	Fashion Merchandising	ECRD.....	Medical Assistant
FLMC.....	Filmmaking	MDCA.....	Medical Assistant
RTVB.....	Filmmaking	BIOS.....	Medical Laboratory Technician
BNKG.....	Finance (Banking)	MLAB.....	Medical Laboratory Technician
BUSG.....	Finance (Banking)	MUSB.....	Music Business
IBUS.....	Finance (Banking)	MUSC.....	Music
FIRS.....	Fire Services	MUSP.....	Music Performance
FIRT.....	Fire Technology	NMTT.....	Nuclear Medicine Technology
GISC.....	Geographic Information Science	RNSG.....	Nursing
HITT.....	Health Information Technology	OTHA.....	Occupational Therapy Assistant
HPRS.....	Health Information Technology	LGLA.....	Paralegal Technology
HART.....	Heating/Air Condition. and RefrigerationTechnology	POFL.....	Paralegal Technology
RBPT.....	Heating/Air Condition. and RefrigerationTechnology	PTRT.....	Petroleum Engineering Technology
DEMР.....	Heavy Vehicle & Truck Repair	PHRA.....	Pharmacy Technician
HLAB.....	Histologic Technician	PTHA.....	Physical Therapist Assistant
FMKT.....	Horticulture	PTAC.....	Process Technology
HALT.....	Horticulture	RADR.....	Radiography
HAMG.....	Hotel/Restaurant Management	RELE.....	Real Estate
HRPO.....	Human Resources Management	RSPT.....	Respiratory Therapist
CHLT.....	Human Service Technology	RSTO.....	Restaurant Management
DAAC.....	Human Service Technology	DYTC.....	Surgical Technology
CMSW.....	Human Service Technology	NUPC.....	Surgical Technology
GERS.....	Human Service Technology	PLAB.....	Surgical Technology
RECT.....	Human Service Technology	SCIT.....	Surgical Technology
SCWK.....	Human Service Technology	SRGT.....	Surgical Technology
ELMT.....	Industrial Electricity	TRAI.....	Translation and Interpretation
ELPT.....	Industrial Electricity	TRVM.....	Travel and Tourism
INCR.....	Industrial Electricity	VTHT.....	Veterinary Paramedic
INTC.....	Instrumentation and Controls Engineering Technology	VNSG.....	Vocational Nursing
RBTC.....	Instrumentation and Controls Engineering Technology	WLDG.....	Welding
SOLR.....	Instrumentation and Controls Engineering Technology		
WIND.....	Instrumentation and Controls Engineering Technology		

# Course Descriptions

## **ABDR 1215 Vehicle Trim and Hardware**

*Prerequisites: Must be placed into GUST 0339 in reading, ENGL 0300 or 0347 in writing and MATH 0308 in math.*

*Credit: 2 (2 lecture, 1 lab)*

An in depth study of vehicle trim and glass service.

## **ABDR 1280 Cooperative Education -Autobody/Collision and Repair Technology/Technician**

*Prerequisites: ABDR 1431,1441,1207, 1215,1458,1442, 2441; must be placed into GUST 0339 in reading, ENGL 0300 or 0347 in writing and MATH 0308 in math.*

*Credit: 2 (1 lecture, 10 lab)*

Career-related activities encountered in the student's area of specialization offered through an individualized agreement among the college, employer, and student. Under the supervision of the college and the employer, the student combines classroom learning with work experience. Includes a lecture component.

## **ABDR 1291 Special Topics in Auto/Automotive Body Repairer**

*Prerequisites: Must be placed into GUST 0339 in reading, ENGL 0300 or 0347 in writing and MATH 0308 in math.*

*Credit: 2 (1 lecture, 2 lab)*

Advanced techniques in blending, matching and application in the refinishing process, including custom applications.

## **ABDR 1307 Collision Repair Welding**

*Prerequisites: Must be placed into GUST 0339 in reading, ENGL 0300 or 0347 in writing and MATH 0308 in math.*

*Credit: 3 (2 lecture, 4 lab)*

AA study of collision repair welding and cutting procedures.

## **ABDR 1431 Basic Refinishing**

*Prerequisites: Must be placed into GUST 0339 in reading, ENGL 0300 or 0347 in writing and MATH 0308 in math.*

*Credit: 4 (2 lecture, 4 lab)*

An introduction to current refinishing products, shop safety, and equipment used in the automotive refinishing industry. Emphasis on surface preparation, masking techniques, and refinishing of trim and replacement parts.

## **ABDR 1441 Structural Analysis and Damage Repair I**

*Prerequisites: Must be placed into GUST 0339 in reading, ENGL 0300 or 0347 in writing and MATH 0308 in math.*

*Credit: 4 (2 lecture, 4 lab)*

Expanded training in the roughing and shaping procedures on automotive sheet metal necessary to make satisfactory body repairs. Emphasis on the alignment of component parts such as doors,

hood, front-end assemblies, and deck lids.

## **ABDR 1442 Structural Analysis and Damage Repair II**

*Prerequisites: ABDR 1441. Must be placed into GUST 0339 in reading, ENGL 0300 or 0347 in writing and MATH 0308 in math.*

*Credit: 4 (2 lecture, 4 lab)*

Continuation of general repair and replacement procedures for damaged structural parts and collision damage.

## **ABDR 1458 Intermediate Refinishing**

*Prerequisites: Must be placed into GUST 0339 in reading, ENGL 0300 or 0347 in writing and MATH 0308 in math.*

*Credit: 4 (2 lecture, 4 lab)*

Expanded training in mixing and spraying of automotive topcoats. Emphasis on formula ingredient, reducing, thinning, and special spraying techniques. Introduction to partial panel refinishing techniques and current industry paint removal techniques.

## **ABDR 2431 Structural Analysis and Damage Repair III**

*Prerequisites: Must be placed into GUST 0339 in reading, ENGL 0300 or 0347 in writing and MATH 0308 in math.*

*Credit: 4 (2 lecture, 4 lab)*

Advanced concepts in the application of theories of auto body repair and replacement of major body units.

## **ABDR 2441 Major Collision Repair and Panel Replacement**

*Prerequisites: Must be placed into GUST 0339 in reading, ENGL 0300 or 0347 in writing and MATH 0308 in math.*

*Credit: 4 (2 lecture, 4 lab)*

Instruction in preparation of vehicles for major repair processes. This course covers interpreting information from damage reports, planning repair sequences, selecting appropriate tools, and organizing removed parts for reinstallation.

## **ABDR 2449 Advanced Refinishing**

*Prerequisites: Must be placed into GUST 0339 in reading, ENGL 0300 or 0347 in writing and MATH 0308 in math.*

*Credit: 4 (2 lecture, 4 lab)*

Skill development in multi-stage refinishing techniques. Further development in identification of problems and solutions in color matching and partial panel refinishing.

## **ACCT 2301 Principles of Financial Accounting**

*Prerequisites: Departmental Approval*

*Credit: 3 (3 lecture)*

This course covers the fundamentals of financial accounting, including double-entry accounting and the accounting cycle. Other topics include cash, receivables, inventories, plant assets, liabilities, partnerships, corporation, investments,

statement of cash flows and interpretation of financial statements.

## **ACCT 2302 Principles of Managerial Accounting**

*Prerequisites: ACCT 2301*

*Credit: 3 (3 lecture)*

This course covers the fundamentals of managerial accounting including manufacturing operations and planning and control. Other topics include budgets, introduction to cost accounting, cost control techniques, methods of measuring performance and financial statement analysis.

## **ACNT 1303 Introduction to Accounting I**

*Prerequisites: Must be placed into GUST 0342 in reading, ENGL 0300 or 0347 in writing and MATH 0308 in math.*

*Credit: 3 (3 lecture)*

A study of analyzing, classifying, and recording business transactions in a manual and computerized environment. Emphasis on understanding the complete accounting cycle and preparing financial statements, bank reconciliations, and payroll. Coverage also includes the fundamental principles of double-entry bookkeeping, financial statements, trial balances, worksheets, special journals, adjusting entries and closing entries.

## **ACNT 1304 Introduction to Accounting II**

*Prerequisites: ACNT 1303; Must be placed into GUST 0342 in reading, ENGL 0300 or 0347 in writing and MATH 0308 in math.*

*Credit: 3 (3 lecture)*

A study of accounting for merchandising, notes payable, notes receivable, valuation of receivables and equipment, and valuation of inventories in a manual and computerized environment.

## **ACNT 1305 Forensic Accounting**

*Prerequisites: ACCT 2302; must be placed into GUST 0342 in reading, ENGL 0300 or 0347 in writing and MATH 0308 in math.*

*Credit: 3 (3 lecture)*

Accounting fraud and examination designed to provide a basic understanding of the impact that fraud has on an organization. (This course is intended to help students understand the role of the Forensic Accountant. Upon completion of this course the students will learn special skills in accounting, auditing, finance, quantitative methods, certain areas of the law, research, and investigative skills to collect, analyze, and evaluate evidential matter and to interpret and communicate findings. Finance and quantitative skills will be addressed since they are especially important to Forensic Accountants who calculate damages. The complexity of Forensic Accounting has gained considerable attention over the past five years and will continue to gain momentum.)

## **ACNT 1313 Computerized Accounting Applications**

*Prerequisites: ACNT 1303 or ACCT 2301; must be placed into GUST 0342 in reading, ENGL 0300 or 0347 in writing and MATH 0308 in math.*

*Credit: 3 (2 lecture, 2 lab)*

A study of utilizing the computer to develop and maintain accounting record-keeping systems, make management decisions, record daily

# Course Descriptions

business transactions, and generate financial statements using Peachtree or QuickBooks.

## **ACNT 1329 Payroll and Business Tax Accounting**

*Prerequisites: ACNT 1303 or ACCT 2301; must be placed into GUST 0342 in reading, ENGL 0300 or 0347 in writing and MATH 0308 in math.*

*Credit: 3 (3 lecture)*

A study of payroll procedures, taxing entities, and reporting requirements of local, state, and federal taxing authorities in a manual and computerized environment.

## **ACNT 1331 Federal Income Tax: Individual**

*Prerequisites: ACCT 2302; must be placed into GUST 0342 in reading, ENGL 0300 or 0347 in writing and MATH 0308 in math.*

*Credit: 3 (3 lecture)*

A study of the laws currently implemented by the IRS, providing a working knowledge of preparing taxes for the individual.

## **ACNT 1347 Federal Income Tax for Partnerships and Corporations**

*Prerequisites: ACNT 1331; must be placed into GUST 0342 in reading, ENGL 0300 or 0347 in writing and MATH 0308 in math.*

*Credit: 3 (3 lecture)*

Introduction to the tax laws as currently implemented by the Internal Revenue Service providing a working knowledge of preparing taxes for a partnership, sub chapter S, and corporation.

## **ACNT 1382 Cooperative Education—Accounting Technician**

*Prerequisites: Department Program Approval and 20 hours a week employment; must be placed into GUST 0342 in reading, ENGL 0300 or 0347 in writing and MATH 0308 in math.*

*Credit: 3 (1 lecture/seminar and 20-hours a week employment)*

Career related activities encountered in the student's area of specialization are offered through a cooperative agreement between the college, employer, and student. Under supervision of the college and the employer, the student combines classroom learning with work experience. Directly related to a technical discipline, specific learning objectives guide the student through the paid work experience. Blend of academic and work-related activities in student's major.

## **ACNT 1391 Special Topics in Accounting: Ethics for Accountants**

*Prerequisites: Prerequisites: ACCT 2302; must be placed into GUST 0342 in reading, ENGL 0300 or 0347 in writing and MATH 0308 in math.*

*Credit: 3 (3 lecture)*

This course will serve as a general introduction to professional ethics in the accounting and business environments. We will discuss the fundamental ethical issues of business and society, the roles and responsibilities of accounting and auditing professionals, ethical behavior by management,

and legal and professional guidelines that address the ethical concerns of society.

## **ACNT 1391 Special Topics in Accounting: Fraud Examinations**

*Prerequisites: Prerequisites: ACCT 2302; must be placed into GUST 0342 in reading, ENGL 0300 or 0347 in writing and MATH 0308 in math.*

*Credit: 3 (3 lecture)*

Course will provide an overview of how and why occupational fraud is committed, the principles and methodologies of prevention, detection and investigation of fraud using accounting, auditing and investigative skills.

## **ACNT 1391 Special Topics in Accounting: Oil and Gas Accounting**

*Prerequisites: ACCT 2302; must be placed into GUST 0342 in reading, ENGL 0300 or 0347 in writing and MATH 0308 in math.*

*Credit: 3 (3 lecture)*

An introduction to particularities of recording and reporting cost and revenues incident to creation and realization of mineral interests.

## **ACNT 1391 Special Topics in Accounting: Tax and Accounting Research**

*Prerequisites: ACCT 2302*

*Credit: 2 (2 lecture)*

Topics address recently identified current events, skills, knowledge, and/or attitudes and behaviors pertinent to the technology or occupation and relevant to the professional development of the student. This course was designed to be repeated multiple times to improve student proficiency.

## **ACNT 1392 Special Topics in Accounting: Small Business Accounting**

*Prerequisites: ACCT 2302; must be placed into GUST 0342 in reading, ENGL 0300 or 0347 in writing and MATH 0308 in math.*

*Credit: 3 (3 lecture)*

A course on how to start and operate a small business. Topics include essential management skills and how to prepare a business plan and marketing strategies. Practical guidance is provided for selecting and maintaining a cost-effective accounting system, records retention, budgets and cash flow projections.

## **ACNT 1491 Special Topics in Accounting: Technical Writing and Research for Accountants**

*Prerequisites: ACCT 2302; Must be placed into GUST 0342 in reading, ENGL 0300 or 0347 in writing and MATH 0308 in math.*

*Credit: 4 (4 lecture)*

This course is intended to develop the necessary skills for effective accounting and tax research in the 21st Century. Professional accountants use online and electronic accounting, auditing and tax research tools. This class will use the "Research Institute of America" as its primary provider of tools to learn and execute professional research techniques, it includes the following databases: WGL Electronic Tax Payroll and Accounting Tax Library RIA Academic Advantage

Essentials Library PPC FASB Reference Material on Checkpoint AICPA on CheckPoint PPC GASB Reference Material on Checkpoint The Research of America databases may be accessed from HCC's library. Proper tax and accounting research requires critical thinking skills and the ability to produce professional results. Other databases and techniques will be discussed in the class as well as the Research of America database. This class will address the technical skills necessary for professional research and will address CPA Exam related research issues.

## **ACNT 2303 Intermediate Accounting I**

*Prerequisites: ACCT 2302; must be placed into GUST 0342 in reading, ENGL 0300 or 0347 in writing and MATH 0308 in math.*

*Credit: 3 (3 lecture)*

Critical analysis of general accepted accounting principles, concepts, and theory underlying the preparation of financial statements. Emphasis on current theory and practice. Covers the theoretical and practical basis for financial statements, present value applications, and the theory and practice of accounting for cash, receivables, inventories, liabilities, long-term investments, depreciable and depletable property, and intangible assets.

## **ACNT 2304 Intermediate Accounting II**

*Prerequisites: ACNT 2303; must be placed into GUST 0342 in reading, ENGL 0300 or 0347 in writing and MATH 0308 in math.*

*Credit: 3 (3 lecture)*

Continued in-depth analysis of generally accepted accounting principles underlying the preparation of financial statements including comparative analysis and statement of cash flows. Topics also included are bonds, leases, pension plans, corporate paid-in- capital, special purpose securities, retained earnings, tax allocation, inflation accounting, funds statement, and financial statement analysis.

## **ACNT 2309 Cost Accounting**

*Prerequisites: ACCT 2302; must be placed into GUST 0342 in reading, ENGL 0300 or 0347 in writing and MATH 0308 in math.*

*Credit: 3 (3 lecture)*

A study of budgeting and cost control systems including a detailed study of manufacturing cost accounts and reports, job order costing, and process costing. Includes introduction to alternative costing methods such as activity-based and just-in-time costing. Coverage also includes historical cost systems, work-in-process inventories, material and labor control, multiple products, budgeting, applying overhead, standard costs, direct costing, evaluating profit performance, and distribution costs.

## **ACNT 2330 Government and Non-Profit Accounting**

*Prerequisites: ACCT 2302; must be placed into GUST 0342 in reading, ENGL 0300 or 0347 in writing and MATH 0308 in math.*

*Credit: 3 (3 lecture)*

Basic concepts and techniques of fund accounting, financial reporting for governmental and not-for-

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profit entities. Accounting cycle for funds and account groups and related financial statements.

## **ACNT 2331 Internal Control and Auditing**

*Prerequisites: ACCT 2302; must be placed into GUST 0342 in reading, ENGL 0300 or 0347 in writing and MATH 0308 in math.*

*Credit: 3 (3 lecture)*

A study of internal control and auditing standards and processing used by internal auditors, managers, and independent public accountants.

## **ACNT 2332 Accounting Information Systems**

*Prerequisites: ACCT 2302; must be placed into GUST 0342 in reading, ENGL 0300 or 0347 in writing and MATH 0308 in math.*

*Credit: 3 (3 lecture)*

A study of the role of accounting information systems and related subsystems, including data collection, retrieval, manipulation, filtering and sorting of data.

## **ACNT 2333 Advanced Accounting**

*Prerequisites: ACNT 2304; must be placed into GUST 0342 in reading, ENGL 0300 or 0347 in writing and MATH 0308 in math.*

*Credit: 3 (3 lecture)*

Methods of measuring and communicating economic information, including consolidated statements, partnerships, real estate, foreign operations, and fund units.

## **ACNT 2382 Cooperative Education—Accounting Technician**

*Prerequisites: ACNT 1382 - 20 hours a week employment & departmental approval; Must be placed into GUST 0342 in reading, ENGL 0300 or 0347 in writing and MATH 0308 in math.*

*Credit: 3 (1 lecture/seminar and 20-hours a week employment)*

Continuation of ACNT 1382. Career related activities encountered in the student's area of specialization are offered through a cooperative agreement between the college, employer, and student. Under supervision of the college and the employer, the student combines classroom learning with work experience. Directly related to a technical discipline, specific learning objectives guide the student through the paid work experience. Blend of academic and work-related activities in student's major.

## **AFSC 1201 Foundations of the US Air Force I**

*Prerequisites: Contact UH Air Force ROTC*

*Credit: 2 (2 lecture, 1 lab)*

Overall roles and missions of the USAF; career fields available. Emphasis on military customs and courtesies, appearance standards, core values, written and personal communication. Introduction to American military history. Cooperative program with the University of Houston Air Force ROTC department.

## **AFSC 1202 Foundations of the US Air Force II**

*Prerequisites: AFSC 1201*

*Credit: 2 (2 lecture, 1 lab)*

Continuation of AFSC 1201. Cooperative program with the University of Houston Air Force ROTC department.

## **AFSC 2201 Evolution of Air Power I**

*Prerequisites: AFSC 1202*

*Credit: 2 (2 lecture, 1 lab)*

Key historical events and milestones in the development of air power as a primary instrument of United States national security. Core values and competencies of leaders in the United States Air Force. Tenets of leadership and ethics. Cooperative program with the University of Houston Air Force ROTC department.

## **AFSC 2202 Evolution of Air Power II**

*Prerequisites: AFSC 2201*

*Credit: 2 (2 lecture, 1 lab)*

Continuation of AFSC 2201. Cooperative program with the University of Houston Air Force ROTC department.

## **AGRI 1131 The Agricultural Industry**

*Credit: 1 (1 lecture)*

An overview of world agriculture, nature of the industry and resource conservation, insight regarding career opportunities in agriculture and natural resources.

## **AGRI 1307 Agronomy**

*Credit: 3 (2 lecture, 2 lab)*

Principles and practices in development, production, and management of field crops, plant breeding, plant diseases, soils, insect control, and weed control.

## **AGRI 1309 Computers in Agriculture**

*Credit: 3 (2 lecture, 2 lab)*

Use of computers in agricultural applications. Introduction to programming languages, word processing, electronic spreadsheets and agricultural software.

## **AGRI 1311 Dairying**

*Credit: 3 (2 lecture, 2 lab)*

Survey of dairy industries: dairy breeds, standards for selecting and culling, herd replacements, feeding, management, physiology, and health maintenance. Food value of milk, tests for composition and quality, use and processing of market milk and dairy products.

## **AGRI 1315 Horticulture**

*Credit: 3 (3 lecture)*

Structure, growth, and development of horticultural plants from a practical and scientific approach. Environmental effects, basic principles of propagation, greenhouse and outdoor production, nutrition, pruning, chemical control of growth, pest control, and landscaping.

## **AGRI 1319 General Animal Science**

*Credit: 3 (2 lecture, 2 lab)*

Scientific methods of animal selection, reproduction, nutrition, management, and marketing of beef cattle, swine, sheep, goats,

and horses. Evaluation and processing of meat, wool, and mohair. Importance of livestock and meat industries.

## **AGRI 1325 Marketing of Agricultural Products**

*Credit: 3 (3 lecture)*

Introductory course covering the operations involved in the movement of agricultural commodities from producer to consumer. Essential marketing functions of buying, selling, transporting, storing, financing, standardizing, pricing and risk bearing.

## **AGRI 1327 Poultry Science**

*Credit: 3 (2 lecture, 2 lab)*

Introduction to the poultry industry. Practices and principles in production and marketing of turkeys, layers, broilers, and specialized fowl. Management, automated equipment, product technology, incubation, and production economics are included.

## **AGRI 1329 Principles of Food Science**

*Credit: 3 (3 lecture)*

Technological and scientific aspects of modern industrial food supply systems. Food classification, nutritional considerations, modern processing, and quality control.

## **AGRI 2301 Agricultural Power Units**

*Credit: 3 (2 lecture, 2 lab)*

Fundamentals of internal combustion engines: gasoline, diesel, and liquefied petroleum. Maintenance and adjustments of the electrical, ignition, fuel, lubricating, and cooling systems.

## **AGRI 2303 Agricultural Construction**

*Credit: 3 (2 lecture, 2 lab)*

Selection, use, and maintenance of hand and power tools, arc and oxyacetylene welding, construction materials and principles.

## **AGRI 2313 Entomology**

*Credit: 3 (2 lecture, 2 lab)*

Principal orders of insects, relation of anatomy and physiology of insects to control methods: development habits and economic importance of more common insects with control methods for injurious species.

## **AGRI 2317 Introduction to Agricultural Economics**

*Credit: 3 (3 lecture)*

Characteristics of our economic system and basic economic concepts. Survey of the farm and ranch, its organizational and management structure, and operation within the marketing system. Functional and institutional aspects of agricultural finance and government farm programs.

## **AGRI 2321 Livestock Evaluation**

*Credit: 3 (2 lecture, 2 lab)*

Instruction in selecting, evaluating, and judging of

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beef cattle, sheep, swine and horses. the course will include the judging of both breeding and marketing animals with decisions being supported by oral reasons.

## **AGRI 2330 Wildlife Conservation and Management**

*Credit: 3 (3 lecture)*

Principles and practices used in the production and improvement of wildlife resources for aesthetic, ecological, and recreational uses of public and private lands.

## **AGRI 2335 Dendrology, (see FORE 1314)**

## **AGRI 2336 Arboriculture - (see FORE 2309)**

## **ANTH 2101 Physical Anthropology Lab**

*Credit: 1 (2 lab)*

ANTH 2101 is a 1-unit laboratory course. Students use physical anthropological methods and tools to solve problems in the areas of genetics, human variation, human osteology, primate biology and behavior, and human evolution. A problem solving approach is stressed in applying scientific fundamentals including the techniques of observation, measurement, and critical thinking. Core Curriculum Course.

## **ANTH 2301 Introduction to Physical Anthropology**

*Prerequisites: Must be placed into college-level reading (or take GUST 0342 as a co-requisite) and be placed into college-level writing (or take ENGL 0310/0349 as a co-requisite).*

*Credit: 3 (3 lecture)*

Introduction to Physical Anthropology explores the relationship between culture and biology through the methods, theory and research of biological anthropology. Students learn about basic mechanisms of genetic change in populations and the relationships between humans and the other primates. The appearance of humans and their bipedal ancestors approximately four million years ago and their culture history through the Paleolithic age are examined in detail. Students learn about biological variation and adaptation in human populations, responses to the environment, race, and other issues and their applications. This course satisfies the Life and Physical Sciences or Component Area Option of the HCC core.

## **ANTH 2302 Introduction to Archaeology**

*Prerequisites: Must be placed into college-level reading (or take GUST 0342 as a co-requisite) and be placed into college-level writing (or take ENGL 0310/0349 as a co-requisite).*

*Credit: 3 (3 lecture)*

Introduction to Archaeology provides a survey of the basic methods, theory and research of scientific archaeology. Human cultures and behaviors are identified and interpreted from material remains of over 2.5 million years of the human past. Students learn how anthropologists build cultural history from artifacts and material evidence of human

activity, reconstruct past life ways, and explain similarities and differences of human cultures. Core Curriculum Course.

## **ANTH 2346 General Anthropology**

*Prerequisites: Must be placed into college-level reading (or take GUST 0342 as a co-requisite) and be placed into college-level writing (or take ENGL 0310/0349 as a co-requisite).*

*Credit: 3 (3 lecture)*

This introductory survey of the four subfields of anthropology focuses on the cultural and biological diversity of humans including hominid prehistory, the emergence of Paleolithic cultures, and the agricultural and urban revolutions from an anthropological perspective. Past and present human adaptations and culture are surveyed and analyzed using the comparative and holistic approach of biological anthropology, archaeology, linguistics and ethnology. Core Curriculum Course.

## **ANTH 2351 Cultural Anthropology**

*Prerequisites: Must be placed into college-level reading (or take GUST 0342 as a co-requisite) and be placed into college-level writing (or take ENGL 0310/0349 as a co-requisite).*

*Credit: 3 (3 lecture)*

This course focuses on culture, the ways people live and give meaning, form and organization to their lives as they adapt to various environments and conditions both in and beyond the borders of the U.S. Study of the descriptions and analysis of cultural diversity provide the basis for evaluating cultural components of everyday life including recognition of ethnocentrism, intercultural communication and understanding local and 'global' culture in a multicultural and transforming world. Core Curriculum Course.

## **ANTH 2389 Academic Cooperative in Anthropology**

*Prerequisites: Must be placed into college-level reading and college-level writing.*

*Credit: 3 (1 lecture, 16 lab)*

An instructional program designed to integrate on-campus study with practical hands-on experience in anthropology. In conjunction with class seminars, the individual student will set specific goals and objectives in the study of human culture and social behavior and/or institutions and processes.

## **ARAB 1411 Beginning Arabic I**

*Prerequisites: Must be placed into college - level reading (or take GUST 0342 as a co-requisite) and be placed into college level writing (or take ENGL 0310/0349 as a co-requisite).*

*Credit: 4 (3 lecture, 2 lab)*

Fundamental skills in listening comprehension, speaking, reading, and writing. Includes basic vocabulary, grammatical structures, and culture.

Core Curriculum Course.

## **ARAB 1412 Beginning Arabic II**

*Prerequisites: ARAB 1411 or department approval. Must be placed into college - level reading (or take GUST 0342 as a co-requisite) and be placed into college level writing (or take ENGL 0310/0349 as a co-requisite).*

*Credit: 4 (3 lecture, 2 lab)*

Continuation of ARAB 1411. Further development of listening comprehension, speaking, reading, and writing skills, and cultural awareness. More advanced grammar. Transfers as foreign language credit. Core Curriculum Course.

## **ARAB 2311 Intermediate Arabic I**

*Prerequisites: ARAB 1412 or departmental approval. Must be placed into college - level reading (or take GUST 0342 as a co-requisite) and be placed into college level writing (or take ENGL 0310/0349 as a co-requisite).*

*Credit: 4 (3 lecture, 2 lab)*

Further development of listening, speaking, reading and writing skills and cultural awareness acquired in Beginning Arabic. Introduction of more complex language structures. Oral and written practice based on selected readings. Class conducted mainly in Arabic.

## **ARAB 2312 Intermediate Arabic II**

*Prerequisites: ARAB 2311 or departmental approval. Must be placed into college - level reading (or take GUST 0342 as a co-requisite) and be placed into college level writing (or take ENGL 0310/0349 as a co-requisite).*

*Credit: 4 (3 lecture, 2 lab)*

Continuation of ARAB 2311, but with special emphasis on written communication. Readings, discussions and compositions. Class conducted mainly in Arabic.

## **ARCE 1303 Architectural Materials and Methods of Construction**

*Prerequisites: Must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (2 lecture, 4 lab)*

Properties, specifications, vendor references, and uses of materials as related to architectural systems of structures.

## **ARCE 1342 Codes, Specifications and Contract Documents**

*Prerequisites:*

*Credit: 3 (2 lecture, 4 lab)*

Study of ordinances, codes, and legal documents as they relate to specifications and drawing. Discussion of owner-architect-contractor

# Course Descriptions

responsibilities, duties, and legal relationships.

## **ARCE 1352 Structural Drafting**

*Prerequisites: DFTG 1405 and DFTG 1309; must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (2 lecture, 4 lab)*

A study of structural systems including concrete foundations and frames, wood framing and trusses, and structural steel framing systems. Includes detailing of concrete, wood, and steel to meet industry standards including the American Institute of Steel Construction and The American Concrete Institute.

## **ARCE 2352 Mechanical and Electrical Systems**

*Prerequisites: DFTG 1405, DFTG 1309 and DFTG 1317; must be placed into GUST 0341 in reading, ENGL 0310 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (2 lecture, 4 lab)*

The properties of building materials (assemblies), specifications, codes, vendor references, and uses of mechanical, plumbing, conveying, and electrical systems as they relate to architecture for residential and commercial construction.

## **ARTC 1302 Digital Imaging I (Photoshop)**

*Prerequisites: Must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (2 lecture, 4 lab)*

Digital imaging using raster image editing and/or image creation software: scanning, resolution, file formats, output devices, color systems, and image-acquisitions.

## **ARTC 1305 Basic Graphic Design**

*Prerequisites: Must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (2 lecture, 4 lab)*

Graphic design with emphasis on the visual communication process. Topics include basic terminology and graphic design principles.

## **ARTC 1309 Basic Illustration**

*Prerequisites: Must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (2 lecture, 4 lab)*

Introduction to drawing techniques as they pertain to the commercial illustration industry.

## **ARTC 1317 Design Communication I**

*Prerequisites: ARTC 1325 and ARTC 1305 or Department Approval; must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (2 lecture, 4 lab)*

Study of design development relating to graphic design terminology, tools and media, and layout and design concepts. Topics include integration of type, images and other design elements, and developing computer skills in industry standard

computer programs.

## **ARTC 1321 Illustration Techniques I**

*Prerequisites: ARTC 1309 or Department Approval; must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (2 lecture, 4 lab)*

A study of illustration techniques in various media. Emphasis on creative interpretation and the discipline of draftsmanship for visual communication of ideas.

## **ARTC 1325 Introduction to Computer Graphics**

*Prerequisites: Must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (2 lecture, 4 lab)*

A survey of computer design concepts, terminology, processes, and procedures. Topics include computer graphics hardware, electronic images, electronic publishing, vector-based graphics, and interactive multimedia.

## **ARTC 1353 Computer Illustration (illustrator)**

*Prerequisites: ARTC 1325 or Department Approval; must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (2 lecture, 4 lab)*

Use of the tools and transformation options of an industry-standard vector drawing program to create complex illustrations or drawings.

## **ARTC 2305 Digital Imaging II**

*Prerequisites: Department Approval; must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (2 lecture, 4 lab)*

Principles of digital image processing and electronic painting. Emphasis on bit-mapped or raster-based image marking and the creative aspects of electronic illustration for commercial or fine art applications.

## **ARTC 2313 Digital Publishing II (InDesign)**

*Prerequisites: ARTC 1305, ARTC 1325 or Department Approval; must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (2 lecture, 4 lab)*

Includes layout procedures from thumbnails and roughs to final comprehensive and print output. Emphasis on design principles for the creation of advertising and publishing materials and techniques for efficient planning and documenting projects.

## **ARTC 2317 Typographic Design**

*Prerequisites: ARTC 1302, 1305, 1353, or Department Approval; must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Corequisites: ARTC 2313 or Department Approval*

*Credit: 3 (2 lecture, 4 lab)*

Exploration of typographic design including

computer generated letterforms as elements of design. Includes theory and techniques of traditional, contemporary, and experimental typography.

## **ARTC 2335 Portfolio Development for Graphic Design**

*Prerequisites: Department Approval; must be placed into GUST 0342 in reading, ENGL 0310 or 0349 in writing and MATH 0306 in math.*

*Credit: 3 (2 lecture, 4 lab)*

Preparation of a portfolio comprised of completed graphic design class projects. Evaluation and demonstration of portfolio presentation methods based on the student's specific area of study.

## **ARTC 2347 Design Communication II**

*Prerequisites: Department Approval; must be placed into GUST 0342 in reading, ENGL 0310 or 0349 in writing and MATH 0306 in math.*

*Credit: 3 (2 lecture, 4 lab)*

An advanced study of the design process and art direction. Emphasis on form and content through the selection, creation, and integration of typographic, photographic, illustrative, and design elements.

## **ARTC 2348 Digital Publishing III**

*Prerequisites: Department Approval; must be placed into GUST 0342 in reading, ENGL 0310 or 0349 in writing and MATH 0306 in math.*

*Credit: 3 (2 lecture, 4 lab)*

A project-based page layout course from concept to completion addressing design problems, preflight of files, color separations, and trapping techniques.

## **ARTS 1301 Art Appreciation**

*Prerequisites: Must be placed into college-level reading (or take GUST 0342 as a co-requisite) and be placed into college-level writing (or take ENGL 0310/0349 as a co-requisite).*

*Credit: 3 (3 lecture)*

This introduction to the visual arts is designed for the general student. The course explores what is art, who makes it, and why it is made. This course satisfies the Creative Arts or Component Area Option of the HCC core.

## **ARTS 1303 Art History I**

*Prerequisites: Must be placed into college-level reading and college-level writing.*

*Credit: 3 (3 lecture)*

This course examines painting, sculpture, architecture and related arts covering the Paleolithic through Gothic periods. Also covered is the art of non-western cultures. This course satisfies the Creative Arts or Component Area Option of the HCC core.

## **ARTS 1304 Art History II**

*Prerequisites: Must be placed into college-level reading and college-level writing.*

*Credit: 3 (3 lecture)*

This course examines painting, sculpture, architecture and related arts from the Early Renaissance through the Twentieth Century. Also covered is the art of non-western cultures. ARTS

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1303 is not a prerequisite. This course satisfies the Creative Arts or Component Area Option of the HCC core.

## **ARTS 1311 Foundation Design I (2-D Design)**

*Prerequisites: None*

*Credit: 3 (2 lecture, 4 lab)*

This beginning studio course explores the fundamentals of two-dimensional design: line, shape, texture, value, color and composition. A variety of media will be used. Recommended but not required as a first studio course.

## **ARTS 1312 Foundation Design II (3-D Design)**

*Prerequisites: ARTS 1311*

*Credit: 3 (2 lecture, 4 lab)*

A beginning studio course that explores the fundamentals of three-dimensional design: line, plane, mass, surface, light and color in space. A variety of media will be used. Recommended but not required to be taken before Sculpture, Ceramics or Jewelry.

## **ARTS 1316 Foundation Drawing I**

*Prerequisites: None*

*Credit: 3 (2 lecture, 4 lab)*

This beginning drawing course develops students' observation skills through experimentation with various approaches, styles, techniques, and media. Recommended but not required to be taken before Life Drawing, Painting or Printmaking. Foundation Drawing I is a pre-requisite for Foundation Drawing II.

## **ARTS 1317 Foundation Drawing II**

*Prerequisites: ARTS 1316*

*Credit: 3 (2 lecture, 4 lab)*

This studio course builds upon the skills learned in Drawing I. Emphasis will be upon further media experimentation and development of a personal style. Foundation Drawing I is a prerequisite.

## **ARTS 2316 Painting I**

*Prerequisites: None*

*Credit: 3 (2 lecture, 4 lab)*

A studio course which explores painting media with an emphasis on color, composition, subject matter and technique. Painting I is a prerequisite for Painting II.

## **ARTS 2317 Painting II**

*Prerequisites: ARTS 2316*

*Credit: 3 (2 lecture, 4 lab)*

This studio course builds upon skills developed in Painting I with an emphasis on the development of personal style, subject matter, and individual expression. Painting I is a prerequisite for Painting II.

## **ARTS 2323 Life Drawing I**

*Prerequisites: None*

*Credit: 3 (2 lecture, 4 lab)*

A drawing course focusing on the human form. Various media and techniques will be explored while drawing from a live model. Life Drawing I is a prerequisite for Life Drawing II.

## **ARTS 2324 Life Drawing II**

*Prerequisites: ARTS 2323*

*Credit: 3 (2 lecture, 4 lab)*

This studio course builds upon skills developed in Life Drawing I, emphasizing personal style and individual expression. Further experimentation with various media and techniques will be explored while drawing from a live model. Life Drawing I is a prerequisite for Life Drawing II.

## **ARTS 2326 Sculpture I**

*Prerequisites: None*

*Credit: 3 (2 lecture, 4 lab)*

This studio course will introduce the student to various materials, processes and elements of design. Media may include plaster, wood, clay, and found materials. Sculpture I is a prerequisite for Sculpture II.

## **ARTS 2327 Sculpture II**

*Prerequisites: ARTS 2326*

*Credit: 3 (2 lecture, 4 lab)*

A studio course which builds upon fundamentals learned in Sculpture I with an emphasis on materials and site selection, scale, and individual expression. Sculpture I is a prerequisite for Sculpture II.

## **ARTS 2333 Printmaking I**

*Prerequisites: None*

*Credit: 3 (2 lecture, 4 lab)*

An introduction to and exploration of various relief printing, monoprinting, and intaglio processes. Printmaking I is a prerequisite for Printmaking II.

## **ARTS 2334 Printmaking II**

*Prerequisites: ARTS 2333*

*Credit: 3 (2 lecture, 4 lab)*

This course builds upon Printmaking I fundamentals and introduces additional print processes and combinations of those processes to allow individual expression. Printmaking I is a prerequisite for Printmaking II.

## **ARTS 2336 Fiber Arts I**

*Credit: 3 (2 lecture, 4 lab)*

Structure and design of woven and non-woven fiber forms.

## **ARTS 2341 Art Metals I**

*Prerequisites: None*

*Credit: 3 (2 lecture, 4 lab)*

Fundamentals of jewelry construction including design, fabrication, surface treatment, and stone setting. Art Metals I is a prerequisite for Art Metals II.

## **ARTS 2342 Art Metals II**

*Prerequisites: ARTS 2341*

*Credit: 3 (2 lecture, 4 lab)*

A continuation of ARTS 2341 with emphasis on individual expression, design and further material exploration. Art Metals I is a prerequisite for Art Metals II.

## **ARTS 2346 Ceramics I**

*Prerequisites: None*

*Credit: 3 (2 lecture, 4 lab)*

This studio course is an introduction to arts, using the clay medium. Sculptural approaches to clay (slab, pinch, coil wheel) as well as surface treatment will be investigated. Glaze making and kiln technology will be introduced. Ceramics I is a prerequisite for Ceramics II.

## **ARTS 2347 Ceramics II**

*Prerequisites: ARTS 2346*

*Credit: 3 (2 lecture, 4 lab)*

This studio course builds on knowledge acquired in Ceramics I. Emphasis will be on form and surface experimentation, as well as development of personal expression. Traditional and nontraditional uses of clay will be explored. Ceramics I is a prerequisite for Ceramics II.

## **ARTS 2348 Digital Arts I**

*Prerequisites: None*

*Credit: 3 (2 lecture, 4 lab)*

This studio course is an introduction to art using the computer. Digital approaches to imagery will be investigated using various tools (possibilities include cameras, scanners, printers, etc.) and software. Emphasis will be placed on creating original images as well as manipulating existing images.

## **ARTS 2349 Digital Arts II**

*Prerequisites: ARTS 2348 or ARTS 2344*

*Credit: 3 (2 lecture, 4 lab)*

This studio art course builds upon the skills learned in Digital Arts I. Emphasis will be upon further media experimentation and development of a personal style. Digital Arts I is a prerequisite for Digital Arts II.

## **ARTS 2356 Photography I**

*Prerequisites: None*

*Credit: 3 (2 lecture, 4 lab)*

An introduction to basic photographic processes including black and white film processing and printing. The student will examine various aesthetic approaches to photographing as well as some history of photography. This course will emphasize aesthetic aspects of photography such as design and composition, as well as content. Photography I is a prerequisite for Photography II.

## **ARTS 2357 Photography II**

*Prerequisites: ARTS 2356*

*Credit: 3 (2 lecture, 4 lab)*

This course will build on previously acquired skills

# Course Descriptions

of black and white film exposure, processing and printing and guide students in developing personal outlooks toward specific applications of the photographic process. Photography I is a prerequisite for Photography II.

## **ARTS 2366 Watercolor I**

*Prerequisites: None*

*Credit: 3 (2 lecture, 4 lab)*

A studio course that explores watercolor media with an emphasis on color, composition, self-expression, and technique.

## **ARTS 2367 Watercolor II**

*Prerequisites: ARTS 2366*

*Credit: 3 (2 lecture, 4 lab)*

This studio course builds upon skills developed in Watercolor I with an emphasis on the development of personal style, subject matter, and individual expression. Watercolor I is a prerequisite for Watercolor II.

## **ARTV 1111 Storyboard**

*Prerequisites:*

*Credit: 1 (1 lecture, 1 lab)*

Determine a project's content; choose or create graphics; and sequence the content to convey the message.

## **ARTV 1303 Basic Animation**

*Prerequisites:*

*Credit: 3 (2 lecture, 4 lab)*

Examination of animation concepts, principles, and storyboard for basic production. Emphasizes creating movement and expression utilizing traditionally or digitally generated image sequences.

## **ARTV 1341 3-D Animation I**

*Prerequisites: ARTV 1345*

*Credit: 3 (2 lecture, 4 lab)*

Intermediate level 3-D course introducing animation tools and techniques used to create movement. Emphasis on using the principles of animation.

## **ARTV 1345 3-D Modeling and Rendering I**

*Prerequisites: ARTC 1302 or Department Approval; must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (2 lecture, 4 lab)*

Techniques of three-dimensional (3-D) modeling utilizing industry standard software. Includes the creation and modification of 3-D geometric shapes, use of a variety of rendering techniques, camera, light sources, texture, and surface mapping.

## **ARTV 1351 Digital Video**

*Prerequisites: ARTV 1345; must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (2 lecture, 4 lab)*

Producing and editing video and sound for multimedia or web productions. Emphasizes capture, editing, and outputting of video using a desktop digital video workstation.

## **ARTV 2301 2-D Animation I (FLASH)**

*Prerequisites: IIMED 1316, IMED 1341, ITSE 2313, or Department Approval; must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.;*

*Credit: 3 (2 lecture, 4 lab)*

Skill development in the use of software to develop storyboards and two-dimensional animation including creating, importing, and sequencing media elements to create multimedia presentation. Emphasis on conceptualization, creativity, and visual aesthetics.

## **ARTV 2320 Team Program Production I**

*Prerequisites:*

*Credit: 3 (2 lecture)*

Students assume roles in a production team using techniques and equipment to create short-form production(s).

## **ARTV 2322 Team Program Production II**

*Prerequisites:*

*Credit: 3 (2 lecture, 4 lab)*

Develop an advanced level production while working in conjunction with a team; assume management production responsibilities.

## **ARTV 2330 2-D Animation II**

*Prerequisites: Department Approval; must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (2 lecture, 4 lab)*

Advanced study of technical aspects of animation. Emphasizes aesthetic design and completion of an animation project.

## **ARTV 2335 Portfolio Development for Animation**

*Prerequisites:*

*Credit: 3 (2 lecture, 4 lab)*

A course in the development of a professional portfolio to showcase the student's skills in animation. Includes self-promotion, resumes, portfolio distribution, and interview techniques.

## **ARTV 2341 Advanced Digital Video**

*Prerequisites: Must be placed into college-level reading, writing and math.*

*Credit: 3 (2 lecture, 4 lab)*

Advanced digital video techniques for post-production. Emphasizes integration of special effects and animation for film, video, and the Internet. Exploration of new and emerging compression and video streaming technologies.

## **ARTV 2345 3-D Modeling and Rendering II**

*Prerequisites: ARTC 1302 and ARTV 1345; must be placed into college-level reading, writing and math.*

*Credit: 3 (2 lecture, 4 lab)*

A studio course focused on advanced 3-D modeling and rendering techniques using industry standard software, modeling techniques, camera settings, lighting, and surfacing to develop detailed environments.

## **ASTR 1303 Stars and Galaxies**

*Prerequisites: Must be placed into GUST 0341 (or higher) in reading and placed into MATH 0312 (or take MATH 0308 as a co-requisite).*

*Credit: 3 (3 lecture)*

An introduction to the present cosmological theories about the structure and evolution of the universe. A comparison with previous models since antiquity. A study of the celestial sphere and the constellations, the motions in the sky. A study of gravity, light, radiation, optics, telescopes and spacecraft. A survey of the stars, clusters, galaxies, superclusters, their properties, structure and evolution. This course satisfies the Life and Physical Sciences or Component Area Option of the HCC core.

## **ASTR 1304 Solar System (lecture)**

*Prerequisites: Must be placed into GUST 0341 (or higher) in reading and placed into MATH 0312 (or take MATH 0308 as a co-requisite).*

*Credit: 3 (3 lecture)*

An introduction to present theories about the structure and evolution of the solar system, compared to other models and theories since antiquity. A survey of the Sun, planets, moons, rings, asteroids, comets and debris in our solar system. The possibility of life in the Universe. This course satisfies the Life and Physical Sciences or Component Area Option of the HCC core.

## **ASTR 1403 Stars and Galaxies**

*Prerequisites: Must be placed into GUST 0341 (or higher) in reading and placed into MATH 0312 (or take MATH 0308 as a co-requisite).*

*Credit: 4 (3 lecture, 3 lab)*

An introduction to the present cosmological theories about the structure and evolution of the universe. A comparison with previous models since antiquity. A study of the celestial sphere and the constellations, the motions in the sky. A study of gravity, light, radiation, optics, telescopes and spacecraft. A survey of the stars, clusters, galaxies, superclusters, their properties, structure and evolution. Laboratory includes an introduction to observational techniques using telescopes, in-class projects/exercises on spectroscopy, stellar

# Course Descriptions

positions, solar heating, planetary motions, solar and astrophotography, star clusters, galaxies, and cosmology. This course satisfies the Life and Physical Sciences or Component Area Option of the HCC core.

## **ASTR 1404 Solar System (lecture + lab)**

*Prerequisites: Must be placed into GUST 0341 (or higher) in reading and placed into MATH 0312 (or take MATH 0308 as a co-requisite).*

*Credit: 4 (3 lecture, 3 lab)*

An introduction to present theories about the structure and evolution of the solar system, compared to other models and theories since antiquity. A survey of the Sun, planets, moons, rings, asteroids, comets and debris in our solar system. The possibility of life in the Universe. Laboratory topics include planetary, lunar and solar observations with telescopes and/or the naked eye; measurements of the gravitational constant, gravitational acceleration and the speed of light; analysis of spectra and spacecraft images; and impact cratering simulations. This course satisfies the Life and Physical Sciences or Component Area Option of the HCC core.

## **AUMT 1305 Introduction to Automotive Technology**

*Prerequisites: Must be placed into GUST 0339 in reading, ENGL 0300 or 0347 in writing and MATH 0308 in math.*

*Credit: 3 (2 lecture, 2 lab)*

An introduction to the automotive industry including automotive history, safety practices, shop equipment and tools, vehicle subsystems, service publications, fasteners, professional responsibilities, and automotive maintenance. May be taught manufacturer specific.

## **AUMT 1306 Automotive Engine Removal and Installation**

*Prerequisites: Must be placed into GUST 0339 in reading, ENGL 0300 or 0347 in writing and MATH 0308 in math.*

*Credit: 3 (2 lecture, 4 lab)*

Fundamentals of engine inspection, removal and installation procedures. May be taught manufacturer specific.

## **AUMT 1307 Automotive Electrical Systems**

*Prerequisites: Must be placed into GUST 0339 in reading, ENGL 0300 or 0347 in writing and MATH 0308 in math.*

*Credit: 3 (2 lecture, 4 lab)*

An overview of automotive electrical systems including topics in operational theory, testing, diagnosis, and repair of batteries, charging and starting systems, and electrical accessories. Emphasis on electrical schematic diagrams and service manuals. May be taught manufacturer specific.

## **AUMT 1310 Automotive Brake Systems**

*Prerequisites: Must be placed into GUST 0339 in reading, ENGL 0300 or 0347 in writing and MATH 0308 in math.*

*Credit: 3 (2 lecture, 4 lab)*

Operation and repair of drum/disc type brake systems. Emphasis on safe use of modern equipment. Topics include brake theory, diagnosis, and repair of power, manual, anti-lock brake systems, and parking brakes. May be taught with manufacturer specific instructions.

## **AUMT 1316 Automotive Suspension and Steering Systems**

*Prerequisites: Must be placed into GUST 0339 in reading, ENGL 0300 or 0347 in writing and MATH 0308 in math.*

*Credit: 3 (2 lecture, 4 lab)*

A study of automotive suspension and steering systems including tire and wheel problem diagnosis, component repair, and alignment procedures. May be taught manufacturer specific.

## **AUMT 1319 Automotive Engine Repair**

*Prerequisites: Must be placed into GUST 0339 in reading, ENGL 0300 or 0347 in writing and MATH 0308 in math.*

*Credit: 3 (2 lecture, 4 lab)*

Fundamentals of engine operation, diagnosis and repair including lubrication systems and cooling systems. Emphasis on overhaul of selected engines, identification and inspection, measurements, and disassembly, repair, and reassembly of the engine. May be taught manufacturer specific.

## **AUMT 1345 Automotive Climate Control Systems**

*Prerequisite/Corequisite: AUMT 1307*

*Prerequisites: Must be placed into GUST 0339 in reading, ENGL 0300 or 0347 in writing and MATH 0308 in math.*

*Credit: 3 (2 lecture, 4 lab)*

Theory of automotive air conditioning and heating systems. Emphasis on the basic refrigeration cycle and diagnosis and repair of system malfunctions. Covers EPA guidelines for refrigerant handling and new refrigerant replacements. May be taught manufacturer specific.

## **AUMT 1380 Cooperative Education-Automobile/Automotive Mechanics Technology/Technician**

*Prerequisites: Department Approval; must be placed into GUST 0339 in reading, ENGL 0300 or 0347 in writing and MATH 0308 in math.*

*Credit: 3 (1 lecture, 20 lab)*

Career-related activities encountered in the student's area of specialization offered through an individualized agreement among the college, employer, and student. Under the supervision of the college and the employer, the student combines classroom learning with work experience. Includes a lecture component.

## **AUMT 2209 Automotive Drive Train and Axle Theory**

*Prerequisites: Must be placed into GUST 0339 in reading, ENGL 0300 or 0347 in writing and MATH*

*0308 in math.*

*Credit: 2 (2 lecture, 1 lab)*

A study of automotive clutches, clutch operation devices, manual transmissions/transaxles, and differentials. Emphasis on theory and diagnosis of transmission/transaxle and drive line components.

## **AUMT 2223 Theory of Automatic Transmission and Transaxle**

*Prerequisites: Must be placed into GUST 0339 in reading, ENGL 0300 or 0347 in writing and MATH 0308 in math.*

*Credit: 2 (2 lecture, 1 lab)*

Theory of operation, hydraulic principles, and related circuits of modern automatic transmissions and transaxles. Discussion of diagnosing and repair techniques.

## **AUMT 2313 Automotive Drive Train and Axles**

*Prerequisites: Must be placed into GUST 0339 in reading, ENGL 0300 or 0347 in writing and MATH 0308 in math.*

*Credit: 3 (2 lecture, 4 lab)*

A study of automotive clutches, clutch operation devices, manual transmissions/transaxles, and differentials with emphasis on the diagnosis and repair of transmissions/transaxles and drive lines. May be taught with manufacturer specific instructions.

## **AUMT 2317 Automotive Engine Performance Analysis I**

*Prerequisites: Must be placed into GUST 0339 in reading, ENGL 0300 or 0347 in writing and MATH 0308 in math.*

*Credit: 3 (2 lecture, 4 lab)*

Theory, operation, diagnosis, and repair of basic engine dynamics, ignition systems, and fuel delivery systems. Use of basic engine performance diagnostic equipment. May be taught with manufacturer specific instructions.

## **AUMT 2321 Automotive Electrical Diagnosis and Repair**

*Prerequisite/Corequisite: AUMT 1307 Must be placed into GUST 0339 in reading, ENGL 0300 or 0347 in writing and MATH 0308 in math.;*

*Credit: 3 (2 lecture, 4 lab)*

Repair of automotive electrical subsystems, lighting, instrumentation, and accessories. Emphasis on accurate diagnosis and proper repair methods using various troubleshooting skills and techniques. May be taught manufacturer specific.

## **AUMT 2325 Automatic Transmission and Transaxle**

*Prerequisites: Must be placed into GUST 0339 in reading, ENGL 0300 or 0347 in writing and MATH 0308 in math.*

# Course Descriptions

*Credit: 3 (2 lecture, 4 lab)*

A study of the operation, hydraulic principles, and related circuits of modern automatic transmissions and automatic transaxles. Diagnosis, disassembly, and assembly procedures with emphasis on the use of special tools and proper repair techniques. May be taught manufacturer specific.

## **AUMT 2328 Automotive Service**

*Prerequisites: Must be placed into GUST 0339 in reading, ENGL 0300 or 0347 in writing and MATH 0308 in math.*

*Credit: 3 (2 lecture, 4 lab)*

Mastery of automotive vehicle service and component systems repair. Emphasis on mastering current automotive competencies covered in related courses. May be taught manufacturer specific.

## **AUMT 2334 Automotive Engine Performance Analysis II**

*Prerequisites: Must be placed into GUST 0339 in reading, ENGL 0300 or 0347 in writing and MATH 0308 in math.*

*Credit: 3 (2 lecture, 4 lab)*

A study of diagnosis and repair of emission systems, computerized engine performance systems, and advanced ignition and fuel systems; and proper use of advanced engine performance diagnostic equipment. May be taught manufacturer specific.

## **AUMT 2380 Cooperative Education-Auto/Automotive Technician**

*Prerequisites: Must be placed into GUST 0339 in reading, ENGL 0300 or 0347 in writing and MATH 0308 in math.*

*Credit: 3 (1 lecture, 20 lab)*

Career-related activities encountered in the student's area of specialization offered through an individualized agreement among the college, employer, and student. Under the supervision of the college and the employer, the student combines classroom learning with work experience. Includes a lecture component.

## **AUMT 2437 Automotive Electronics**

*Prerequisites: Must be placed into GUST 0339 in reading, ENGL 0300 or 0347 in writing and MATH 0308 in math.*

*Prerequisite/Corequisite: AUMT 1307;*

*Credit: 4 (2 lecture, 4 lab)*

Topics address electrical principles, semiconductor and integrated circuits, digital fundamentals, microcomputer systems, and electrical test equipment as applied to automotive technology. May be taught manufacturer specific.

## **AUMT 2455 Automotive Engine**

## **Machining**

*Prerequisites: Must be placed into GUST 0339 in reading, ENGL 0300 or 0347 in writing and MATH 0308 in math.*

*Credit: 4 (2 lecture, 4 lab)*

In-depth coverage of precision engine rebuilding, cylinder reconditioning, and crack repair. Instruction in machines and equipment necessary to complete an engine repair. May be taught with manufacturer specific instructions.

## **BCIS 1405 Business Computer Applications**

*Prerequisites: Must be placed into college level reading & college level writing & developmental mathematics (0312 or higher).*

*Credit: 4 (3 lecture, 3 lab)*

Computer terminology, hardware, software, operating systems, and information systems relating to the business environment. The main focus of this course is on business applications of software, including word processing, spreadsheets, databases, presentation graphics, and business-oriented utilization of the Internet.

## **BIOL 1108 Introductory Biology Laboratory I**

*Prerequisite/Corequisite: BIOL 1308*

*Credit: 1 (3 lab)*

Selected laboratory experiments related to topics in BIOL 1308 (Introductory Biology I) for non-majors. Core Curriculum Course.

## **BIOL 1109 Introductory Biology Laboratory II**

*Prerequisite/Corequisite: BIOL 1309*

*Credit: 1 (3 lab)*

Selected laboratory experiments related to topics in BIOL 1309 (Introductory Biology I) for non-majors. Core Curriculum Course.

## **BIOL 1308 Biology for Non-Science Majors I**

*Prerequisites: Must be placed into GUST 0342 (or higher) in reading and ENGL 0310/0349 (or higher) in writing.*

*Credit: 3 (3 lecture)*

Topics include basic chemistry, cell morphology and physiology, photosynthesis and respiration, cell division, and classical and molecular genetics. This course satisfies the Life and Physical Sciences or Component Area Option of the HCC core.

## **BIOL 1309 Biology for Non-Science Majors II**

*Prerequisites: BIOL 1308, Must be placed into GUST 0342 (or higher) in reading and ENGL 0310/0349 (or higher) in writing.*

*Credit: 3 (3 lecture)*

Topics include evolution, classification and ecological relationships, and organ systems of animals and plants. This course satisfies the Life and Physical Sciences or Component Area Option of the HCC core.

## **BIOL 1322 Nutrition & Diet Therapy**

*Prerequisites: Must be placed into college-level reading (or take GUST 0342 as a co-requisite) and*

*be placed into college-level writing (or take ENGL 0310/0349 as a co-requisite).*

*Credit: 3 (3 lecture)*

A course designed to teach the fundamentals of nutrition based on basic nutrition principles. Scientific standard recommendations of levels of nutrient intake for a healthy population are discussed. Sources and functions of carbohydrates, proteins, fats, vitamins and minerals are also studied. (cross listed with HECO 1322). This course satisfies the Life and Physical Sciences or Component Area Option of the HCC core.

## **BIOL 1406 Biology for Science Majors I**

*Prerequisites: Must be placed into college level reading and writing.*

*Credit: 4 (3 lecture, 3 lab)*

Discussions focus on biological chemistry, biological processes, cellular morphology, metabolism, genetics and molecular biology. This course satisfies the Life and Physical Sciences or Component Area Option of the HCC core.

## **BIOL 1407 Biology for Science Majors II**

*Prerequisites: BIOL 1406, Must be placed into college-level reading (or take GUST 0342 as a co-requisite) and be placed into college-level writing (or take ENGL 0310/0349 as a co-requisite).*

*Credit: 4 (3 lecture, 3 lab)*

Topics include evolution, classification and ecological relationships, and organ systems of animals and plants. This course satisfies the Life and Physical Sciences or Component Area Option of the HCC core.

## **BIOL 1411 General Botany**

*Prerequisites: Must be placed into college-level reading (or take GUST 0342 as a co-requisite) and be placed into college-level writing (or take ENGL 0310/0349 as a co-requisite).*

*Credit: 4 (3 lecture, 3 lab)*

Plant science including survey of the plant kingdom, photosynthesis, respiration, anatomy, reproduction, ecology, and vascular plant taxonomy.

## **BIOL 1413 General Zoology**

*Prerequisites: Must be placed into college-level reading (or take GUST 0342 as a co-requisite) and be placed into college-level writing (or take ENGL 0310/0349 as a co-requisite).*

*Credit: 4 (3 lecture, 3 lab)*

A general overview of the animal kingdom including principles, life histories, and classification. Emphasis is placed on the vertebrates.

## **BIOL 2101 Anatomy and Physiology I**

*Prerequisites: Must have passed ENGL 1301 (or higher) or take ENGL 1301 as a co-requisite.*

*Credit: 1 (3 lab)*

# Course Descriptions

Study of the structure and function of human cells, tissues, and organ systems including integumentary skeletal, muscular, and nervous systems.

## **BIOL 2102 Anatomy and Physiology II**

*Prerequisites: Must have passed ENGL 1301 (or higher) or take ENGL 1301 as a co-requisite.*

*Credit: 1 (3 lab)*

Continuation of BIOL 2101 including the circulatory, respiratory, digestive, excretory, reproductive and endocrine systems.

## **BIOL 2120 Microbiology**

*Prerequisites: BIOL 1406; must be placed into college-level reading (or take GUST 0342 as a co-requisite) and be placed into college-level writing (or take ENGL 0310/0349 as a co-requisite).*

*Credit: 1 (3 lab)*

Study of microorganisms including morphology, metabolism, taxonomy, culture techniques, microbial genetics, immunology, bacteriology, virology, mycology, parasitology, and diseases.

## **BIOL 2301 Anatomy and Physiology I**

*Prerequisites: Must have passed ENGL 1301 (or higher) or take ENGL 1301 as a co-requisite.*

*Credit: 3 (3 lecture)*

Study of the structure and function of human cells, tissues, and organ systems including integumentary skeletal, muscular, and nervous systems.

## **BIOL 2302 Anatomy and Physiology II**

*Prerequisites: Must have passed ENGL 1301 (or higher) or take ENGL 1301 as a co-requisite.*

*Credit: 3 (3 lecture)*

Continuation of BIOL 2301 including the circulatory, respiratory, digestive, excretory, reproductive and endocrine systems.

## **BIOL 2320 Microbiology**

*Prerequisites: BIOL 1406; must be placed into college-level reading (or take GUST 0342 as a co-requisite) and be placed into college-level writing (or take ENGL 0310/0349 as a co-requisite).*

*Credit: 3 (3 lecture)*

Study of microorganisms including morphology, metabolism, taxonomy, culture techniques, microbial genetics, immunology, bacteriology, virology, mycology, parasitology, and diseases.

## **BIOL 2406 Environmental Biology**

*Prerequisites: Must be placed into college-level reading (or take GUST 0342 as a co-requisite) and be placed into college-level writing (or take ENGL 0310/0349 as a co-requisite).*

*Credit: 4 (3 lecture, 3 lab)*

Human interaction with and effect upon plant and animal communities. Conservation, pollution, energy, and other contemporary ecological problems.

## **BIOL 2416 Genetics**

*Prerequisites: BIOL 1406; must be placed into college-level reading (or take GUST 0342 as a co-requisite) and be placed into college-level writing (or take ENGL 0310/0349 as a co-requisite).*

*Credit: 4 (3 lecture, 3 lab)*

Study of the principles of molecular and classical genetics and the function and transmission of hereditary material. May include population genetics and genetic engineering.

## **BIOL 2421 Microbiology for Science Majors**

*Prerequisites: CHEM 1411 and BIOL 1406 and 1407 or BIOL 1411 and 1413.*

*Credit: 4 (3 lecture, 3 lab)*

Principles of microbiology, including metabolism, structure, function, genetics, and phylogeny of microbes. The course will also examine the interactions of microbes with each other, hosts, and the environment. Laboratory activities will reinforce principles of microbiology.

## **BIOL 2428 Comparative Anatomy**

*Prerequisites: BIOL 1407; must be placed into college-level reading (or take GUST 0342 as a co-requisite) and be placed into college-level writing (or take ENGL 0310/0349 as a co-requisite).*

*Credit: 4 (3 lecture, 3 lab)*

Comparative studies of the evolution of the vertebrate body including morphology, physiology, embryology, taxonomy, and paleontology.

## **BIOM 1309 Applied Biomedical Equipment Technology**

*Prerequisites: CETT 1403, CETT 1425 or Department Approval. Must be placed into college-level reading, writing and math.*

*Credit: 3 (2 lecture, 3 lab)*

Introduction to biomedical instrumentation as related to anatomy and physiology. Detailed coverage of anatomical systems that use medical equipment for monitoring, diagnosis, and treatment.

## **BIOM 2331 Biomedical Clinical Instrumentation**

*Prerequisites: CETT 1403, CETT 1425, or Department Approval. Must be placed into college-level reading, writing and math.*

*Credit: 3 (2 lecture, 3 lab)*

A study of theory, application, and principles of operation of instruments commonly used in a medical laboratory.

## **BIOM 2489 Internship-Biomedical Technology/Technician**

*Prerequisites: 30 credit hours of CETT courses and Department Approval. Must be placed into college-level reading, writing and math.*

*Credit: 4 (20 lab)*

A work-based learning experience that enables the student to apply specialized occupational theory, skills and concepts. A learning plan is developed by the college and the employer.

## **BIOS 1470 Introduction to Biosafety and Biotechnology**

*Prerequisites: Must be placed into college-level reading, writing and math.*

*Credit: 4 (3 lecture, 3 lab)*

Topics address the current development of the fields of biosafety and biotechnology. Covers the applications of biosafety and biotechnology as these relate to medical and pharmaceutical research, and health care entities. Explores biotechnology and nanotechnology unique applications, workplace environment, and occupational safety. Describes controlling mechanisms used in biotechnology and biosafety to assure a protective workplace environment.

## **BIOS 1471 Introduction to Laboratory Safety**

*Prerequisites: Must be placed into college-level reading, writing and math.*

*Credit: 4 (3 lecture, 3 lab)*

Topics include safe handling of biological, chemical, radiation and nano materials in vivo or vitro. Focuses on safety, regulations, and proper materials handling in research, clinical laboratories, and petrochemical industries. Covers the classification levels of laboratories (i.e., Biosafety Level 1, 2, 3 and 4 requirements; topics include laboratory risk identification, medical surveillance requirements as part of an occupational health program, routine safety surveillance activities, identification of appropriate decontamination methods for biological, radiological, chemical or nano particle accidents and spills in research, clinical, and petrochemical laboratories and describing the instruction materials required to educate personnel in all areas of laboratory safety, including biological safety, chemical safety, recombinant DNA research activities and nanosafety.

## **BIOS 2370 Internship - Biosafety**

*Prerequisites: Must be placed into college-level reading, writing and math.*

*Credit: 3 (3 lecture)*

Participation in real-life applications of biosafety and nanosafety measures for research laboratories, clinical laboratories and/or petrochemical laboratory environments. A work based learning experience that enables the student to apply the specialized biosafety and nanosafety skills, knowledge, theory and concepts to laboratory and institutional environment. It includes oversight of biosafety and nanosafety regulations within a facility, including the performance of environmental monitoring for contamination and air quality related to contaminants by biohazard and nano particles among others.

## **BIOS 2470 Industrial Hygiene Sampling Instrumentation Laboratory**

*Prerequisites: Must be placed into college-level reading, writing and math.*

*Credit: 4 (3 lecture, 3 lab)*

# Course Descriptions

Covers applications of industrial hygiene air and environmental sampling instrumentation including biosafety, radiation safety, chemical safety and nanosafety functions for research laboratories, clinical laboratories and/or petrochemical laboratory environments. Safe practices in the use of handling hazardous materials including shipping of infectious substances, radioactive materials, and nanoparticles and disposal of hazardous wastes are also addressed. Topics also include performing the environmental monitoring for contamination and air quality related to contaminants by biohazard and nano particles to gain experience in this area.

## **BITC 1311 Introduction to Biotechnology**

*Prerequisites: Must be placed into college-level reading, college-level writing and Math 0312.*

*Credit: 3 (3 lecture)*

An introduction to biotechnology including career exploration, history and applications of DNA/RNA technology, molecular biology, bioethics, and laboratory safety practices.

## **BITC 1370 Introduction to Biochemistry**

*Prerequisites: Must be placed into college-level reading, writing and math.*

*Credit: 3 (3 lecture)*

The study of the knowledge of the structure, function, and cellular metabolism of various biomolecules. The course will deal with the intra- and intermolecular conversion of biomolecules. Knowledge in this area is directly applicable to the fields of analysis and processing of biomolecules and their pertinence to biotechnology as it relates to biopharmaceuticals, biodiagnostics, fermentation, and bio-manufacturing.

## **BITC 1402 Biotechnology Laboratory Methods and Techniques**

*Prerequisite/Corequisite: BITC 1311 or Department Approval; must be placed into college-level reading, writing and math.*

*Credit: 4 (3 lecture, 3 lab)*

Laboratory operations, management, equipment, instrumentation, quality control techniques, and safety procedures. Includes laboratory practice in using pH meters, mixing buffers, performing measurements, preparing solutions, and performing separatory techniques.

## **BITC 1403 Principles of Biochemistry**

*Prerequisites: BIOL 1406, CHEM 1414, and MATH 1314. Must be placed into college-level reading, writing and math.*

*Credit: 4 (3 lecture, 3 lab)*

Structure, function, and cellular metabolism of various bio-molecules. Concentrates on the intra- and intermolecular conversion of bio-molecules. Knowledge in this area is directly applicable to analysis and processing of bio-molecules and their pertinence to biotechnology as it relates to biopharmaceuticals, biodiagnostics, fermentation, and bio-manufacturing.

## **BITC 1491 Special Topics in Biological Technology/Technician**

*Prerequisites: Must be placed into college-level reading, college-level writing and Math 0312*

*Credit: 4 (3 lecture, 3 lab)*

Topics address recently identified current events, skills, knowledges, and/or attitudes and behaviors pertinent to the technology or occupation and relevant to the professional development of the student. This course was designed to be repeated multiple times to improve student proficiency.

## **BITC 2386 Internship - Biology Technician/Biotechnology Laboratory Technician**

*Prerequisites: BITC 1402 and Department Approval; must be placed into college-level reading, writing and math.*

*Credit: 3 (1 lecture, 20 lab)*

A work-based learning experience that enables the student to apply specialized occupational theory, skills and concepts. A learning plan is developed by the college and the employer.

## **BITC 2411 Biotechnology Laboratory Instrumentation**

*Prerequisites: BITC 1402 and Department Approval; must be placed into college-level reading, writing and math.*

*Credit: 4 (3 lecture, 3 lab)*

Theory, applications, and operation of various analytical instruments. Addresses separation and identification techniques including electrophoresis, spectrophotometry, and chromatography.

## **BITC 2431 Cell Culture Techniques**

*Prerequisites: BITC 1402 or Department Approval; must be placed into college-level reading, writing and math.*

*Credit: 4 (3 lecture, 3 lab)*

Theory and applications of cell culture techniques. Laboratory emphasis on the principles and practices of initiation, cultivation, maintenance, preservation of cell lines and applications.

## **BITC 2441 Molecular Biology Techniques**

*Prerequisites: BITC 2411 or Department Approval; must be placed into college-level reading, writing and math.*

*Credit: 4 (3 lecture, 3 lab)*

In depth coverage of the theory and laboratory techniques in molecular biology with an emphasis on gene expression and regulation, recombinant DNA, and nucleic acids.

## **BITC 2445 Medical Biotechnology**

*Prerequisites: BITC 1311 or Departmental Approval; must be placed into college-level reading, writing and math.*

*Credit: 4 (3 lecture, 3 lab)*

Biotechnology as it applies to medicine and medical research. Includes molecular mechanisms underlying diseases such as cancer, diabetes, heart disease, and AIDS. Covers the applications

of biotechnology to the diagnosis and treatment of disease as well as the development of drugs and therapeutic agents. Emphasizes research and medical-related biotechnology methods and laboratory procedures.

## **BITC 2472 Immunological Methods and Techniques**

*Prerequisites: BITC 1402 or Department Approval; must be placed into college-level reading, writing and math.*

*Credit: 4 (3 lecture, 3 lab)*

Study of the principles and practices of modern immunology including the interactions among the various cellular and chemical components of immune response. Emphasis on the techniques used in the biotechnology industry involved in manufacturing of immunotherapeutic agents and biopharmaceuticals. Knowledge in this area is directly applicable to the fields of biopharmaceuticals, bio-diagnostics, fermentation and bio manufacturing.

## **BMGT 1301 Supervision**

*Prerequisites: Must be placed into GUST 0342 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (3 lecture)*

A study of the role of the supervisor. Managerial functions as applied to leadership, counseling, motivation, and human skills are examined.

## **BMGT 1313 Principles of Purchasing**

*Prerequisites: Must be placed into GUST 0342 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (3 lecture)*

The purchasing process as it relates to such topics as inventory control, price determination, vendor selection, negotiation techniques, and ethical issues.

## **BMGT 1325 Office Management**

*Prerequisites: Must be placed into GUST 0342 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (3 lecture)*

Systems, procedures, and practices related to organizing and planning office work, supervising employee performance, and exercising leadership skills.

## **BMGT 1327 Principles of Management**

*Prerequisites: Must be placed into GUST 0342 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (3 lecture)*

Concepts, terminology, principles, theories, and

# Course Descriptions

issues in the field of management.

## **BMGT 1331 Production and Operations Management**

*Prerequisites: Must be placed into GUST 0342 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (3 lecture)*

Fundamentals of the various techniques used in the practice of production management to include location, design, and resource allocation

## **BMGT 1341 Business Ethics**

*Prerequisites: Must be placed into GUST 0342 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (3 lecture)*

Discussion of ethical issues, the development of a moral frame of reference, and the need for an awareness of social responsibility in management practices and business activities. Includes ethical corporate responsibility.

## **BMGT 1370 Introduction to HR/PeopleSoft Applications**

*Prerequisites: Must be placed into GUST 0342 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (2 lecture, 3 lab)*

A hands-on overview of the major areas of human resources/PeopleSoft, as illustrated by PeopleSoft software applications. Some topics will cover accessing PeopleSoft, navigating the PeopleSoft interface, understanding PeopleSoft panels, using PeopleSoft panels, and creating queries.

## **BMGT 1371 Intermediate HR/PeopleSoft Applications**

*Prerequisites: Must be placed into GUST 0342 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (2 lecture, 3 lab)*

A continuation of Introduction to Human Resources/PeopleSoft with intermediate PeopleSoft applications. Additional topics will include: understanding PeopleSoft processes, PeopleSoft HRMS (Human Resource Management Systems), PeopleSoft HRMS modules, and advanced query topics.

## **BMGT 2303 Problem Solving and Decision Making**

*Prerequisites: ENGL 0300 or 0347, GUST 0342 (9th -11th Grade Reading), MATH 0306 (Basic Math Pre-Algebra)*

*Credit: 3 (3 lecture)*

Discussion of ethical issues, the development of a moral frame of reference, and the need for an awareness of social responsibility in management practices and business activities. Includes ethical corporate responsibility.

## **BMGT 2305 Advanced Communication in Management/PeopleSoft Applications (Team Work and Case Studies)**

*Prerequisites: BMGT 1371; must be placed into GUST 0342 in reading, ENGL 0300 or 0347 in*

*writing and MATH 0306 in math. (Computer Lab required)*

*(Computer Lab required)*

*Credit: 3 (2 lecture, 2 lab)*

Putting it all together/PeopleSoft: group projects, team applications, and implementation of results

## **BMGT 2310 Financial Management/PeopleSoft Applications**

*Prerequisites: BMGT 1394; must be placed into GUST 0342 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math. (Computer Lab required)*

*(Computer Lab required)*

*Credit: 3 (2 lecture, 3 lab)*

Emphasis on the development and use of accounting information to support managerial decision-making processes in manufacturing, service, and for-profit settings. Topics include managerial concepts and systems, various analysis for decision making, and planning and control.

## **BMGT 2331 Total Quality Management/PeopleSoft Applications**

*Prerequisites: BMGT 2310; must be placed into GUST 0342 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math. (Computer Lab required)*

*Credit: 3 (2 lecture, 3 lab)*

Quality of productivity in organizations using PeopleSoft Applications. Includes planning for quality PeopleSoft reports, implementation of reports, development of reports for business decision-making. Additional topics will include accessing and setting up queries, aggregating totals, using SQR with PeopleSoft, and reporting tables.

## **BNKG 1303 Principles of Bank Operation**

*Prerequisites: Must be placed into GUST 0341 in reading, ENGL 0310 or 0349 in writing and MATH 0308 in math.*

*Credit: 3 (3 lecture)*

Overview of the fundamental banking functions and the role of regulation in the banking industry. Explanation of financial products and services to various markets.

## **BNKG 1305 Teller Training**

*Prerequisites: Must be placed into GUST 0341 in reading, ENGL 0310 or 0349 in writing and MATH 0308 in math.*

*Credit: 3 (3 lecture)*

Application of the functions related to negotiable instruments, cash control, handling money, and balancing. Explanation of compliance and regulation issues affecting bank tellers.

## **BNKG 1340 Money and Banking**

*Prerequisites: Must be placed into GUST 0341 in reading, ENGL 0310 or 0349 in writing and MATH 0308 in math.*

*Credit: 3 (3 lecture)*

Monetary policy and its related effects on financial intermediaries. Includes financial markets,

regulatory functions, and structures. Addresses investment and funds management.

## **BNKG 1345 Consumer Lending**

*Prerequisites: Must be placed into GUST 0341 in reading, ENGL 0310 or 0349 in writing and MATH 0308 in math.*

*Credit: 3 (3 lecture)*

A study of the different types of consumer loans. Identify the federal regulations and state laws pertaining to collection and serving of a consumer loan and relate consumer credit to the lending process.

## **BNKG 1349 Commercial Lending**

*Prerequisites: Must be placed into GUST 0341 in reading, ENGL 0310 or 0349 in writing and MATH 0308 in math.*

*Credit: 3 (3 lecture)*

Overview of the commercial lending market and process with an emphasis on credit analysis, evaluation, federal regulation, and state laws related to business and industrial lending.

## **BNKG 1351 Selling Bank Products and Services**

*Prerequisites: Must be placed into GUST 0341 in reading, ENGL 0310 or 0349 in writing and MATH 0308 in math.*

*Credit: 3 (3 lecture)*

Characteristics and benefits of bank products and services. Emphasis on the personal selling process and quality customer service. Application of personal selling, cross-selling, and related product benefits to individual customer needs.

## **BNKG 1353 Mortgage Lending**

*Prerequisites: Must be placed into GUST 0341 in reading, ENGL 0310 or 0349 in writing and MATH 0308 in math.*

*Credit: 3 (3 lecture)*

Overview of the mortgage lending market and process with an emphasis on documentation, credit evaluation, federal regulation, and state laws related to mortgage loans.

## **BNKG 1356 Analyzing Financial Statements I**

*Prerequisites: ACCT 2301; Must be placed into GUST 0341 in reading, ENGL 0310 or 0349 in writing and MATH 0308 in math.*

*Credit: 3 (3 lecture)*

A study of the process of evaluating financial statements, cash flow, and ratio analysis of individuals and businesses with an emphasis on the relationship of comparative analysis and industry standards.

## **BNKG 1373 Teller Training Lab**

*Prerequisites: BNKG 1305; Must be placed into GUST 0341 in reading, ENGL 0310 or 0349 in writing and MATH 0308 in math.*

*Credit: 3 (2 lecture, 2 lab)*

An alternate continuation of BNKG 1305 Teller

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Training, this course affords the student practical, hands-on experience in paying and receiving teller operations. Students develop skills such as cash handling, cash drawer setup, maintenance, security and daily balancing, processing of basic paying and receiving customer transactions, quoting funds availability, implementing security precautions, operating ten-key terminal, and using automated teller machines via daily practice in a lab setting.

## **BNKG 1380 Cooperative Education-Banking and Financial Support Services**

*Prerequisites: Department Approval; Must be placed into GUST 0341 in reading, ENGL 0310 or 0349 in writing and MATH 0308 in math.*

*Credit: 3 (1 lecture, 20 lab)*

Career-related activities encountered in the student's area of specialization offered through an individualized agreement among the college, employer, and student. Under the supervision of the college and the employer, the student combines classroom learning with work experience. Includes a lecture component.

## **BNKG 2374 Financial Business Administration**

*Prerequisites: BNKG 1340; Must be placed into GUST 0341 in reading, ENGL 0310 or 0349 in writing and MATH 0308 in math.*

*Credit: 3 (3 lecture)*

Course emphasizes the managerial responsibility of coordinating the many facets of a financial institution. The course covers administration in a regulatory environment, portfolio mix, and the various changes that are happening in this fast paced industry. Special attention is placed on investment areas in which customers are allowed to participate, which banks must have a working knowledge of but are not allowed to invest in.

## **BNKG 2380 Cooperative Education-Banking and Financial Support Services**

*Prerequisites: Department Approval; Must be placed into GUST 0341 in reading, ENGL 0310 or 0349 in writing and MATH 0308 in math.*

*Credit: 3 (1 lecture, 20 lab)*

Career-related activities encountered in the student's area of specialization offered through an individualized agreement among the college, employer, and student. Under the supervision of the college and the employer, the student combines classroom learning with work experience. Includes a lecture component.

## **BNKG 2381 Cooperative Education-Banking and Financial Support Services**

*Prerequisites: Department Approval; Must be placed into GUST 0341 in reading, ENGL 0310 or 0349 in writing and MATH 0308 in math.*

*Credit: 3 (1 lecture, 20 lab)*

Career-related activities encountered in the student's area of specialization offered through an individualized agreement among the college, employer, and student. Under the supervision of the college and the employer, the student combines classroom learning with work experience. Includes a lecture component.

## **BUSG 1301 Introduction to Business**

*Prerequisites: Must be placed into GUST 0342 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (3 lecture)*

Fundamental business principles including structure, functions, resources, and operational processes.

## **BUSG 1303 Principles of Finance**

*Prerequisites: Must be placed into GUST 0342 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (3 lecture)*

Financial dynamics of a business. Includes monetary and credit theory, cash inventory, capital management, and consumer and government finance. Emphasizes the time value of money.

## **BUSG 1307 Entrepreneurship and Economic Development**

*Prerequisites:*

*Credit: 3 (3 lecture)*

Overview of entrepreneurship as an economic development strategy. Includes community support systems for entrepreneurs.

## **BUSG 1370 Personal Financial Planning**

*Prerequisites: Must be placed into GUST 0342 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (3 lecture)*

An exploration of financial planning that emphasizes topics of personal interest but also have application to business financial planning topics. Topics include budgeting, bank accounts and account reconciliation, individual retirement accounts, loans, investments, debt management, real estate, insurance, wills, trusts, and taxes.

## **BUSG 1371 Principles of Securities Operations**

*Prerequisites: Must be placed into GUST 0342 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (3 lecture)*

An overview of the fundamental functions and the role of regulation in the securities industry. Explanation of securities products and services to a variety of markets.

## **BUSG 1372 Communications for Securities Professionals**

*Prerequisites: Must be placed into GUST 0342 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (3 lecture)*

An overview of the fundamental functions and the role of regulation in the securities industry. Explanation of securities products and services to a variety of markets.

## **BUSG 1373 Entrepreneurship and Economic Development**

*Prerequisites: Must be placed into GUST 0342 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (3 lecture)*

Overview of entrepreneurship as an economic

development strategy. Includes community support systems for entrepreneurs.

## **BUSG 1374 Business Writing Essentials**

*Prerequisites: Must be placed into GUST 0342 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (3 lecture)*

An interactive study of critical business writing elements. The course goal is to help students develop business writing skills to incorporate in their work environments.

## **BUSG 1382 Cooperative Education-Entrepreneurship/Entrepreneurial Studies**

*Prerequisites: Department Approval; Must be placed into GUST 0342 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

Career-related activities encountered in the student's area of specialization offered through an individualized agreement among the college, employer, and student. Under the supervision of the college and the employer, the student combines classroom learning with work experience. Includes a lecture component.

## **BUSG 1391 Special Topics in Business, General**

*Prerequisites: Must be placed into GUST 0342 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (3 lecture)*

Topic addresses recently identified current events, skills, knowledge, and/or attitudes and behaviors pertinent to the technology or occupation and relevant to the professional development of the student.

## **BUSG 2305 Business Law/Contracts**

*Prerequisites: Must be placed into GUST 0342 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (3 lecture)*

Principles of law which form the legal framework for business activity including applicable statutes, contracts, and agency.

## **BUSG 2309 Small Business Management**

*Prerequisites: Must be placed into GUST 0342 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (3 lecture)*

A course on how to start and operate a small business. Topics include facts about a small business, essential management skills, how to prepare a business plan, financial needs, marketing strategies, and legal issues.

# Course Descriptions

## **BUSG 2317 Business Law/Commercial**

*Prerequisites: Must be placed into GUST 0342 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math*

*Credit: 3 (3 lecture)*

The relationship of law and business as they relate to commercial transactions.

## **BUSG 2370 Legal Issues for Enterprise**

*Prerequisites: Must be placed into GUST 0342 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math*

*Credit: 3 (3 lecture)*

Legal Aspects of Enterprise explores both the for-profit and not-for-profit legal requirements and provides applications activities to help the beginning business entrepreneur or social entrepreneur actually set up a new enterprise. Topics include: types of business structures, types of not-for-profit structures, legal forms and paperwork required to set up each type of structure, resources for assistance in setting up enterprises (such as legal clinics, lawyers who provide pro bono services for social enterprise); important considerations in retaining a lawyer, and legal pitfalls for the beginning entrepreneur to avoid.

## **BUSG 2380 Cooperative Education - Business/Commerce, General**

*Prerequisites: Department Approval; must be placed into college-level reading, college-level writing and MATH 0312.*

*Credit: 3 (1 lecture, 20 lab)*

Career-related activities encountered in the student's area of specialization offered through an individualized agreement among the college, employer, and student. Under the supervision of the college and the employer, the student combines classroom learning with work experience. Includes a lecture component.

## **BUSG 2381 Cooperative Education- Business/Commerce, General**

*Prerequisite: Prerequisite: Department Approval or BMGT 1301 and BMGT 1303, BUSG 1301; must be placed into college-level reading, college-level writing and MATH 0312 in math.*

*Credit: 3 (1 lecture, 20 lab)*

Career-related activities encountered in the student's area of specialization offered through an individualized agreement among the college, employer, and student. Under the supervision of the college and the employer, the student combines classroom learning with work experience. Includes a lecture component.

## **BUSG 2382 Cooperative Education- Business/Commerce, General**

*Prerequisites: Department Approval: Must be placed into GUST 0342 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (1 lecture, 20 lab)*

Career-related activities encountered in the student's area of specialization offered through

an individualized agreement among the college, employer, and student. Under the supervision of the college and the employer, the student combines classroom learning with work experience. Includes a lecture component.

## **BUSI 1301 Introduction to Business**

*Credit: 3 (3 lecture)*

Fundamental business principles including structure, functions, resources, and operational processes.

## **BUSI 2301 Business Law I**

*Credit: 3 (3 lecture)*

Principles of law which form the legal framework for business activity including applicable statutes, contracts, and agency.

## **CDEC 1313 Curriculum Resources for Early Childhood Programs**

*Prerequisites: Must be placed into GUST 0341 in reading, ENGL 0310 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (2 lecture, 3 lab)*

A study of the fundamentals of curriculum design and implementation in developmentally appropriate programs for children.

## **CDEC 1317 Child Development Associate Training I**

*Prerequisites: Must be placed into GUST 0341 in reading, ENGL 0310 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (2 lecture, 2 lab)*

Based on the requirements for the Child Development Associate National Credential (CDA). Topics on CDA overview, general observational skills, and child growth and development overview. The four functional areas of study are creative, cognition, physical and communication.

## **CDEC 1319 Child Guidance**

*Prerequisites: Must be placed into GUST 0341 in reading, ENGL 0310 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (2 lecture, 2 lab)*

An exploration of guidance strategies for promoting prosocial behaviors with individual and groups of children. Emphasis on positive guidance principles and techniques, family involvement, and cultural influences. Practical application through direct participation with children.

## **CDEC 1321 The Infant and Toddler**

*Prerequisites: Must be placed into GUST 0341 in reading, ENGL 0310 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (2 lecture, 3 lab)*

A study of appropriate infant and toddler (birth to 3), including an overview of development, quality care giving routines, appropriate environments, materials and activities, and teaching/guidance techniques.

## **CDEC 1323 Observation and Assessment**

*Prerequisites: Must be placed into GUST 0341 in reading, ENGL 0310 or 0347 in writing and MATH*

*0306 in math.*

*Credit: 3 (3 lecture)*

A study of observation skills, assessment techniques, and documentation of children's development.

## **CDEC 1339 Early Childhood Development 0-3 Years**

*Prerequisites: Must be placed into GUST 0341 in reading, ENGL 0310 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (2 lecture, 3 lab)*

Principles of normal growth and development from conception through three years of age. Emphasizes physical, intellectual, and social/emotional development.

## **CDEC 1356 Emergent Literacy for Early Childhood**

*Prerequisite/Corequisite: CDEC 1313; Must be placed into GUST 0341 in reading, ENGL 0310 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (2 lecture, 3 lab)*

An exploration of principles, methods, and materials for teaching young children language and literacy through a play-based, integrated curriculum.

## **CDEC 1358 Creative Arts for Early Childhood**

*Prerequisite/Corequisite: CDEC 1313; Must be placed into GUST 0341 in reading, ENGL 0310 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (2 lecture, 3 lab)*

An exploration of principles, methods, and materials for teaching young children music, movement, visual arts and dramatic play through process-oriented experiences to support divergent thinking.

## **CDEC 1359 Children with Special Needs**

*Prerequisites: Must be placed into GUST 0341 in reading, ENGL 0310 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (2 lecture, 2 lab)*

A survey of information regarding children with special needs including possible causes and characteristics of exceptionality, educational intervention, available resources, referral processes, the advocacy role and legislative issues.

## **CDEC 1391 Special Topics in Family Life and Relations Studies: Infants and Toddlers and Their Families**

*Prerequisites: Must be placed into GUST 0341 in reading, ENGL 0310 or 0347 in writing and MATH*

# Course Descriptions

0306 in math.

Credit: 3 (3 lecture)

A study of infants and toddlers and their families. Includes appropriate assessment strategies and communication techniques to be used with families.

## **CDEC 1393 Special Topics in Early Childhood Education and Teaching: Parenting**

*Prerequisite: CDEC 1356, 1358 or 2307; Must be placed into GUST 0341 in reading, ENGL 0310 or 0347 in writing and MATH 0306 in math.*

Credit: 3 (3 lecture)

A study of the contemporary parenting issues facing both parents and professionals who work with them.

## **CDEC 2186 Internship - Child Care Provider/Assistant**

*Prerequisite: Department Approval; must be placed into college-level reading, college-level writing and MATH 0308 in math.*

Credit: 1 (6 lab)

A work-based learning experience that enables the student to apply specialized occupational theory, skills and concepts. A learning plan is developed by the college and the employer. (Lab hours must be completed in a NAEYC accredited center).

## **CDEC 2280 Cooperative Education - Early Childhood Provider/Assistant**

*Prerequisite: Department Approval; must be placed into college-level reading, college-level writing and MATH 0308 in math.*

Credit: 2 (1 lecture, 10 lab)

Career-related activities encountered in the student's area of specialization offered through an individualized agreement among the college, employer, and student. Under the supervision of the college and the employer, the student combines classroom learning with work experience. Includes a lecture component. (Lab hours must be completed in a NAEYC accredited center).

## **CDEC 2307 Math and Science for Early Childhood**

*Prerequisite/Corequisite: CDEC 1313; must be placed into GUST 0341 in reading, ENGL 0310 or 0347 in writing and MATH 0306 in math.*

Credit: 3 (2 lecture, 3 lab)

An exploration of principles, methods, and materials for teaching children math and science concepts and process skills through discovery and play.

## **CDEC 2315 Diverse Cultural/Multilingual Education**

*Prerequisites:*

Credit: 3 (3 lecture)

An overview of multicultural topics and education. Includes relationships with the family and community awareness and sensitivity to diversity, and individual needs of children.

## **CDEC 2322 Child Development Associate**

## **Training II**

*Prerequisites: Must be placed into GUST 0341 in reading, ENGL 0310 or 0347 in writing and MATH 0306 in math.*

Credit: 3 (2 lecture, 2 lab)

A continuation of the study of the requirements for the Child Development Associate National Credential (CDA). The six functional areas of study include safe, healthy, learning environment, self, social, and guidance.

## **CDEC 2324 Child Development Associate Training III**

*Prerequisites: Must be placed into GUST 0341 in reading, ENGL 0310 or 0347 in writing and MATH 0306 in math.*

Credit: 3 (2 lecture, 2 lab)

A continuation of the requirements for the Child Development Associate National Credential (CDA). Three of the 13 functional areas of study include family, program management, and professionalism.

## **CDEC 2326 Administration of Programs for Children I**

*Prerequisites: CDEC 1356, 1358 or 2307; must be placed into GUST 0342 in reading, ENGL 0310 or 0347 in writing and MATH 0308 in math.*

Credit: 3 (3 lecture)

Application of management procedures for early child care education programs. Includes planning, operating, supervising, and evaluating programs. Topics cover philosophy, types of programs, policies, fiscal management, regulations, staffing, evaluation, and communication.

## **CDEC 2328 Administration of Programs for Children II**

*Prerequisites: CDEC 2326; must be placed into GUST 0342 in reading, ENGL 0310 or 0347 in writing and MATH 0308 in math.*

Credit: 3 (3 lecture)

An in-depth study of the skills and techniques in managing early care and education programs, including legal and ethical issues, personal management, team building, leadership, conflict resolution, stress management advocacy, professionalism, fiscal analysis and planning parent education/partnerships, and technical applications in programs.

## **CDEC 2341 The School Age Child**

*Prerequisites: Must be placed into GUST 0342 in reading, ENGL 0310 or 0347 in writing and MATH 0306 in math.*

Credit: 3 (2 lecture, 3 lab)

A study of appropriate programs for the school age child (5 to 13 years), including an overview of development, appropriate environments, materials, and activities and teaching/guidance techniques.

## **CDEC 2380 Cooperative Education - Early Childhood Provider/Assistant**

*Prerequisites: Department Approval; must be placed into college-level reading, college-level*

*writing and MATH 0308 in math.*

Credit: 3 (1 lecture, 15 lab)

Career-related activities encountered in the student's area of specialization offered through an individualized agreement among the college, employer, and student. Under the supervision of the college and the employer, the student combines classroom learning with work experience. Includes a lecture component. (Lab hours must be completed in a NAEYC accredited center).

## **CETT 1321 Electronic Fabrication**

*Prerequisites: Must be placed into GUST 0342 in reading, ENGL 0310 or 0349 in writing and MATH 0308 in math or Department Approval.*

Credit: 3 (2 Lecture, 4 Lab)

Formerly CPMT 1407

A study of electronic circuit fabrication techniques including printed circuit boards, wire wrapping, bread boarding, and various soldering techniques.

## **CETT 1402 Electricity Principles**

*Prerequisites:*

Credit: 4 (2 lecture, 2 lab)

Principles of electricity including proper use of test equipment, A/C and D/C circuits, and component theory and operations.

## **CETT 1403 DC Circuits**

*Prerequisite/Corequisite: MATH 1316 or Departmental Approval. Must be placed into college-level reading, writing and math.*

Credit: 4 (3 lecture, 3 lab)

A study of the fundamentals of direct current including Ohm's law, Kirchoff's laws and circuit analysis techniques.

## **CETT 1405 AC Circuits**

*Prerequisites: CETT 1403*

*Prerequisite/Corequisite: MATH 1316 or Departmental Approval. Must be placed into college-level reading, writing and math.*

Credit: 4 (3 lecture, 3 lab)

A study of the fundamentals of alternating current including series and parallel AC circuits, phasors, capacitive and inductive networks, transformers, and resonance; introduction to filters.

## **CETT 1409 DC-AC Circuits**

*Prerequisites: Must be placed into GUST 0342 in reading, ENGL 0310 or 0349 in writing and MATH 0308. Departmental Approval*

Credit: 4 (2 lecture, 4 lab)

Fundamentals of DC circuits and AC circuits operation including Ohm's law, Kirchoff's laws, networks, transformers, resonance, phasors, capacitive and inductive and circuit analysis techniques.

# Course Descriptions

## **CETT 1415 Digital Applications**

*Prerequisites: Must be placed into GUST 0342 in reading, ENGL 0310 or 0349 in writing and MATH 0308. Departmental Approval.*

*Credit: 4 (2 lecture, 4 lab)*

An investigation of combinational and sequential logic elements and circuits with emphasis on design and troubleshooting of combinational and sequential circuits.

## **CETT 1425 Digital Fundamentals**

*Prerequisites: Must be placed into college-level reading, writing and math.*

*Prerequisite/Corequisite: CETT 1403 or Departmental Approval*

*Credit: 4 (3 lecture, 3 lab)*

An entry level course in digital electronics to include numbering systems, logic gates, Boolean algebra, and combinational logic.

## **CETT 1429 Solid State Devices**

*Prerequisite/Corequisite: CETT 1405; must be placed into college-level reading, writing and math or Departmental Approval.*

*Credit: 4 (3 lecture, 3 lab)*

A study of diodes and bipolar semiconductor devices, including analysis of static and dynamic characteristics, biasing-techniques, and thermal considerations of solid state devices.

## **CETT 1431 Programming for Discrete Electronic Devices**

*Prerequisites: Department Approval; must be placed into GUST 0342 in reading, ENGL 0310 or 0349 in writing and MATH 0312 in math.*

*Credit: 4 (3 lecture, 3 lab)*

Introduction to a high level programming language .Includes structured programming and problem solving applicable to discrete electronic devices.

## **CETT 1445 Microprocessor**

*Prerequisites: CETT 1425 or Department Approval; must be placed into college-level reading, writing and math.*

*Credit: 4 (3 lecture, 3 lab)*

An introductory course in microprocessor software and hardware, its architecture, timing sequence, operation, and programming, and discussion of appropriate software diagnostic language and tools.

## **CETT 1357 Linear Integrated Circuits**

*Prerequisites: CETT 1429 or Department Approval; must be placed into college-level reading, writing and math.*

*Credit: 3 (2 lecture, 4 lab)*

A study of the characteristics, operations, stabilization, testing, and feedback techniques of linear integrated circuits. Applications include computation, measurements, instrumentation, and active filtering.

## **CETT 2435 Advanced Microprocessor**

*Prerequisites: CETT 1445, CETT 1457 or Department Approval; must be placed into college-level reading, writing and math.*

*Credit: 4 (3 lecture, 3 lab)*

An advanced course utilizing the microprocessor in control systems and interfacing. Emphasis on microprocessor hardware and implementation of peripheral interfacing.

## **CHEF 1301 Basic Food Preparation**

*Prerequisites: Must be placed into GUST 0339 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Corequisites: CHEF 2201 and 2231*

*Credit: 3 (2 lecture, 4 lab)*

A study of the fundamental principles of food preparation and cookery to include Brigade System, cooking techniques, materials handling, heat transfer, sanitation, safety, nutrition, and professionalism.

## **CHEF 1302 Principles of Healthy Cuisine**

*Prerequisites: CHEF 1301, 1305, 2201 and 2231; must be placed into GUST 0339 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math..*

*Credit: 3 (2 lecture, 4 lab)*

Introduction to the principles of planning, preparation, and presentation of nutritionally balanced meals. Adaptation of basic cooking techniques to lower the fat and caloric content. Alternative methods and ingredients will be used to achieve a healthier cooking style.

## **CHEF 1205 Sanitation and Safety**

*Prerequisites: Must be placed into GUST 0339 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 2 (2 lecture)*

A study of personal cleanliness; sanitary practices in food preparation; causes, investigation, control of illness caused by food contamination (Hazard Analysis Critical Control Points); and work place safety standards.

## **CHEF 1310 Garde Manger**

*Prerequisites: CHEF 1301, 1305, 2201 and 2231; must be placed into GUST 0339 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (2 lecture, 4 lab)*

A study of specialty foods and garnishes. Emphasis on design, techniques, and display of fine foods.

## **CHEF 1313 Food Service Operation Systems I**

*Prerequisites: Must be placed into GUST 0339 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (3 lecture)*

An overview of the information needs of food and lodging properties. Emphasis on both front, back, and material management utilizing computer systems.

## **CHEF 1314 A la Carte Cooking**

*Prerequisites: CHEF 1301, 1305, 2201 and 2231; must be placed into GUST 0339 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (2 lecture, 4 lab)*

A course in a la carte or "cooking to order" concepts. Topics include menu and recipe interpretation and conversion, organization of work station, employment of appropriate cooking methods, plating, and saucing principles.

## **CHEF 1341 American Regional Cuisine**

*Prerequisites: CHEF 1301, 1305, 2201 and 2231; must be placed into GUST 0339 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (2 lecture, 4 lab)*

A study of the development of regional cuisines in the United States with emphasis on the similarities in production and service systems. Application of skills to develop, organize, and build a portfolio of recipe strategies and production systems.

## **CHEF 1345 International Cuisine**

*Prerequisites: CHEF 1301, 1305, 2201 and 2231; must be placed into GUST 0339 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (2 lecture, 4 lab)*

The study of classical cooking skills associated with the preparation and service of international and ethnic cuisines. Topics include similarities between food production systems used in the United States and other regions of the world.

## **CHEF 1381 Cooperative Education - Culinary Arts/Chef Training**

*Prerequisites: CHEF 1301, 1305, 2201 and 2231, Department Approval; must be placed into GUST 0339 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (1 lecture, 20 lab)*

Career-related activities encountered in the student's area of specialization offered through an individualized agreement among the college, employer, and student. Under the supervision of the college and the employer, the student combines classroom learning with work experience. Includes a lecture component.

## **CHEF 1391 Special Topics in Culinary Arts/ Chef Training**

*Prerequisites: CHEF 1301, 1305, 2201 and 2231, Department Approval; must be placed into GUST 0339 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (2 lecture, 4 lab)*

Topics address recently identified current events, skills, knowledge's, and/or attitudes and behaviors pertinent to the technology or occupation and relevant to the professional development of the student. This course was designed to be repeated multiple times to improve student proficiency.

## **CHEF 2171 Culinary Capstone Projects Laboratory**

*Prerequisites: CHEF 1301, 1305, 2201 and 2231, Department Approval; must be placed into GUST 0339 in reading, ENGL 0300 or 0347 in writing and*

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MATH 0306 in math.

Credit: 1 (1 lecture, 5 lab)

Open laboratory for reinforcement of specific culinary skills and selected culinary projects based on an individualized learning plan.

## **CHEF 2201 Intermediate Food Preparation**

Prerequisites: CHEF 1301 and 2231; Must be placed into GUST 0339 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.

Corequisites: CHEF 1301 and 2231

Credit: 2 (1 lecture, 4 lab)

Continuation of previous food preparation course. Topics include the concept of precooked food items, as well as scratch preparation. Covers full range of food preparation techniques.

## **CHEF 2231 Advanced Food Preparation**

Prerequisites: Must be placed into GUST 0339 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.

Corequisites: CHEF 1301 and 2201

Credit: 2 (1 lecture, 4 lab)

Topics include the concept of pre-cooked food items and the preparation of canapes, hors d'oeuvres, and breakfast items.

## **CHEF 2265 Practicum (or Field Experience) - Culinary Arts/Chef Training (Formerly CHEF 1364)**

Prerequisites: CHEF 1301, 1305, 2201 and 2231, Department Approval; must be placed into GUST 0339 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.

Credit: 2 (18 Lab)

Practical, general workplace training supported by an individualized learning plan developed by the employer, college, and student.

## **CHEF 2302 Saucier**

Prerequisites: CHEF 1301, 2201 and 2231; must be placed into GUST 0339 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.

Credit: 3 (2 lecture, 4 lab)

Instruction in the preparation of stocks, soups, classical sauces, contemporary sauces, accompaniments, and the pairing of sauces with a variety of foods.

## **CHEM 1305 Introductory Chemistry I**

Prerequisites: Must be placed into GUST 0342 (or higher) in reading and ENGL 0310/0349 (or higher) in writing.

Credit: 3 (3 lecture)

General introduction to fundamental principles of chemistry includes atomic structure, chemical formulas, molecules, reactions, and elementary thermodynamics. This course is intended to be preparatory to CHEM 1411 for science majors

who have no prior knowledge of chemistry. This course satisfies the Life and Physical Sciences or Component Area Option of the HCC core.

## **CHEM 1307 Introductory Chemistry II**

Prerequisite: Prerequisite: CHEM 1305, Must be placed into GUST 0342 (or higher) in reading and ENGL 0310/0349 (or higher) in writing.

Credit: 3 (3 lecture)

Continuation of CHEM 1305. The organic chemistry of aliphatic and aromatic hydrocarbons, oxygen and nitrogen-containing organic compounds, and biochemistry is introduced.

## **CHEM 1405 Introductory Chemistry I**

Prerequisites: Must be placed into GUST 0342 (or higher) in reading and ENGL 0310/0349 (or higher) in writing.

Credit: 4 (3 lecture, 3 lab)

A general introduction to the properties of matter. Topics include atomic structure, energy, chemical bonding, reactions, gas laws and elementary thermodynamics. This is a preparatory course to CHEM 1411 for science majors who have no prior knowledge of chemistry. This course satisfies the Life and Physical Sciences or Component Area Option of the HCC core.

## **CHEM 1407 Introductory Chemistry II**

Prerequisite: CHEM 1405; must be placed into GUST 0342 (or higher) in reading and ENGL 0310/0349 (or higher) in writing.

Credit: 4 (3 lecture, 3 lab)

Continuation of CHEM 1405. The chemistry of carbon compounds. Topics include aliphatic and aromatic hydrocarbons, alcohols, ethers, aldehydes, ketones, carboxylic acids, acid derivatives, amines and biochemistry is introduced.

## **CHEM 1411 General Chemistry I**

Prerequisites: One year of high school Chemistry; must be placed into college-level reading (or take GUST 0342 as a co-requisite) and be placed into MATH 0312 (or higher) and be placed into college-level writing (or take ENGL 0310/0349 as a co-requisite).

Credit: 4 (3 lecture, 3 lab)

Science and engineering majors study atomic structure, chemical reactions, thermodynamics, electronic configuration, chemical bonding, molecular structure, gases, states of matter, and properties of solutions. This course satisfies the Life and Physical Sciences or Component Area Option of the HCC core.

## **CHEM 1412 General Chemistry II**

Prerequisites: CHEM 1411; must be placed into college-level reading (or take GUST 0342 as a co-requisite) and be placed into MATH 0312 (or higher) and be placed into college-level writing (or take ENGL 0310/0349 as a co-requisite).

Credit: 4 (3 lecture, 3 lab)

Continuation of CHEM 1411. Topics include solutions, chemical kinetics, equilibrium and equilibrium phenomena in aqueous solution, acids and bases, pH, thermodynamics, electrochemistry, nuclear chemistry, organic chemistry, and biochemistry. This course satisfies the Life and Physical Sciences or Component Area Option of the HCC core.

## **CHEM 1413 College Chemistry I**

Prerequisites: Must be placed into college-level reading (or take GUST 0342 as a co-requisite) and be placed into MATH 0312 (or higher) and be placed into college-level writing (or take ENGL 0310/0349 as a co-requisite).

Credit: 4 (3 lecture, 3 lab)

Nursing and allied health science majors study atomic structure, electron configuration, periodic law, radioactivity and its effects on living organisms, chemical bonding, molecules, gases, solutions, solution concentration, acids and bases, and buffers.

## **CHEM 1414 College Chemistry II**

Prerequisites: CHEM 1413, Must be placed into college-level reading (or take GUST 0342 as a co-requisite) and be placed into MATH 0312 (or higher) and be placed into college-level writing (or take ENGL 0310/0349 as a co-requisite).

Credit: 4 (3 lecture, 3 lab)

Continuation of CHEM 1413. Topics include the organic chemistry of hydrocarbons, alcohols, ethers, aldehydes, ketones, carboxylic acids, esters, amines, and amides; biochemistry topics include amino acids and proteins, enzymes, carbohydrates, and lipids.

## **CHEM 2423 Organic Chemistry I**

Prerequisites: CHEM 1412; must be placed into college-level reading and be placed into MATH 1314 (or higher) and be placed into college-level writing.

Credit: 4 (3 lecture, 3 lab)

Study of compounds of carbon. Topics include alkanes, alkenes, alkynes, alcohols, alkyl halides, stereochemistry, nucleophilic substitution, reaction mechanisms and synthesis. Core Curriculum Course. Study of the properties and behavior of hydrocarbon compounds and their derivatives. Designed for students in science or pre-professional programs.

## **CHEM 2425 Organic Chemistry II**

Prerequisites: CHEM 2423; must be placed into college-level reading and be placed into MATH 1314 (or higher) and be placed into college-level writing.

Credit: 4 (3 lecture, 3 lab)

Continuation of CHEM 2423. Topics include aromaticity, benzene and EAS reactions, aldehydes, ketones, carboxylic acids and their derivatives, condensation reactions, amines, phenols, and infrared and NMR spectroscopy.

## **CHIN 1411 Beginning Chinese I**

Prerequisites: Must be placed into college - level reading (or take GUST 0342 as a co-requisite) and be placed into college level writing (or take ENGL 0310/0349 as a co-requisite)

Credit: 4 (3 lecture, 2 lab)

Introduction to Chinese language and culture. Development of basic skills in listening comprehension, speaking, reading, writing, and

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cultural awareness. Course includes vocabulary building, conversation and grammar. Transfers as foreign language credit. Core Curriculum Course.

## **CHIN 1412 Beginning Chinese II**

*Prerequisites: Chinese 1411 or satisfactory score on advanced placement examination or at least 2 years of high school Chinese within the last two years. Must be placed into college - level reading (or take GUST 0342 as a co-requisite) and be placed into college level writing (or take ENGL 0310/0349 as a co-requisite)*

*Credit: 4 (3 lecture, 2 lab)*

Continuation of Chinese 1411. Further development of listening comprehension, speaking, reading, and writing skills, and cultural awareness. More advanced grammar. Transfers as foreign language credit. Core Curriculum Course.

## **CHLT 1266 Practicum (or Field Experience) - Community Health Services/Liaison/Counseling**

*Prerequisites: Must be placed into GUST 0342 in reading, ENGL 0310 or 0349 in writing and MATH 038 in math.*

*Credit: 2 (14 external hours)*

Practical, general workplace training supported by an individualized learning plan developed by the employer, college, and student.

## **CHLT 1291 Special Topics in Community Health Liaison**

*Prerequisites: Must be placed into GUST 0342 in reading, ENGL 0310 or 0349 in writing and MATH 038 in math.*

*Credit: 2 (2 lecture)*

Topics address recently identified current events, skills, knowledge, and/or attitudes and behaviors pertinent to the technology or occupation and relevant to the professional development of the student. This course was designed to be repeated multiple times to improve student proficiency.

## **CHLT 1302 Wellness and Health Promotion**

*Prerequisites: Must be placed into GUST 0342 in reading, ENGL 0310 or 0349 in writing and MATH 038 in math.*

*Credit: 3 (3 lecture)*

Overview of wellness theory and its application throughout the life span. Focus is on attitude development, impact of cultural beliefs, and communication of wellness. Includes health behavior theories and approaches to behavior modification.

## **CHLT 1342 Community Health Field Methods**

*Prerequisites: Must be placed into GUST 0342 in reading, ENGL 0310 or 0349 in writing and MATH 038 in math.*

*Credit: 3 (3 lecture)*

Preparation for field work with individuals, families, and groups emphasizing teaching and capacity-building skills. Topics include outreach methods, area canvassing, home visiting, group work, community events, and community organizing.

## **CHLT 1401 Introduction to Community Health**

*Prerequisites: Must be placed into GUST 0342 in reading, ENGL 0310 or 0349 in writing and MATH 038 in math.*

*Credit: 4 (4 lecture)*

Designed to provide a basic understanding of variables that affect health sectors in the community.

## **CJCR 1304 LE-Probation and Parole**

*Prerequisites: Must be placed into college-level reading, college-level writing and MATH 0306 in math.*

*Credit: 3 (3 lecture)*

A survey of the structure, organization, and operation of probation and parole services. Emphasis on applicable state statutes and administrative guidelines.

## **CJCR 2325 Legal Aspects of Corrections**

*Prerequisites: Must be placed into college-level reading, college-level writing and MATH 0306 in math.*

*Credit: 3 (3 lecture)*

A study of the operation, management, and legal issues affecting corrections. Analysis of constitutional issues involving rights of the convicted, as well as civil liability of correctional agencies and staff.

## **CJLE 1506 Basic Peace Officer I**

*Prerequisites: Must be placed into college-level reading, college-level writing and MATH 0306 in math.*

*Credit: 5 (3 lecture, 8 lab)*

Introduction to fitness and wellness, history of policing, professionalism and ethics, United States Constitution and Bill of Rights, criminal justice system, Texas Penal Code, Texas Code of Criminal Procedure, civil process, and stress management. This course taken in conjunction with Basic Peace Officer II, III, and IV will satisfy the TCLEOSE-approved Basic Peace Officer Training Academy.

## **CJLE 1512 Basic Peace Officer II**

*Prerequisites: Must be placed into college-level reading, college-level writing and MATH 0306 in math.*

*Credit: 5 (3 lecture, 8 lab)*

Basic preparation for a new peace officer. Covers field note taking, report writing, 'use of force' law and concepts, problem solving, multiculturalism, professional policing approaches, patrol procedures, victims of crime, family violence, MHMR, crowd management, HAZMAT, and criminal investigation. This course taken in conjunction with Basic Peace Officer I, III, and IV will satisfy the TCLEOSE-approved Basic Peace Officer Academy.

## **CJLE 1518 Basic Peace Officer III**

*Prerequisites: Department Approval; must be placed into college-level reading, college-level writing and MATH 0306 in math.*

*Credit: 5 (3 lecture, 8 lab)*

Basic preparation for a new peace officer. Covers laws pertaining to controlled substances, crowd management, personal property, and crime scene investigation. This course taken in conjunction

with Basic Peace Officer I, II, and IV will satisfy the TCLEOSE-approved Basic Peace Officer Academy.

## **CJLE 1524 Basic Peace Officer IV**

*Prerequisites: Must be placed into college-level reading, college-level writing and MATH 0306 in math.*

*Credit: 5 (3 lecture, 8 lab)*

Basic preparation for a new peace officer. Should be taken in conjunction with Basic Peace Officer I, II, and III to satisfy the Texas Commission on Law Enforcement (TCLEOSE) approved Basic Peace Officer Training Academy. \*\*\*THIS COURSE MAY BE OFFERED ONLY BY INSTITUTIONS LICENSED AS A POLICE ACADEMY BY TCLEOSE\*\*\*

## **CJLE 2384 Cooperative Education-Criminal Justice/Police Science**

*Prerequisites: CRIJ 2328, Department Approval; must be placed into college-level reading, college-level writing and MATH 0306 in math.*

*Credit: 3 (1 lecture, 20 lab)*

Career-related activities encountered in the student's area of specialization offered through an individualized agreement among the college, employer, and student. Under the supervision of the college and the employer, the student combines classroom learning with work experience. Includes a lecture component.

## **CJLE 2420 Texas Peace Officer Procedures**

*Prerequisites: Must be placed into college-level reading, college-level writing and MATH 0306 in math.*

*Credit: 4 (3 lecture, 4 lab)*

Study of the techniques and procedures used by police officers on patrol. Includes controlled substance identification, handling abnormal persons, traffic collision investigation, note taking and report writing, vehicle operation, traffic direction, crowd control, and jail operations. The student will demonstrate relevant law enforcement techniques and procedures required of Texas peace officers as mandated by the Texas Commission on Law Enforcement Officer Standards and education; identify and explain required forms and documents; and explain the applicable procedures to various situations as they relate to the enforcement of law.

## **CJLE 2421 Texas Peace Officer Law**

*Prerequisites: Must be placed into college-level reading, college-level writing and MATH 0306 in math.*

*Credit: 4 (3 lecture, 4 lab)*

Study of laws directly related to police field work. Topics include Texas Transportation Code, intoxicated driver, Texas Penal Code, elements of crimes, Texas Family Code, Texas Alcoholic Beverage Code, and civil liability. The student will identify relevant sections of Texas law as mandated for this course by the Texas Commission on Law Enforcement Officer Standards and Education, discuss the Texas Penal Code, identify violations of the Texas Family Code and the Texas Alcoholic Beverage Code, define and illustrate civil liability, and discuss the transportation code, intoxicated drivers and elements of crimes.

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## **CJLE 2522 Texas Peace Officer Skills**

*Prerequisites: Must be placed into college-level reading, college-level writing and MATH 0306 in math.*

*Credit: 5 (3 lecture, 4 lab)*

Requires the demonstration and practice of the skills of a police officer including patrol, driving, traffic stop skills, use of force, mechanics of arrest, firearm safety, and emergency medical care. The student will evaluate and explain an appropriate response for a situational scenario, demonstrate the proper and effective application of physical skill while using police equipment, and demonstrate other skills expected of Texas peace officer as mandated for this course by the Texas Commission on Law Enforcement Officer Standards and Education.

## **CJSA 1393 Special Topics In Criminal Justice Studies**

*Prerequisites: Department Approval; must be placed into college-level reading, college-level writing and MATH 0306 in math.*

*Credit: 3 (3 lecture)*

Topics address recently identified current events, skills, knowledge, and/or attitudes and behaviors pertinent to the technology or occupation and relevant to the professional development of the student. This course was designed to be repeated multiple times to improve student proficiency.

## **CJSA 2364 Practicum-Criminal Justice Studies**

*Prerequisite/Corequisite: Prerequisite/ Corequisite: CRIJ 2301, Department Approval; must be placed into college-level reading, college-level writing and MATH 0306 in math.*

*Credit: 3 (21 lab)*

Practical, general workplace training supported by an individualized learning plan developed by the employer, college, and student. The college with the employer develops and documents an individualized plan for the student. The plan relates the workplace training and experiences to the student's general and technical course of study. The guided external experiences may be paid or unpaid. This course may be repeated if topics and learning outcomes vary. As outlined in the learning plan, the student will master the theory, concepts, and skills involving the tools, materials, equipment, procedures, regulations, laws, and interactions within and among political, economic, environmental, and legal systems associated with the workplace; demonstrate ethical behavior, safety practices, interpersonal and teamwork skills, appropriate verbal and written communications in the workplace.

## **CMSW 1266, 1267, 2266, 2267 Practicum (or Field Experience) - Clinical and Medical Social Work**

*Prerequisites: Must be placed into college-level reading, college-level writing and MATH 0308 in math.*

*Credit: 2 (14 lab)*

Practical, general workplace training supported by an individualized learning plan developed by the employer, college, and student.

## **CMSW 1313 Assessment and Service Delivery**

*Prerequisites: Must be placed into college-level reading, college-level writing and MATH 0308 in math.*

*Credit: 3 (3 lecture)*

A study of interviewing and assessment instruments and approaches for working with multicultural population. Emphasis on service delivery systems. Topics include awareness of commonly used assessments, ethical standards of practice, awareness of multicultural issues and competence in service delivery.

## **CMSW 1353 Family Intervention Strategies**

*Prerequisites: Must be placed into GUST 0342 in reading, ENGL 0310 or 0349 in writing and MATH 0308 in math.*

*Credit: 3 (3 lecture)*

Study of current family intervention strategies.

## **CMSW 2303 Community Organization**

*Prerequisites: Must be placed into college-level reading, college-level writing and MATH 0308 in math.*

*Credit: 3 (3 lecture)*

Addresses community problem-solving and development procedures, including issue development and planning, and the tactics involved in community change.

## **CNBT 1300 Residential and Light Commercial Blueprint Reading**

*Prerequisites: Must be placed into GUST 0339 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (2 lecture, 2 lab)*

Introductory blueprint reading for residential and light commercial construction.

## **CNBT 1301 Introduction to the Construction Industry**

*Prerequisites: Must be placed into GUST 0339 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (3 lecture)*

Identify types of construction and organizational structures; explain purposes for various construction documents; describe the responsibilities of the construction office and field operations; identify environmental health and safety agency requirements; identify the various construction crafts and trades; and describe green and sustainable building practices and standards.

## **CNBT 1302 Mechanical, Plumbing, and Electrical Systems in Construction**

*Prerequisite: Prerequisite: CNBT 1201 or ELPT 1221 and TECM 1301; must be placed into GUST 0339 in reading, ENGL 0300 or 0347 in writing and*

*MATH 0306 in math.*

*Credit: 3 (3 lecture)*

A presentation of the basic mechanical, plumbing, and electrical components in construction and their relationship.

## **CNBT 1311 Construction Methods and Materials I**

*Prerequisite/Corequisite: CNBT 1201, TECM 1301; must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (3 lecture)*

Introduction to construction materials and methods and their applications.

## **CNBT 1316 Construction Technology I**

*Prerequisite/Corequisite: CNBT 1311*

*Prerequisite: TECM 1301; Must be placed into GUST 0339 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (3 lecture)*

Introduction to site preparation, foundations, form work, safety, tools, and equipment.

## **CNBT 1318 Construction Tools and Techniques**

*Prerequisites/Corequisites: CNBT 1201, TECM 1301; Must be placed into GUST 0339 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (2 lecture, 2 lab)*

Comprehensive study of the selection and use of hand tools, portable and stationary power tools and related construction equipment. Emphasis on safety in the use of tools and equipment.

## **CNBT 1342 Building Codes and Inspections**

*Prerequisites: TECM 1301, CNBT 1300; must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0308 in math.*

*Credit: 3 (3 lecture)*

Building codes and standards applicable to building construction and inspection processes.

## **CNBT 1346 Construction Estimating I**

*Prerequisites: TECM 1301, CNBT 1300; must be placed into GUST 0339 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Prerequisites/Corequisite: CNBT 1311*

*Credit: 3 (2 lecture, 2 lab)*

Fundamentals of estimating materials and labor costs in construction.

## **CNBT 1391 Special Topics in Construction/Building Technology/ Technician**

*Prerequisites: Must be placed into GUST 0339 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (3 lecture)*

An introduction to the process of career decision-making and the foundation skills required for a variety of trades in construction and manufacturing technologies including Air Conditioning and Refrigeration, Building Maintenance, Carpentry, Construction, Industrial Electricity, Machining and Manufacturing, and

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Welding. Topics include educational planning and vocational requirements including analyzing personal career interests<sup>1</sup>, values, and aptitudes; surveying and researching career fields with related educational and training requisites; appraising career opportunities, prevailing wages, employment outlook, advantages, challenges and limitations.

## **CNBT 2335 Computer Aided Construction Scheduling**

*Prerequisites/Corequisites: ITSC 1309 CNBT 1346; must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0308 in math.*

*Credit: 3 (2 lecture, 2 lab)*

Advanced construction scheduling utilizing computer scheduling software to perform various scheduling procedures.

## **CNBT 2337 Construction Estimating II**

*Prerequisites/Corequisites: ITSC 1309 CNBT 1346; must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0308 in math.*

*Credit: 3 (2 lecture, 2 lab)*

Advanced estimating concepts using computer software programs for construction and crafts.

## **CNBT 2342 Construction Management I**

*Prerequisites: CNBT 1302, TECM 1301, CNBT 1300, CNBT 1311; must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0308 in math.*

*Credit: 3 (3 lecture)*

Management skills on the job site. Topics include written and oral communications, leadership and motivation, problem solving, and decision making.

## **COMM 1307 Introduction to Mass Communication**

*Prerequisites: Must be placed into college-level reading (or take GUST 0342 as a co-requisite) and be placed into college-level writing (or take ENGL 0310/0349 as a co-requisite).*

*Credit: 3 (3 lecture)*

Analyzes communication theory and mass media in 21st century society. Surveys history, operation, and structure of the American communication system. Identifies major legal, ethical, and sociocultural issues, studies basic communication theory, and the interrelations between media and the individual, media and society, and media and the future. Examines career potential and job prospects in today's and tomorrow's electronic culture.

## **COMM 1335 Survey of Radio/TV**

*Credit: 3 (3 lecture)*

A survey and analysis of history and principles of radio and television broadcasting and production, including programming for varied audience segments and sponsorship. Studies history, technology, regulation, audience, and economics of radio, television, and related electronic media. Studies basic skills and theories of image and sound, equips student to communicate through audio/visual media. Includes public cable, closed-

circuit television, production workshops, and individualized instructional modules. Field trip and community media guest lectures included.

## **COMM 1336 Television Production I**

*Prerequisites: COMM 1335*

*Credit: 3 (2 lecture, 2 lab)*

A concentrated course in the theory and application of principles, procedures, and techniques of television production. Uses lecture and laboratory setting with supervision by faculty.

## **COMM 1337 Television Production II**

*Prerequisites: COMM 1335*

*Credit: 3 (2 lecture, 2 lab)*

The preparation and directing of television programs with emphasis on the creative application of broadcast principles and informational techniques. Uses lecture and laboratory setting with supervision by faculty.

## **COMM 2129 News Publication III**

*Credit: 1 (1 lecture)*

Work on the staff of one of the college publications. Students are required to work on the staff of at least one of the official college publications for prescribed periods under faculty supervision.

## **COMM 2289 Academic Cooperative**

*Credit: (2)lecture)*

An instructional program designed to integrate on-campus study with practical hands-on work experience. In conjunction with class seminars, the individual student will set specific goals and objectives in the study of communication.

## **COMM 2302 Principles of Journalism**

*Prerequisites: Must be placed at college level reading and writing skills.*

*Credit: 3 (3 lecture)*

Exploration of ethical and legal boundaries as well as issues and problems facing today's journalist.

## **COMM 2303 Audio/Radio Production**

*Credit: 3 (3 lecture)*

Concepts and techniques of sound production, including the coordinating and directing processes. Hands-on experience with equipment, sound sources, and direction of talent.

## **COMM 2304 Introduction to Cinematic Production**

*Credit: 3 (3 lecture)*

Basic single-camera production concepts and techniques.

## **COMM 2305 Editing and Layout**

*Credit: 3 (3 lecture)*

Trains students in basic copy editing for publication and in handling production copy from manuscript to finished publication, including photography choice, sizing, cropping and/or handling of various types of graphic illustrations. Covers publication layout (rough, finished), type choice, color, and black/

white rendering.

## **COMM 2309 News Editing and Copy Reading I**

*Credit: 3 (2 lecture, 2 lab)*

Trains students in writing newspaper and magazine feature articles and editorials. Examines topic selection and location of background source material, plus market and reader analysis. Discusses free-lance market and adapting style to different audiences and publications. (formerly COMM 2310).

## **COMM 2311 Media Writing**

*Prerequisites: ENGL 1301*

*Credit: 3 (2 lecture, 2 lab)*

Provides training in news gathering, news writing, and editing. Develops skills in headline writing, layout, and newspaper production with experience on student newspaper or area print publications. Field trips and careers are explored. This course satisfies the Creative Arts or Component Area Option of the HCC core.

## **COMM 2315 Media Writing II**

*Prerequisites: ENGL 1301, COMM 2311*

*Credit: 3 (2 lecture, 2 lab)*

*Continuation of COMM 2311.*

## **COMM 2327 Advertising**

*Credit: 3 (3 lecture)*

Enables student to conceive ideas, tailor and lay out advertisements geared for TV commercials, radio, magazines, and newspapers. Assignments are based on goals, objectives, product/service fact sheets, and marketing considerations. Course integrates vital ingredients that enhance or impede advertising outcomes: product research, consumer behavior, semantics, social science knowledge, copy research and copywriting, visualization, media strategy, advertising agency knowledge, handling of client relations, and preparation of a portfolio. Field trip.

## **COMM 2330 Introduction to Public Relations**

*Credit: 3 (3 lecture)*

Studies principles and practices of public relations. Provides hands-on techniques to influence positive public opinion within and outside of companies. Requires creation of feature and news articles, press releases, press kit, brochure, and brief work plan utilizing the four-step planning process for resolving PR problems. Trains students to write good copy, construct PR goals and objectives, conduct practical research to determine public attitudes and opinion, arrange and conduct press conferences, and develop positive media relationships. (formerly COMM 2328).

## **COMM 2331 Radio and Television Announcing**

*Credit: 3 (2 lecture, 2 lab)*

The development of skills required for efficient announcing, acting, newscasting, and other

# Course Descriptions

speaking before microphone and camera. Students write and present radio, TV, audiovisual announcements and assignments. Utilize lectures, lab setting with supervision by faculty.

## **COMM 2332 Radio/Television News**

*Prerequisite: Department Approval*

*Credit: 3 (2 lecture, 2 lab)*

Studies fundamentals of broadcast news. Covers broadcast writing, performing, and standard broadcasting formats. Uses lecture and laboratory setting with supervision by both sponsoring commercial studio and faculty.

## **COMM 2339 Writing for Radio, Television and Film**

*Credit: 3 (3 lecture)*

Writing for production of programs and various documentaries, training materials slide/tape sets, and other situations requiring a production script.

## **COMM 2366 Introduction to Cinema**

*Credit: 3 (3 lecture)*

Emphasis on the analysis of the visual and aural aspects of selected motion pictures, dramatic aspects of narrative films, and historical growth and sociological effect of film as an art (Cross-listed as DRAM 2366). This course satisfies the Creative Arts or Component Area Option of the HCC core.

## **COMM 2389 Academic Cooperative**

*Credit: 3 (1 lecture, 8 lab)*

An instructional program designed to integrate on-campus study with practical hands-on work experience. In conjunction with class seminars, the individual student will set specific goals and objectives in the study of communication.

## **COSC 1436 Programming Fundamentals I**

*Prerequisites: Must be at college-level skills in reading and writing, place into MATH 1314 College Algebra or higher, and have had high school computer literacy or equivalent.*

*Credit: 4 (3 lecture, 3 lab)*

Introduces the fundamental concepts of structured programming and provides a comprehensive introduction to programming for computer science and technology majors. Topics include software development methodology, data types, control structures, functions, arrays, and the mechanics of running, testing, and debugging. This course assumes computer literacy. This course is included in the Field of Study Curriculum for Computer Science. Core curriculum course

## **COSC 1437 Programming Fundamentals II**

*Prerequisites: COSC 1436 or ITSE 1402, and MATH 2412 and ENGL 1301*

*Credit: 4 (3 lecture, 3 lab)*

This course focuses on the object-oriented programming paradigm, emphasizing the definition

and use of classes along with fundamentals of object-oriented design. The course includes basic analysis of algorithms, searching and sorting techniques, and an introduction to software engineering processes. Students will apply techniques for testing and debugging software.

## **COSC 2425 Computer Organization and Machine Language**

*Prerequisites: COSC 1436, MATH 1314 and ENGL 1301*

*Credit: 3 (3 lecture, 3 lab)*

Basic computer organization; machine cycle, digital representation of data and instructions; assembly language programming, assembler, loader, macros, subroutines, and program linkages.

## **COSC 2436 Programming Fundamentals III**

*Prerequisites: MATH 2413 and COSC 1437*

*Credit: 4 (3 lecture, 3 lab)*

Further applications of programming techniques, introducing the fundamental concepts of data structures and algorithms. Topics include recursion, fundamental data structures (including stacks, queues, linked lists, hash tables, trees, and graphs), and algorithmic analysis.

## **CPMT 1303 Introduction to Computer Technology**

*Prerequisites: Must be placed into GUST 0342 in reading, ENGL 0310 or 0349 in writing and MATH 0308 in math. Department Approval.*

*Credit: 3 (2 lecture, 4 lab)*

A fundamental computer course that provides in-depth explanation of the procedures to utilize hardware and software. Emphasis on terminology, acronyms, and hands-on activities.

## **CPMT 1411 Introduction to Computer Maintenance**

*Prerequisites: Must be placed into GUST 0342 in reading, ENGL 0310 or 0349 in writing and MATH 0306 in math. Department Approval.*

*Credit: 4 (3 lecture, 3 lab)*

Introduction to the installation, configuration, and maintenance of a microcomputer system.

## **CPMT 1449 Computer Networking Technology**

*Prerequisites: Must be placed into GUST 0342 in reading, ENGL 0310 or 0349 in writing and MATH 0306 in math. Department Approval.*

*Credit: 4 (3 lecture, 3 lab)*

Networking fundamentals, terminology, hardware, software, and network architecture. Includes local and wide area networking concepts and networking installations and operations.

## **CRIJ 1301 Introduction to Criminal**

## **Justice**

*Prerequisites: Must be placed into college level reading and writing or higher.*

*Credit: 3 (3 lecture)*

History, philosophy, and ethical considerations of criminal justice; the nature and impact of crime; and an overview of the criminal justice system, including law enforcement and court procedures. Designated as Criminal Justice Transfer Curriculum.

## **CRIJ 1306 The Courts and Criminal Procedure**

*Prerequisites: Must be placed into college level reading and writing or higher.*

*Credit: 3 (3 lecture)*

Study of the judiciary in the American criminal justice system and the adjudication processes and procedures. Designated as Criminal Justice Transfer Curriculum.

## **CRIJ 1307 Crime in America**

*Prerequisites: Must be placed into college level reading and writing or higher.*

*Credit: 3 (3 lecture)*

American crime problems in historical perspective, social and public policy factors affecting crime, impact and crime trends, social characteristics of specific crimes, and prevention of crime.

## **CRIJ 1310 Fundamentals of Criminal Law**

*Prerequisites: Must be placed into college level reading and writing or higher.*

*Credit: 3 (3 lecture)*

Study of criminal law, its philosophical and historical development, major definitions and concepts, classifications and elements of crime, penalties using Texas statutes as illustrations, and criminal responsibility. Designated as Criminal Justice Transfer Curriculum.

## **CRIJ 1313 Juvenile Justice Systems**

*Prerequisites: Must be placed into college level reading and writing or higher.*

*Credit: 3 (3 lecture)*

A study of the juvenile justice process to include specialized juvenile law, role of the juvenile law, role of the juvenile courts, role of police agencies, role of correctional agencies, and theories concerning delinquency.

## **CRIJ 2301 Community Resources in Corrections**

*Prerequisites: Must be placed into college level reading and writing or higher.*

*Credit: 3 (3 lecture)*

An introductory study of the role of the community in corrections; community programs for adults and

# Course Descriptions

juveniles; administration of community programs; legal issues; future trends in community treatment.

## **CRIJ 2313 Correctional Systems and Practices**

*Prerequisites: Must be placed into college level reading and writing or higher.*

*Credit: 3 (3 lecture)*

Corrections in the criminal justice system; organization of correctional systems; correctional role; institutional operations; alternatives to institutionalization; treatment and rehabilitation; current and future issues. Designated as Criminal Justice Transfer Curriculum.

## **CRIJ 2314 Criminal Investigation**

*Prerequisites: Must be placed into college level reading and writing or higher.*

*Credit: 3 (3 lecture)*

Investigative theory; collection and preservation of evidence; sources of information; interview and interrogation; uses of forensic sciences; case and trial preparation.

## **CRIJ 2323 Legal Aspects of Law Enforcement**

*Prerequisite/Corequisite: CRIJ 1301; Must be placed into college level reading and writing or higher.*

*Credit: 3 (3 lecture)*

Police authority; responsibilities; constitutional constraints; laws of arrest, search, and seizure; police liability. Designated as Criminal Justice Transfer Curriculum.

## **CRIJ 2328 Police Systems and Practices**

*Prerequisites: Must be placed into college level reading and writing or higher.*

*Credit: 3 (3 lecture)*

The police profession; organization of law enforcement systems; the police role; police discretion; ethics; police-community interaction; current and future issues. Designated as Criminal Justice Transfer Curriculum.

## **CSME 1405 Fundamentals of Cosmetology**

*Prerequisites: Must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Corequisites: CSME 1410*

*Credit: 4 (2 lecture, 7 lab)*

A course in the basic fundamentals of cosmetology. Topics include safety and sanitation, service preparation, manicure, facial, chemical services, shampoo, haircut, wet styling, and comb out.

## **CSME 1410 Introduction to Haircutting and Related Theory**

*Prerequisites: Must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Corequisites: CSME 1405, CSME 1453*

*Credit: 4 (2 lecture, 7 lab)*

Introduction to the theory and practice of hair cutting. Topics include terminology, implements, sectioning and finishing techniques.

## **CSME 1420 Orientation to Facial Specialist**

*Prerequisites: Must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Corequisites: CSME 1421, CSME 1447*

*Credit: 3 (3 lecture, 4 lab)*

An overview of the skills and knowledge necessary for the field of facials and skin care.

## **CSME 1421 Principles of Facial/Skin Care Technology I**

*Prerequisites: Must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Corequisites: CSME 1420, CSME 1447*

*Credit: 4 (2 lecture, 6 lab)*

An introduction to the principles of facial and skin care technology. Topics include anatomy, physiology, theory, and related skills of facial and skin care technology.

## **CSME 1447 Principles of Skin Care/Facials and Related Theory**

*Prerequisites: Must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Corequisite: CSME 1420, CSME 1421, CSME 1545*

*Credit: 3 (3 lecture, 4 lab)*

An in-depth coverage of the theory and practice of skin care, facials, and cosmetics.

## **CSME 1451 Artistry of Hair, Theory and Practice**

*Prerequisites: Must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Corequisites: CSME 2410*

*Credit: 4 (2 lecture, 6 lab)*

Instruction in the artistry of hair design. Topics include theory, techniques, and application of hair design.

## **CSME 1452 Orientation to Hair Weaving & Braiding**

*Prerequisites: Must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Corequisites: CSME 1457*

*Credit: 4 (2 lecture, 8 lab)*

An overview of the skills and knowledge necessary for the field of hair weaving and braiding.

## **CSME 1453 Chemical Reformation**

*Prerequisites: Must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Corequisites: CSME 2401*

*Credit: 4 (2 lecture, 7 lab)*

Presentation of the theory and practice of chemical reformation, including terminology, application, and

workplace competencies.

## **CSME 1457 Applications of Hair Weaving & Braiding**

*Prerequisites: Must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Corequisites: CSME 1452*

*Credit: 4 (2 lecture, 7 lab)*

Emphasis on the application of hair weaving and braiding techniques and preparation for the Texas Department of Licensing and Regulation (TDLR) examination.

## **CSME 1491 Special Topics in Cosmetology/Cosmetologist: Client Relations**

*Prerequisites: Department Approval. Must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Corequisites: CSME 2343, CSME 2531*

*Credit: 4 (2 lecture, 4 lab)*

This course is designed to introduce the student to the principles of client relations dealing with diverse populations of clients and attitudes and behaviors pertinent to the occupation of cosmetology and relevant to the professional development of the student. This course is a 2 lecture and 4 lab hours (96 contact hours) course upon successful completion of the course, the student will be awarded 4 semester credit hours.

## **CSME 1534 Cosmetology Instructor I**

*Prerequisites: Must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Corequisite: CSME 1535, CSME 2514*

*Credit: 5 (3 lecture, 5 lab)*

The fundamentals of instruction of cosmetology students.

## **CSME 1535 Orientation to the Instruction of Cosmetology**

*Prerequisites: A current Texas Cosmetology Operator License. Must have 3 years recent verifiable work experience. Must obtain department approval; Must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Corequisites: CSME 1534, CSME 2514*

*Credit: 5 (3 lecture, 5 lab)*

An overview of the skills and knowledge necessary for the instruction of cosmetology students.

## **CSME 1545 Principles of Facial/Skin Care Technology II**

*Prerequisite: CSME 1447; Must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Corequisites: CSME 2531, CSME 1491, CSME 1447*

*Credit: 5 (3 lecture, 6 lab)*

A continuation of the concepts and principles in skin care and other related technologies.

# Course Descriptions

Topics include advanced instruction in anatomy, physiology, theory, and related skills of facial and skin care technology.

## **CSME 2304 Introduction to the Theory and Chemistry of Hair Color**

*Prerequisites: Must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Corequisites:*

*Credit: 3 (3 lecture, 1 lab)*

The introduction of basic theory and chemistry of hair color. Topics include the Law of Color, terminology and chemical composition of hair color products.

## **CSME 2337 Advanced Cosmetology Techniques**

*Prerequisites: Must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Corequisites: CSME 2439*

*Credit: 3 (1 lecture, 8 lab)*

Mastery of advanced cosmetology techniques including hair designs, professional cosmetology services, and workplace competencies

## **CSME 2343 Salon Development**

*Prerequisites: Must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Corequisites: CSME 1491*

*Credit: 3 (2 lecture, 4 lab)*

Exploration of salon development. Topics include professional ethics and goals, salon operation, and record keeping.

## **CSME 2401 Principles of Hair Coloring and Related Theory**

*Prerequisites: Must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Corequisites: CSME 1453*

*Credit: 4 (2 lecture, 7 lab)*

Presentation of the theory, practice, and chemistry of hair color. Topics include terminology, application, and workplace competencies related to hair color.

## **CSME 2410 Advanced Haircutting and Related Theory**

*Prerequisites: Must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Corequisites: CSME 1451*

*Credit: 4 (2 lecture, 7 lab)*

Advanced concepts and practice of haircutting. Topics include haircuts utilizing scissors, razor, and/or clippers.

## **CSME 2439 Advanced Hair Design**

*Prerequisites: Must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Corequisites: CSME 2337*

*Credit: 4 (2 lecture, 6 lab)*

Advanced concepts in the theory and practice of hair design

## **CSME 2514 Cosmetology Instructor II**

*Prerequisites: Must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Corequisites: CSME 1534, CSME 1535, CSME 2515*

*Credit: 5 (3 lecture, 5 lab)*

A continuation of the fundamentals of instructing cosmetology students.

## **CSME 2531 Principles of Facial/Skin Care Technology III**

*Prerequisites: CSME 1447; Must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Corequisites: CSME 1491, CSME 1545*

*Credit: 5 (3 lecture, 6 lab)*

Advanced concepts and principles of skin care and other related technologies.

## **CSME 2541 Preparation for the State Licensing Examination**

*Prerequisites: Department Approval; Must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Corequisites: CSME1451*

*Credit: 5 (3 lecture, 6 lab)*

Preparation for the state licensing examination.

## **CSME 2544 Cosmetology Instructor IV**

*Prerequisites: CSME 1534, CSME 1535, CSME 2514; Must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Corequisites: CSME 2515, CSME 2545*

*Credit: 5 (3 lecture, 5 lab)*

Advanced concepts of instruction in a cosmetology program. Topics include demonstration, development, and implementation of advanced evaluation and assessment techniques.

## **CSME 2545 Instructional Theory and Clinic Operation**

*Prerequisites: CSME 1534, CSME 1535, CSME 2514; Must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Corequisites: CSME 2515, CSME 2544*

*Credit: 5 (3 lecture, 5 lab)*

An overview of the objectives required by the Texas Department of Licensing and Regulation Instructor Examination.

## **CSME 2549 Cosmetology Instructor III**

*Prerequisites: CSME 1534, CSME 1535, CSME 2514; Must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Corequisites: CSME 2544, CSME 2545, CSME 2514*

*Credit: 5 (3 lecture, 5 lab)*

Presentation of lesson plan assignments and evaluation techniques.

## **CTEC 1213 Introduction to Chemical Technology**

*Prerequisites: Must be placed into GUST 0342 in reading, ENGL 0312 or 0349 in writing and MATH 0312 in math.*

*Credit: 2 (2 lecture)*

Introduction to the educational and professional requirements of the chemical technician. Topics include safety, industrial site visits, chemical literature, and computer applications.

## **CTEC 1345 Chemical Laboratory Safety**

*Prerequisites: Must be placed into college-level reading, writing and math.*

*Credit: 3 (3 lecture)*

Study of the safety problems encountered in the operation of a chemical laboratory. Topics include chemical and safety regulations, chemical hygiene plans, the Lab Standard, and safe laboratory procedures.

## **CTEC 1349 Environmental Chemistry**

*Prerequisites: SCIT 1414 or CHEM 1411 or Department Approval; must be placed into GUST 0342 in reading, ENGL 0312 or 0349 in writing and MATH 0312 in math.*

*Credit: 3 (2 lecture, 3 lab)*

Instruction in laboratory operations for the analysis of environmental contaminants according to current federal, state, and local standards.

## **CTEC 1391 Special Topics in Chemical Technology/Technician**

*Prerequisites: Must be placed into GUST 0342 in reading, ENGL 0310 or 0349 in writing and MATH 0312 in math.*

*Credit: 3 (3 lecture)*

Topics address recently identified current events, skills, knowledges, and/or attitudes and behaviors pertinent to the technology or occupation and relevant to the professional development of the student. This course was designed to be repeated multiple times to improve student proficiency.

## **CTEC 1401 Applied Petrochemical Technology**

*Prerequisites: Department Approval; must be placed into GUST 0342 in reading, ENGL 0312 or 0349 in writing and MATH 0312 in math.*

*Credit: 4 (3 lecture, 3 lab)*

Instruction in the basic principles of physics and their application to process facilities. Topics include units of measurement; gas laws; thermodynamics; temperature; pressure; and the properties of solids, liquids, and gases and how these properties relate to the operation of process equipment.

# Course Descriptions

## **CTEC 1441 Applied Instrumental Analysis**

*Prerequisites: Must be placed into college-level reading, writing and math.*

*Credit: 4 (2 lecture, 4 lab)*

Principles of instrumental chemical analysis. Topics include chromatography, spectroscopy, and electroanalytical chemistry.

## **CTEC 1470 Principles of Pipeline Technology**

*Prerequisites: PTAC 1410 or Department Approval; must be placed into college-level reading, writing and math.*

*Credit: 4 (3 lecture, 3 lab)*

Topics include: reliable operations of pumps and compressors, calculation of flow, requirements for flow control valves and mechanics, pressure relief devices, turbo-expanders, pumps, water hammer, valve noise, calculation of pressure drops in single and two phase systems, transport maintenance and troubleshooting, transport material safety and operations, corrosion of piping systems, pipe sizing, and solids fluidization. Students will learn pipe design and manufacturing material along with economics associated with transporting of material through piping systems. Students will use software and actual pipeline systems for level and flow control and operations.

## **CTEC 2333 Comprehensive Studies in Chemical Technology**

*Prerequisites: Department Approval; must be placed into college-level reading and into ENGL 0312 or 0349 in writing and MATH 0312 in math.*

*Credit: 3 (1 lecture, 5 lab)*

Course requiring a special laboratory research project.

## **CTEC 2381 Cooperative Education - Chemical Technology/Technician**

*Prerequisites: SCIT 1414 or Department Approval; must be placed into college-level reading, writing and math.*

*Credit: 3 (1 lecture, 20 lab)*

Career-related activities encountered in the student's area of specialization offered through an individualized agreement among the college, employer, and student. Under the supervision of the college and the employer, the student combines classroom learning with work experience. Includes a lecture component.

## **CTEC 2386 Internship-Chemical Technology/Technician**

*Prerequisites: Department Approval; must be placed into college-level reading, writing and math.*

*Credit: 3 (18 lab)*

A work-based learning experience that enables the student to apply specialized occupational theory, skills and concepts. A learning plan is developed by the college and the employer.

## **CTEC 2431 Applied Instrumental Analysis II**

*Prerequisites: CTEC 1441 or Departmental Approval; must be placed into college-level reading, writing and math.*

*Credit: 4 (2 lecture, 4 lab)*

Advanced topics in instrumental analysis. Topics include atomic absorption, inductively coupled plasma, nuclear magnetic resonance, gas chromatography/mass spectrometry, liquid chromatography, and infrared spectroscopy.

## **CTEC 2441 Polymers I**

*Prerequisites: SCIT 2401 or Concurrent Enrollment or Department Approval; must be placed into college-level reading, writing and math.*

*Credit: 4 (3 lecture, 2 lab)*

Study of the concepts of polymer science. Topics include classification, structure, properties, synthesis, characterization, and industrial application.

## **CTEC 2443 Polymers II**

*Prerequisites: CTEC 2441 or Department Approval; must be placed into college-level reading, writing and math.*

*Credit: 4 (3 lecture, 2 lab)*

Continuation of Polymers I with emphasis on polymeric materials.

## **CTEC 2445 Unit Operations**

*Prerequisites: CTEC 2441 or Department Approval; must be placed into college-level reading, writing and math.*

*Credit: 4 (3 lecture, 2 lab)*

Instruction in the principles of chemical engineering and process equipment with emphasis on scale-up from laboratory bench to pilot plant.

## **CTEC 2470 Process Control and Design**

*Prerequisites: PTAC 1410 or Department Approval; must be placed into college-level reading, writing and math.*

*Credit: 4 (3 lecture, 3 lab)*

Develop knowledge and skills on practical chemical/industrial process control. Understand control room functions and operation. Identify process dynamics using real-time plant data. Understand industrial controllers—PID/feed-forward/model-based controller, dead-time compensators and non-linear controllers. Design, build and tune controllers. Optimize tuning parameters. Simulate controllers and optimize them in a simulated plant environment. Students will use software for dynamics identification and controller tuning optimizations and conduct numerous hands-on exercises to prepare them for the industrial environment.

## **CTMT 2336 Computer Tomography Equipment and Methodology**

*Prerequisites: Registered and in good standing with ARRT or NMTCB; must be placed into college-level reading, writing and math.*

*Corequisite: RADR 2340*

*Credit: 3 (3 lecture)*

Skill development in the operation of computed

tomographic equipment, focusing on routine protocols, image quality, quality assurance and radiation protection.

## **CTMT 2460 Clinical-Radiologic Technology/Science-Radiographer**

*Prerequisites: Registered and in good standing with ARRT or NMTCB; must be placed into college-level reading, writing and math.*

*Corequisites: RADR 2340, CTMT 2336, CTMT 2461*

*Credit: 4 (12 external lab)*

A health-related work-based learning experience that enables the student to apply specialized occupational theory, skills, and concepts. Direct supervision is provided by the clinical professional.

## **CTMT 2461 Clinical-Radiologic Technology/Science-Radiographer**

*Prerequisites: Registered and in good standing with ARRT or NMTCB; must be placed into college-level reading, writing and math.*

*Corequisites: RADR 2340, CTMT 2336, CTMT 2460*

*Credit: 4 (12 external lab)*

A health-related work-based learning experience that enables the student to apply specialized occupational theory, skills, and concepts. Direct supervision is provided by the clinical professional.

## **DAAC 1304 Pharmacology of Addiction**

*Prerequisites: Must be placed into GUST 0342 in reading, ENGL 0310 or 0349 in writing and MATH 0308 in math.*

*Credit: 3 (3 lecture)*

Describes the psychological, physiological, and sociological effects of mood altering substances and behaviors. Emphasizes pharmacological effects of tolerance, dependency/withdrawal, cross addiction, and drug interaction.

## **DAAC 1305 Co-Occurring Disorders**

*Prerequisites: Must be placed into college-level reading, college-level writing and MATH 0308 in math.*

*Credit: 3 (3 lecture)*

Provides students with an understanding of co-occurring psychiatric and substance abuse disorders and their impact on the individual, family, and community. Includes an integrated approach to address the issues accompanying the illness.

## **DAAC 1311 Counseling Theories**

*Prerequisites: Must be placed into college-level reading, college-level writing and MATH 0308 in math.*

*Credit: 3 (3 lecture)*

An examination of the major theories and current treatment modalities used in the field of counseling.

## **DAAC 1319 Introduction to Alcohol and Other Drug Addictions**

*Prerequisites: Must be placed into GUST 0341 in reading, ENGL 0310 or 0349 in writing and MATH 0308 in math.*

*Credit: 3 (3 lecture)*

Provides an overview of causes and consequences of addiction as they relate to the individual, family, community, and society. Overview of alternatives regarding prevention, intervention, and treatment.

# Course Descriptions

Includes explanation of competencies and requirements for licensure in Texas. Identifies addiction issues related to diverse populations.

## **DAAC 1417 Basic Counseling Skills**

*Prerequisites: Must be placed into GUST 0341 in reading, ENGL 0310 or 0349 in writing and MATH 0308 in math.*

*Credit: 4 (2 lecture, 8 lab)*

Presents the basic counseling skills necessary to develop an effective helping relationship with clients.

## **DAAC 2267 Practicum (or Field Experience)-Substance Abuse/Addiction Counseling**

*Prerequisites: Department Approval; must be placed into college-level reading, college-level writing and MATH 0308 in math.*

*Credit: 2 (19 lab)*

Practical, general workplace training supported by an individualized learning plan developed by the employer, college, and student.

## **DAAC 2306 Substance Abuse Prevention I**

*Prerequisites: Must be placed into GUST 0342 in reading, ENGL 0310 or 0349 in writing and MATH 0308 in math.*

*Credit: 3 (3 lecture, 1 lab)*

Focuses on aspects of substance abuse prevention from a public health model.

## **DAAC 2353 Substance Abuse Prevention II**

*Prerequisites: Must be placed into GUST 0342 in reading, ENGL 0310 or 0349 in writing and MATH 0308 in math.*

*Credit: 3 (3 lecture, 1 lab)*

Focuses on the incorporation of research and evaluation methods into advanced program designs and outcomes, and research and application of ethics as applied to substance abuse prevention.

## **DAAC 2354 Dynamics of Group Counseling**

*Prerequisites: DAAC 1417; must be placed into GUST 0342 in reading, ENGL 0310 or 0349 in writing and MATH 0308 in math.*

*Credit: 3 (3 lecture)*

Exploration of group counseling skills, techniques, and stages of group development.

## **DANC 1110 Tap Dance**

*Prerequisites: Must be placed into GUST 0342 (or higher) in reading and ENGL 0310/0349 (or higher) in writing.*

*Credit: 1 (0 lecture, 3 lab)*

Instruction in the fundamental techniques and concepts associated with Tap dance. May be repeated for credit once.

## **DANC 1112 Dance Practicum I**

*Prerequisites: Department Approval required.*

*Credit: 1 (0 lecture, 4 lab)*

Skill development in staged performances of dance genres. Emphasis on style, technique, and performance.

## **DANC 1113 Dance Practicum II**

*Prerequisites: Department Approval required.*

*Credit: 1 (0 lecture, 4 lab)*

Skill development in staged performances of dance genres. Emphasis on style, technique, and performance.

## **DANC 1151 Freshman Dance Performance**

*Prerequisites: Must be placed into GUST 0342 (or higher) in reading and ENGL 0310/0349 (or higher) in writing.*

*Credit: 1 (1 lecture, 3 lab)*

*Instruction in dance performance through experiential projects at the freshman level. May be repeated for credit once*

## **DANC 1201 Dance Composition - Improvisation**

*Prerequisites: Must be placed into GUST 0342 (or higher) in reading and ENGL 0310/0349 (or higher) in writing.*

*Credit: 1 (1 lecture, 3 lab)*

This introductory course in improvisation will investigate spontaneous problem solving as a means of generating movement for dance composition. Students will be called upon to explore and respond to various forms of stimuli in a safe and supportive learning environment within solo and group work.

## **DANC 1210 Tap I (Inactive Fall 2017)**

*Prerequisites: Must be placed into GUST 0342 (or higher) in reading and ENGL 0310/0349 (or higher) in writing.*

*Credit: 2 (1 lecture, 2 lab)*

Basic skills and vocabulary of tap dance.

## **DANC 1241 Beginning Ballet**

*Prerequisites: Must be placed into GUST 0342 (or higher) in reading and ENGL 0310/0349 (or higher) in writing.*

*Credit: 2 (1 lecture, 3 lab)*

Instruction in the fundamental techniques and concepts associated with ballet. May be repeated for credit once.

## **DANC 1245 Beginning Modern Dance**

*Prerequisites: Must be placed into GUST 0342 (or higher) in reading and ENGL 0310/0349 (or higher) in writing.*

*Credit: 2 (1 lecture, 3 lab)*

Instruction in the intermediate techniques and concepts associated with the concert form of modern dance.

## **DANC 1301 Dance Composition - Choreography**

*Prerequisites: Must be placed into GUST 0342 (or higher) in reading and ENGL 0310/0349 (or higher) in writing.*

*Credit: 3 (3 lecture)*

This course provides various improvisational and compositional tools to expand movement vocabulary and create basic dance studies. Through this process students will develop an understanding of dance as an art form. Studies will be presented in both solo and group format.

## **DANC 1305 World Dance: Africa and the Diaspora**

*Prerequisites: Must be placed into GUST 0342 (or higher) in reading and ENGL 0310/0349 (or higher) in writing.*

*Credit: 3 (2 lecture, 2 lab)*

Students will learn cultural dances of Africa and the African Diaspora, with emphasis on rhythmic awareness and movement development. The cultural origins, significance, and motivation, as well as the use of costumes and music, will be explored in lecture and research through live performances, guest artists, and the use of multi-media sources. Instruction will include experiential and written assignments.

## **DANC 1306 World Dance and Culture**

*Prerequisites: Must be placed into GUST 0342 (or higher) in reading and ENGL 0310/0349 (or higher) in writing.*

*Credit: 3 (3 lecture)*

This survey course investigates what dance reveals about cultural, national and ethnic identity, class and gender, and the continuation of community from a global perspective. Dance forms from every continent are compared and contrasted. The origins, significance, and motivation, as well as the use of costumes and music, will be explored in lecture and research through performances, and the use of multi-media sources. From a comparative perspective, the course encourages the student to view their own dance experience as culturally significant.

## **DANC 1341 Ballet I (Inactive Fall 2017)**

*Prerequisites: Must be placed into GUST 0342 (or higher) in reading and ENGL 0310/0349 (or higher) in writing.*

*Credit: 3 (2 lecture, 2 lab)*

A beginning-level course which introduces the student to the concepts of classical ballet, through practice of basic bare and centre skills, the body positions, and movement combinations. The history of the development of ballet is presented through lecture and multimedia, and esthetic principles of dance are explored through lecture and concert attendance.

## **DANC 1342 Ballet II**

*Prerequisites: DANC 1341 or instructor's approval.*

*Credit: 3 (2 lecture, 2 lab)*

Continuation of DANC 1341.

## **DANC 1345 Modern Dance I**

*Prerequisites: Must be placed into GUST 0342 (or higher) in reading and ENGL 0310/0349 (or higher) in writing.*

*Credit: 3 (2 lecture, 2 lab)*

A beginning-level course which introduces the student to the concepts of modern dance.

# Course Descriptions

The course includes floor work, basic axial center technique, locomotor movements, and improvisation. The history of modern dance is presented through lecture and multimedia, and esthetic principles of dance are explored through lecture and concert attendance.

## **DANC 1346 Modern Dance II**

*Prerequisites: DANC 1345 Modern I or instructor's approval.*

*Credit: 3 (2 lecture, 2 lab)*

Continuation of DANC 1345.

## **DANC 1347 Jazz Dance I**

*Prerequisites: Must be placed into GUST 0342 (or higher) in reading and ENGL 0310/0349 (or higher) in writing.*

*Credit: 3 (2 lecture, 2 lab)*

A beginning level course which introduces the student to the basic skills of jazz dance, with an emphasis on technique development, rhythmic awareness, and various jazz movement styles. The history of jazz dance is presented through lecture and multimedia, and esthetic principles of dance are explored through lecture and concert attendance.

## **DANC 1348 Jazz Dance II**

*Prerequisites: DANC 1347 Jazz I or instructor's approval.*

*Credit: 3 (2 lecture, 2 lab)*

Continuation of Jazz Dance I.

## **DANC 1351 Dance Performance I** **(Deactivate Fall 2017)**

*Prerequisites: Must be placed into GUST 0342 (or Higher) in reading and ENGL 0310/0349 (or higher) in writing.*

*Credit: 3 (2 lecture, 2 lab)*

This course offers students the opportunity to engage in rehearsal and performance of dance works in the making under the direction of faculty or guest choreographers.

## **DANC 1352 Dance Performance II**

*Prerequisites: Must be placed into GUST 0342 (or Higher) in reading and ENGL 0310/0349 (or higher) in writing.*

*Credit: 3 (2 lecture, 2 lab)*

This course offers students the opportunity to engage in rehearsal and performance of dance works in the making under the direction of faculty or guest choreographers. Continuation of DANC 1351.

## **DANC 1377 African-American Dance Forms**

*Prerequisites: Must be placed into GUST 0342 (or Higher) in reading and ENGL 0310/0349 (or higher) in writing.*

*Credit: 3 (2 lecture, 2 lab)*

This beginning level course introduces the student to movement styles of various African American dance forms including concert dance, cultural or social dances, and dances of the diaspora. Through movement, text, video, lecture,

assignments, and performance observations students will explore the history, evolution as well as current trends of African American culture and dance. Students will learn how to critically evaluate dance works and will be given the tools to analyze, evaluate, and discuss African American Dance from numerous periods throughout history.

## **DANC 1378 African-American Dance History**

*Prerequisites: Must be placed into GUST 0342 (or Higher) in reading and ENGL 0310/0349 (or higher) in writing.*

*Credit: 3 (3 lecture, 0 lab)*

This course is designed for the general student and explores African American Dance including concert dance, cultural or social dances, and dances of the diaspora. Through text, video, lecture, assignments, and performance observations students will explore the history, evolution as well as current trends of African American culture and dance. Students will learn how to critically evaluate dance works and will be given the tools to analyze, evaluate, and discuss African American Dance from numerous periods throughout history.

## **DANC 2112 Dance Practicum III**

*Prerequisites: Department Approval required.*

*Credit: 1 (0 lecture, 4 lab)*

Skill development in staged performances of dance genres. Emphasis on style, technique, and performance.

## **DANC 2113 Dance Practicum IV**

*Prerequisites: Department Approval required.*

*Credit: 1 (0 lecture, 4 lab)*

Skill development in staged performances of dance genres. Emphasis on style, technique, and performance.

## **DANC 2151 Sophomore Dance Performance**

*Prerequisites: Must be placed into GUST 0342 (or Higher) in reading and ENGL 0310/0349 (or higher) in writing.*

*Credit: 1 (1 lecture, 3 lab)*

Instruction in dance performance through experiential projects at the sophomore level. May be repeated for credit once.

## **DANC 2245 Intermediate Modern Dance**

*Prerequisites: DANC 1346 Modern II or instructor's approval.*

*Credit: 2 (2 lecture, 2 lab)*

Instruction in the intermediate techniques and concepts associated with the concert form of modern dance.

## **DANC 2247 Intermediate Jazz Dance**

*Prerequisites: DANC 1346 Modern II or instructor's approval.*

*Credit: 2 (1 lecture, 3 lab)*

Instruction in the intermediate techniques and concepts associated with jazz dance.

## **DANC 2303 Dance Appreciation**

*Prerequisites: Must be placed into college-level reading and college-level writing.*

*Credit: 3 (3 lecture)*

Introduction to dance designed for the general student. This course explores what is dance, who makes it, and why it is made. Through lecture, multimedia, and live performances, students are presented with examples from many world cultures. This course satisfies the Creative Arts or Component Area Option of the HCC core.

## **DANC 2325 Anatomy and Kinesiology**

*Prerequisites: Program approval, must be placed into college-level reading and college-level writing.*

*Credit: 3 (3 lecture)*

The study of human movement designed specifically to relate to dance. The course will cover the skeletal, nervous, and muscular systems. Studies include movement analysis, therapeutic exercises, and prevention of dance injuries.

## **DANC 2341 Ballet III**

*Prerequisites: DANC 1342 or instructor's approval.*

*Credit: 3 (2 lecture, 2 lab)*

A continuation of DANC 1342 with an emphasis on developing strength, control, flexibility and line to develop a more comprehensive classical ballet movement vocabulary. Through lecture and multimedia, the student will trace the development of ballet in the United States.

## **DANC 2342 Ballet IV**

*Prerequisites: DANC 2341 Ballet III or instructor's approval.*

*Credit: 3 (2 lecture, 2 lab)*

Continuation of DANC 2341.

## **DANC 2345 Modern Dance III (Inactivate Fall 2017)**

*Prerequisites: DANC 1346 Modern II or instructor's approval.*

*Credit: 3 (2 lecture, 2 lab)*

A continuation of DANC 1346 with an emphasis on developing strength, control, flexibility, and improvisational skills to develop a more comprehensive modern dance vocabulary. Through lecture and multimedia, the student will trace the recent developments in modern dance performance styles.

## **DANC 2346 Modern IV**

*Prerequisites: DANC 2346 Modern III or instructor's approval.*

*Credit: 3 (2 lecture, 2 lab)*

Continuation of DANC 2345.

## **DANC 2347 Jazz Dance III (Inactivate Fall 2017)**

*Prerequisites: DANC 1348 Jazz II or instructor's approval.*

*Credit: 3 (2 lecture, 2 lab)*

A continuation of DANC 1348.

# Course Descriptions

## **DANC 2351 Performance III**

*Prerequisites: Must be placed into GUST 0342 (or higher) in reading and ENGL 0310/0349 (or higher) in writing.*

*Credit: 3 (2 lecture, 2 lab)*

This course offers students the opportunity to engage in rehearsal and performance of dance works in the making under the direction of faculty or guest choreographers. May be repeated with coordinator's approval.

## **DANC 2352 Performance IV**

*Prerequisites: Must be placed into GUST 0342 (or higher) in reading and ENGL 0310/0349 (or higher) in writing.*

*Credit: 3 (2 lecture, 2 lab)*

Continuation of DANC 2351

## **DANC 2389 Academic Cooperative in Dance**

*Prerequisites: Must be placed into college-level reading and college-level writing.*

*Credit: 3 (1 lecture, 16 lab)*

An instructional program designed to integrate on-campus study with practical hands-on experience in dance. In conjunction with class seminars, the individual student will set specific goals and objectives in the study of dance.

## **DEMR 1301 Shop Safety and Procedures**

*Prerequisites: Must be placed into GUST 0339 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (2 lecture, 2 lab)*

A study of shop safety, rules, basic shop tools, and test equipment.

## **DEMR 1305 Basic Electrical Systems**

*Prerequisites: DEMR 1301; must be placed into GUST 0339 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (2 lecture, 4 lab)*

Basic principles of electrical systems of diesel powered equipment with emphasis on starters, alternators, and batteries.

## **DEMR 1306 Diesel Engine I**

*Prerequisite/Corequisite: DEMR 1301; must be placed into GUST 0339 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (2 lecture, 4 lab)*

An introduction to the basic principles of diesel engines and systems.

## **DEMR 1310 Diesel Engine Testing and Repair I**

*Prerequisite/Corequisite: DEMR 1313; must be placed into GUST 0339 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (2 lecture, 4 lab)*

An introduction to testing and repairing diesel engines including related systems specialized tools.

## **DEMR 1316 Basic Hydraulics**

*Prerequisite/Corequisite: DEMR 1301; must be placed into GUST 0339 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (1 lecture, 4 lab)*

Fundamentals of hydraulics including components and related systems.

## **DEMR 1317 Basic Brake Systems**

*Prerequisites: Must be placed into GUST 0339 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (2 lecture, 4 lab)*

Basic principles of brake systems of diesel powered equipment. Emphasis on maintenance, repairs, and troubleshooting.

## **DEMR 1323 Heating, Ventilation, and Air Conditioning (HVAC) Troubleshooting and Repair**

*Prerequisites: Must be placed into GUST 0339 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (2 lecture, 4 lab)*

Introduction to heating, ventilation, and air conditioning theory, testing, and repair. Emphasis on refrigerant reclamation, safety procedures, specialized tools, and repairs.

## **DEMR 1329 Preventative Maintenance**

*Prerequisites: DEMR 1301; must be placed into GUST 0339 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (2 lecture, 2 lab)*

An introductory course designed to provide the student with basic knowledge of proper servicing practices. Content includes record keeping and condition of major systems.

## **DEMR 1330 Steering and Suspension I**

*Prerequisites: Must be placed into GUST 0339 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (2 lecture, 4 lab)*

A study of design, function, maintenance, and repair of steering and suspension systems. Emphasis on troubleshooting and repair of failed components.

## **DEMR 1342 Power Train Applications I**

*Prerequisite/Corequisite: DEMR 1349; must be placed into GUST 0339 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (2 lecture, 4 lab)*

In-depth coverage of the mechanics and theory of power trains. Emphasis on disassembly, inspection, and repair of power train components.

## **DEMR 1381 Cooperative Education-Diesel Engine Mechanic and Repairer**

*Prerequisite/Corequisite: DEMR 2312 and Department Approval; must be placed into GUST 0339 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math. Credit: 3 (1 lecture, 20 lab)*

Career-related activities encountered in the student's area of specialization offered through an individualized agreement among the college, employer, and student. Under the supervision of the college and the employer, the student combines classroom learning with work experience. Includes a lecture component.

## **DEMR 2312 Diesel Engine Testing and Repair II**

*Prerequisite/Corequisite: DEMR 1342; must be placed into GUST 0339 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math. Credit: 3 (2 lecture, 4 lab)*

Coverage of testing and repairing diesel engines including related systems specialized tools.

## **DEMR 2332 Electronic Controls**

*Prerequisites: Must be placed into GUST 0339 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (2 lecture, 4 lab)*

Advanced skills in diagnostic and programming techniques of electronic control systems.

## **DEMR 2439 Advanced Electrical Systems**

*Prerequisites: Must be placed into GUST 0339 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 4 (2 lecture, 4 lab)*

A continuation of basic electrical systems to include lighting, computer controls and accessories. Emphasis on diagnosis, testing, and repair using the various diagnostic tools and procedures for current electronic systems.

## **DFTG 1302 Introduction to Technical Animation and Rendering**

*Prerequisites: DFTG 2319; must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (2 lecture, 4 lab)*

Basic terminology and concepts associated with the development of computer modules used in technical computer animation. Topics include basic animation principles, model creation, light sources, camera positioning, rendering, importing and modification of external files.

## **DFTG 1305 Technical Drafting**

*Prerequisites: Must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (2 lecture, 4 lab)*

Introduction to the principles of drafting to include terminology and fundamentals, including size and shape descriptions, projection methods, geometric construction, sections, auxiliary views, and reproduction processes.

## **DFTG 1309 Basic Computer-Aided Drafting(AutoCAD)**

*Prerequisites: Must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

# Course Descriptions

*Co-requisite: DFTG 1405 or Departmental Approval*

*Credit: 3 (2 lecture, 4 lab)*

An introduction to computer-aided drafting. Emphasis is placed on setup; creating and modifying geometry; storing and retrieving predefined shapes; placing, rotating, and scaling objects, adding text and dimensions, using layers, coordinate systems and plot/print to scale.

## **DFTG 1310 Specialized Basic Computer Aided Drafting (MicroStation)**

*Prerequisites: DFTG 1405 and DFTG 1309 or Department Approval; must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (2 lecture, 4 lab)*

A supplemental course to Basic Computer Aided Drafting using an alternative computer-aided drafting (CAD) software to create detail and working drawings.

## **DFTG 1313 Drafting for Specific Occupations**

*Prerequisites: CNBT 1300; must be placed into GUST 0339 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (2 lecture, 2 lab)*

Discussion of theory and practice with drafting methods and the terminology required to prepare working drawings in specific or various occupational fields.

## **DFTG 1315 Architectural Blueprint Reading**

*Prerequisites: CNBT 1201; must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (2 lecture)*

The fundamentals of blueprint reading for the construction industry will be examined.

## **DFTG 1317 Architectural Drafting- Residential**

*Prerequisites: DFTG 1405 and DFTG 1309; must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (2 lecture, 4 lab)*

Architectural drafting procedures, practices, and symbols, including preparation of detailed working drawings for residential structure with emphasis on light frame construction methods.

## **DFTG 1329 Electro-Mechanical Drafting**

*Prerequisites: DFTG 1405 and DFTG 1309; must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (2 lecture, 4 lab)*

A basic course including layout and design of electro-mechanical equipment from engineering notes and sketches. Emphasis on drawing of electronics enclosures, interior hardware, exterior enclosure, detailed and assembly drawings with a parts list, and flat-pattern layouts.

## **DFTG 1333 Mechanical Drafting**

*Prerequisites: DFTG 1405 and DFTG 1309; must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (2 lecture, 4 lab)*

Detail drawings with proper dimensioning and tolerances, use of sectioning techniques, common fasteners, pictorial drawings, including bill of materials.

## **DFTG 1345 Parametric Modeling and Design (Pro-E)**

*Prerequisites: DFTG 2319*

*Credit: 3 (2 lecture, 4 lab)*

Use parametric modeling techniques to create rendered assemblies, orthographic drawings, auxiliary views, and details from 3-dimensional models.

## **DFTG 1358 Electrical/Electronic Drafting**

*Prerequisites: DFTG 1405 and DFTG 1309; must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (2 lecture, 4 lab)*

Electrical and electronic drawings stressing modern representation used for block diagrams, schematic diagrams, logic diagrams, wiring/assembly drawings, printed circuit board layouts, motor control diagrams, power distribution diagrams, and electrical one-line diagrams.

## **DFTG 1371 Process Plant Layout**

*Prerequisites: DFTG 1405 and DFTG 1309 or Department Approval.*

*Credit: 3 (2 lecture, 3 lab)*

A study of process plant design and layout while developing the basic knowledge of pipe fittings, symbols, specifications, and their applications in the piping process systems. The learner will demonstrate the use of piping symbols and the processes used to develop flow diagrams, piping plans, elevations, and isometrics.

## **DFTG 1376 Revit Residential (Revit)**

*Prerequisites: DFTG 1405, DFTG 1309, and DFTG 1317. Must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (2 lecture, 4 lab)*

Use architectural design software for 2D and 3D modeling design and drafting.

## **DFTG 1391 Special Topics (Pro-E or PDMS in Drafting)**

*Prerequisites: DFTG 2319; Must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (2 lecture, 4 lab)*

Use parametric feature-based solid modeling tool which unites 3D parametric features with 2D tools. Work in 3D environments and calculate mass properties directly from the created geometry. Design, analyze, test, and build prototypes by using high end CAD/CAM/CAE tools.

Topics address recently identified current events,

skills, knowledge, and/or attitudes and behaviors pertinent to the technology or occupation and relevant to the professional development of the student. This course was designed to be repeated multiple times to improve student proficiency.

## **DFTG 1392 Special Topics: Green Build in Architectural Drafting and Architectural CAD/CADD (Revit)**

*Prerequisite: DFTG 2319, DFTG 1317.*

*Credit: 3 (2 lecture, 4 lab)*

The total method of building construction, focused on energy conservation, green and sustainable building, improved construction practices, accessibility, and whole-building design techniques.

Topics address recently identified current events, skills, knowledge, and/or attitudes and behaviors pertinent to the technology or occupation and relevant to the professional development of the student. This course was designed to be repeated multiple times to improve student proficiency.

## **DFTG 1393 Spec. Topics in Civil Drafting and Civil Engineering: Civil 3D**

*Prerequisites: DFTG 2330; Must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (2 lecture, 4 lab)*

Use Civil 3D software to enhance alignment layout of civil engineering projects. Use tools that enable easier sharing of drafting and design standards across organizations.

## **DFTG 1394 Special Topics in Electrical/Electronics Drafting and Electrical/Electronics CAD/CADD**

*Prerequisites: DFTG 1358; Must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (2 lecture, 4 lab)*

Topics address recently identified current events, skills, knowledge, and/or attitudes and behaviors pertinent to the technology or occupation and relevant to the professional development of the student. This course was designed to be repeated multiple times to improve student proficiency.

## **DFTG 1395 Special Topics in Mechanical Drafting and Mechanical Drafting CAD/CADD (AutoPlant Isometrics)**

*Prerequisites: DFTG 2323 and DFTG 2371; Must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (2 lecture, 4 lab)*

Topics address recently identified current events, skills, knowledge, and/or attitudes and behaviors pertinent to the technology or occupation and relevant to the professional development of the student. This course was designed to be repeated multiple times to improve student proficiency.

## **DFTG 1396 Special Topics in Computer Graphics: Smart Plant 3D Drafting**

# Course Descriptions

## **(SmartPlant)**

*Prerequisites: DFTG 2323 and DFTG 2308; Must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (2 lecture, 4 lab)*

Use process, power & marine design software for 3D modeling design. Define a workspace in a 3D intelligent design world. Manipulate designed equipment, specialty items, valves and route sloped pipe and insert splits where required.

Topics address recently identified current events, skills, knowledge, and/or attitudes and behaviors pertinent to the technology or occupation and relevant to the professional development of the student. This course was designed to be repeated multiple times to improve student proficiency.

## **DFTG 1396 Special Topics in Computer Graphics: Piping Design Systems**

**Credit: 3 (2 lecture, 4 lab)**

Provides training in 3D modeling. Create walk throughs allowing operations and maintenance personnel to interactively view the plant before it is constructed.

## **DFTG 2300 Intermediate Architectural Drafting-Residential**

*Prerequisites: DFTG 1317; Must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (2 lecture, 4 lab)*

Continued application of principles and practices used in residential construction.

## **DFTG 2302 Machine Drafting**

*Prerequisites: DFTG 1333; Must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (2 lecture, 4 lab)*

Production of detail and assembly drawings of machine, threads, gears, cams, tolerances and limit dimensioning, surface finishes, and precision drawings.

## **DFTG 2305 Printed Circuit Board Design**

*Prerequisites: DFTG 1358; Must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (2 lecture, 4 lab)*

Course includes single-sided and double-sided printed circuit board design, emphasizing the drawings, standards, and processes required to layout printed circuit board and manufacturing documentation.

## **DFTG 2306 Machine Design**

*Prerequisites: DFTG 2302; Must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (2 lecture, 4 lab)*

Theory and practice of design. Projects in problem solving, including press fit, bolted and welded joints, and transmission components.

## **DFTG 2308 Instrumentation Drafting**

*Prerequisites: DFTG 2323; Must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (2 lecture, 4 lab)*

Principles of instrumentation as applicable to industrial applications; fundamentals of measurements and control devices; currently used ISA (Instrument Society of America) symbology; basic flow sheet layout, and drafting practices.

## **DFTG 2316 Electrical Drafting**

*Prerequisites: DFTG 1405 and DFTG 1309.*

*Credit: 3 (2 lecture, 4 lab)*

A study of electrical drawing preparation as applied to commercial and industrial standards.

## **DFTG 2317 Descriptive Geometry**

*Prerequisites: DFTG 1405 and DFTG 1309; Must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (2 lecture, 4 lab)*

Graphical solutions to problems involving points, lines, and planes in space.

## **DFTG 2319 Intermediate Computer-Aided Drafting (AutoCAD)**

*Prerequisites: DFTG 1309 and DFTG 1405; Must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (2 lecture, 4 lab)*

A continuation of practices and techniques used in basic computer-aided drafting emphasizing advanced dimensioning techniques, the development and use of prototype drawings, construction of pictorial drawings, construction of 3-dimensional drawings, interfacing 2-D and 3-D environments and extracting data.

## **DFTG 2321 Topographical Drafting**

*Prerequisites: DFTG 1405 and DFTG 1309*

*Credit: 3 (2 lecture, 4 lab)*

Plotting of surveyor's field notes. Includes drawing elevations, contour lines, plan and profiles, and laying out traverses.

## **DFTG 2323 Pipe Drafting**

*Prerequisites: DFTG 1405 and DFTG 1309; Must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (2 lecture, 4 lab)*

A study of pipe fittings, symbols, specifications, and their applications to a piping process system. Creation of symbols and their usage in flow diagrams, plans, elevations, and isometrics.

## **DFTG 2327 Landscape Drafting**

*Prerequisites: DFTG 1405 and DFTG 1309*

*Credit: 3 (2 lecture, 4 lab)*

A study of site planning and landscape design.

## **DFTG 2328 Architectural Drafting -**

## **Commercial**

*Prerequisites: DFTG 1317; Must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (2 lecture, 4 lab)*

Architectural drafting procedures, practices, and symbols including the preparation of detailed working drawings for a commercial building, with emphasis on commercial construction methods.

## **DFTG 2330 Civil Drafting**

*Prerequisites: DFTG 1405 and DFTG 1309; Must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (2 lecture, 4 lab)*

An in-depth study of drafting methods and principles used in civil engineering.

## **DFTG 2331 Advanced Technologies in Architectural Design and Drafting (Revit-Commercial)**

*Prerequisites: DFTG 1376; Must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (2 lecture, 4 lab)*

Use of architectural specific software to execute the elements required in designing standard architectural exhibits utilizing custom features to create walls, windows and specific design requirements for construction in residential/commercial and industrial architecture.

## **DFTG 2332 Advanced Computer-Aided Drafting**

*Prerequisites: DFTG 2319; Must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (2 lecture, 4 lab)*

Advanced techniques, including the use of a customized system. Presentation of advanced drawing applications, such as three-dimensional solids modeling and linking graphic entities to external non-graphic data.

## **DFTG 2335 Advanced Technologies in Mechanical Design and Drafting (Inventor)**

*Prerequisites: DFTG 2319; Must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (2 lecture, 4 lab)*

Use parametric based mechanical design software for mechanical assembly design and drafting.

## **DFTG 2338 Final Project-Advanced Drafting**

*Prerequisites: DFTG 1405 and DFTG 1309  
Must be at the last semesters before obtaining Drafting Certificate or AAS Degree.*

*Credit: 3 (2 lecture, 4 lab)*

A drafting course in which students participate in a comprehensive project from conception to conclusion. This course is designed to be repeated multiple times to improve student proficiency.

# Course Descriptions

## **DFTG 2340 Solid Modeling/Design (SolidWorks)**

*Prerequisites: DFTG 2319; Must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (2 lecture, 4 lab)*

A computer-aided modeling course. Development of three-dimensional drawings and models from engineering sketches and orthographic drawings and utilization of three-dimensional models in design work. This course is designed to be repeated multiple times to improve student proficiency.

## **DFTG 2345 Advanced Pipe Drafting**

*Prerequisites: DFTG 2323; Must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (2 lecture, 4 lab)*

A continuation of pipe drafting concepts building on the basic principles acquired in pipe drafting.

## **DFTG 2358 Advanced Machine Design**

*Prerequisites: DFTG 2306; Must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (2 lecture, 4 lab)*

Design process skills for the production of complete design package, which includes jig and fixture design, extrusion dies, and injection mold design.

## **DFTG 2370 Intermediate Computer-Aided Drafting-Microstation**

*Prerequisites: DFTG 1310; Must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (2 lecture, 4 lab)*

A continuation of practices and techniques used in the basic computer-aided drafting (Microstation), emphasizing advanced dimensioning techniques, the development and use of prototype drawings, construction of pictorial drawings, construction of three (3) dimensional drawings, interfacing 2D and 3D environments and extracting data.

## **DFTG 2371 Advanced Technologies in Process Plant Design-(AutoPlant)**

*Prerequisite: DFTG 2323, DFTG 2319 or 2370; Must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (2 lecture, 4 lab)*

Use process plant based mechanical design software for specific applications in industrial design and drafting.

## **DFTG 2372 Piping Plans and Process Equipment**

*Prerequisites: DFTG 2319 or DFTG 2370 or Departmental Approval; Must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (2 lecture, 4 lab)*

A continuation of process pipe design concepts, building on the principles acquired in Process Plant Layout.

## **DFTG 2373 Piping Design Management System (PDMS)**

*Prerequisites: DFTG 2319; Must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (2 lecture, 4 lab)*

Uses process plant management systems based Piping design software for 2D and 3D modeling design and drafting.

## **DFTG 2374 Civil 3D**

*Prerequisites: DFTG 1405, DFTG 1309, DFTG 2330; Must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (2 lecture, 4 lab)*

DFTG 2374 Civil 3D covers the essentials of Autodesk Civil 3D. Students learn how to work with point data in Autodesk Civil 3D, how to create and analyze a surface, how to develop a site, how to model roads, corridors, and pipe networks, how to work with survey data, and how to import and export data. Hands-on exercises throughout the course explore how to create 2D and 3D drawings.

## **DFTG 2375 Geographic Information Science (GIS)**

*Prerequisites: DFTG 1405 and DFTG 1309. Must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (2 lecture, 4 lab)*

DFTG 2375 Introduction to GIS is designed to teach students: general application of GIS software, acquire qualitative methods skills in data and document gathering, analyzing information, and presenting results.

## **DFTG 2380 Cooperative Education - Drafting and Design Technology/ Technician, General**

*Prerequisite: Completed at least 12 semester hours in Drafting Certificate Program and Departmental Approval.*

*Credit: 3 (1 lecture, 20 lab)*

Career-related activities encountered in the student's area of specialization offered through an individualized agreement among the college, employer, and student. Under the supervision of the college and the employer, the student combines classroom learning with work experience. Includes a lecture component.

## **DFTG 2381 Cooperative Education - Drafting and Design Technology/ Technician, General**

**Prerequisite: Completed at least 32 semester hours in Drafting Certificate Program and Departmental Approval.**

*Credit: 3 (1 lecture, 20 lab)*

Career-related activities encountered in the student's area of specialization offered through an individualized agreement among the college, employer, and student. Under the supervision of the college and the employer, the student combines

classroom learning with work experience. Includes a lecture component.

## **DHYG 1123 Dental Hygiene Practice**

*Prerequisites: Completion of first year dental hygiene curriculum with 75% or higher in all dental hygiene courses.*

*Credit: 1 (1 lecture, 1 lab)*

Practice settings for the dental hygienist including office management, employment considerations, resume preparation, and job interviewing. Emphasis on the laws governing the practice of dentistry and dental hygiene, moral standards, and the ethical standards established by the dental hygiene profession.

## **DHYG 1207 General & Dental Nutrition**

*Prerequisites: Completion of first year dental hygiene curriculum with 75% or higher in all dental hygiene courses. Must be placed into college-level reading, college-level writing and MATH 0312 in math.*

*Credit: 2 (2 lecture)*

General nutrition and nutritional biochemistry with emphasis on the effects of nutrition, dental health, diet, and application of counseling strategies.

## **DHYG 1211 Periodontology**

*Prerequisites: Completion of first semester dental hygiene curriculum with 75% or higher in all dental hygiene courses. Must be placed into college-level reading, college-level writing and MATH 0312 in math.*

*Credit: 2 (2 lecture)*

Normal and diseased periodontium including the structural, functional, and environmental factors. Emphasis on etiology, pathology, treatment modalities, and therapeutic and preventive periodontics.

## **DHYG 1215 Community Dentistry**

*Prerequisites: Completion of first year of dental hygiene curriculum with 75% or higher in all dental hygiene courses. Must be placed into college-level reading, college-level writing and MATH 0312 in math.*

*Credit: 2 (2 lecture, 1 lab)*

The principles and concepts of community public health and dental health education emphasizing community assessment, educational planning, implementation, and evaluation including methods and materials used in teaching dental health education in various community settings.

## **DHYG 1227 Preventive Dental Hygiene Care**

*Prerequisites: BIOL 2401, CHEM 1305, ENGL 1301; Admission to the Dental Hygiene Program. Must be placed into college-level reading, college-level writing and MATH 0312 in math.*

*Credit: 2 (2 lecture, 1 lab)*

The dental hygienist in the dental health care system emphasizing the basic concepts of disease prevention and health promotion. Communication

# Course Descriptions

and behavior modification skills are utilized to facilitate the role of the dental hygienist as an educator.

## **DHYG 1235 Pharmacology For The Dental Hygienist**

*Prerequisites: Completion of first year dental hygiene curriculum with 75% or higher in all dental hygiene courses. Must be placed into college-level reading, college-level writing and MATH 0312 in math.*

*Credit: 2 (2 lecture)*

Classes of drugs and their uses, actions, interactions, side effects, contraindications, and systemic and oral manifestations with emphasis on dental applications

## **DHYG 1260 Clinical - Dental Hygiene/ Hygienist**

*Prerequisites: Completion of first year dental hygiene curriculum with 75% or higher in all dental hygiene courses. Must be placed into college-level reading, college-level writing and MATH 0312 in math.*

*Credit: 2 (12 lab)*

A health-related work-based learning experience that enables the student to apply specialized occupational theory, skills, and concepts. Direct supervision is provided by the clinical professional.

## **DHYG 1261 Clinical - Dental Hygiene/ Hygienist**

*Prerequisites: Completion of first year dental hygiene curriculum with 75% or higher in all dental hygiene courses. Must be placed into college-level reading, college-level writing and MATH 0312 in math.*

*Credit: 2 (8 lab)*

A health-related work-based learning experience that enables the student to apply specialized occupational theory, skills, and concepts. Direct supervision is provided by the clinical professional.

## **DHYG 1301 Orofacial Anatomy, Histology & Embryology**

*Prerequisites: BIOL 2401, CHEM 1305, ENGL 1301; Admission to the Dental Hygiene Program. Must be placed into college-level reading, college-level writing and MATH 0312 in math.*

*Credit: 3 (3 lecture, 1 lab)*

The histology and embryology of oral tissues, gross anatomy of the head and neck, tooth morphology, and individual tooth identification.

## **DHYG 1304 Dental Radiology**

*Prerequisites: BIOL 2401, CHEM 1305, ENGL 1301; Admission to the Dental Hygiene Program. Must be placed into college-level reading, college-level writing and MATH 0312 in math.*

*Credit: 3 (2 lecture, 4 lab)*

Radiation physics, biology, hygiene, and safety theories with an emphasis on the fundamentals of oral radiographic techniques and interpretation of radiographs. Includes exposure of intra-oral radiographs, quality assurance, radiographic interpretation, patient selection criteria, and other

ancillary radiographic techniques.

## **DHYG 1319 Dental Materials**

*Prerequisites: Completion of first/second semester dental hygiene curriculum with 75% or higher in all dental hygiene courses. Must be placed into college-level reading, college-level writing and MATH 0312 in math.*

*Credit: 3 (2 lecture, 2 lab)*

Physical and chemical properties of dental materials including the application and manipulation of the various materials used in dentistry.

## **DHYG 1331 Preclinical Dental Hygiene**

*Prerequisites: BIOL 2401, CHEM 1305, ENGL 1301; Admission to the Dental Hygiene Program. Must be placed into college-level reading, college-level writing and MATH 0312 in math.*

*Credit: 3 (1 lecture, 7 lab)*

Foundational knowledge for performing clinical skills on patients with emphasis on principles, procedures, and professionalism for performing comprehensive oral prophylaxis.

## **DHYG 1339 General And Oral Pathology**

*Prerequisites: Completion of first semester dental hygiene curriculum with 75% or higher in all dental hygiene courses. Must be placed into college-level reading, college-level writing and MATH 0312 in math.*

*Credit: 3 (3 lecture)*

Disturbances in human body development, diseases of the body, and disease prevention measures with emphasis on the oral cavity and associated structures.

## **DHYG 2201 Contemporary Dental Hygiene Care I**

*Prerequisites: Completion of first semester dental hygiene curriculum with 75% or higher in all dental hygiene courses. Must be placed into college-level reading, college-level writing and MATH 0312 in math.*

*Credit: 2 (2 lecture, 1 lab)*

Dental hygiene care for the medically or dentally compromised patient including supplemental instrumentation techniques.

## **DHYG 2231 Contemporary Dental Hygiene Care II**

*Prerequisites: Completion of first year dental hygiene curriculum with 75% or higher in all dental hygiene courses. Must be placed into college-level reading, college-level writing and MATH 0312 in math.*

*Credit: 2 (2 lecture)*

A continuation of Contemporary Dental Hygiene Care I. Dental hygiene care for the medically or dentally compromised patient including advanced instrumentation techniques.

## **DHYG 2360 Clinical - Dental Hygiene/ Hygienist III**

*Prerequisites: Completion of first year dental hygiene curriculum with 75% or higher in all dental hygiene courses. Must be placed into college-level reading, college-level writing and*

*MATH 0312 in math.*

*Credit: 3 (16 lab)*

Intermediate Level: A health-related work-based learning experience that enables the student to apply specialized occupational theory, skills, and concepts. Direct supervision is provided by the clinical professional.

## **DHYG 2361 Clinical - Dental Hygiene/ Hygienist IV**

*Prerequisites: Completion of first year dental hygiene curriculum with 75% or higher in all dental hygiene courses. Must be placed into college-level reading, college-level writing and MATH 0312 in math.*

*Credit: 3 (16 lab)*

Advanced Level: A health-related work-based learning experience that enables the student to apply specialized occupational theory, skills, and concepts. Direct supervision is provided by the clinical professional.

## **DMSO 1202 Basic Ultrasound Physics**

*Prerequisites: Admission to the program; must be placed into college-level reading, writing and math.*

*Credit: 2 (1 lecture, 3 lab)*

Basic acoustical physics and acoustical waves in human tissue. Emphasis is on ultrasound transmission in soft tissues, attenuation of sound energy, parameters affecting sound transmission and resolution of sound beams.

## **DMSO 1210 Introduction to Sonography**

*Prerequisites: Admission to the program; must be placed into college-level reading, writing and math.*

*Credit: 2 (1 lecture, 2 lab)*

An introduction to the profession of sonography and the role of the sonographer. Emphasis on medical terminology, ethical/legal aspects, written and verbal communication, and professional issues relating to registry, accreditation, professional organizations and history of the profession.

## **DMSO 1266 Practicum (or Field Experience)-Diagnostic Medical Sonography/Sonographer and Ultrasound Technician**

*Prerequisites: DMSO 1302, 1355, 1441, 1451; must be placed into college-level reading, writing and math.*

*Credit: 2 (16 lab)*

Practical, general workplace training supported by an individualized learning plan developed by the employer, college, and student.

## **DMSO 1342 Intermediate Ultrasound Physics**

*Prerequisites: DMSO 1302; must be placed into college-level reading, writing and math.*

*Credit: 3 (3 lecture, 1 lab)*

Continuation of Basic Ultrasound Physics. Includes interaction of ultrasound with tissues, mechanics of ultrasound production and display, various

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transducer designs and construction, quality assurance, bioeffects, and image artifacts. May introduce methods of Doppler flow analysis.

## **DMSO 1355 Sonographic Pathophysiology**

*Prerequisites: Admission to program; must be placed into college-level reading, writing and math.*

*Credit: 3 (2 lecture, 2 lab)*

Pathology and pathophysiology of the abdominal structures visualized with ultrasound. Includes abdomen, pelvis, and superficial structures.

## **DMSO 1441 Abdominopelvic Sonography**

*Prerequisites: Admission to program; must be placed into college-level reading, writing and math.*

*Credit: 4 (3 lecture, 4 lab)*

Normal anatomy and physiology of the abdominal and pelvic cavities as related to scanning techniques, transducer selection, and scanning protocols.

## **DMSO 1451 Sonographic Sectional Anatomy**

*Prerequisites: Admission to program; must be placed into college-level reading, writing and math.*

*Credit: 4 (3 lecture, 2 lab)*

Sectional anatomy of the male and female body. Includes anatomical relationships of organs, vascular structures, and body planes and quadrants.

## **DMSO 2130 Advanced Ultrasound and Review**

*Prerequisites: Admission to program; must be placed into college-level reading, writing and math.*

*Credit: 1 (3 lab)*

Knowledge, skills, and professional values within a legal and ethical framework addressing emerging technologies and professional development.

## **DMSO 2243 Advanced Ultrasound Physics**

*Prerequisites: DMSO 1302, DMSO 1342 and DMSO 2351; must be placed into college-level reading, writing and math.*

*Credit: 2 (2 lecture)*

Theory and application of ultrasound principles. Includes advances in ultrasound technology.

## **DMSO 2253 Sonography of Superficial Structures**

*Prerequisites: DMSO 2405; must be placed into college-level reading, writing and math.*

*Credit: 2 (1 lecture, 2 lab)*

Detailed study of normal and pathological superficial structures as related to scanning techniques, patient history and laboratory data, transducer selection and scanning protocols.

## **DMSO 2266 Practicum (or Field Experience)-Diagnostic Medical Sonography/Sonographer and**

## **Ultrasound Technician**

*Prerequisites: DMSO 1266; must be placed into college-level reading, writing and math.*

*Credit: 2 (16 lab)*

Practical, general workplace training supported by an individualized learning plan developed by the employer, college, and student.

## **DMSO 2342 Sonography of High Risk Obstetrics**

*Prerequisites: DMSO 2405; must be placed into college-level reading, writing and math.*

*Credit: 3 (3 lecture)*

Maternal disease and fetal abnormalities. Includes scanning techniques, patient history and laboratory data, transducer selection, and scanning protocols.

## **DMSO 2351 Doppler Physics**

*Prerequisites: DMSO 1342; must be placed into college-level reading, writing and math.*

*Credit: 3 (3 lecture)*

Doppler and hemodynamic principles relating to arterial and venous imaging and testing.

## **DMSO 2405 Sonography of Obstetrics/ Gynecology**

*Prerequisites: DMSO 1355, DMSO 1451; must be placed into college-level reading, writing and math.*

*Credit: 4 (4 lecture, 1 lab)*

Detailed study of the pelvis and obstetrics/ gynecology as related to scanning techniques, patient history and laboratory data, transducer selection and scanning protocols.

## **DMSO 2441 Sonography of Abdominopelvic Pathology**

*Prerequisites: DMSO 1355, DMSO 1441, DMSO 1451; must be placed into college-level reading, writing and math.*

*Credit: 4 (3 lecture, 2 lab)*

Pathologies and disease states of the abdomen and pelvis as related to scanning techniques, patient history and laboratory data, transducer selection, and scanning protocols. Emphasizes endocavitary sonographic anatomy and procedures including pregnancy.

## **DMSO 2467 Practicum (or Field Experience)-Diagnostic Medical Sonography/Sonographer and Ultrasound Technician**

*Prerequisites: All DMSO courses; must be placed into college-level reading, writing and math.*

*Corequisites: DMSO 2243, DMSO 2245*

*Credit: 4 (32 lab)*

Practical, general workplace training supported by an individualized learning plan developed by the employer, college, and student.

## **DNTA 1102 Communication and Behavior in the Dental Office**

*Prerequisites: DNTA 1167, ENGL 1301, MATH 0306*

*Credit: 1 (1 lecture)*

The study of human interaction and communication in the dental office.

## **DNTA 1167 Practicum-Dental Assistant**

*Prerequisites: DNTA 1305, DNTA 1245, DNTA 1401, DNTA 1411, DNTA 1415, ENGL 1301, MATH 0306*

*Credit: 1 (10 lab)*

Practical, general workplace training supported by an individualized learning plan developed by the employer, college, and student.

## **DNTA 1245 Preventive Dentistry**

*Prerequisites: Program Admittance, ENGL 1301, MATH 0306*

*Credit: 2 (2 lecture, 1 lab)*

The study of nutrition and preventable dental disease and community dental health.

## **DNTA 1305 Dental Radiology**

*Prerequisites: Program Admittance, ENGL 1301*

*Credit: 3 (2 lecture, 3 lab)*

Introduction to radiation physics, radiation protection, and the operation of radiographic equipment. Instruction in exposure, processing and mounting of dental radiographs, and study of federal and state safety and standard practices.

## **DNTA 1349 Dental Radiology in the Clinic**

*Prerequisites: DNTA 1305, ENGL 1301*

*Credit: 3 (2 lecture, 3 lab)*

The practical application of exposing, processing, and mounting diagnostically acceptable radiographs obtained by utilizing various radiographic techniques.

## **DNTA 1351 Dental Office Management**

*Prerequisites: DNTA 1415, ENGL 1301*

*Credit: 3 (3 lecture)*

Use computers and or manual systems to process dental information and interpret and practice learned dental office management skills.

## **DNTA 1401 Dental Materials**

*Prerequisites: Program Admittance, ENGL 1301*

*Credit: 4 (3 lecture, 2 lab)*

Composition, properties, procedures and safety standards related to dental materials.

## **DNTA 1411 Dental Science**

*Prerequisites: Program Admittance, ENGL 1301*

*Credit: 4 (4 lecture)*

A fundamental study of anatomical systems with emphasis placed on head and neck anatomy. Topics include embryology of the teeth along with basic dental terminology.

## **DNTA 1415 Chairside Assisting**

*Prerequisites: Program Admittance, ENGL 1301*

*Credit: 4 (3 lecture, 3 lab)*

A study of pre-clinical chairside assisting procedures, instrumentation, OSHA and other regulatory agencies' standards.

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## **DNTA 1447 Advanced Dental Science**

*Prerequisites: DNTA 1411, ENGL 1301*

*Credit: 4 (4 lecture)*

An advanced study of anatomical systems, pharmacology, oral pathology, and developmental abnormalities.

## **DNTA 1453 Dental Assisting Applications**

*Prerequisites: DNTA 1401, DNTA 1415, ENGL 1301*

*Credit: 4 (3 lecture, 3 lab)*

An extended study of dental assisting techniques with emphasis on four-handed dentistry and utilization of armamentarium for general practice and specialty procedures.

## **DNTA 2130 Seminar for the Dental Assistant**

*Prerequisites: DNTA 1167, DNTA 1349, DNTA 1351, DNTA 1447, DNTA 1453, ENGL 1301*

*Credit: 1 (1 lecture)*

Analysis of case studies during the clinical phase of practicum/clinical.

## **DNTA 2267 Practicum-Dental Assistant**

*Prerequisites: DNTA 1167, DNTA 1349, DNTA 1351, DNTA 1447, DNTA 1453, ENGL 1301*

*Credit: 2 (15 lab)*

Practical, general workplace training supported by an individualized learning plan developed by the employer, college, and student.

## **DRAM 1161 Musical Theatre I**

*Prerequisites: Must be placed into GUST 0342 (or higher) in reading and ENGL 0310/0349 (or higher) in writing.*

*Credit: 1 (0 lecture, 4 lab)*

Focus on the study and performance of works from the musical theatre repertory, including musical comedy, reviews, operetta, and basic vocal and movement skills. Theatre attendance and/or assistance in college productions required. (Formerly DRAM 1172)

## **DRAM 1162 Musical Theatre II**

*Prerequisites: Must be placed into GUST 0342 (or higher) in reading and ENGL 0310/0349 (or higher) in writing.*

*Credit: 1 (0 lecture, 4 lab)*

Focus on the study and performance of works from the musical theatre repertory, including musical comedy, reviews, operetta, and basic vocal and movement skills. Theatre attendance and/or assistance in college productions required.

## **DRAM 1310 Introduction to Theatre**

*Prerequisites: Must be placed into GUST 0342 (or higher) in reading and ENGL 0310/0349 (or higher) in writing.*

*Credit: 3 (3 lecture)*

Basic principles of theatre, including the various styles of theatrical production and present practices in the theatre. Required of majors. Open to non-majors. This course satisfies the Creative Arts or Component Area Option of the HCC core.

## **DRAM 1320 Performance**

*Prerequisites: Must be placed into GUST 0342 (or higher) in reading and ENGL 0310/0349 (or higher) in writing.*

*in writing.*

*Credit: 3 (2 lecture, 4 lab)*

This class is devoted to the rehearsal and performance of one or more plays and is designed to give the student experience in applying his performance techniques for an audience.

## **DRAM 1322 Stage Movement**

*Prerequisites: Must be placed into GUST 0342 (or higher) in reading and ENGL 0310/0349 (or higher) in writing.*

*Credit: 3 (2 lecture, 2 lab)*

A course to develop the actor's expressive use of the body through pantomime, tumbling, acrobatics, fencing, and stage fighting.

## **DRAM 1330 Basic Theatre Practice I**

*Prerequisites: Must be placed into GUST 0342 (or higher) in reading and ENGL 0310/0349 (or higher) in writing.*

*Credit: 3 (2 lecture, 2 lab)*

Stagecraft, stage properties, and makeup. Practical experience on technical crews is provided. Laboratory hours may be arranged. Required of majors. Open to non-majors.

## **DRAM 1341 Stage Makeup**

*Prerequisites: Must be placed into GUST 0342 (or higher) in reading and ENGL 0310/0349 (or higher) in writing.*

*Credit: 3 (3 lecture)*

Principles of straight and character makeup. Student must purchase basic makeup kit. Theatre attendance and/or assistance in college productions required. Required of majors. Open to non-majors.

## **DRAM 1351 Acting I**

*Prerequisites: Must be placed into GUST 0342 (or higher) in reading and ENGL 0310/0349 (or higher) in writing.*

*Credit: 3 (2 lecture, 2 lab)*

An introduction to the problems of internal acting technique, creation of visual images, reaction to stimulus, and creation of inner life of character. Scene work: finding beats, developing subtext, and playing intentions. Theatre attendance and/or assistance in college productions required. Required of majors. Open to non-majors. Core Curriculum Course.

## **DRAM 1352 Acting II**

*Prerequisites: Must be placed into GUST 0342 (or higher) in reading and ENGL 0310/0349 (or higher) in writing.*

*Credit: 3 (2 lecture, 2 lab)*

An introduction to the problems of external acting technique with emphasis on characterization using animal, color and inanimate object improvisational techniques. Scene work focuses on comedic technique including analyzing incongruities, playing opposites, and timing. Theatre attendance and/or assistance in college productions required. Required of majors. Open to non-majors.

## **DRAM 2331 Basic Theatre Practice II**

*Prerequisites: Must be placed into GUST 0342 (or higher) in reading and ENGL 0310/0349 (or higher) in writing.*

*Credit: 3 (2 lecture, 2 lab)*

A continuation of DRAM 1330. Required of majors. Open to non-majors.

## **DRAM 2336 Vocal Production**

*Recommended Prerequisite: SPCH 1342; Must be placed into GUST 0342 (or higher) in reading and ENGL 0310/0349 (or higher) in writing.*

*Credit: 3 (3 lecture)*

Emphasis on vocal production: breathing and support, resonance, pitch, range, quality projection. Emphasis on oral interpretation skills. SPCH 1342 recommended.

## **DRAM 2337 Voice for the Actor I**

*Prerequisites: SPCH 1342, DRAM 2336, or Department Approval; Must be placed into GUST 0342 (or higher) in reading and ENGL 0310/0349 (or higher) in writing.*

*Credit: 3 (3 lecture)*

Acting with voice: combining proper production techniques and correct pronunciation and articulation, the actor learns to be expressive vocally. Analysis of the emotional potential of vowel and consonant sounds and combinations. Scansion, phrasing, rhythm and dynamics.

## **DRAM 2338 Voice for the Actor II**

*Prerequisites: SPCH 1342 or a demonstrable knowledge of the IPA; Must be placed into GUST 0342 (or higher) in reading and ENGL 0310/0349 (or higher) in writing. Credit: 3 (3 lecture)*

Accents and dialects. Using the International Phonetic Alphabet (IPA) students learn the alterations from English needed to produce correctly the sounds of most needed foreign accents, including standard British, Cockney, French, German, American New York, and Southerners, among others.

## **DRAM 2351 Acting III**

*Prerequisites: DRAM 1351, 1352 or Department Approval; Must be placed into GUST 0342 (or higher) in reading and ENGL 0310/0349 (or higher) in writing.*

*Credit: 3 (2 lecture, 2 lab)*

A study of classical acting style with an emphasis on Shakespeare. Special attention is paid to movement and vocal technique dealing with the problems of period movement and heightened language.

## **DRAM 2361 History of the Theatre**

*Prerequisites: Must be placed into GUST 0342 (or higher) in reading and ENGL 0310/0349 (or higher) in writing.*

*Credit: 3 (3 lecture)*

Survey of the theatre from its beginning. This course satisfies the Creative Arts or Component Area Option of the HCC core.

## **DRAM 2366 Introduction to Cinema**

*Prerequisites: Must be placed into GUST 0342 (or higher) in reading and ENGL 0310/0349 (or higher) in writing.*

*Credit: 3 (3 lecture)*

Emphasis on the analysis of the visual and aural aspects of selected motion pictures, dramatic aspects of narrative films, and historical growth and sociological effect of film as an art. This course

# Course Descriptions

satisfies the Creative Arts or Component Area Option of the HCC core.

## **DRAM 2367 The Art of Film Making**

*Prerequisites: Must be placed into GUST 0342 (or higher) in reading and ENGL 0310/0349 (or higher) in writing.*

*Credit: 3 (3 lecture)*

The analysis of key masterworks of American and international films with particular emphasis on works by famed and influential directors.

## **DRAM 2389 Academic Cooperative in Drama**

*Prerequisites: Must be placed into GUST 0342 (or higher) in reading and ENGL 0310/0349 (or higher) in writing.*

*Credit: 3 (1 lecture, 16 lab)*

An instructional program designed to integrate on-campus study with practical hands-on experience in drama. In conjunction with class seminars, the individual student will set specific goals and objectives in the study of drama.

## **ECON 1301 Introduction to Economics**

*Credit: 3 (3 lecture)*

Examination of the structure and operation of the American economic system. Introduction to selected economic principles essential to the understanding of contemporary issues. May not be substituted for ECON 2301 or ECON 2302.

## **ECON 2289 Academic Cooperative in Economics**

*Prerequisites: Department Approval*

*Credit: 3 (1 lecture, 16 lab)*

An instructional program designed to integrate on-campus study with practical hands-on experience in economics. In conjunction with class seminars, the individual student will set specific goals and objectives in the study of human social behavior and/or social institutions.

## **ECON 2301 Principles of Macroeconomics**

*Prerequisites: Must be placed into college-level reading and be placed into MATH 0308 (or higher) and be placed into ENGL 0310/0349 (or higher) in writing.*

*Credit: 3 (3 lecture)*

Macroeconomics examines the fundamentals of the American economy as it relates to social welfare. Emphasis is on basic concepts and theories as they affect domestic and international markets. This course integrates behavioral social sciences to present solutions to real world problems. Macroeconomics includes measurements of GDP, fiscal and monetary policy. Core Curriculum Course.

## **ECON 2302 Principles of Microeconomics**

*Prerequisites: Must be placed into college-level reading and be placed into MATH 0308 (or higher) and be placed into ENGL 0310/0349 (or higher) in writing.*

*Credit: 3 (3 lecture)*

Microeconomics examines the fundamentals of the American economy as it relates to business and individual welfare. Emphasis is on basic concepts and theories as they affect domestic and international markets. Microeconomics includes

cost and production decisions and discusses the role of competition, monopolies and oligopolies. Core Curriculum Course.

## **ECON 2289 Academic Cooperative in Economics**

*Prerequisites: Department Approval*

*Credit: 3 (1 lecture, 16 lab)*

An instructional program designed to integrate on-campus study with practical hands-on experience in economics. In conjunction with class seminars, the individual student will set specific goals and objectives in the study of human social behavior and/or social institutions.

## **ECON 2389 Academic Cooperative in Economics**

*Prerequisites: Department Approval*

*Credit: 3 (1 lecture, 16 lab)*

An instructional program designed to integrate on-campus study with practical hands-on experience in economics. In conjunction with class seminars, the individual student will set specific goals and objectives in the study of human social behavior and/or social institutions.

## **ECRD 1211 Electrocardiography**

*Prerequisites: Must be placed into GUST 0342 in reading, ENGL 0310 or 0349 in writing and MATH 0308 in math.*

*Credit: 2 (1 lecture, 3 lab)*

Fundamentals of cardiovascular anatomy and physiology. Includes basic electrocardiography procedures, interpretation of basic dysrhythmias, and appropriate treatment modalities.

## **EDUC 1300 Learning Framework**

*Prerequisites: Must be placed into GUST 0341 (or higher).*

*Credit: 3 (3 lecture)*

EDUC 1300 is a study of the research and theory in the psychology of learning, cognition, and motivation; factors that impact learning; and application of learning strategies. Theoretical models of strategic learning, cognition, and motivation serve as the conceptual basis for the introduction of college-level student academic strategies. In addition, the course focuses on numerous college, career, and life management topics necessary for students to make the most of their college investment. Core curriculum course.

## **EDUC 1301 Introduction to Education**

*Prerequisites: Must be placed into college-level reading and college-level writing.*

*Credit: 3 (3 lecture)*

An enriched, integrated pre-service course and content experience that provides active recruitment and institutional support of students interested in a teaching career, especially in high need fields. The course provides students with opportunities to participate in early field observations at all levels of P-12 schools with varied and diverse student populations and provides students with support from college and school faculty,

preferably in small cohort groups, for the purpose of introduction to and analysis of the culture of schooling and classrooms. Course content should be aligned as applicable with State Board for Educator Certification Pedagogy and Professional Responsibilities standards; and the course must include a minimum of 16 contact hours of field experience in P-12 classrooms.

## **EDUC 1325 Multicultural Education**

*Prerequisite/Corequisite: EDUC 1301; Must be placed into college-level reading and college-level writing.*

*Credit: 3 (3 lecture)*

An examination of cultural diversity found in society and reflected in the classroom. Topics will include the study of major cultures and their influence on lifestyle, behavior, learning, intercultural communication and teaching, as well as psychosocial stressors encountered by diverse cultural groups.

## **EDUC 2301 Introduction to Special Populations**

*Prerequisites: EDUC 1301; Must be placed into college-level reading and college-level writing.*

*Credit: 3 (3 lecture)*

An enriched, integrated pre-service course and content experience that provides an overview of schooling and classrooms from the perspectives of language, gender, socioeconomic status, ethnic and academic diversity, and equity with an emphasis on factors that facilitate learning. The course provides students with opportunities to participate in early field observations of P-12 special populations and should be aligned as applicable with State Board for Educator Certification Pedagogy and Professional Responsibilities standards. Must include a minimum of 16 contact hours of field experience in P-12 classrooms with special populations.

## **EECT 1440 Telecommunications Transmission Media**

*Prerequisites: Department Approval. Must be placed into college-level reading, ENGL 0310 or 0349 in writing and MATH 0312 in math or Department Approval.*

*Credit: 4 (3 lecture, 2 lab)*

Fundamentals of telecommunications media, including installation, maintenance, and troubleshooting. Topics address media characteristics and connectorization.

## **EECT 2337 Wireless Telephony Systems**

*Prerequisites: EECT 2439, Department Approval. Must be placed into college-level reading, ENGL 0310 or 0349 in writing and MATH 0312 in math.*

*Credit: 3 (2 lecture, 4 lab)*

Principles of wireless/cellular telephony systems to include call processing, hand-off, site analysis, antenna radiation patterns, commonly used test/maintenance equipment and access protocol.

## **EECT 2402 Voice Over Internet Protocol**

# Course Descriptions

## **(VOIP) Systems (NOT IN DB)**

*Prerequisites: ITCC 1401 or CPMT 1449 Department Approval.*

*Credit: 4 (3 lecture, 3 lab)*

The fundamentals of Voice Over Internet Protocol (VoIP) and the integrations between VoIP and the Public Switched Telephone Network (PSTN), including setup, testing, maintenance, and troubleshooting.

## **EECT 2433 Telephone Systems**

*Prerequisites: CETT 1409 or Department Approval; Must be placed into college-level reading, ENGL 0310 or 0349 in writing and MATH 0312 in math.*

*Credit: 4 (3 lecture, 3 lab)*

Study of installation and maintenance systems including telephone set, public switched networks, local exchanges, networks, two- and four-wire systems, tip and ringing requirements, and digital transmission techniques.

## **EECT 2439 Communications Circuits**

*Prerequisites: CETT 1429 or Department Approval; Must be placed into college-level reading, ENGL 0310 or 0349 in writing and MATH 0312 in math.*

*Credit: 4 (3 lecture, 3 lab)*

A study of communications systems with emphasis on amplitude modulation, frequency modulation, phase modulation, and digital pulse modulation. Discussion of several types of modulators, demodulators, receivers, transmitters, and transceivers.

## **EEIR 1307 Introductory Security Systems**

*Prerequisites: ELPT 1311; Must be placed into GUST 0339 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (2 lecture, 3 lab)*

A study of the security system components, maintenance, troubleshooting, and repair procedures. Emphasis on the installation of security systems as directed.

## **EEIR 1345 Intermediate Security Systems**

*Prerequisites: EEIR 1307; Must be placed into GUST 0339 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (2 lecture, 3 lab)*

A study of maintenance, troubleshooting, and repair of security systems of moderate complexity. Emphasis on the maintenance of security systems with limited instructor direction.

## **ELMT 1301 Programmable Logic Controllers**

*Prerequisite/Corequisite: ELPT 1341; must be placed into GUST 0339 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (2 lecture, 3 lab)*

An introduction to programmable logic controllers as used in industrial environments including

basic concepts, programming, applications, troubleshooting of ladder logic, and interfacing of equipment.

## **ELMT 1305 Basic Fluid Power**

*Prerequisites:*

*Credit: 3 (3 lecture, 0 lab)*

Basic fluid power course covering pneumatic and hydraulic systems, fluid power symbols, operating theory, components, and basic electrical and manual controls.

## **ELMT 1311 Solar Fundamentals**

*Prerequisites:*

*Credit: 3 (2 lecture, 3 lab)*

Study of heat transference, motors, pumps and other mechanical devices; solid state switches; photovoltaic plates and energy conversion; thermal dynamics; and solar energy.

## **ELMT 1402 Solar Photovoltaic Systems**

*Prerequisite: Must be placed into GUST 0339 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 4 (3 lecture, 4 lab)*

Design and installation of solar photovoltaic systems and their applications.

## **ELPT 1221 Introduction to Electrical Safety and Tools**

*Prerequisites: Must be placed into GUST 0339 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 2 (1 lecture, 2 lab)*

A comprehensive overview of safety rules and regulations and the selection, inspection, use, and maintenance of common tools for electricians. Emphasis is given to safety rules and accepted safety practices in the workplace, the use of hand tools, power tools and the proper selection, function and operation of common electrical measuring instruments.

## **ELPT 1311 Basic Electrical Theory**

*Prerequisite/Corequisite: TECM 1301; must be placed into GUST 0339 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (2 lecture, 3 lab)*

Basic theory and practice of electrical circuits. Includes calculations as applied to alternating and direct current.

## **ELPT 1315 Electrical Calculations I**

*Prerequisite/Corequisite: TECM 1301; must be placed into GUST 0339 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (3 lecture)*

Introduction to mathematical applications utilized to solve problems in the electrical field. Topics include fractions, decimals, percentages, simple equations, ratio and proportion, unit conversions, and applied geometry.

## **ELPT 1325 National Electrical Code I**

*Prerequisite/Corequisite: TECM 1301; must be placed into GUST 0339 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (3 lecture)*

An introductory study of the National Electric Code (NEC) for those employed in fields requiring knowledge of the Code. Emphasis on wiring design, protection, methods, and materials; equipment for general use; and basic calculations.

## **ELPT 1329 Residential Wiring**

*Prerequisite/Corequisite: ELPT 1221 or CNBT 1201*

*Prerequisites: Must be placed into GUST 0339 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (2 lecture, 3 lab)*

Wiring methods for single family and multi-family dwellings. Includes load calculations, service entrance sizing, proper grounding techniques, and associated safety procedures.

## **ELPT 1341 Motor Control**

*Prerequisite/Corequisite: ELPT 1311 or HART 1301; must be placed into GUST 0339 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (2 lecture, 3 lab)*

Operating principles of solid-state and conventional controls along with their practical applications. Includes braking, jogging, plugging, safety interlocks, wiring, and schematic diagram interpretations.

## **ELPT 1345 Commercial Wiring**

*Prerequisites/Corequisites: ELPT 1221 and ELPT 1329; must be placed into GUST 0339 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Corequisite: ELPT 1325*

*Credit: 3 (2 lecture, 3 lab)*

Commercial wiring methods. Includes overcurrent protection, raceway panel board installation, proper grounding techniques, and associated safety procedures.

## **ELPT 1355 Electronic Applications**

*Prerequisite: ELPT 1311, TECM 1301; must be placed into GUST 0339 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (2 lecture, 3 lab)*

Electronic principles and the use of electronic devices. Includes diodes, transistors, and rectifiers.

## **ELPT 1451 Electrical Machines**

*Prerequisite/Corequisite: CETT 1405; must be placed into college-level reading, writing and math or Department Approval.*

*Credit: 4 (3 lecture, 3 lab)*

Direct current (DC) motors, single-phase and polyphase alternating current (AC) motors, generators, and alternators. Emphasis on

# Course Descriptions

construction, characteristics, efficiencies, starting, and speed control.

## **ELPT 2301 Journeyman Electrician Exam Review**

*Department Approval; must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0308 in math.*

*Credit: 3 (3 lecture)*

Preparation for journeyman electrician licensure with emphasis on calculations and the National Electrical Code (NEC).

## **ELPT 2325 National Electrical Code II**

*Prerequisite/Corequisite: TECM 1301 and ELPT 1325; must be placed into GUST 0339 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (3 lecture)*

In-depth coverage of the National Electric Code (NEC) for those employed in fields requiring knowledge of the Code. Emphasis on wiring protection and methods, special conditions, and advanced calculations. Topics include hazardous location classifications and divisions, wiring methods and materials for electrical installations in special occupancies.

## **ELPT 2419 Programmable Logic Controllers I**

*Prerequisite: ELMT 1301, TECM 1301 Must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0308 in math.*

*Credit: 4 (3 lecture, 2 lab)*

Fundamental concepts of programmable logic controllers, principles of operation, and numbering systems as applied to electrical controls.

## **ELPT 2449 Industrial Automation**

*Prerequisite/Corequisite: Department Approval; Must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0308 in math.*

*Credit: 4 (3 lecture, 2 lab)*

Electrical control systems, applications, and interfacing utilized in industrial automation.

## **ELPT 2455 Programmable Logic Controllers II**

*ELPT 2419; must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0308 in math.*

*Credit: 4 (3 lecture, 2 lab)*

Advanced concepts in programmable logic controllers and their applications and interfacing to industrial controls.

## **EMSP 1160 Clinical-EMT Basic**

*Prerequisites: EMSP 1501; Must be placed into college-level reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 1 (4 lab)*

A health-related work-based learning experience that enables the student to apply specialized occupational theory, skills, and concepts. Direct supervision is provided by the clinical professional.

## **EMSP 1191 Special Topics EMT/Technician**

*Prerequisites: EMSP 2243; Must be placed into college-level reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 1 (3 lab)*

Topics address recently identified current events, skills, knowledges, and/or attitudes and behaviors pertinent to the technology or occupation and relevant to the professional development of the student. This course was designed to be repeated multiple times to improve student proficiency.

## **EMSP 1263 Clinical Foundations**

*Prerequisites: EMSP 1355; Must be placed into college-level reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 2 (9 lab)*

A health-related work-based learning experience that enables the student to apply specialized occupational theory, skills, and concepts. Direct supervision is provided by the clinical professional.

## **EMSP 1338 Introduction to Advanced Practice**

*Prerequisites: EMSP 1160; Must be placed into college-level reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (2 lecture, 3 lab)*

An exploration of the foundations necessary for mastery of the advanced topics of clinical practice out of the hospital.

## **EMSP 1355 Trauma Management**

*Prerequisites: EMSP 1356; Must be placed into college-level reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (2 lecture, 4 lab)*

A detailed study of the knowledge and skills in the assessment and management of patients with traumatic injuries.

## **EMSP 1356 Patient Assessment and Airway Management**

*Prerequisites: EMSP 1338; Must be placed into college-level reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (2 lecture, 3 lab)*

A detailed study of the knowledge and skills required to perform patient assessment and airway management.

## **EMSP 1491 Special Topics in Emergency Medical Technology/Technician**

*Prerequisites: Must be placed into college-level reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 4 (2 lecture, 5 lab)*

Basic (EMT-B) for Health Care Providers course will provide students in other allied health careers valuable assessment and treatment skills for emergencies in the prehospital setting at the Basic level. Knowledge will be gained via course textbook, skills sessions, online coursework, and clinical rotations. Clinical rotations will allow students to manage medical / trauma patients, with EMS preceptors, via ambulance rotations. Graduates of this program will be eligible to take the National Registry EMT certification examination which will also lead to Texas Department of State Health Services certification upon successful completion

## **EMSP 1501 Emergency Medical Technician-Basic**

*Prerequisites: Must be placed into college-level reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 5 (3 lecture, 8 lab)*

Preparation for certification as an Emergency Medical Technician (EMT)-Basic. Includes all the skills necessary to provide emergency medical care at a basic life support level with an emergency service or other specialized services.

## **EMSP 2160 Clinical-Emergency Medical EMT Paramedic (Cardiology)**

*Prerequisites: Must be placed into college-level reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Corequisite:*

*Credit: 1 (6 lab)*

A health-related work-based learning experience that enables the student to apply specialized occupational theory, skills, and concepts. Direct supervision is provided by the clinical professional.

## **EMSP 2205 EMS Operations**

*Prerequisites: Must be placed into college-level reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Co-requisite: EMSP 1356*

*Credit: 2 (4 lab)*

Knowledge and skills to safely manage multi-casualty incidents and rescue situations; utilize air medical resources; identify hazardous materials and other specialized incidents.

## **EMSP 2243 Assessment Based Management**

*Prerequisites: EMSP 2262; Must be placed into college-level reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 2 (1 lecture, 4 lab)*

A capstone course covering comprehensive, assessment based patient care management. Includes specific care when dealing with pediatric, adult, geriatric, and special-needs patients.

## **EMSP 2252 EMS Research**

*Prerequisites: EMSP 2243*

*Credit: 2 (1 lecture, 3 lab)*

Primary and/or secondary research in current and emerging issues in EMS. Basic research principles, scientific inquiry, and interpretation of professional literature are emphasized.

## **EMSP 2261 Clinical-Emergency Medical EMT Paramedic (Special Populations)**

*Prerequisites: EMSP 2434; Must be placed into college-level reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Corequisite: EMSP 2430*

*Credit: 2 (9 lab)*

A health-related work-based learning experience that enables the student to apply specialized occupational theory, skills, and concepts. Direct supervision is provided by the clinical professional.

## **EMSP 2262 Clinical-Emergency Medical**

# Course Descriptions

## **EMT Paramedic (Paramedic Field)**

*Prerequisites: EMSP 2330; Must be placed into college-level reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Corequisite:*

*Credit: 2 (9 lab)*

A health-related work-based learning experience that enables the student to apply specialized occupational theory, skills, and concepts. Direct supervision is provided by the clinical professional.

## **EMSP 2306 Emergency Pharmacology**

*Prerequisites: EMSP 1263; Must be placed into college-level reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (2 lecture, 4 lab)*

A comprehensive course covering the utilization of medications in treating emergency situations.

## **EMSP 2330 Special Populations**

*Prerequisites: EMSP 2261; Must be placed into college-level reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (2 lecture, 4 lab)*

A detailed study of the knowledge and skills necessary to assess and manage ill or injured patients in diverse populations.

## **EMSP 2434 Medical Emergencies**

*Prerequisites: EMSP 2160; Must be placed into college-level reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 4 (3 lecture, 4 lab)*

A detailed study of the knowledge and skills in the assessment and management of patients with medical emergencies.

## **EMSP 2444 Cardiology**

*Prerequisites: Must be placed into college-level reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Corequisite: EMSP 2348*

*Credit: 4 (3 lecture, 4 lab)*

Assessment and management of patients with cardiac emergencies. Includes single and multi-lead ECG interpretation.

## **EMSP 2553 Emergency Medical Services Certification for Health Care Professionals**

*Prerequisites: Must be placed into college-level reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 5 (2 lecture, 9 lab)*

An equivalency course for Emergency Medical Services (EMS) certification under Texas Administrative Code for EMS Personnel Certification.

## **ENGL 0100 Developmental English**

*Prerequisite: Department Chair approval*

*Credit: 1 (1 lecture)*

An individualized curriculum for students whose test scores demonstrate high proficiency but do not meet state requirements for placement into college level course work. This course will present

a concentrated review of the Writing Process and basic grammar and sentence structure. Department Chair approval required.

## **ENGL 0300 Fundamentals of Grammar and Composition I**

*Prerequisites: Must be placed into ENGL 0300 (or higher) in writing.*

*Credit: 3 (3 lecture)*

A refresher course devoted to improving basic English skills for native speakers. (NOTE: Instead of ENGL 0300, non-native speakers must refer to ENGL 0340-0349 or ESOL 0341-0356). Emphasizes grammar, sentence structure, and paragraph development through essay writing.

## **ENGL 0310 Fundamentals of Grammar and Composition II**

*Prerequisites: Must be placed into ENGL 0310 or completion of ENGL 0300.*

*Credit: 3 (3 lecture)*

A course designed to prepare students for ENGL 1301. Students will ordinarily proceed to ENGL 0310 after taking ENGL 0300. Some students may, however, test directly into ENGL 0310 (ENGL 0300 is not a prerequisite for ENGL 0310). ENGL 0310 provides a basic review of the principles of grammar, usage and mechanics and utilizes the writing process to teach the students to write short essays (350-500 words).

## **ENGL 0320 Advanced Grammar and TOEFL Preparation**

*Prerequisites: A satisfactory score on the CELSA test or completion of ENGL 0346.*

*Credit: 3 (3 lecture)*

An advanced grammar review and listening skills development. Excellent preparation for ESL students who must pass the TOEFL in order to transfer to a four-year institution.

## **ENGL 0343 Advanced Conversation for Foreign Speakers**

*Prerequisites: English 0341 or sufficient assessment score for English 0346 or above.*

*Credit: 3 (3 lecture, 2 lab)*

Students discuss current events and cultural topics in English. Pronunciation, vocabulary development, and group discussion skills are stressed. May be taken concurrently with other English courses.

## **ENGL 0346 Grammar and Composition for Foreign Speakers I**

*Prerequisites: A satisfactory score on the CELSA Test or completion of ENGL 0341.*

*Credit: 3 (3 lecture, 1 lab)*

An intermediate course in English grammar and composition designed to help the student acquire a greater facility in written English. This course is designed for the student who already possesses adequate conversational skill and is pursuing a college career. This course emphasizes grammar, vocabulary, sentence composition, and paragraph writing. It may be taken with ENGL 0343 if the student placed into 0346 wishes more proficiency

in conversation. Important: This course is now offered as ESOL 0351/0354.

## **ENGL 0347 Grammar and Composition for Foreign Speakers II**

*Prerequisites: A satisfactory score on the CELSA Test or completion of ENGL 0346.*

*Credit: 3 (3 lecture, 1 lab)*

An advanced course in English grammar and composition designed to help the foreign student who already has some elementary skills in English grammar and composition. This course is a continuation of ENGL 0346 and focuses more on advanced grammar and essay writing. Important: This course is now offered as ESOL 0351/0354.

## **ENGL 0349 Advanced Composition for Foreign Speakers**

*Prerequisites: A satisfactory score on the COMPASS-ESL. Test or completion of ENGL 0354.*

*Credit: 3 (3 lecture, 2 lab)*

A continuation of ENGL 0354. Designed to help non-native speakers to improve writing skills before taking ENGL 1301. Concentrated interdisciplinary writing practice and vocabulary study to prepare students for freshman composition, ENGL 1301, and other academic courses.

## **ENGL 1301 Composition I**

*Prerequisites: Appropriate score on TSI/ACT/SAT/STAAR, INRW 0420, Grade of C or better in ELA College Prep course from participating ISDs*

*Credit: 3 (3 lecture)*

Intensive study of and practice in writing processes, from invention and researching to drafting, revising, and editing, both individually and collaboratively. Emphasis on effective rhetorical choices, including audience, purpose, arrangement, and style. Focus on writing the academic essay as a vehicle for learning, communicating, and critical analysis. Core Curriculum Course.

## **ENGL 1302 Composition II**

*Prerequisite: Composition 1301 or its equivalent*

*Credit: 3 (3 lecture)*

Intensive study of and practice in the strategies and techniques for developing research-based expository and persuasive texts. Emphasis on effective and ethical rhetorical inquiry, including primary and secondary research methods; critical reading of verbal, visual, and multimedia texts; systematic evaluation, synthesis, and documentation of information sources; and critical thinking about evidence and conclusions. Core Curriculum Course.

## **ENGL 2307 Creative Writing I**

*Prerequisites: ENGL 1301, Department Approval*

*Credit: 3 (3 lecture)*

# Course Descriptions

Practical experience in the techniques of imaginative writing. May include fiction, nonfiction, poetry, screenwriting, or drama. This course satisfies the Creative Arts or Component Area Option of the HCC core.

## **ENGL 2308 Creative Writing II**

*Prerequisite: ENGL 2307*  
*Credit: 3 (3 lecture)*

Practical experience in the techniques of imaginative writing. May include fiction, nonfiction, poetry, screenwriting, or drama. This course satisfies the Creative Arts or Component Area Option of the HCC core.

## **ENGL 2311 Technical & Business Writing (single-semester course)**

*Prerequisite: ENGL 1301*

*Credit: 3 (3 lecture)*

Intensive study of and practice in professional settings. Focus on the types of documents necessary to make decisions and take action on the job, such as proposals, reports, instructions, policies and procedures, e-mail messages, letters, and descriptions of products and services. Practice individual and collaborative processes involved in the creation of ethical and efficient documents. Core Curriculum Course.

## **ENGL 2322 British Literature I**

*Prerequisite: ENGL 1301*

*Credit: 3 (3 lecture)*

A survey of the development of British literature from the Anglo-Saxon period to the Eighteenth Century. Students will study works of prose, poetry, drama, and fiction in relation to their historical, linguistic, and cultural contexts. Texts will be selected from a diverse group of authors and traditions. This course satisfies the Language, Philosophy and Culture or Component Area Option of the HCC core.

## **ENGL 2323 British Literature II**

*Prerequisite: ENGL 1301*

*Credit: 3 (3 lecture)*

A survey of the development of British literature from the Romantic period to the present. Students will study works of prose, poetry, drama, and fiction in relation to their historical and cultural contexts. Texts will be selected from a diverse group of authors and traditions. This course satisfies the Language, Philosophy and Culture or Component Area Option of the HCC core.

## **ENGL 2327 American Literature I**

*Prerequisite: ENGL 1301*

*Credit: 3 (3 lecture)*

A survey of American literature from the period of exploration and settlement through the Civil War. Students will study works of prose, poetry, drama, and fiction in relation to their historical and cultural contexts. Texts will be selected from among a diverse group of authors for what they reflect and reveal about the evolving American experience and character. This course satisfies the Language, Philosophy and Culture or Component Area Option of the HCC core.

## **ENGL 2328 American Literature II**

*Prerequisite: ENGL 1301*

*Credit: 3 (3 lecture)*

A survey of American literature from the Civil War to the present. Students will study works of prose, poetry, drama, and fiction in relation to their historical and cultural contexts. Texts will be selected from among a diverse group of authors for what they reflect and reveal about the evolving American experience and character. This course satisfies the Language, Philosophy and Culture or Component Area Option of the HCC core.

## **ENGL 2332 World Literature I**

*Prerequisite: ENGL 1301*

*Credit: 3 (3 lecture)*

A survey of world literature from the ancient world through the sixteenth century. Students will study works of prose, poetry, drama, and fiction in relation to their historical and cultural contexts. Texts will be selected from a diverse group of authors and traditions. This course satisfies the Language, Philosophy and Culture or Component Area Option of the HCC core.

## **ENGL 2333 World Literature II**

*Prerequisite: ENGL 1301*

*Credit: 3 (3 lecture)*

A survey of world literature from the seventeenth century to the present. Students will study works of prose, poetry, drama, and fiction in relation to their historical and cultural contexts. Texts will be selected from a diverse group of authors and traditions. This course satisfies the Language, Philosophy and Culture or Component Area Option of the HCC core.

## **ENGL 2342 Forms of Literature I**

*Prerequisite: ENGL 1301*

*Credit: 3 (3 lecture)*

The study of one or more literary genres including, but not limited to, poetry, fiction, drama, and film. This course satisfies the Language, Philosophy and Culture or Component Area Option of the HCC core.

## **ENGL 2343 Forms of Literature II**

*Prerequisite: ENGL 1301*

*Credit: 3 (3 lecture)*

The study of one or more literary genres including, but not limited to, poetry, fiction, drama, and film. This course satisfies the Language, Philosophy and Culture or Component Area Option of the HCC core.

## **ENGL 2351 Mexican-American Literature**

*Prerequisite: ENGL 1301*

*Credit: 3 (3 lecture)*

A survey of Mexican-American/Chicano/a literature including fiction, non-fiction, poetry, and drama.

This course satisfies the Language, Philosophy and Culture or Component Area Option of the HCC core.

## **ENGL 2389 Technical Writing Cooperative Education**

*Prerequisites: ENGL 1301, minimal GPA of 2.5 overall and/or approval of the instructor or department chair. Must be placed into college-level reading and college-level writing.*

*Credit: 3 (3 lecture, minimum 20 hours career-related work experience per week)*

A cooperative study effort integrating classroom study with work experience that enables students to learn more about organizational functions. Students also have the opportunity to learn about occupational roles in their fields as their supervising employers cooperate with the College to insure a blend of work and study.

## **ENGR 1201 Introduction to Engineering**

*Prerequisite: Must qualify to take MATH 2413 Calculus or co-enroll in MATH 2412 Precalculus as a co-requisite.*

*Credit: 2 (2 lecture)*

Introduction to engineering as a discipline and a profession. Includes instruction in the application of mathematical and scientific principles to the solution of practical problems for the benefit of society.

## **ENGR 1204 Engineering Graphics**

*Prerequisite: MATH 1314 or equivalent academic preparation*

*Credits credits: 2 (2 lecture, 1 lab)*

Course description Introduction to basic engineering graphics using the latest version of AutoCAD. Basic AutoCAD commands will be introduced and emphasized throughout this course. Development of technical drawing skills including: freehand sketching, text, orthographic projection, dimensioning, sectional views, and other viewing conventions. Required for all ASES degrees

## **ENGR 2105 Circuit Analysis I Laboratory**

*Prerequisite/Co-Requisite: ENGR 2305*

*Credit: 3 (1 lecture, 3 lab)*

Supporting theoretical principles presented in ENGR 2305 involving DC and AC circuit theory, network theorems, time, and frequency domain circuit analysis. Introduction to principles and operation of basic laboratory equipment; laboratory report preparation.

## **ENGR 2301 Engineering Statics**

*Prerequisites: PHYS 2425 and MATH 2414*

# Course Descriptions

*Credit: 3 (3 lecture, 1 lab)*

Composition and resolution of forces, free body diagrams, analysis of forces acting on structures and machines, friction, centroids, and moments of inertia.

## **ENGR 2302 Engineering Dynamics**

*Prerequisite: ENGR 2301*

*Credit: 3 (3 lecture, 1 lab)*

Dynamics of rigid bodies, force-mass acceleration, work-energy, impulse momentum and introduction of mechanical vibrations.

## **ENGR 2304 Computer Programming for Engineers**

*Prerequisite: MATH 2413; Recommended co-enrollment in MATH 2414.*

*Credit: 3 (2 lecture, 2 lab)*

Course designed for students who intend to obtain a degree in an engineering discipline. Course covers problem solving, algorithm development for advanced topics in engineering and mathematics

## **ENGR 2305 Circuit Analysis I**

*Prerequisite/Co-Requisite: ENGR 2305*

*Credit: 1 (3 lecture)*

Supporting theoretical principles presented in ENGR 2305 involving DC and AC circuit theory, network theorems, time, and frequency domain circuit analysis. Introduction to principles and operation of basic laboratory equipment; laboratory report preparation.

## **ENGR 2332 Engineering Mechanics of Materials**

*Prerequisites: MATH 2414 and ENGR 2302*

*Credit: 3 (3 lecture)*

Concepts of stresses and strains, engineering properties of materials including thin-walled pressure vessels, torsional and flexural members, shear, moment, equation of elastic curve, deflection of members, combined loadings, column behavior.

## **ENGR 2405 Electrical Circuits I**

*Prerequisites: MATH 2414 or higher and PHYS 2326/2126 (or 2426) with grades of C or higher.*

*Credit: 4 (3 lecture, 3 lab)*

Principles of electrical circuits and systems. Basic circuit elements (resistance, inductance, mutual inductance, capacitance, independent and dependent controlled voltage, and current sources). Topology of electrical networks; Kirchhoff's laws; node and mesh analysis; DC circuit analysis; operational amplifiers; transient and sinusoidal steady-state analysis; AC circuit analysis; first- and second-order circuits; Bode plots; and use of computer simulation software to solve circuit problems.

## **ENTC 1343 Statics**

*Prerequisites: Must be placed into GUST 0339 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (3 lecture)*

A study of the composition and resolution of forces and the equilibrium of forces acting on structures. Includes the concepts of friction, moments, couples, centroids, and moment of inertia.

## **ENTC 1347 Safety and Ergonomics**

*Prerequisites/Corequisites: TECM 1301; must be placed into GUST 0339 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (2 lecture, 2 lab)*

Occupational Safety and Health Administration (OSHA) safety guidelines including electrical, chemical, and hazardous material safety. Ergonomic considerations to include repetitive motion, plant layout, and machine design. Industrial safety awareness, accident cost and prevention, and workman's compensation issues.

## **ENTC 1423 Strength of Materials**

*Prerequisites: Must be placed into GUST 0341 in reading, ENGL 0310 or 0349 in writing and MATH 0306 in math.*

*Credit: 4 (3 lecture, 3 lab)*

Study of the relationship between externally applied forces and internally induced stresses and the resulting deformations in structural members. The student will identify the principle behind moments of inertia and explain the relationship between that principle and the shape's cross-sectional geometry and reference axis; and calculate the torsional shearing stress on a solid round shaft subjected to various torques and horsepower requirements.

## **ENTC 1491 Special Topics in Engineering Technology, General**

*Prerequisites: Must be placed into GUST 0339 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 4 (2 lecture, 5 lab)*

Topics address recently identified current events, skills, knowledge, and/or attitudes and behaviors pertinent to the technology or occupation and relevant to the professional development of the student. This course was designed to be repeated multiple times to improve student proficiency.

## **ENTC 2314 Facility Operations and Maintenance**

*Prerequisites: TECM 1301; must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0308 in math.*

*Credit: 3 (2 lecture, 2 lab)*

Interaction of facility, people, equipment, operation, service, and maintenance. Topics include building structure and interior elements, air conditioning, furniture, grounds, and waste management.

## **ENTC 2331 Manufacturing Materials**

*Prerequisites: TECM 1301; must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0308 in math.*

*Credit: 4 (2 lecture, 3 lab)*

Identification of various materials used in manufacturing including metals, plastics, composite materials, concrete, ceramics, and wood. Examination of the properties of these materials and standards for quality measurement.

## **ENTC 2381 Cooperative Education - Engineering Technology/Technician,**

## **General**

*Prerequisites: Department Approval; must be placed into GUST 0339 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (1 lecture, 20 lab)*

Career related activities encountered in the student's area of specialization are offered through a cooperative agreement between the college, employer, and student. Under supervision of the college and the employer, the student combines classroom learning with work experience. Directly related to a technical discipline, specific learning objectives guide the student through the paid work experience. This course may be repeated if topics and learning outcomes vary.

## **ENTC 2410 Machine Design**

*Prerequisites: Must be placed into GUST 0341 in reading, ENGL 0310 or 0349 in writing and MATH 0306 in math.*

*Credit: 4 (2 lecture, 6 lab)*

Design considerations for machinery. Includes selection of mechanical components and machine construction principles.

## **ESOL 0349 Advanced Intermediate Conversation for Foreign Speakers**

*Prerequisites: A satisfactory score on the COMPASS-ESL Test or successful completion of ESOL 0345.*

*Corequisites: ESOL 0350, ESOL 0351 and ESOL 0352*

*Credit: 3 (3 lecture, 2 lab)*

A continuation of ESOL 0345. This course is designed to further develop conversational skills by incorporating more complicated vocabulary and grammatical structures. Students are also required to present oral reports at various times during the semester.

## **ESOL 0350 Advanced Intermediate Reading for Foreign Speakers**

*Prerequisites: A satisfactory score on the COMPASS-ESL Test or successful completion of ESOL 0346.*

*Corequisites: ESOL 0349, ESOL 0351 and ESOL 0352*

*Credit: 3 (3 lecture, 2 lab)*

A continuation of ESOL 0346. An advanced intermediate course in reading academically oriented English. This course further develops reading comprehension skills and expands vocabulary. Emphasis is on distinguishing main ideas from supporting details and drawing conclusions.

## **ESOL 0351 Advanced Intermediate**

# Course Descriptions

## **Composition for Foreign Speakers**

*Prerequisites: A satisfactory score on the COMPASS-ESL. Test or successful completion of ESOL 0347.*

*Corequisites: ESOL 0349, ESOL 0350 and ESOL 0352*

*Credit: 3 (3 lecture, 2 lab)*

A continuation of ESOL 0347. This course concentrates on the development of writing skills, reviews the paragraph and its essential elements, and introduces the multi-paragraph essay.

## **ESOL 0352 Advanced Intermediate Grammar for Foreign Speakers**

*Prerequisites: A satisfactory score on the COMPASS-ESL. Test or successful completion of ESOL 0348.*

*Corequisites: ESOL 0349, ESOL 0350 and ESOL 0351*

*Credit: 3 (3 lecture, 2 lab)*

A continuation of ESOL 0348. This course provides a review of essential grammatical and structural features while introducing their finer points. Emphasis is placed on compound and complex sentence structures and is designed to lead students toward active mastery of the patterns and principles of formal written English.

## **ESOL 0353 Advanced Reading for Foreign Speakers**

*Prerequisites: A satisfactory score on the COMPASS-ESL. Test or successful completion of ESOL 0350.*

*Corequisites: ESOL 0354, ESOL 0355 and ESOL 0356*

*Credit: 3 (3 lecture, 2 lab)*

A continuation of ESOL 0350. An advanced course designed to develop reading and critical thinking skills for college-bound students. Reading skills are refined to guide students towards mastery of deduction, inference, and figurative language.

## **ESOL 0354 Advanced Composition for Foreign Speakers**

*Prerequisites: A satisfactory score on the COMPASS-ESL. Test or successful completion of ESOL 0351.*

*Corequisites: ESOL 0353, ESOL 0355 and ESOL 0356*

*Credit: 3 (3 lecture, 2 lab)*

A continuation of ESOL 0351. This course concentrates on elements of essay organization. Students are required to produce well-organized, well-substantiated essays.

## **ESOL 0355 Advanced Grammar for Foreign Speakers**

*Prerequisites: A satisfactory score on the COMPASS-ESL. Test or successful completion of ESOL 0352.*

*Corequisites: ESOL 0353, ESOL 0354 and ESOL 0356*

*Credit: 3 (3 lecture, 2 lab)*

A continuation of ESOL 0352. This course provides a review of both essential and finer points of the

grammatical structural features of formal written English. Emphasis is placed on active production and error analysis of standard English.

## **ESOL 0356 Advanced Conversation for Foreign Speakers**

*Prerequisites: A satisfactory score on the COMPASS-ESL. Test or successful completion of ESOL 0349.*

*Corequisites: ESOL 0353, ESOL 0354 and ESOL 0355*

*Credit: 3 (3 lecture, 2 lab)*

A continuation of ESOL 0349. This course is designed to encourage students' use of high-level grammatical structures and vocabulary skills. Students are required to present an oral book report, an oral report of a personal, off-campus interview, and an oral research report.

## **ESOL 0360 Integrated Reading/Writing for Non-Native Speakers.**

*Prerequisites: A satisfactory score on the COMPASS-ESL. Test or successful completion of ESOL 0345.*

*Corequisites: ESOL 0350, ESOL 0351 and ESOL 0352.*

*Credit: 3 (3 lecture, 2 lab)*

A continuation of ESOL 0345. This course is designed to further develop conversational skills by incorporating more complicated vocabulary and grammatical structures. Students are also required to present oral reports at various times during the semester.

## **FIRS 1191 Special Topics Fire Fighting**

*Prerequisites: Must be placed into college-level reading, college-level writing and MATH 0306 in math.*

*Credit: 1*

The activities involved in live fire training techniques including fire ground organization, water supply, ventilation, ladder raises, and attack line advancement for the suppression of fire. This course is designed to be used multiple times.

## **FIRS 1203 Firefighter Agility and Fitness Preparation**

*Prerequisites: Must be placed into college-level reading, college-level writing and MATH 0306 in math.*

*Credit: 2 (1 lecture, 2 lab)*

Physical ability testing methods. Rigorous training in skills and techniques needed in typical fire department physical ability tests.

## **FIRS 1301 Fire Fighter Certification I**

*Prerequisites: Must be placed into college-level reading, college-level writing and MATH 0306 in math.*

*Credit: 3 (2 lecture, 4 lab)*

One in a series of courses in basic preparation for a new firefighter. Should be taken in conjunction with Firefighter Certification II, III, IV, V, VI, and VII to satisfy the Texas Commission on Fire Protection (TCFP) curriculum for Basic Structural

Fire Suppression, Course #100. \*\*\*THIS COURSE MAY BE OFFERED ONLY BY INSTITUTIONS LICENSED AS A FIRE ACADEMY BY THE TEXAS COMMISSION ON FIRE PROTECTION\*\*\*

## **FIRS 1313 Fire Fighter Certification III**

*Prerequisite or Corequisite: FIRS 1407; Must be placed into college-level reading, college-level writing and MATH 0306 in math.*

*Credit: 3 (2 lecture, 3 lab)*

One in a series of courses in basic preparation for a new firefighter. Should be taken in conjunction with Firefighter Certification I, II, IV, V, VI, and VII to satisfy the Texas Commission on Fire Protection (TCFP) curriculum for Basic Structural Fire Suppression, Course #100. \*\*\*THIS COURSE MAY BE OFFERED ONLY BY INSTITUTIONS LICENSED AS A FIRE ACADEMY BY THE TEXAS COMMISSION ON FIRE PROTECTION\*\*\*

## **FIRS 1319 Fire Fighter Certification IV**

*Prerequisite or Corequisite: FIRS 1313; Must be placed into college-level reading, college-level writing and MATH 0306 in math.*

*Credit: 3 (2 lecture, 2 lab)*

One in a series of courses in basic preparation for a new firefighter. Should be taken in conjunction with Firefighter Certification I, II, III, V, VI, and VII to satisfy the Texas Commission on Fire Protection (TCFP) curriculum for Basic Structural Fire Suppression, Course #100. \*\*\*THIS COURSE MAY BE OFFERED ONLY BY INSTITUTIONS LICENSED AS A FIRE ACADEMY BY THE TEXAS COMMISSION ON FIRE PROTECTION\*\*\*

## **FIRS 1329 Fire Fighter Certification VI**

*Prerequisite or Corequisite: FIRS 1423; Must be placed into college-level reading, college-level writing and MATH 0306 in math.*

*Credit: 3 (2 lecture, 3 lab)*

One in a series of courses in basic preparation for a new firefighter. Should be taken in conjunction with Firefighter Certification I, II, III, IV, V, and VII to satisfy the Texas Commission on Fire Protection (TCFP) curriculum for Basic Structural Fire Suppression, Course #100. \*\*\*THIS COURSE MAY BE OFFERED ONLY BY INSTITUTIONS LICENSED AS A FIRE ACADEMY BY THE TEXAS COMMISSION ON FIRE PROTECTION\*\*\*

## **FIRS 1407 Fire Fighter Certification II**

*Prerequisite or Corequisite: FIRS 1301; Must be placed into college-level reading, college-level writing and MATH 0306 in math.*

*Credit: 4 (3 lecture, 4 lab)*

One in a series of courses in basic preparation for a new firefighter. Should be taken in conjunction with Firefighter Certification I, III, IV, V, VI, and VII to satisfy the Texas Commission on Fire Protection (TCFP) curriculum for Basic Structural Fire Suppression, Course #100. \*\*\*THIS COURSE MAY BE OFFERED ONLY BY INSTITUTIONS LICENSED AS A FIRE ACADEMY BY THE TEXAS COMMISSION ON FIRE PROTECTION\*\*\*

## **FIRS 1423 Fire Fighter Certification V**

*Prerequisite or Corequisite: FIRS 1319; Must be placed into college-level reading, college-level*

# Course Descriptions

writing and MATH 0306 in math.

*Credit: 4 (3 lecture, 3 lab)*

One in a series of courses in basic preparation for a new firefighter. Should be taken in conjunction with Firefighter Certification I, II, III, IV, VI, and VII to satisfy the Texas Commission on Fire Protection (TCFP) curriculum for Basic Structural Fire Suppression, Course #100. \*\*\*THIS COURSE MAY BE OFFERED ONLY BY INSTITUTIONS LICENSED AS A FIRE ACADEMY BY THE TEXAS COMMISSION ON FIRE PROTECTION\*\*\*

## **FIRS 1433 Fire Fighter Certification VII**

*Prerequisite or Corequisite: FIRS 1329; Must be placed into college-level reading, college-level writing and MATH 0306 in math.*

*Credit: 4 (3 lecture, 4 lab)*

One in a series of courses in basic preparation for a new firefighter. Should be taken in conjunction with Firefighter Certification I, II, III, IV, V, and VI to satisfy the Texas Commission on Fire Protection (TCFP) curriculum for Basic Structural Fire Suppression, Course #100. \*\*\*THIS COURSE MAY BE OFFERED ONLY BY INSTITUTIONS LICENSED AS A FIRE ACADEMY BY THE TEXAS COMMISSION ON FIRE PROTECTION\*\*\*

## **FIRT 1202 Plan Examiner I**

*Prerequisites: Must be placed into college-level reading, college-level writing and MATH 0306 in math.*

*Credit: 2 (2 lecture)*

Examination of plans submitted for approval by businesses, industry, or other regulated entities. Includes applicable codes and/or standards that meet certification requirements of the Texas Commission on Fire Protection.

## **FIRT 1301 Fundamentals of Fire Protection**

*Prerequisites: Must be placed into college-level reading, college-level writing and MATH 0306 in math.*

*Credit: 3 (3 lecture)*

Orientation to the fire service, career opportunities, related fields.

## **FIRT 1303 Fire and Arson Investigation I**

*Prerequisites: Must be placed into college-level reading, college-level writing and MATH 0306 in math.*

*Credit: 3 (2 lecture, 3 lab)*

Basic fire and arson investigation practices. Emphasis on fire behavior principles related to fire cause and origin determination.

## **FIRT 1305 Public Education Programs**

*Prerequisites: Must be placed into college-level reading, college-level writing and MATH 0306 in math.*

*Credit: 3 (3 lecture)*

Preparation of fire fighters and fire officers to develop public fire safety awareness. Emphasis on implementation of fire and public safety programs in an effort to reduce the loss of life.

## **FIRT 1307 Fire Prevention Codes and Inspections**

*Prerequisites: Must be placed into college-level reading, college-level writing and MATH 0306 in*

*math.*

*Credit: 3 (3 lecture)*

Local building and fire prevention codes. Fire prevention inspections, practices, and procedures.

## **FIRT 1309 Fire Administration I**

*Prerequisites: Must be placed into college-level reading, college-level writing and MATH 0306 in math.*

*Credit: 3 (3 lecture)*

Introduction to the organization and management of a fire department and the relationship of government agencies to the fire service. Emphasis on fire service leadership from the perspective of the company officer.

## **FIRT 1311 Fire Service Hydraulics**

*Prerequisites: Must be placed into college-level reading, college-level writing and MATH 0306 in math.*

*Credit: 3 (3 lecture)*

The use of water in fire protection. Application of hydraulic principles to analyze and solve water supply problems.

## **FIRT 1315 Hazardous Materials I**

*Prerequisites: Must be placed into college-level reading, college-level writing and MATH 0306 in math.*

*Credit: 3 (3 lecture)*

The chemical characteristics and behavior of various materials. Storage, transportation, handling hazardous emergency situations, and the most effective methods of hazard mitigation.

## **FIRT 1319 Firefighter Health and Safety**

*Prerequisites: Must be placed into college-level reading, college-level writing and MATH 0306 in math.*

*Credit: 3 (3 lecture)*

Firefighter occupational safety and health in emergency and non-emergency situations.

## **FIRT 1327 Building Construction in the Fire Service**

*Prerequisites: Must be placed into college-level reading, college-level writing and MATH 0306 in math.*

*Credit: 3 (3 lecture)*

Components of building construction that relate to life safety. Includes relationship of construction elements and building design impacting fire spread in structures.

## **FIRT 1329 Building Codes and Construction**

*Prerequisites: Must be placed into college-level reading, college-level writing and MATH 0306 in math.*

*Credit: 3 (3 lecture)*

Examination of building codes and requirements, construction types, and building materials. Includes walls, floorings, foundations, and various roof types and the associated dangers of each.

## **FIRT 1338 Fire Protection Systems**

*Prerequisites: Must be placed into college-level reading, college-level writing and MATH 0306 in math.*

*Credit: 3 (3 lecture)*

Design and operation of fire detection and alarm systems, heat and smoke control systems, special protection and sprinkler systems, water supply for fire protection, and portable fire extinguishers.

## **FIRT 1340 Fire Inspector II**

*Prerequisites: FIRT 1408; Must be placed into college-level reading, college-level writing and MATH 0306 in math.*

*Credit: 3 (2 lecture, 3 lab)*

Fire inspection rules, procedures, and inspection practices to meet the Texas Commission on Fire Protection requirements for Fire Inspector II.

## **FIRT 1342 Fire Officer I**

*Prerequisites: Must be placed into college-level reading, college-level writing and MATH 0306 in math.*

*Credit: 3 (3 lecture)*

Meets the curriculum requirements of the Texas Commission on Fire Protection (TCFP) for Fire Officer I certification. \*\*THIS COURSE MAY BE OFFERED ONLY BY INSTITUTIONS CERTIFIED AS A TRAINING FACILITY BY THE TEXAS COMMISSION ON FIRE PROTECTION\*\*

## **FIRT 1343 Fire Officer II**

*Prerequisites: Must be placed into college-level reading, college-level writing and MATH 0306 in math.*

*Credit: 3 (3 lecture)*

Meets the curriculum requirements of the Texas Commission on Fire Protection (TCFP) for Fire Officer II certification. \*\*THIS COURSE MAY BE OFFERED ONLY BY INSTITUTIONS CERTIFIED AS A TRAINING FACILITY BY THE TEXAS COMMISSION ON FIRE PROTECTION\*\*

## **FIRT 1345 Hazardous Materials II**

*Prerequisites: Must be placed into college-level reading, college-level writing and MATH 0306 in math.*

*Credit: 3 (3 lecture)*

Mitigation practices and techniques to effectively control hazardous material spills and leaks.

## **FIRT 1347 Industrial Fire Protection**

*Prerequisites: Must be placed into college-level reading, college-level writing and MATH 0306 in math.*

*Credit: 3 (3 lecture)*

Industrial emergency response teams and specific needs related to hazards in business and industrial facilities.

## **FIRT 1349 Fire Administration II**

*Prerequisites: Must be placed into college-level reading, college-level writing and MATH 0306 in math.*

*Credit: 3 (3 lecture)*

# Course Descriptions

In depth study of fire service management as pertaining to budgetary requirements, administration, organization of divisions within the fire service and relationships between the fire service and outside agencies.

## **FIRT 1353 Legal Aspects of Fire Protection**

*Prerequisites: Must be placed into college-level reading, college-level writing and MATH 0306 in math.*

*Credit: 3 (3 lecture)*

Study of the rights, duties, liability concerns, and responsibilities of public fire protection agencies while performing assigned duties.

## **FIRT 1391 Special Topics in Fire Protection and Safety Technology/Technician**

*Prerequisite: Department Approval; Must be placed into college-level reading, college-level writing and MATH 0306 in math.*

*Credit: 3 (3 lecture)*

Topics address recently identified current events, skills, knowledge, and/or attitudes and behaviors pertinent to the technology or occupation and relevant to the professional development of the student.

## **FIRT 1392 Special Topics in Fire Services Administration**

*Prerequisites: Must be placed into college-level reading, college-level writing and MATH 0306 in math.*

*Credit: 3 (3 lecture)*

Topics address recently identified current events, skills, knowledge, and/or attitudes and behaviors pertinent to the technology or occupation and relevant to the professional development of the student.

## **FIRT 1408 Fire Inspector I**

*Prerequisites: Must be placed into college-level reading, college-level writing and MATH 0306 in math.*

*Credit: 4 (2 lecture, 4 lab)*

Fire inspection including rules, codes, and field inspection practices to meet certification requirements of the Texas Commission on Fire Protection.

## **FIRT 1433 Fire Chemistry I**

*Prerequisites: Must be placed into college-level reading, college-level writing and MATH 0306 in math.*

*Credit: 4 (2 lecture, 4 lab)*

Chemical nature and properties of inorganic compounds as related to the fire service. Fundamental laws of chemistry, states of matter, gas laws, chemical bonding, and thermodynamics.

## **FIRT 2305 Fire Instructor I**

*Prerequisite: FIRT 1433 or proof of Firefighter II level certification; Must be placed into college-level reading, college-level writing and MATH 0306 in math.*

*Credit: 3 (3 lecture, 1 lab)*

Preparation of fire and emergency services personnel to deliver instruction from a prepared lesson plan. Includes the use of instructional aids and evaluation instruments to meet the Texas Commission on Fire Protection requirements for Fire Instructor I certification.

## **FIRT 2307 Fire Instructor II**

*Prerequisite: FIRT 2305, or proof of Fire Instructor I certification; Must be placed into college-level reading, college-level writing and MATH 0306 in math.*

*Credit: 3 (3 lecture, 1 lab)*

Development of individual lesson plans for a specific topic including learning objectives, instructional aids, and evaluation instruments. Includes techniques for supervision and coordination of activities of other instructors to meet Texas Commission on Fire Protection requirements for Fire Instructor II certification.

## **FIRT 2309 Fire Fighting Strategies and Tactics I**

*Prerequisites: Must be placed into college-level reading, college-level writing and MATH 0306 in math.*

*Credit: 3 (3 lecture)*

Analysis of the nature of fire problems and selection of initial strategies and tactics including an in-depth study of efficient and effective use of manpower and equipment to mitigate the emergency.

## **FIRT 2333 Fire & Arson Investigation II**

*Prerequisites: Must be placed into college-level reading, college-level writing and MATH 0306 in math.*

*Credit: 3 (2 lecture, 3 lab)*

Fire Investigation techniques and defense of findings in a court room setting.

## **FIRT 2351 Company Fire Officer**

*Prerequisites: Must be placed into college-level reading, college-level writing and MATH 0306 in math.*

*Credit: 3 (3 lecture)*

A capstone course covering fire ground operations and supervisory practices. Includes performance evaluation of incident commander, safety officer, public information officer, and shift supervisor duties.

## **FIRT 2380 Cooperative Education Fire Protection and Safety Technology/Technician**

*Prerequisite: 15 semester hours of FIRT/FIRS and Department Approval; Must be placed into college-level reading, college-level writing and MATH 0306 in math.*

*Credit: 3 (1 lecture, 20 lab)*

Career-related activities encountered in the student's area of specialization offered through an individualized agreement among the college, employer, and student. Under the supervision of the college and the employer, the student combines classroom learning with work experience. Includes a lecture component.

## **FIRT 2419 Fire Chemistry II**

*Prerequisites: Must be placed into college-level reading, college-level writing and MATH 0306 in math.*

*Credit: 4 (2 lecture, 4 lab)*

Chemical compounds related to the fire service. Includes effective selection of extinguishing agents and method of application.

## **FIRT 2459 Fire Instructor III**

*Prerequisite: FIRT 2307, or proof of the Fire Instructor II Certification*

*Credit: 4 (3 lecture, 2 lab)*

Development of comprehensive training curriculum and programs. Includes organization of needs analysis and development of training goals and implementation strategies to meet Texas Commission on Fire Protection requirements for Fire Instructor III.

## **FLMC 1292 Special Topics in Film-Video Making/Cinematography and Production**

*Prerequisites: RTVB 1321; Must be placed into GUST 0342 in reading, ENGL 0310 in writing and MATH 0312 in math.*

*Credit: 2 (2 lecture)*

Topics address recently identified current events, skills, knowledges, and/or attitudes and behaviors pertinent to the technology or occupation and relevant to the professional development of the student. This course was designed to be repeated multiple times to improve student proficiency.

## **FLMC 1300 Production Management**

*Prerequisites: RTVB 1321; Must be placed into GUST 0342 in reading, ENGL 0310 in writing and MATH 0312 in math.*

*Credit: 3 (2 lecture, 4 lab)*

Managing above- and below-the-line film or video production costs. Emphasizes analysis of scripts and treatments to determine production costs, crewing requirements, location needs, equipment rentals, and associated production costs.

## **FLMC 1304 Lighting for Film and Video**

*Prerequisites: RTVB 2337; Must be placed into GUST 0342 in reading, ENGL 0310 in writing and MATH 0312 in math.*

*Credit: 3 (2 lecture, 4 lab)*

Lighting techniques for 16mm film or video production. (This class demonstrates advanced lighting techniques for 16mm film and video productions. Using a variety of lab projects and location settings, students will use lights, filters, in-camera special effects and mood setting techniques to enhance shot composition and camera movement. Topics also include operating film cameras, light meters and selecting film stock. Students are required to attend additional lab hours outside of class.)

## **FLMC 1311 Survey of the Motion Picture**

*Prerequisites: Must be placed into GUST 0342 in reading, ENGL 0310 in writing and MATH 0312 in math.*

*Credit: 3 (2 lecture, 4 lab)*

Overview of film history and techniques including

# Course Descriptions

introduction to cinematic elements and approaches to analysis and criticism.

## **FLMC 1329 Scriptwriting**

*Prerequisites:*

*Credit: 3 (2 lecture, 4 lab)*

Writing scripts for film and electronic media. Emphasizes format and style for commercials, public service announcements, promos, news, and documentaries.

## **FLMC 1331 Video Graphics and Visual Effects I**

*Prerequisites: Must be placed into GUST 0342 in reading, ENGL 0310 in writing and MATH 0312 in math.*

*Credit: 3 (2 lecture, 4 lab)*

A course in the applications of computers for video production. Design of computer graphic workstations and development of a rationale for selecting software, hardware, and peripherals.

## **FLMC 1371 Film and New Media**

*Prerequisites:*

*Credit: 3 (2 lecture, 4 lab)*

This interdisciplinary and multimedia course explores the origins, dynamics, and innovation of new media involvement/inclusion in filmmaking. This course will cover the history and importance of evolving technology (smartphones, wearable cameras, digital cameras) and its applications in social communication platforms. The course is designed as an entry-level, general interest class open to all students who have an interest in the roles of New Media in communication, information, and commerce.

## **FLMC 1391 Special Topics in Film/Cinema Studies**

*Prerequisites: RTVB 1321; Must be placed into GUST 0342 in reading, ENGL 0310 in writing and MATH 0312 in math.*

*Credit: 3 (2 lecture, 4 lab)*

Topics address recently identified current events, skills, knowledge, and/or attitudes and behaviors pertinent to the technology or occupation and relevant to the professional development of the student. This course was designed to be repeated multiple times to improve student proficiency.

## **FLMC 2305 Film-Style 3-D Animation Production**

*Prerequisites: RTVB 2331; Must be placed into GUST 0342 in reading, ENGL 0310 in writing and MATH 0312 in math.*

*Co-requisite: FLMC 2370*

*Credit: 3 (2 lecture, 4 lab)*

Techniques in 3-D animation for film-style and live action production. Topics include animations fundamentals, 3D modeling, splines and lofts, keyframing, particle effects, rendering.

## **FLMC 2308 Film Business and Marketing**

*Prerequisites: MUSB 2355 and FLMC 1300; Must be placed into GUST 0342 in reading, ENGL 0310 in writing and MATH 0312 in math.*

*Credit: 3 (2 lecture, 4 lab)*

The fundamentals of budgeting, financial records, and the distribution and marketing of films. (The course will introduce the fundamentals of budgeting, financial records, and the distribution of films. Starting with a brief historical review of the American film industry, the course will describe the major film corporations and their subsidiaries and the rise of the independent film industry. Additional topics include basic accounting issues, marketing concepts, distribution, advertising, the Internet, publicity, finding a distribution partner, negotiation tactics and strategies, and establishing a 'paper trail' for financial transactions.)

## **FLMC 2310 Film-style Production**

*Prerequisites: RTVB 1321; Must be placed into GUST 0342 in reading, ENGL 0310 in writing and MATH 0312 in math.*

*Credit: 3 (2 lecture, 4 lab)*

Writing, directing, and producing film-style productions.

## **FLMC 2330 Audio Post Production**

*Prerequisites: RTVB 2337 and RTVB 2330; Must be placed into GUST 0342 in reading, ENGL 0310 in writing and MATH 0312 in math.*

*Credit: 3 (2 lecture, 4 lab)*

The technology, creative application and requirements for producing audio soundtracks for film and video. (This course explores the technology, creative application and requirements for producing audio soundtracks for film and video projects. Topics include time code, synchronization, mixing, Foley, dialog replacement, sound effects and location sound. The students will work on computerized workstations to produce finished audio tracks for various projects. Students are required to attend additional lab hours outside of class.)

## **FLMC 2331 Video Graphics and Visual Effects II**

*Prerequisites: FLMC 1331; Must be placed into GUST 0342 in reading, ENGL 0310 in writing and MATH 0312 in math.*

*Credit: 3 (2 lecture, 4 lab)*

Advanced concepts of designing vector and raster graphics, executing rendering techniques, designing and producing three-dimensional (3-D) materials, and selecting hardware, software, and peripherals for video production.

## **FLMC 2333 Cinematography**

*Prerequisites: FLMC 1304; Must be placed into GUST 0342 in reading, ENGL 0310 in writing and MATH 0312 in math.*

*Credit: 3 (2 lecture, 4 lab)*

Theoretical elements and practical applications of cinematography. (This class teaches theoretical elements and practical application of cinematography. While learning techniques

of film production, students study historical and contemporary trends and styles. Theoretical topics include differences in film stocks, exposure, color theory and filters. Professional techniques that alter an image's character are demonstrated and discussed. Practical tests and scenes are shot using color and black and white film stocks. Students are required to attend additional lab hours outside of class.)

## **FLMC 2334 Directing for Film or Video**

*Prerequisites: FLMC 1300; Must be placed into GUST 0342 in reading, ENGL 0310 in writing and MATH 0312 in math.*

*Credit: 3 (2 lecture, 4 lab)*

Directing to lead a production team. (This course teaches the craft of directing to students who aspire to lead a production team. By analyzing the work of classic and contemporary directors, the class investigates the art and language of filmmaking. Topics include framing and composition, camera angles, camera movement, blocking of actors, visualizing action, and creating a sequence, script breakdown, and techniques for establishing mood, character, and conflict.)

## **FLMC 2335 Screenwriting for Features, Shorts and Documentaries**

*Prerequisites: RTVB 1429; Must be placed into GUST 0342 in reading, ENGL 0310 in writing and MATH 0312 in math.*

*Credit: 3 (2 lecture, 4 lab)*

Screenwriting for the principle genres of film. (This class emphasizes screenwriting for the principle genres of film. Students will create treatments from dramatic concepts, turn these treatments into screenplays and complete full shooting scripts by the course's end. Topics include scriptwriting, formatting conventions and structural analysis of comedies, dramas, documentaries and short films. At the conclusion of the course students will submit an original script to a scriptwriting contest. Students are required to attend additional lab hours outside of class.)

## **FLMC 2336 Production Development-Producing**

*Prerequisites: FLMC 1300, RTVB 2337; Must be placed into GUST 0342 in reading, ENGL 0310 in writing and MATH 0312 in math.*

*Credit: 3 (2 lecture, 4 lab)*

Sequential steps of supervision in all phases of film production and distribution. Includes resource acquisition and allocation. (During this class the student will address three primary questions posed when developing an idea for a film: What are you going to film? How are you going to film it? How are you going to structure the production? This class will teach students how to explore these questions fully before production begins. Class

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discussions, student projects and instructor analysis will emphasize the pre-production process: storyboarding shot lists, scheduling, location scouting, stock footage and budgeting. The class will also address design and aesthetic decisions in costuming, makeup and set design. Students are required to attend additional lab hours outside of class.)

## **FLMC 2342 Film Editing and Sound Synchronization**

*Prerequisites: RTVB 2337; Must be placed into GUST 0342 in reading, ENGL 0310 in writing and MATH 0312 in math.*

*Credit: 3 (2 lecture, 4 lab)*

Design and theory of film editing from raw footage to a final release print. Includes preparing film for the lab, setting up opticals, making and shooting titles, hot splicing, sound track dubbing, and obtaining a final release print. Also may include special effects and sync vs. non-sync sound.

## **FLMC 2344 Advanced Film and Video Editing**

*Prerequisite: FLMC 1331, RTVB 2330; Must be placed into GUST 0342 in reading, ENGL 0310 in writing and MATH 0312 in math.*

*Credit: 3 (2 lecture, 4 lab)*

Exploration of the creative possibilities of non-linear film and video editing. Includes editing aesthetics, titles, graphic design, compositing, and special effects.

## **FLMC 2380 Cooperative Education/ Cinematography and Film/Video Production**

*Prerequisites: FLMC 2336 and Department Approval; Must be placed into GUST 0342 in reading, ENGL 0310 in writing and MATH 0312 in math.*

*Credit: 3 (1 lecture, 20 lab)*

Career-related activities encountered in the student's area of specialization offered through an individualized agreement among the college, employer, and student. Under the supervision of the college and the employer, the student combines classroom learning with work experience. Includes a lecture component.

## **FMKT 1301 Floral Design**

*Prerequisites: Must be placed into GUST 0342 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (2 lecture, 2 lab)*

Principles of floral art with an emphasis on commercial design. Topics include basic design styles and color harmonies; identification, use, and care of processing of cut flowers and foliages; mechanical aids and containers; personal flowers; holiday designs; and plant identification and care.

## **FMKT 2331 Advanced Floral Design**

*Prerequisites: FMKT 1301; Must be placed into GUST 0342 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (2 lecture, 2 lab)*

An in-depth coverage of advanced floral design practices for the retail floral industry. Topics include contemporary floral arrangement styles and trends.

## **FMKT 2335 Flower Shop Management**

*Prerequisites: FMKT 1301; Must be placed into GUST 0342 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (3 lecture)*

Modern principles and practices used in management and operations of retail florist shops. Topics include structure of the industry, shop location, business plan organization, marketing methods and management practices.

## **FREN 1300 Beginning French Conversation I**

*Credit: 3 (3 lecture)*

An introductory French course that emphasizes listening comprehension and speaking skills. Reading and writing may be done as reinforcement to oral communication skills. The course is slower-paced and less comprehensive than French 1411. It is highly recommended for students without previous experience in the French language. This course is not open to students whose first language is French. Generally, does not transfer as foreign language credit, but may transfer as elective credit.

## **FREN 1411 Beginning French I**

*Prerequisites: Must be placed into college - level reading (or take GUST 0342 as a co-requisite) and be placed into college level writing (or take ENGL 0310/0349 as a co-requisite).*

*Credit: 4 (3 lecture, 2 lab)*

Introduction to the French language and culture. Development of basic skills in listening comprehension, speaking, reading, writing, and cultural awareness. Course includes vocabulary building, conversation and grammar. Transfers as foreign language credit. Core Curriculum Course.

## **FREN 1412 Beginning French II**

*Prerequisites: FREN 1411 or satisfactory score on an advanced placement examination or at least two years of high school French within the last two years; must be placed into college - level reading (or take GUST 0342 as a co-requisite) and be placed into college level writing.*

*Credit: 4 (3 lecture, 2 lab)*

Continuation of FREN 1411. Further development of listening comprehension, speaking, reading and writing skills and cultural awareness. More advanced grammar. Transfers as foreign language credit. Core Curriculum Course.

## **FREN 2311 Intermediate French I**

*Prerequisites: FREN 1412 or equivalent; must be placed into college - level reading (or take GUST 0342 as a co-requisite) and be placed into college level writing (or take ENGL 0310/0349 as a co-requisite).*

*Credit: 3 (3 lecture)*

Further development of listening, speaking, reading and writing skills and cultural awareness acquired in Beginning French. Introduction of more complex language structures. Oral and written practice based on selected readings. Class conducted mainly in French.

## **FREN 2312 Intermediate French II**

*Prerequisites: FREN 2311 or equivalent; must be placed into college - level reading (or take GUST 0342 as a co-requisite) and be placed into college level writing.*

*Credit: 3 (3 lecture)*

Continuation of FREN 2311 but with special emphasis on written communication. Readings, discussions and compositions. Class conducted mainly in French.

## **FSDH 1191 Special Topics in Fashion Design and Illustration**

*Prerequisites: Must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 1 (1 lecture)*

Topics address recently identified current events, skills, knowledge, and/or attitudes and behaviors pertinent to the technology or occupation and relevant to the professional development of the student. This course was designed to be repeated multiple times to improve student proficiency.

## **FSDH 1233 Fashion Study Tour**

*Prerequisites: Must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 2 (2 lecture)*

A course which combines the study of fashion with travel. Exploration of fashion, art, architecture, textiles, costume, business, and cultural activities in major art and fashion cities. Examination of the most current work in the industry from a global perspective. This course was designed to be repeated multiple times to improve student proficiency.

## **FSDH 1235 Millinery**

*Prerequisites: Must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 2 (2 lecture, 1 lab)*

A study of the basic skills and methods used to create hats. An application of the techniques used to design and produce hats for fashion, theater, historic reproduction and educational instruction purposes.

## **FSDH 1291 Special Topics in Fashion Design and Illustration: Maskmaking**

*Prerequisites: Must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 2 (2 lecture)*

An introductory course in the construction of masks through several techniques. The students will use their creativity to put their own spin on a traditional craft.

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## **FSHD 1302 Introduction to Fashion**

*Prerequisites: Must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (3 lecture)*

Survey of the world of fashion businesses. Introduction to the creation and merchandising of fashion through the study of fashion vocabulary, the fashion process, fashion publications and career opportunities.

## **FSHD 1308 Fashion Trends**

*Prerequisites: Must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (3 lecture)*

A study of the effects of Eastern and Western cultures on the development of fashion. Examination of the relationship of social, psychological, economic, demographic and life-style trends to fashion trends.

## **FSHD 1311 Fashion History**

*Prerequisites: Must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (3 lecture)*

Survey of the evolution of fashion change traced through garment development from ancient times to present day. A study of customs and silhouettes of each historical period and their modern day adaptations. Examination of twentieth century fashion designers.

## **FSHD 1318 Apparel Computer Systems**

*Prerequisites: Must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (3 lecture, 1 lab)*

An introduction to apparel computer systems used in wholesale and retail fashion businesses. Applications demonstrated include computer-aided garment and textile design, fashion illustration, pattern making, pattern grading, marker making, newsletters, brochures, advertisements and catalogs.

## **FSHD 1322 Fashion Sketching**

*Prerequisites: Must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (3 lecture, 1 lab)*

Fundamentals of quick sketching to communicate design ideas. Instruction in drawing the male and female fashion figure. Emphasis on simple methods for making quick sketches to illustrate style information.

## **FSHD 1324 Ready-To-Wear Construction**

*Prerequisites: Must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (2 lecture, 4 lab)*

Fundamentals of mass production of apparel, focusing on the operation of industrial sewing and pressing equipment. Survey of materials selection and construction techniques used at all price levels of mass produced apparel. Introduction to industry seam allowances. Identification of differences between ready-to-wear and couture construction.

## **FSHD 1328 Flat Pattern Design I**

*Prerequisite: FSHD 1324; Must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (2 lecture, 3 lab)*

An introduction to the creative design of clothing through the flat pattern method. General principles of pattern making using the basic five-piece dress sloper. A study of dart manipulation, slashing and spreading the pattern and contouring sew lines.

## **FSHD 1332 Custom Patterns**

*Prerequisites: FSHD 1328 and FSHD 2306; Must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (2 lecture, 3 lab)*

Skill development in taking body measurements. Instruction in developing custom fittings for customized patterns. In depth coverage of the process of transferring a custom body fitted canvas to a basic dress form and padding it for custom sizing.

## **FSHD 1333 Fashion Study Tour**

*Prerequisites: Must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (3 lecture)*

A course which combines the study of fashion with travel. Exploration of fashion, art, architecture, textiles, costume, business, and cultural activities in major art and fashion cities. Examination of the most current work in the industry from a global perspective. This course was designed to be repeated multiple times to improve student proficiency.

## **FSHD 1351 Design Construction Techniques**

*Prerequisite: FSHD 1324; Must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (2 lecture, 4 lab)*

A continuation of Ready-to-Wear Construction with emphasis on design details. Instruction in basic manipulation of a commercial pattern to create individual design details, dressmaking and fully lined unstructured garments in intermediate level fabrics.

## **FSHD 1355 Flat Pattern Design II**

*Prerequisite: FSHD 1328; Must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (2 lecture, 3 lab)*

A continuation of Flat Pattern Design I with emphasis on patterns for tailored garments. Instruction in creating a jacket sloper with a two piece suit sleeve to make patterns for a variety of

jacket silhouettes. Adding shoulder pad allowance, drafting patterns for jacket linings and interfacing pieces, lapel and collar variations and various pants shapes.

## **FSHD 1391 Special Topics in Fashion Design and Illustration: Advanced Fashion Sketching**

*Prerequisites: Must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (3 lecture)*

Topics address recently identified current events, skills, knowledge, and/or attitudes and behaviors pertinent to the technology or occupation and relevant to the professional development of the student. This course was designed to be repeated multiple times to improve student proficiency.

## **FSHD 2215 Bustier Construction**

*Prerequisites: Must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 2 (1 lecture, 3 lab)*

Instruction in the skills and techniques for creating a boned bodice. Production of strapless bodices from fashion and theatrical sources through the pattern-making and construction process.

## **FSHD 2305 Computer Aided Apparel Design**

*Prerequisites: Must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (3 lecture, 3 lab)*

Fundamentals of computerized pattern design and marker making, as they pertain to the industrial production of apparel products.

## **FSHD 2306 Draping**

*Prerequisite: FSHD 1324; Must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (2 lecture, 3 lab)*

A study of three-dimensional fashion design conceptualizing by draping in muslin or fashion fabric directly on the dress form. Skill development in observing grain of fabric, identifying drapable fabrics and creating designs suitable for draping. Presentation of major fashion designers' draping techniques.

## **FSHD 2310 Fabric Design**

*Prerequisites: FSHD 1324, FSHN 1301; Must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (2 lecture, 3 lab)*

Fundamentals of fabric design. Instruction in silk screen, batik, tie-dye, painting, resist dye, block print, stenciling and weaving. Skill development in

# Course Descriptions

fabric design and production suitable for fashion apparel.

## **FSHD 2312 Theatrical Costume Design**

*Prerequisite: DRAM 1310; Must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (2 lecture, 3 lab)*

A study of garment design for the theater in which costumes are researched and designed for theatrical productions. Instruction in the effect of lighting and staging in relationship to costuming.

## **FSHD 2341 Pattern Grading**

*Prerequisite: FSHD 1328; Must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (3 lecture, 1 lab)*

Instruction in sizing standard patterns larger and smaller for the mass production of apparel. A study of 1", 1-1/2", and 2" and S-M-L-XL grade rules and their applications. Skill development in grading basic and fashion patterns with the ruler, the grading machine, and the computer.

## **FSHD 2343 Fashion Collection Design**

*Prerequisites: FSHD 1351, FSHD 1328; Must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (2 lecture, 3 lab)*

Advanced concepts in designing a collection of marketable apparel. Instruction in developing a design work board for a specific target market and selecting the most marketable ideas for the collection. Projects in resource development, fabric selection, estimating wholesale costs and initial pattern and garment production.

## **FSHD 2344 Fashion Collection Production**

*Prerequisite: FSHD 2343; Must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (2 lecture, 3 lab)*

A continuation of the Fashion Collection Design course. Emphasis on the production, costing and marketing of a cohesive collection of fashion apparel. Instruction in completing production patterns for all collection garments.

## **FSHD 2388 Internship - Fashion/Apparel Design**

*Prerequisite: Department Approval; Must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (16 lab) (256 hours work experience)*

A work-based learning experience that enables the student to apply specialized occupational theory, skills and concepts. A learning plan is developed by the college and the employer.

## **FSHN 1301 Textiles**

*Prerequisites: Must be placed into GUST 0341 in reading, ENGL 0301 or 0349 in writing and MATH 0308 in math.*

*Credit: 3 (3 lecture, 1 lab)*

A general study of textiles with emphasis on factors that affect the hand, appearance and performance in clothing use. Examination of the properties of natural and man-made fibers, how yarn is formed, methods of production and the properties of a wide

variety of fabrics. Application of textiles used in the apparel industry.

## **FSHN 1305 Apparel Alterations**

*Prerequisite: FSHD 1324; Must be placed into GUST 0341 in reading, ENGL 0301 or 0349 in writing and MATH 0308 in math.*

*Credit: 3 (2 lecture, 3 lab)*

Skill development in fitting, altering, conserving and restyling apparel for men, women and children. Preparation for fitting, alterations, conservation and restoration work for a retail store, dry cleaning establishment, wedding gown business or historical costume collection.

## **FSHN 1320 Fashion Selling**

*Prerequisites: Must be placed into GUST 0341 in reading, ENGL 0301 or 0349 in writing and MATH 0308 in math.*

*Credit: 3 (3 lecture)*

Examination of selling techniques for fashion apparel and accessories in retail and wholesale settings. Identification of buying motives, sales psychology, customer approach and closure. Instruction in product analysis, building a regular clientele, developing a fashion vocabulary and training and motivating a sales staff.

## **FSHN 1329 Basic Men's Tailoring**

*Prerequisite: FSHD 1324; Must be placed into GUST 0341 in reading, ENGL 0301 or 0349 in writing and MATH 0308 in math.*

*Credit: 3 (2 lecture, 3 lab)*

An introduction to tailoring men's structured apparel including fundamentals of sewing machine operations, fabric preparation and cutting, machine and hand sewing techniques, and pressing proficiency including instruction in pattern and alterations, assembling men's jackets, vests and pants, and fitting and alterations procedures.

## **FSHN 2301 Fashion Promotion**

*Prerequisites: Must be placed into GUST 0341 in reading, ENGL 0301 or 0349 in writing and MATH 0308 in math.*

*Credit: 3 (3 lecture)*

A survey of fashion direction, publicity and fashion event coordination. Emphasis on fashion show production from idea to runway, including theme development, stage/set design, choreography, music coordination, lighting, lineup, model fittings, rehearsal and press kit development.

## **FSHN 2303 Fashion Buying**

*Prerequisites: Must be placed into GUST 0341 in reading, ENGL 0301 or 0349 in writing and MATH 0308 in math.*

*Credit: 3 (3 lecture)*

Fundamentals of fashion buying with instruction in planning, pricing, and purchasing retail fashion inventories. Identification of wholesale merchandise resources.

## **FSHN 2305 Fashion Retailing**

*Prerequisites: Must be placed into GUST 0341 in reading, ENGL 0301 or 0349 in writing and MATH 0308 in math.*

*Credit: 3 (3 lecture)*

An overview of fashion retailing procedures used in various types of retail fashion companies. A study of profit and loss, pricing, markup, inventory control, shortages, forecasting, store organization, and events. Examination of the wide variety of job opportunities available in the retail fashion industry.

## **FSHN 2307 Fashion Advertising**

*Prerequisites: Must be placed into GUST 0341 in reading, ENGL 0301 or 0349 in writing and MATH 0308 in math.*

*Credit: 3 (3 lecture)*

General principles and practices of fashion advertising and consumer directed communication. A study of persuasive media approaches for public relations induced publicity and advertising produced sales promotions.

## **FSHN 2309 Fashion Image**

*Prerequisites: Must be placed into GUST 0341 in reading, ENGL 0301 or 0349 in writing and MATH 0308 in math.*

*Credit: 3 (3 lecture)*

Instruction in the techniques used to analyze the fashion image of individual clients. Emphasis on personal coloring, color harmonies, appropriate fabric textures, body proportion and silhouette, figure, facial and hair analysis, and wardrobe coordination. Study of fashion image consultant business practices and job qualifications.

## **FSHN 2320 Visual Merchandising**

*Prerequisites: Must be placed into GUST 0341 in reading, ENGL 0301 or 0349 in writing and MATH 0308 in math.*

*Credit: 3 (2 lecture, 3 lab)*

Skill development in the creation of showroom or retail store window/interior displays that sell merchandise. Study of the basic techniques of store planning, mannequin dressing, alternate form design, and display space conceptualization and implementation.

## **FSHN 2388 Internship - Fashion Merchandising**

*Prerequisite: Department Approval; Must be placed into GUST 0341 in reading, ENGL 0301 or 0349 in writing and MATH 0308 in math.*

*Credit: 3 (16 lab) (256 hours work experience)*

Principles and practices in resume and cover letter A work-based learning experience that enables the student to apply specialized occupational theory, skills and concepts. A learning plan is developed by the college and the employer.

## **FSHN 2432 Advanced Pattern Drafting**

*Prerequisites: Must be placed into GUST 0341 in reading, ENGL 0301 or 0349 in writing and MATH 0308 in math.*

*Credit: 4 (4 lecture, 1 lab)*

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Advanced techniques for drafting patterns.)

## **GAME 1212 Game Theory**

*Prerequisites:* GAME1306; Must be placed into college-level reading, ENGL 0310 or 0349 in writing and MATH 0306 in math.

*Credit:* 2 (1 lecture, 3 lab)

Game and simulation design. Application of design theories to production-based projects from the conceptual stage to a completed project.

## **GAME 1302 Interactive Storyboarding**

*Prerequisite:* GAME 1371; Must be placed into college-level reading, ENGL 0310 or 0349 in writing and MATH 0306 in math.

*Credit:* 3 (2 lecture, 4 lab)

In-depth coverage of storyboarding for the development of interactive media. Addresses target audience analysis, purpose, goals and objectives, content outline, flow chart, and interactive storyboarding.

## **GAME 1304 Level Design**

*Prerequisite:* Department Approval; Must be placed into college-level reading, ENGL 0310 or 0349 in writing and MATH 0306 in math.

*Credit:* 3 (2 lecture, 4 lab)

Introduction to the tools and concepts used to create levels for games and simulations. Incorporates level design, architecture theory, concepts of critical path and flow, balancing, play testing, and storytelling. Includes utilization of toolsets from industry titles.

## **GAME 1306 Design and Creation of Games**

*Prerequisites:* Department Approval; Must be placed into college-level reading, ENGL 0310 or 0349 in writing and MATH 0306 in math.

*Credit:* 3 (2 lecture, 4 lab)

Introduction to game and simulation development. Includes analysis of existing applications and their play elements. In-depth coverage of the elements of the application and examination of social issues, genres, and trends. Also covers creation of design documents, investigation of why people play games, review of technological and cultural history of electronic games, survey of the major innovators and historical figures of the industry, and examination of the trends and taboos that motivate game design.

## **GAME 1314 Character Sculpting**

*Prerequisites:* GAME 1336; Must be placed into college-level reading, ENGL 0310 or 0349 in writing and MATH 0306 in math.

*Credit:* 3 (2 lecture, 4 lab)

Creation of original characters from the drawing stage to sculpting clay status. Explores a variety of poses using clay and aluminum armatures.

## **GAME 1334 Video Game Art**

*Prerequisites:*

*Credit:* 3 (2 lecture 4 lab)

Explores the role of the artist in the gaming industry. Introduces tools and techniques used in the creation of assets for a game engine. Covers art pipeline, team integration and communication.

## **GAME 1335 Interactive Writing I**

*Prerequisites:* Must be placed into college-level reading, ENGL 0310 or 0349 in writing and MATH 0306 in math.

*Credit:* 3 (2 lecture 4 lab)

Instruction in writing plot, story, setting, and description for every game element and verbal communication based on game concept. Includes the study of traditional narrative practices and interactive fiction requiring creative writing.

## **GAME 1336 Introduction to 3D Game Modeling**

*Prerequisites:* Must be placed into college-level reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.

*Credit:* 3 (2 lecture, 4 lab)

Architectural spaces and modeling in a real-time game editor. Includes techniques for building, texturing, and lighting a game level to function in realtime.

## **GAME 1371 Introduction to 2D Game Art**

*Prerequisites:* GAME 1336; Must be placed into college-level reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.

*Credit:* 3 (2 lecture 4 lab)

Introduce industry software tools used in the creation of 2D game and simulation art. Includes the concepts, commands and interfaces of industry standard raster and vector graphics. Learn to edit and manipulate existing art.

## **GAME 1372 Game Programming for Non-Programmers**

*Prerequisites:* GAME 1336; Must be placed into college-level reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.

*Credit:* 3 (2 lecture 4 lab)

Examines the role of a programmer in the development of a game and translation of game design to code. Includes hands-on programming using a high level language.

## **GAME 1374 Introduction to 3D Game Animation**

*Prerequisites:* GAME 1336; Must be placed into college-level reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.

*Credit:* 3 (2 lecture 4 lab)

Introduce industry software tools used in creating game and simulation animation. Introduce techniques used to create movement of game assets; covers the principles of animation and their application in 3D space. Introduces animation issues such as animation hierarchies, game combat timing, and in-game storytelling.

## **GAME 1375 Principles of Game Concept Art**

*Prerequisites:* GAME 1371; Must be placed into college-level reading, ENGL 0310 or 0349 in writing and MATH 0306 in math.

*Credit:* 3 (2 lecture, 4 lab)

A study of traditional art techniques and its

applications to game concept art.

## **GAME 1378 Art for 2D Games**

*Prerequisites:*

*Credit:* 3 (2 lecture 4 lab)

Introduction to industry tools for the purpose of creating 2D game assets for gaming and simulation. Includes the art of spriting, 2D animation, 2D texturing, color theory, image manipulation, custom user interface, weapon designs, character design, heads up display, game user interface, file formatting, proper importing and exporting for games, understanding of design principles for games and marketing for games.

## **GAME 1379 Introduction to Game Programming**

*Prerequisites:* Must be placed into college-level reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.

*Credit:* 3 (2 lecture 4 lab)

Examines the role of a programmer in the development of a game and translation of game design to code. Includes hands-on programming using a high level language.

## **GAME 2302 Mathematical Applications for Game Development**

*Prerequisites:* GAME 1306 and programming; must be placed into college-level reading, ENGL 0310 or 0349 in writing and MATH 0312 in math.

*Credit:* 3 (2 lecture 4 lab)

Presents applications of mathematics and science in game and simulation programming. Includes the utilization of matrix and vector operations, kinematics, and Newtonian principles in games and simulations. Also covers code optimization.

## **GAME 2304 Level Design II**

*Prerequisites:* GAME 1304; must be placed into college-level reading, ENGL 0310 or 0349 in writing and MATH 0306 in math.

*Credit:* 3 (2 lecture, 4 lab)

Intermediate approach to the tools and concepts used to develop levels of games and simulations. Incorporates an intermediate exploration of level design, architecture theory, concepts of critical path and flow, balancing, play testing and storytelling. Includes utilization of toolsets from industry titles.

## **GAME 2305 Interactive Writing II**

*Prerequisites:* GAME 1335; Must be placed into college-level reading, ENGL 0310 or 0349 in writing and MATH 0306 in math.

*Credit:* 3 (2 lecture, 4 lab)

Dialog, story, and character development in writing for video games.

## **GAME 2308 Portfolio for Game Development**

*Prerequisites:* GAME 2332; must be placed into college-level reading, college-level writing and MATH 0308 in math.

*Credit:* 3 (2 lecture 4 lab)

Design and management of an industry standard portfolio. Includes techniques in self-promotion, resume writing, portfolio distribution systems, and interviewing.

# Course Descriptions

## **GAME 2309 Video Game Art II**

*Prerequisites:*

*Credit: 3 (2 lecture, 4 lab)*

Explores the role of the artist in the gaming industry. Introduces tools and techniques used in the creation of assets for a game engine. Covers art pipeline, team integration and communication.

## **GAME 2312 Interactive Audio**

*Prerequisites:*

*Credit: 3 (2 lecture, 4 lab)*

Music and sound effects. Includes formats, working within memory budgets, interactive systems, and foley libraries. Addresses a range of practical audio-related areas.

## **GAME 2319 Game Engine**

*Prerequisites: GAME 2347; must be placed into college-level reading, ENGL 0310 or 0349 in writing and MATH 0312 in math.*

*Credit: 3 (2 lecture, 4 lab)*

Commercial and open source gaming engines. Includes discussions and recommendations for game engines to fit industry specifications.

## **GAME 2325 3D Animation II-Character Setup**

*Prerequisites: GAME 1374; must be placed into college-level reading, ENGL 0310 or 0349 in writing and MATH 0312 in math.*

*Credit: 3 (2 lecture, 4 lab)*

Skinning and weighting, forward kinematics, inverse kinematics, constraints, expressions, scripting and driven keys, mesh deformers, morph targets/blend shapes, and animation user interfaces.

## **GAME 2332 Project Development I**

*Prerequisites: GAME 1371, GAME 1372, GAME 1212; must be placed into college-level reading, college-level writing and MATH 0308 in math.*

*Credit: 3 (2 lecture, 4 lab)*

Skill development in an original modification based on a current game engine. Includes management of version control; development of project timeliness; integration of sound, models, and animation; production of demos; and creation of original levels, characters, and content for a real-time multiplayer game. Applies skills learned in previous classes in a simulated real-world design team experience.

## **GAME 2334 Project Development II**

*Prerequisites: GAME 1336, GAME 2332; must be placed into college-level reading, college-level writing and MATH 0308 in math.*

*Credit: 3 (2 lecture, 4 lab)*

Continuation of an original modification based on a current game engine with an emphasis on new content and significant changes in game play over the base game experience. Includes creation of

original levels, characters, and content for a real-time multiplayer game applying skills learned in previous classes. (formerly GAME 2375)

## **GAME 2336 Lighting, Shading and Texture**

*Prerequisites: GAME 1336; must be placed into college-level reading, ENGL 0310 or 0349 in writing and MATH 0308 in math.*

*Credit: 3 (2 lecture, 4 lab)*

Lighting, shading, and texture painting for 3D models using digital painting techniques. Emphasizes lighting, shading, and texture creation of limited resolution to increase system performance for digital games and simulation training models.

## **GAME 2338 Game Testing**

*Prerequisites: Must be placed into college-level reading, ENGL 0310 or 0349 in writing and MATH 0312 in math.*

*Credit: 3 (2 lecture, 4 lab)*

Testing and debugging gaming and simulation applications in the alpha and beta stages of production. Includes critiques of the product and written documentation of the testing and debugging processes.

## **GAME 2341 Game Scripting**

*Prerequisites: GAME 1372; Must be placed into college-level reading, ENGL 0310 or 0349 in writing and MATH 0312 in math.*

*Credit: 3 (2 lecture, 4 lab)*

Scripting languages with emphasis on game concepts and simulations.

## **GAME 2342 Game Development Using C++**

*Prerequisites: GAME 2347; Must be placed into college-level reading, ENGL 0310 or 0349 in writing and MATH 0312 in math.*

*Credit: 3 (2 lecture, 4 lab)*

Skill development in C++ programming for games and simulations. Examines real-world C++ development issues.

## **GAME 2344 DirectX Programming**

*Prerequisites: GAME 2347; Must be placed into college-level reading, ENGL 0310 or 0349 in writing and MATH 0312 in math.*

*Credit: 3 (2 lecture, 4 lab)*

Exploration of the advanced suite of multimedia application programming interfaces (API) built into the Microsoft Windows operating system.

## **GAME 2347 Advanced Game Programming**

*Prerequisites: GAME 2347; must be placed into college-level reading, ENGL 0310 or 0349 in writing and MATH 0312 in math.*

*Credit: 3 (2 lecture, 4 lab)*

Optimization of student-created games. Includes performance tuning, debugging, designing for test, software architecture design, object-oriented practices for game play, asset management, and coding best practices.

## **GAME 2371 Level Design III**

*Prerequisites: GAME 2304; must be placed into college-level reading, ENGL 0310 or 0349 in writing and MATH 0306 in math.*

*Credit: 3 (2 lecture, 4 lab)*

Advanced approach to the tools and concepts used to create levels for games and simulations. Incorporates an advanced exploration of level design, architecture theory, concepts of critical path and flow, balancing, play testing, and storytelling. Includes utilization of toolsets from industry titles.

## **GAME 2372 Emerging Game Technology**

*Prerequisites: GAME 2304; Must be placed into college-level reading, ENGL 0310 or 0349 in writing and MATH 0306 in math.*

*Credit: 3 (2 lecture, 4 lab)*

Explore significant developments within the gaming and simulation field. Research emerging technologies and systems recently developed in the gaming and simulation industry.

## **GAME 2373 2D Game Programming**

*Prerequisites: GAME 1372; Must be placed into college-level reading, ENGL 0310 or 0349 in writing and MATH 0312 in math.*

*Credit: 3 (2 lecture, 4 lab)*

Design and development of 2D games and simulations. Includes the design of the user interface, animation, and software development techniques using industry standard development tool.

## **GAME 2378 Techniques of Game Art**

*Prerequisites: GAME 1371; Must be placed into college-level reading, ENGL 0310 or 0349 in writing and MATH 0308 in math.*

*Credit: 3 (2 lecture, 4 lab)*

A study of industry-used, game-art techniques and its applications of 3D game art assets.

## **GAME 2386 Internship**

*Prerequisites: GAME 2334; must be placed into college-level reading, college-level writing and MATH 0312 in math.*

*Credit: 3 (15 external lab)*

A work-based learning experience that enables the student to apply specialized occupational theory, skills and concepts. A learning plan is developed by the college and the employer.

## **GEOG 1301 Physical Geography**

*Prerequisites: Must be placed into college-level reading (or take GUST 0342 as a co-requisite) and be placed into college-level writing (or take ENGL 0310/0349 as a co-requisite).*

*Credit: 3 (3 lecture)*

An introduction to the earth's physical elements. Emphasis is placed on the interrelationships within and between the atmosphere, hydrosphere, lithosphere, and biosphere. Map applications and other tools are used to help understand topics such as weather and climate, soils, ecosystems,

# Course Descriptions

and natural resources. This course satisfies the Life and Physical Sciences or Component Area Option of the HCC core.

## **GEOG 1302 Human Geography**

*Prerequisites: Must be placed into college-level reading (or take GUST 0342 as a co-requisite) and be placed into college-level writing (or take ENGL 0310/0349 as a co-requisite).*  
*Credit: 3 (3 lecture)*

A survey of the cultural diversity found on earth. Topics include population, language, religion, ethnicity, and popular culture, with a special focus on spatial attributes and expressions of culture. This course satisfies the Social and Behavioral Sciences or Component Area Option of the HCC core.

## **GEOG 1303 World Regional Geography**

*Prerequisites: Must be placed into college-level reading (or take GUST 0342 as a co-requisite) and be placed into college-level writing (or take ENGL 0310/0349 as a co-requisite).*

*Credit: 3 (3 lecture)*

A study of the world's regions with an emphasis on prevailing conditions and developments. Using a spatial lens, the course looks at cultural, physical, and historical characteristics of regions around the world, and develops awareness of the diversity of ideas and practices found in these regions. This course satisfies the Social and Behavioral Sciences or Component Area Option of the HCC core.

## **GEOG 2312 Economic Geography**

*Prerequisites:*

*Credit: 3 (3 lecture)*

Analytical study of the historical development of particular economic distributions as they relate to social, cultural, political, and physical factors. Includes critical inquiry into the reasons for location of various types of economic activity, production, and marketing. Cross-listed with ECON 2311.

## **GEOG 1305 Environmental Science (previously ENVR 1301)**

*Prerequisites: Must qualify to take GUST 0342 (or higher) in reading and ENGL 0310/0349 (or higher) in writing or INRW 0420 or ESOL 0360.*

*Credit: 3 (3 lecture)*

A survey of the forces, including humans, that shape our physical and biologic environment, and how they affect life on Earth. Introduction to the science and policy of global and regional environmental issues, including pollution, climate change, and sustainability of land, water, and energy resources. This course satisfies the Life and Physical Sciences or Component Area Option of the HCC core.

## **GEOG 1345 Oceanography**

*Prerequisites: : Must qualify to take GUST 0342 or INRW 0420 (or higher) in reading and qualify to take MATH 0312 (or higher) in mathematics and qualify to take ENGL 0310/0349 or INRW 0420 (or higher) in writing.*

*Credit: 3 (3 lecture)*

An introduction to the world's oceans, emphasizing the geological, physical, biological, chemical, and ecological aspects of the marine environment. This

course satisfies the Life and Physical Sciences or Component Area Option of the HCC core.

## **GEOG 1347 Meteorology**

*Prerequisites: Must qualify to take GUST 0342 or INRW 0420 (or higher) in reading and qualify to take MATH 0312 (or higher) in mathematics and qualify to take ENGL 0310/0349 or INRW 0420 (or higher) in writing.*

*Credit: 3 (3 lecture)*

The study of basic principles of weather and climate and the pervasive effects of weather conditions on daily lives, commerce, agriculture, urban planning and other human activity. The course offers basic scientific theory with applications familiar to the student. This course satisfies the Life and Physical Sciences or Component Area Option of the HCC core.

## **GEOG 1403 Physical Geology**

*Prerequisites: Must qualify to take GUST 0342 or INRW 0420 (or higher) in reading and qualify to take MATH 0312 (or higher) in mathematics and qualify to take ENGL 0310/0349 or INRW 0420 (or higher) in writing.*

*Credit: 4 (3 lecture, 3 lab)*

Introduction to the study of the materials and processes that have modified and shaped the surface and interior of Earth over time. These processes are described by theories based on experimental data and geologic data gathered from field observations. Laboratory activities will cover methods used to collect and analyze earth science data. This course satisfies the Life and Physical Sciences or Component Area Option of the HCC core.

## **GEOG 1404 Historical Geology**

*Prerequisites: GEOG 1403*

*Credit: 4 (3 lecture, 3 lab)*

A comprehensive survey of the history of life and major events in the physical development of Earth as interpreted from rocks and fossils. Laboratory activities will introduce methods used by scientists to interpret the history of life and major events in the physical development of Earth from rocks and fossils. This course satisfies the Life and Physical Sciences or Component Area Option of the HCC core.

## **GERM 1300 Beginning German**

### **Conversation I**

*Credit: 3 (3 lecture)*

An introductory German course which emphasizes listening comprehension and speaking skills. Reading and writing may be done as reinforcement to oral communication skills. The course is slower-paced and less comprehensive than German 1411. It is highly recommended for students without previous experience in the German language. This course is not open to students whose first language is German. Generally, does not transfer as foreign language credit, but may transfer as elective credit.

## **GERM 1411 Beginning German I**

*Prerequisites: Must be placed into college - level reading (or take GUST 0342 as a co-requisite) and be placed into college level writing (or take ENGL*

*0310/0349 as a co-requisite)*

*Credit: 4 (3 lecture, 2 lab)*

Introduction to German language and culture. Development of basic skills in listening comprehension, speaking, reading, writing, and cultural awareness. Course includes vocabulary building, conversation and grammar. Transfers as foreign language credit. Core Curriculum Course.

## **GERM 1412 Beginning German II**

*Prerequisites: GERM 1411 or satisfactory score on an advanced placement examination or at least 2 years of high school German within the last two years; must be placed into college - level reading (or take GUST 0342 as a co-requisite) and be placed into college level writing (or take ENGL 0310/0349 as a co-requisite).*

*Credit: 4 (3 lecture, 2 lab)*

Continuation of GERM 1411. Further development of listening comprehension, speaking, reading, and writing skills, and cultural awareness. More advanced grammar. Transfers as foreign language credit. Core Curriculum Course.

## **GERM 2311 Intermediate German I**

*Prerequisites: GERM 1412 or equivalent; must be placed into college - level reading (or take GUST 0342 as a co-requisite) and be placed into college level writing (or take ENGL 0310/0349 as a co-requisite).*

*Credit: 3 (3 lecture)*

Further development of listening, speaking, reading and writing skills and cultural awareness acquired in Beginning German. Introduction of more complex language structures. Oral and written practice based on selected readings. Class conducted mainly in German.

## **GERM 2312 Intermediate German II**

*Prerequisites: GERM 2311 or equivalent; must be placed into college - level reading (or take GUST 0342 as a co-requisite) and be placed into college level writing (or take ENGL 0310/0349 as a co-requisite).*

*Credit: 3 (3 lecture)*

Continuation of GERM 2311. Special emphasis on writing. Readings, discussions and compositions. Class conducted mainly in German.

## **GERS 1301 Introduction to Gerontology**

*Prerequisites: Must be placed into GUST 0342 in reading, ENGL 0310 or 0349 in writing and MATH 0306 in math.*

*Credit: 3 (3 lecture)*

Overview of the social, psychological, and biological changes that accompany aging and an overview of the implications of these changes for the individual, as well as for the larger society.

## **GISC 1401 Cartography and Geography in Geographical Information Systems (GIS)**

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## **and Global Positioning Systems**

*Prerequisites: GISC 1411 or Department Approval; must be placed into GUST 0342 in reading, ENGL 0310 or 0349 in writing and MATH 0312 in math.*

*Credit: 4 (2 lecture, 4 lab)*

Introduction to the principles of cartography and geography. Emphasis on global reference systems and the use of satellites for measurements and navigation.

## **GISC 1411 Introduction to Geographic Information Systems (GIS)**

*Prerequisites: Must be placed into GUST 0342 in reading, ENGL 0310 or 0349 in writing and MATH 0312 in math.*

*Credit: 4 (2 lecture, 4 lab)*

Introduction to basic concepts of vector GIS using several industry specific software programs including nomenclature of cartography and geography.

## **GISC 1421 Introduction to Raster-Based Geographic Information Systems (GIS)**

*Prerequisites: GISC 1411 or Department Approval; must be placed into college-level reading, writing and math.*

*Credit: 4 (2 lecture, 4 lab)*

Instruction in GIS data sets including raster-based information such as images or photographs, acquisition of such data, and processing and merging with vector data.

## **GISC 1491 Special Topics in Cartography**

*Prerequisites: Department Approval; must be placed into college-level reading, writing and math.*

*Credit: 4 (2 lecture, 4 lab)*

Topics address recently identified current events, skills, knowledge and/or attitudes and behaviors pertinent to the technology or occupation and relevant to the professional development of the student.

## **GISC 2250 Scripting for Geographic Information Systems (GIS)**

*Prerequisites: GISC 1401, GISC 1411; must be placed into college-level reading, writing and math.*

*Credit: 2 (1 lecture, 2 lab)*

Using scripting languages (Python) to automate tasks in Geographic Information Systems (GIS) environments. Introduces scripting and model building techniques used to enhance and customize GIS applications

## **GISC 2359 Web-Served Geographic Information Systems (GIS)**

*Prerequisites: GISC 1401, GISC 1491; must be placed into college-level reading, writing and math.*

*Credit: 3 (2 lecture, 3 lab)*

Delivery of geographic data via the Internet.

Includes composition of the map features distributed and introduction on the use of markup languages to customize web-based Geographic Information Systems (GIS).

## **GISC 2364 Practicum (or Field experience)-Cartography**

*Prerequisites: Department Approval; must be placed into college-level reading, writing and math.*

*Credit: 3 (2 lecture, 3 lab)*

Practical, general workplace training supported by an individualized learning plan developed by the employer, college, and student.

## **GISC 2380 Cooperative Education - Cartography**

*Prerequisites: Department Approval; must be placed into college-level reading, writing and math.*

*Credit: 3 (1 lecture, 20 external hours)*

Career-related activities encountered in the student's area of specialization offered through an individualized agreement among the college, employer, and student. Under the supervision of the college and the employer, the student combines classroom learning with work experience. Includes a lecture component.

## **GISC 2401 Data Acquisition and Analysis in Geographic Information Systems (GIS)**

*Prerequisites: GISC 1401 or Department Approval; must be placed into college-level reading, writing and math.*

*Credit: 4 (2 lecture, 4 lab)*

Study of the management of geographic information, system life cycles, and costs and benefits. Includes institutional issues such as data providers, data management, combination of attribute and graphical data, information storage and access, Texas and national standards for spatial data; and applications of GIS for data modeling and analysis.

## **GISC 2411 Geographic Information Systems (GIS) Applications**

*Prerequisites: GISC 1401, 1421, or Department Approval; must be placed into college-level reading, writing and math.*

*Credit: 4 (2 lecture, 4 lab)*

Application of GIS technology to real workplace applications from public and private sectors. Completion of Global Positioning Systems (GPS) fieldwork required for lab exercises.

## **GOVT 2107 Federal and Texas Constitutions**

*Prerequisites: By permission only. Enrollment limited to students who have already completed a minimum of 6 SCH of GOVT courses but have not satisfied the statutory requirement for study of the federal and state constitutions. (generally, only students who took GOVT 2302, but not GOVT 2301 before Fall, 2013). Ensures compliance with TEC 51.301.*

*Credit: 1 (1 lecture)*

A study of the United States and state constitutions,

with special emphasis on Texas.

## **GOVT 2304 Introduction to Political Science**

*Prerequisites: Must be placed into college-level reading and college-level writing.*

*Credit: 3 (3 lecture)*

An introduction to the history, scope, and methods of political science. Among the topics covered are the different conceptions of politics and science and the relationships between them, the major controversies over the possibility and shape of political science, and the different approaches employed in the study of politics.

## **GOVT 2305 Federal Government (Federal Constitution & Topics)**

*Prerequisites: Must have passed ENGL 1301(Composition I) or co-enrolled in ENGL 1301 as a co-requisite.*

*Credit: 3 (3 lecture)*

Origin and development of the U.S. Constitution, structure and powers of the national government including the legislative, executive, and judicial branches, federalism, political participation, the national election process, public policy, civil liberties and civil rights. Core Curriculum Course.

## **GOVT 2306 Texas Government (Texas constitution & topics)**

*Prerequisites: Must have passed ENGL 1301 (or higher) or take ENGL 1301 as a co-requisite.*

*Credit: 3 (3 lecture)*

Origin and development of the Texas constitution, structure and powers of state and local government, federalism and inter-governmental relations, political participation, the election process, public policy, and the political culture of Texas. Core Curriculum Course.

## **GOVT 2389 Cooperative Legislative Internship**

*Prerequisites: Completion of GOVT 2305 or GOVT 2306 with a grade of "B" or better, a grade point average of at least 3.0, and the written recommendation of an HCC government instructor. Must be placed into college-level reading and college-level writing.*

*Credit: 3 (1 lecture, 16 lab)*

An experiential-learning instruction program designed to integrate textbook and classroom knowledge with practical hands-on experience in an applied area of political science. Primary implementation of student activities will occur in pre-selected legislative institutions or other related governmental organizations.

## **GUST 0100 Developmental Reading**

*Prerequisites: Department Approval*

*Credit: 1 (1 lecture)*

An individualized curriculum for students whose test scores demonstrate high proficiency but do not meet state requirements for placement into core course work. This course will present a concentrated review of basic Reading and Vocabulary Skills. Department Chair approval

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is required.

## **GUST 0339 Introduction to Reading**

*Prerequisites: Must be placed into GUST 0339 (or higher) in reading.*

*Credit: 3 (3 lecture, 1 lab)*

A basic reading course designed to improve students' overall reading skills. Emphasis is on reading comprehension, vocabulary development, study techniques, career planning and critical reading. Classroom instruction is enhanced by a variety of self-paced activities.

## **GUST 0340 Developmental Reading for Non-Native Speakers of English**

*Prerequisites: Satisfactory score on CELSA test*

*Credit: 3 (3 lecture, 1 lab)*

A basic reading course for non-native English speakers designed to improve students' overall reading skills. Emphasis on reading comprehension, vocabulary development, study techniques, and critical reading. Classroom instruction is enhanced by a variety of self-paced activities. Recommended on the basis of CELSA test scores.

## **GUST 0341 Developmental Reading I**

*Prerequisites: Must be placed into GUST 0341 in reading or completion of GUST 0339 or 0340.*

*Credit: 3 (3 lecture, 1 lab)*

Developmental Reading I is designed to address the developmental reader's need for direct instruction in basic reading behaviors that are essential to the acquisition of knowledge in the content areas. Instruction is based on an interactive reading method with emphasis on learning to learn. These key skills include previewing chapters, selecting and organizing the information read and critical reading, making informed decisions about that information.

## **GUST 0342 Developmental Reading II**

*Prerequisites: Must be placed into GUST 0342 in reading or completion of GUST 0341.*

*Credit: 3 (3 lecture, 1 lab)*

Developmental Reading II is a continuation of reading skills introduced in GUST 0341. Stronger emphasis is on critical reading and thinking skills. The goal of GUST 0342 is to teach students to analyze materials thoughtfully, synthesize materials from various sources, and apply this information to their reading.

## **HALT 1211 Shrubs, Vines and Groundcovers**

*Prerequisites: Must be placed into GUST 0342 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 2 (1 lecture, 3 lab)*

In-depth coverage of the shrubs, vines and groundcovers used in the horticulture industry. Topics include identification, characteristics, adaptation, cultural requirements, pest and disease problems, and use in the landscape.

## **HALT 1301 Principles of Horticulture**

*Prerequisites: Must be placed into GUST 0342 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (3 lecture)*

An overview of the horticulture industry, plant science, terminology, classification, propagation, environmental responses, and careers and opportunities in the field of horticulture.

## **HALT 1307 Plant Diseases**

*Prerequisites: Must be placed into GUST 0342 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (2 lecture, 2 lab)*

An overview of the factors causing plant diseases. Topics include physiological disorders, fungi, bacteria, viruses, nematodes, parasitic plants, nonpathogenic factors, and control methods.

## **HALT 1309 Interior Plants**

*Prerequisites: Must be placed into GUST 0342 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (2 lecture, 2 lab)*

Instruction in the identification and classification of the plants used in home and commercial interior landscapes. Topics include design characteristics for interiorscapes and environmental requirements of the plants.

## **HALT 1319 Landscape Construction**

*Prerequisites: Must be placed into GUST 0342 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (2 lecture, 2 lab)*

Exploration of landscape construction materials and methods of installation. Topics on soil preparation, including wood, concrete, masonry construction and landscape lighting including pools, spas, and general construction details.

## **HALT 1322 Landscape Design**

*Prerequisites: Must be placed into GUST 0342 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (2 lecture, 2 lab)*

A study of the principles and elements of landscape design. Topics include client interview, site analysis, plan view, scale, plant selection, basic drawing and drafting skills, and plan preparation.

## **HALT 1333 Landscape Irrigation**

*Prerequisites: Must be placed into GUST 0342 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (2 lecture, 2 lab)*

In-depth coverage of irrigation systems including equipment, design, performance, and maintenance. Topics include residential and commercial applications, troubleshooting, repair, and technological advances in irrigation systems.

## **HALT 1351 Landscape Business Operations**

*Prerequisites: Must be placed into GUST 0342 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (2 lecture, 2 lab)*

Instruction in the structure of the landscape business including cost estimation; organization; equipment needs; interpretation of financial reports; and material, labor, and equipment management. Emphasis on the types of landscape operations, marketing, legal forms, construction law, and safety.

## **HALT 1370 Introduction to Aquaponics**

*Prerequisites: Must be placed into GUST 0342 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (2 lecture, 2 lab)*

This course provides instruction in the principles and practical applications of Aquaponics and Hydroponics culture systems. Students will be introduced to the history as well as a variety of system designs that maintain water quality by various solids removal techniques. In-depth coverage of fish production, plant production, economics and fingerling production. Participants will learn the technology through presentation of the theory and practical skill development. Water quality labs will cover the methods of analysis and the use of water quality test kits. Field work will include fish handling, vegetable production and system operation.

## **HALT 1381 Cooperative Education**

*Prerequisites: Must be placed into GUST 0342 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (1 lecture, 20 hours per week employment)*

Career-related activities encountered in the student's area of specialization offered through an individualized agreement among the college, employer, and student. Under the supervision of the college and the employer, the student combines classroom learning with work experience. Includes a lecture component.

## **HALT 1382 Cooperative Education**

*Prerequisites: Department Approval; Must be placed into GUST 0342 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (1 lecture/seminar and 20 hrs a week employment)*

Career-related activities encountered in the student's area of specialization are offered through a cooperative agreement between the college, employer, and student. Under supervision of the college and the employer, the student combines classroom learning with work experience. Directly related to a technical discipline, specific learning objectives guide the student through the paid work experience. This course may be repeated if topics and learning outcomes vary.

## **HALT 1396 Special Topics in Nursery Operations and Management**

*Prerequisites: Department Approval; Must be placed into GUST 0342 in reading, ENGL 0300 or*

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0347 in writing and MATH 0306 in math.

*Credit: 3 (2 lecture, 2 lab)*

Topics address recently identified current events, skills, knowledge, and/or attitudes and behaviors pertinent to the technology or occupation and relevant to the professional development of the student.

## **HALT 2307 Horticulture Food Crops**

*Prerequisites: Must be placed into GUST 0342 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (2 lecture, 2 lab)*

A study of commercial and home cultivated food crops including various vegetables, fruits, and nuts. Topics address planting, maintenance, harvest, and storage of the various crops.

## **HALT 2308 Greenhouse Management**

*Prerequisites: Must be placed into GUST 0342 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (2 lecture, 2 lab)*

Fundamentals of greenhouse construction and operation. Topics include architectural styles, construction materials, environmental systems and controls, growing media, fertilizers, post harvest handling, marketing, and business management.

## **HALT 2312 Turfgrass Maintenance**

*Prerequisites: Must be placed into GUST 0342 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (3 lecture)*

Instruction in common turfgrass cultural practices. Topics include calculations, application of materials, and the operation and maintenance of equipment.

## **HALT 2314 Plant Propagation**

*Prerequisites: Must be placed into GUST 0342 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (2 lecture, 2 lab)*

A study of the sexual and asexual propagation of plants used in horticulture. Topics include propagation by seeds, cuttings, grafting, budding, layering, division separation, and tissue culture, and environmental factors of propagation.

## **HALT 2318 Soil Fertility and Fertilizers**

*Prerequisites: Must be placed into GUST 0342 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (2 lecture, 2 lab)*

An in-depth study of the chemistry, soil interaction, plant uptake, and utilization of essential plant nutrients. Topics include deficiency and toxicity symptoms, and the selection, application, and characteristics of fertilizer materials.

## **HALT 2320 Nursery Production and**

## **Management**

*Prerequisites: Must be placed into GUST 0342 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (2 lecture, 2 lab)*

An overview of the procedures for establishing and operating a commercial nursery. Topics include site selection, structures, equipment, stock selection, production practices, harvesting, marketing, and management practices.

## **HALT 2331 Advanced Landscape Design**

*Prerequisites: HALT 1322; Must be placed into GUST 0342 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (2 lecture, 2 lab)*

In-depth coverage of advanced practices in landscape planning for commercial and residential landscapes. Topics include advanced design analysis, architectural elements, space articulation, and land engineering concepts.

## **HAMG 1313 Front Office Procedures**

*Prerequisites: Must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (3 lecture, 1 lab)*

A study of the flow of activities and functions in today's lodging operation. Topics include a comparison of manual, machine assisted, and computer based methods for each front line function.

## **HAMG 1321 Introduction to Hospitality Industry**

*Prerequisites: Must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (3 lecture)*

Introduction to the elements of the hospitality industry.

## **HAMG 1324 Hospitality Human Resources Management**

*Prerequisites: Must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (3 lecture)*

A study of the principles and procedures of managing people in the hospitality workplace.

## **HAMG 1340 Hospitality Legal Issues**

*Prerequisites: Must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (3 lecture)*

A course in legal and regulatory requirements that impact the hospitality industry. Topics include Occupational Safety and Health Administration (OSHA), labor regulations, tax laws, tip reporting, franchise regulations, and product liability laws.

## **HAMG 1342 Guest Room Maintenance**

*Prerequisites: Must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (2 lecture, 3 lab)*

Demonstrates the working relationship in the

lodging industry between housekeeping and maintenance.

## **HAMG 2307 Hospitality Marketing and Sales**

*Prerequisites: Must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (3 lecture)*

Identification of the core principles of marketing and their impact on the hospitality industry.

## **HAMG 2332 Hospitality Financial Management**

*Prerequisites: Must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (3 lecture)*

Methods and application of financial management within the hospitality industry. Primary emphasis on sales accountability, internal controls, and reports analysis.

## **HAMG 2337 Hospitality Facilities Management**

*Prerequisites: Must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (3 lecture)*

Identification of building systems, facilities management, security and safety procedures

## **HAMG 2380 Cooperative Education I—Hospitality Administration and Management**

*Prerequisite: Department Approval; Must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Corequisite: 20 hours or more a week of approved hotel or restaurant related employment*

*Credit: 3 (1 lecture, 20 hours work experience)*

Career-related activities encountered in the student's area of specialization offered through an individualized agreement among the college, employer, and student. Under the supervision of the college and the employer, the student combines classroom learning with work experience. Includes a lecture component.

## **HAMG 2381 Cooperative Education II—Hospitality Administration and Management**

*Prerequisite: HAMG 2380; Must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Corequisite: 20 hours or more a week of approved hotel or restaurant related employment*

*Credit: 3 (1 lecture, 20 hours work experience)*

Career-related activities encountered in the student's area of specialization offered through an individualized agreement among the college, employer, and student. Under the supervision of the college and the employer, the student combines classroom learning with work experience. Includes a lecture component.

# Course Descriptions

## **HART 1301 Basic Electricity for HVAC**

*Prerequisites/Corequisites: TECM 1301; Must be placed into GUST 0339 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (2 lecture, 3 lab)*

Principles of electricity as required by HVAC, including proper use of test equipment, electrical circuits, and component theory and operation.

## **HART 1303 Air Conditioning Control Principles**

*Prerequisites/Corequisites: TECM 1301; Must be placed into GUST 0339 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (2 lecture, 3 lab)*

A basic study of HVAC and refrigeration controls; troubleshooting of control components; emphasis on use of wiring diagrams to analyze high and low voltage circuits; a review of Ohm's law as applied to air conditioning controls and circuits.

## **HART 1307 Refrigeration Principles**

*Prerequisites/Corequisites: TECM 1301; Must be placed into GUST 0339 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (2 lecture, 3 lab)*

An introduction to the refrigeration cycle, basic thermodynamics, heat transfer, temperature/pressure relationship, safety, refrigeration containment, and refrigeration components.

## **HART 1341 Residential Air Conditioning**

*Prerequisite: HART 1301, 1307; Must be placed into GUST 0339 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Prerequisite/Corequisite: TECM 1301;*

*Credit: 3 (2 lecture, 3 lab)*

A study of components, applications, and installation of mechanical air conditioning systems including operating conditions, troubleshooting, repair, and charging of air conditioning systems.

## **HART 1345 Gas and Electric Heating**

*Prerequisite: HART 1301, 1307; Must be placed into GUST 0339 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Prerequisite/Corequisite: HART 1341*

*Credit: 3 (2 lecture, 3 lab)*

A study of components, applications and installation of mechanical air conditioning systems including operating conditions, troubleshooting repair, and charging of air conditioning systems.

## **HART 1356 EPA Recovery Certification Preparation**

*Prerequisite: HART 1301, 1307; Must be placed into GUST 0339 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Prerequisite/Corequisite: TECM 1301*

*Credit: 3 (2 lecture, 3 lab)*

Certification training for HVAC refrigerant recovery and recycling. Instruction will provide a review of EPA guidelines for refrigerant recovery and recycling during the installation, service, and repair of all HVAC and refrigeration systems.

## **HART 2301 Air Conditioning and Refrigeration**

## **Codes**

*Prerequisites: Department Approval; Must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0308 in math.*

*Credit: 3 (2 lecture, 3 lab)*

HVAC standards and concepts with emphasis on the understanding, and documentation of the codes and regulations required for the state mechanical contractors license and local codes.

## **HART 2334 Advanced Air Conditioning Controls**

*Prerequisites: Department Approval; Must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0308 in math. Credit: 3 (2 lecture, 3 lab)*

Theory and application of electrical control devices, electromechanical controls, and/or pneumatic controls.

## **HART 2336 Air Conditioning Troubleshooting**

*Prerequisite: Prerequisite: HART 1341, HART 1345, HART 2342; Must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0308 in math.*

*Credit: 3 (2 lecture, 3 lab)*

An advanced course in application of troubleshooting principles and use of test instruments to diagnose air conditioning and refrigeration components and system problems including conducting performance tests.

## **HART 2341 Commercial Air Conditioning**

*Prerequisites/Corequisites: HART 1345*

*Prerequisites: HART 1341; Must be placed into GUST 0339 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (2 lecture, 3 lab)*

Apply and describe the sequence of operation for commercial air conditioning systems and their accessories; identify components relative to commercial air conditioning; and explain energy efficient and renewable energy technologies.

## **HART 2342 Commercial Refrigeration**

*Prerequisites/Corequisites: HART 1345*

*Prerequisites: HART 1341; Must be placed into GUST 0339 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (2 lecture, 3 lab)*

Theory of and practical application in the maintenance of commercial refrigeration; medium and low temperature applications and ice machines.

## **HART 2345 Residential Air Conditioning System Design**

*Prerequisites: HART 1341, HART 1345, TECM 1301; Must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0308 in math.*

*Credit: 3 (2 lecture, 3 lab)*

Study of the properties of air and results of cooling, heating, humidifying or dehumidifying; heat gain and heat loss calculations including equipment selection and balancing the air system.

## **HART 2349 Heat Pumps**

*Prerequisite/Corequisite: HART 1345*

*Prerequisite: HART 1341; Must be placed into GUST 0339 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (2 lecture, 3 lab)*

A study of heat pumps, heat pump control circuits, defrost controls, auxiliary heat, air flow, and other topics related to heat pump systems.

## **HART 2357 Specialized Commercial Refrigeration**

*Prerequisites: HART 2342, TECM 1301; Must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0308 in math.*

*Credit: 3 (2 lecture, 3 lab)*

An advanced course covering the components, accessories, and service of specialized refrigeration units such as ice machines, soft-serve machines, cryogenics, and cascade systems.

## **HIST 1301 United States History I**

*Prerequisites: Must be placed into college-level reading and college-level writing. Must have passed ENGL 1301 (Composition I) or be co-enrolled in ENGL 1301 as a co-requisite.*

*Credit: 3 (3 lecture)*

The American nation from the English colonization to the close of the Civil War through Reconstruction. This course satisfies the History or Component Area Option of the HCC core.

## **HIST 1302 United States History II**

*Prerequisites: Must be placed into college-level reading and college-level writing. Must have passed ENGL 1301 (Composition I) or be co-enrolled in ENGL 1301 as a co-requisite.*

*Credit: 3 (3 lecture)*

The American nation from the end of the Reconstruction Era to the present. This course satisfies the History or Component Area Option of the HCC core.

## **HIST 2301 History of Texas**

*Prerequisites: Must be placed into college-level reading and college-level writing. Must have passed ENGL 1301 (Composition I) or be co-enrolled in ENGL 1301 as a co-requisite.*

*Credit: 3 (3 lecture)*

A survey of the political, economic, social, cultural, and intellectual development of Texas from the period of Spanish discovery to the present. History of Texas may be substituted for either HIST 1301 or HIST 1302. This course satisfies the History or Component Area Option of the HCC core.

## **HIST 2311 Western Civilization I**

*Prerequisites: Must be placed into college-level reading and college-level writing.*

*Credit: 3 (3 lecture)*

# Course Descriptions

Development of ancient, medieval, and early modern civilizations to 1660. This course satisfies the Language, Philosophy and Culture or Component Area Option of the HCC core.

## **HIST 2312 Western Civilization II**

*Prerequisites: Must be placed into college-level reading and college-level writing.*

*Credit: 3 (3 lecture)*

Development of modern western civilization from 1660 to 1945. This course satisfies the Language, Philosophy and Culture or Component Area Option of the HCC core.

## **HIST 2321 World Civilizations I**

*Prerequisites: Must be placed into college-level reading and college-level writing.*

*Credit: 3 (3 lecture)*

A survey of the major western and non-western civilizations which developed from Sumeria to the end of the Middle Ages. Centered around a series of themes, particular emphasis is placed on the commonality of the human experience as illustrated in Europe, the Middle East, Asia and Sub-Saharan Africa. This course satisfies the Language, Philosophy and Culture or Component Area Option of the HCC core.

## **HIST 2322 World Civilizations II**

*Prerequisites: Must be placed into college-level reading and college-level writing.*

*Credit: 3 (3 lecture)*

This course analyzes the effect on the world of the changing relationship between the West and the non-West over the past 500 years. Emphasis will be placed on the social, political and economic dynamics of this interchange. This course satisfies the Language, Philosophy and Culture or Component Area Option of the HCC core.

## **HIST 2327 Mexican-American History I**

*Prerequisites: Must be placed into college-level reading and college-level writing. Must have passed ENGL 1301 (Composition I) or be co-enrolled in ENGL 1301 as a co-requisite.*

*Credit: 3 (3 lecture)*

A survey of the role of the Mexican-American in United States history. Emphasis will be placed on economic, social, and cultural development with particular focus on contributions to American society. This course satisfies the History or Component Area Option of the HCC core.

## **HIST 2328 Mexican-American History II**

*Prerequisites: Must be placed into college-level reading and college-level writing. Must have passed ENGL 1301 (Composition I) or be co-enrolled in ENGL 1301 as a co-requisite.*

*Credit: 3 (3 lecture)*

A survey of the role of the Mexican-American in United States history. Emphasis will be placed on economic, social, and cultural development with particular focus on contributions to American society. This course satisfies the History or Component Area Option of the HCC core.

## **HIST 2371 Women in American History**

*Prerequisites: Must be placed into college-level reading and college-level writing.*

*Credit: 3 (3 lecture)*

The course explores the history of women's experience in American Society. The course will introduce students to the field of American women's history. Women's history is the study of women in past times and across cultures. Its goals are to find women missing from the pages of our history books; to analyze and understand their experience as lived, felt, and understood; to integrate that knowledge into the history of particular times, places, and societies; and to develop from that knowledge conceptual frameworks with which to understand the role and significance of gender in American culture and society.

## **HIST 2381 African-American History**

*Prerequisites: Must be placed into college-level reading and college-level writing. Must have passed ENGL 1301 (Composition I) or be co-enrolled in ENGL 1301 as a co-requisite.*

*Credit: 3 (3 lecture)*

A survey of the role of the Afro-American in United States history. Emphasis will be placed on economic, social, and cultural development with particular focus on contributions to American society. This course satisfies the History or Component Area Option of the HCC core.

## **HIST 2389 Academic Cooperative in History**

*Prerequisites: Must be placed into college-level reading and college-level writing.*

*Credit: 3 (3 lecture, 0 lab)*

An experiential-learning instruction program designed to integrate textbook and classroom knowledge with practical hands-on experience in an applied area of history. In conjunction with class seminars, the individual student will set specific goals and objectives in the study of human social behavior and/or social institutions.

## **HITT 1166 Health Information Practicum I**

*Prerequisites: Department Approval; Must be placed into college-level reading, college-level writing and MATH 0312 in math.*

*Credit: 1 (8 lab)*

Practical general training and experiences in the workplace. The college with the employer develops and documents an individualized plan for the student. The plan relates the workplace training and experiences to the student's general and technical course of study.

## **HITT 1167 Health Information Practicum II**

*Prerequisites: Department Approval; Must be placed into college-level reading, college-level writing and MATH 0312 in math.*

*Credit: 1 (8 Lab)*

Practical general training and experiences in

the workplace. The college, with the employer, develops and documents an individualized plan for the student. The plan relates the workplace training and experiences to the student's general and technical course of study. The guided external experiences may be paid or unpaid. This course may be repeated if topics and learning outcomes vary.

## **HITT 1205 Medical Terminology I**

*(There is a 1305 version of this course.)*

*Prerequisites: Must be placed into college-level reading, college-level writing and MATH 0312 in math.*

*Credit:*

Study of word origin and structure through the introduction of prefixes, suffixes, root words, plurals, abbreviations and symbols, surgical procedures, medical specialties, and diagnostic procedures.

## **HITT 1211 Computers in Health Care**

*Prerequisites: POFI 1301 or ITSC 1309; Must be placed into college-level reading, college-level writing and MATH 0312 in math.*

*Credit: 2 (2 lecture, 1 lab)*

Concepts of computer technology related to health care data.

## **HITT 1249 Pharmacology**

*Prerequisites: HITT 1305, HITT 1445, BIOL 2402; Must be placed into college-level reading, college-level writing and MATH 0312 in math.*

*Credit: 2 (2 lecture)*

Overview of the basic concepts of the pharmacological treatment of various diseases affecting major body systems.

## **HITT 1301 Health Data Content and Structure**

*Prerequisites: Must be placed into college-level reading, college-level writing and MATH 0312 in math.*

*Credit: 3 (2 lecture, 2 lab)*

Introduction to system and processes for collecting, maintaining and disseminating primary and secondary health related information. Introduction in delivery and organizational structure to include content of health record, documentation requirements, registries, indices, licensing, regulatory agencies, forms, and screens.

## **HITT 1253 Legal and Ethical Aspects of Health Information**

*Prerequisites: Must be placed into college-level reading, college-level writing and MATH 0312 in math.*

*Credit: 2 (2 lecture, 1 lab)*

Apply local, state, and federal standards and regulations for the control and use of health information; demonstrate appropriate health information disclosure practices; and identify and discuss ethical issues in health care.

## **HITT 1255 Health Care Statistics**

*Prerequisites: Must be placed into college-level reading, college-level writing and MATH 0312 in*

# Course Descriptions

math.

*Credit: 2 (1 lecture, 3 lab)*

General principles of health care statistics with emphasis in hospital statistics. Skill development in computation and calculation of health data with overview of guidelines for Texas Department of Health Vital Statistics and Studies

## **HITT 1305 Medical Terminology I**

*Prerequisites: Must be placed into college-level reading, college-level writing and MATH 0312 in math.*

*Credit: 3 (2 lecture, 4 lab)*

Study of word origin and structure through the introduction of prefixes, suffixes, root words, plurals, abbreviations and symbols, surgical procedures, medical specialties, and diagnostic procedures.

## **HITT 1307 Cancer Data Management I**

*Prerequisites: HITT 1301, HITT 1355, HITT 1305; Must be placed into college-level reading, college-level writing and MATH 0312 in math.*

*Credit: 3 (3 lecture)*

Introduction to Cancer Data Management. Includes cancer program requirements, the American College of Surgeons Cancer Program survey process, and data collection/retrieval-abstracting, coding, staging, and reporting.

## **HITT 1341 Coding and Classification Systems**

*Prerequisites: HPRS 2301, HITT 1349; Must be placed into college-level reading, college-level writing and MATH 0312 in math.*

*Credit: 3 (2 lecture, 4 lab)*

Application of basic coding rules, principles, guidelines, and conventions.

## **HITT 1345 HealthCare Delivery Systems**

*Prerequisites: HITT 1301; Must be placed into college-level reading, college-level writing and MATH 0312 in math.*

*Credit: 3 (3 lecture)*

Examination of delivery systems including organization, financing, accreditation, licensure, and regulatory agencies.

## **HITT 2149 RHIT Competency Review**

*Prerequisites: Department Approval; Must be placed into college-level reading, college-level writing and MATH 0312 in math.*

*Credit: 1 (3 lab)*

Review of HIT competencies, skills, and knowledge base pertinent to the technology and relevant to the professional development of the student.

## **HITT 2167 Practicum (or Field Experience) - Health Information/Medical Records Technology/Technician**

*Prerequisites: Department Approval; Must be placed into college-level reading, college-level writing and MATH 0312 in math.*

*Credit: 1 (8 lab)*

Practical general training and experiences in the workplace. The college, along with the employer, develops and documents an individualized plan for the student. The plan relates the workplace training and experiences to the student's general and technical courses of study. The guided external experiences may be paid or unpaid. This course may be repeated if topics and learning outcomes vary.

## **HITT 2267 Practicum (or Field Experience) - Health Information/Medical Records Technology/Technician**

*Prerequisites: Department Approval; Must be placed into college-level reading, college-level writing and MATH 0312 in math.*

*Credit: 2 (15 lab)*

Practical, general workplace training supported by an individualized learning plan developed by the employer, college, and student.

## **HITT 2307 Cancer Data Management II**

*Prerequisites: HITT 1307; Must be placed into college-level reading, college-level writing and MATH 0312 in math.*

*Credit: 3 (3 lecture)*

A continuation of Cancer Data Management I. Application of cancer registry data.

## **HITT 2335 Coding and Reimbursement Methodologies**

*Prerequisites: HITT 1341; Must be placed into college-level reading, college-level writing and MATH 0312 in math.*

*Credit: 3 (3 lecture, 3 lab)*

Advanced coding techniques with emphasis on case studies, health records, and federal regulations regarding prospective payment systems and methods of reimbursement.

## **HITT 2339 Health Information Organization and Supervision**

*Prerequisites: Department Approval; Must be placed into college-level reading, college-level writing and MATH 0312 in math.*

*Credit: 3 (3 lecture)*

Principles of organization and supervision of human, fiscal and capital resources.

## **HITT 2340 Advanced Medical Billing and Reimbursement**

*Prerequisites: Must be placed into college-level reading, college-level writing and MATH 0312 in math.*

*Credit: 3 (2 lecture, 2 lab)*

Health insurance and reimbursement in various health care settings. Includes application of coding skills to prepare insurance forms for submission to third party payers.

## **HITT 2367 Practicum (or Field Experience) - Health Information/Medical Records Technology/Technician**

*Prerequisites: Must be placed into college-level reading, college-level writing and MATH 0312 in math.*

*Credit: 3 (21 lab)*

Practical, general workplace training supported by an individualized learning plan developed by the employer, college, and student.

## **HITT 2443 Quality Assessment and Performance Improvement**

*Prerequisites: Department Approval; Must be placed into college-level reading, college-level writing and MATH 0312 in math.*

*Credit: 4 (4 lecture, 1 lab)*

Study of the many facets of quality standards and methodologies in the health information management environment. Topics include licensing, accreditation, computation and presentation of data in statistical formats, quality improvement functions, quality tools, utilization management, risk management, and medical staff data quality issues.

## **HLAB 1266 Practicum-Histologic Technology**

*Prerequisites: Department Approval; must be placed into college-level reading, writing and math.*

*Credit: 2 (15 lab)*

Practical, general workplace training supported by an individualized learning plan developed by the employer, college, and student.

## **HLAB 1267 Practicum-Histologic Technology**

*Prerequisites: HLAB 1266; Department Approval; must be placed into college-level reading, writing and math.*

*Credit: 2 (15 lab)*

Practical, general workplace training supported by an individualized learning plan developed by the employer, college, and student.

## **HLAB 1268 Practicum-Histologic Technology**

*Prerequisites: HLAB 1267; Department Approval; must be placed into college-level reading, writing and math.*

*Credit: 2 (15 lab)*

Practical, general workplace training supported by an individualized learning plan developed by the employer, college, and student.

## **HLAB 1301 Introduction to Histotechnology**

*Prerequisites: Must be placed into college-level reading, writing and math.*

*Credit: 3 (3 lecture, 1 lab)*

Introduction to the healthcare environment and the histology laboratory. Includes laboratory safety and infection control; healthcare professionals; medical terminology; basic anatomy and physiology; laboratory mathematics; communication; and ethics, legal, and professional issues.

# Course Descriptions

## **HLAB 1305 Functional Histotechnology I**

*Prerequisites: HLAB 1401; Must be placed into college-level reading, writing and math.*

*Credit: 3 (3 lecture, 1 lab)*

Recognition, composition, and function of cells, cell life cycles, blood, and basic tissue types.

## **HLAB 1402 Histotechnology I**

*Prerequisites: HLAB 1401; Must be placed into college-level reading, writing and math.*

*Credit: 4 (3 lecture, 3 lab)*

Introduction to the basic theories and practices of histotechnology. Includes laboratory safety, fixation, tissue processing, embedding, microtomy and cryotomy, and routine staining.

## **HLAB 1443 Histotechnology II**

*Prerequisites: HLAB 1402; Must be placed into college-level reading, writing and math.*

*Credit: 4 (3 lecture, 3 lab)*

A continuation of Histotechnology I. Introduces both theory and practice of common histochemical staining techniques. Topics include laboratory safety; laboratory mathematics and reagent preparation; basic tissue/dye bonding; differentiation and quality control; and nuclear, connective tissue, and carbohydrate staining techniques.

## **HLAB 1446 Functional Histology II**

*Prerequisites: HLAB 1405; Must be placed into college-level reading, writing and math.*

*Credit: 4 (4 lecture)*

A continuation of Functional Histology I. Emphasis on the recognition, composition, and function of organ systems. Includes skeletal tissues, central nervous system, circulatory system, endocrine glands, and reproductive system.

## **HLAB 2341 Registry Review**

*Prerequisites: Department Approval; Must be placed into college-level reading, writing and math.*

*Credit: 3 (3 lecture)*

Review of the major theoretical/practical applications in histotechnology. Includes fixation, processing, embedding, microtomy, frozen cryotomy, routine and special stains, tissue identification, immunohistochemistry, enzyme histochemistry, and electron microscopy. Emphasis on employment skills, review of ethical and legal behavior, and professional development.

## **HLAB 2434 Histotechnology III**

*Prerequisites: HLAB 1443; Must be placed into college-level reading, writing and math.*

*Credit: 4 (3 lecture, 3 lab)*

A continuation of Histotechnology II. Further introduces theory and practice of routine histochemical staining techniques. Techniques include microorganisms, tissue pigments and minerals, and neural tissue. Includes specialized techniques such as electron microscopy, immunohistochemistry, and muscle enzyme histochemistry.

## **HMSY 1391 Border Security and**

## **Transportation**

*Prerequisites: HMSY 1337, HMSY 1340*

*Credit: 3 (3 lecture)*

Topics address recently identified current events, skills, knowledge, and/or attitudes and behaviors pertinent to the technology or occupation and relevant to the professional development of the student. This course was designed to be repeated multiple times to improve student proficiency. This course will also provide an overview of modern border and transportation security challenges, as well as different methods employed to address these challenges. The course explores topics associated with border security and security for transportation infrastructure, to include: seaports, ships, aircraft, airports, trains, train stations, trucks, bridges, rail lines, pipelines, and buses. The course will include an exploration of technological solutions employed to enhance security of borders and transportation systems. Students will be required to discuss the legal, economic, political, and cultural concerns and impacts associated with transportation and border security. The course provides students with a knowledge level understanding of the variety of challenges inherent in transportation and border security.

## **HPRS 1106 Essentials of Medical Terminology**

*Prerequisites: Must be placed into college-level reading, writing and math.*

*Credit: 1 (1 lecture)*

A study of medical terminology, word origin, structure, and application.

## **HPRS 1201 Introduction to Health Professions**

*Prerequisites: Must be placed into GUST 0339 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 2 (2 lecture, 1 lab)*

An overview of roles of various members of the health care system, educational requirements, and issues affecting the delivery of health care.

## **HPRS 1206 Essentials of Medical Terminology**

*Prerequisites: Must be placed into college-level reading, writing and math.*

*Credit: 2 (2 lecture)*

A study of medical terminology, word origin, structure, and application.

## **HPRS 1304 Basic Health Professional Skills**

*Prerequisites: Must be placed into college-level reading, writing and math.*

*Credit: 3 (2 lecture, 3 Lab)*

A study of concepts that serve as the foundation for health profession courses, including client care and safety issues, basic client monitoring and health documentation.

Includes CPR, OSHA safety guidelines, universal health precautions, emergency preparedness and response to basic medical emergencies.

## **HPRS 2201 Pathophysiology**

*Prerequisite: BIOL 2402; must be placed into college-level reading, writing and math.*

*Credit: 2 (2 lecture)*

Study of the pathology and general health management of diseases and injuries across the life span. Topics include etiology, symptoms, and the physical and psychological reaction to diseases and injuries.

## **HPRS 2332 Healthcare Communications**

*Prerequisites: PTHA 1305, PTHA 1413, PTHA 1229, PTHA 1201, HPRS 1106; must be placed into college-level reading, writing and math.*

*Credit: 3 (3 lecture, 1 lab)*

Methods of communication with clients, client support groups, health care professionals, and external agencies.

## **HRPO 1302 Human Resource Training and Development**

*Prerequisites: Must be placed into GUST 0342 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (3 lecture)*

An overview of the human resource development function specifically concentrating on the training and development component. Topics include training as related to organizational mission and goals; budgeting; assessment; design, delivery, evaluation, and justification of training. Included are new trends in training, including distance and virtual education.

## **HRPO 1305 Management and Labor Relations**

*Prerequisites: Must be placed into GUST 0342 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (3 lecture)*

The development and structure of the labor movement including labor legislation, collective bargaining, societal impact, labor/management relationships and international aspects.

## **HRPO 1311 Human Relations**

*Prerequisites: Must be placed into GUST 0342 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (3 lecture)*

Practical application of the principles and concepts of the behavioral sciences to interpersonal relationships in the business and industrial environment.

## **HRPO 1392 Special Topics in Labor/Personnel Relations and Studies**

*Prerequisites: Must be placed into GUST 0342 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (3 lecture)*

Topics address recently identified current events, skills, knowledge, and/or attitudes and behaviors pertinent to the technology or occupation and relevant to the professional development of the student. This course was designed to be repeated multiple times to improve student proficiency.

# Course Descriptions

## **HRPO 2301 Human Resources Management**

*Prerequisites: Must be placed into GUST 0342 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (3 lecture)*

Behavioral and legal approaches to the management of human resources in organizations.

## **HRPO 2306 Benefits and Compensation**

*Prerequisites: Must be placed into college-level reading, writing and MATH 0312 in math.*

*Credit: 3 (3 lecture)*

An overview of employee compensation systems. Topics include compensation systems, direct and indirect compensation, internal and external determination of compensation, benefits administration, managing and evaluating for effectiveness, legal and regulatory issues, pay equity, job analysis affecting job compensation and competencies.

## **HRPO 2307 Organizational Behavior**

*Prerequisites: Must be placed into GUST 0342 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (3 lecture)*

The analysis and application of organizational theory, group dynamics, motivation theory, leadership concepts and the integration of interdisciplinary concepts from the behavioral sciences.

## **HRPO 2371 Recruiting, Interviewing and Placement of Human Resources**

*Prerequisites: Must be placed into GUST 0342 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (3 lecture)*

A study of the concepts, techniques and regulations that apply to employment, recruitment, interviewing, selection and placement of human resources.

## **HUMA 1301 Introduction to Humanities I**

*Prerequisites: Must be placed at or passed appropriate coursework to qualify for college-level reading and college-level writing requirements.*

*Credit: 3 (3 lecture)*

This stand-alone course is an interdisciplinary survey of cultures focusing on the philosophical and aesthetic factors in human values with an emphasis on the historical development of the individual and society and the need to create. This course satisfies the Creative Arts or Component Area Option of the HCC core.

## **HUMA 1305 Introduction to Mexican American Studies**

*Prerequisites: Must qualify to take college-level reading and writing OR take INRW 0420 (or GUST 0349 and ENGL 0310) as a co-requisite.*

*Credit: 3 (3 lecture)*

This interdisciplinary survey examines the different cultural, artistic, economic, historical, political, and social aspects of the Mexican-American/Chicano/a communities. It also covers issues such as dispossession, immigration, transnationalism, and other topics that have shaped the Mexican-American experience. This course satisfies the Language, Philosophy and Culture or Component Area Option of the HCC core.

## **HUMA 1311 Mexican-American Fine Art Appreciation**

*Prerequisite: Engl. 0310/0349, GUST 0342*

*Credit: 3 (3 lecture)*

This course is an exploration of the purposes and processes in the visual and performing arts (such as music, painting, drama, and dance) and the ways in which they express the values of the Mexican-American/Chicano/a experience. This course satisfies the Creative Arts or Component Area Option of the HCC core.

## **HUMA 2319 American Minority Studies**

*Prerequisites: ENGL 1301 or higher*

*Credit: 3 (3 lecture)*

This interdisciplinary survey examines the diverse cultural, artistic, economic, historical, political, and social aspects of American minority communities. Topics may include race/ethnicity, gender, socioeconomic class, sexual orientation, national origin, age, disability, and religion. This course satisfies the Language, Philosophy and Culture or Component Area Option of the HCC core.

## **HUMA 2323 World Cultures**

*Prerequisites: ENGL 1301 or higher*

*Credit: 3 (3 lecture)*

This course is a general study of diverse world cultures. Topics include cultural practices, social structures, religions, arts, and languages. This course satisfies the Language, Philosophy and Culture or Component Area Option of the HCC core.

## **HYDR 1345 Hydraulics and Pneumatics**

*Prerequisites: TECM 1301; must be placed into GUST 0339 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (2 lecture, 2 lab)*

Discussion of the fundamentals of hydraulics and pneumatics, components of each system and the operations, maintenance, and analysis of each system.

## **IBUS 1191 Special Topics in International Business - Certified Global Business Professional Exam Preparation Course**

*Prerequisites: Must be placed into GUST 0342 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 1 (1 lecture)*

This course prepares students to sit for the Certified Global Business Professional (CGBP) credential exam. The CGBP designation is recognized internationally as a professional credential for people who work in all fields related to international trade. This course must be taken in the last semester of any International Business program and it was designed to be repeated multiple times to improve student proficiency.

## **IBUS 1291 Special Topics International Business**

*Prerequisites: Must be placed into college-level reading, college-level writing and MATH 0312 in math.*

*Credit: 2 (1 lecture, 10 lab)*

Topics address recently identified current events, skills, knowledge, and/or attitudes and behaviors pertinent to the technology or occupation and relevant to the professional development of the student. This course was designed to be repeated multiple times to improve student proficiency. (This course substitutes for IBUS 2280.)

## **IBUS 1300 Global Logistics Management**

*Prerequisites: Must be placed into college-level reading, college-level writing and MATH 0312 in math.*

*Credit: 3 (3 lecture)*

Global logistics, management processes, procedures, and regulations used in transportation, physical distribution, warehousing, inventory control, materials handling, packaging, plant and warehouse location, risk management, customer service, and networks for logistics, suppliers, and information. Includes decision making and case resolution techniques to solve problems and to develop logistical and information networks for supply chain management appropriate for global corporations.

## **IBUS 1301 Principles of Exports**

*Prerequisites: Must be placed into GUST 0342 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (3 lecture)*

Export management processes and procedures. Includes governmental controls and compliance, licensing of products, documentation, commercial invoices, and traffic procedures. Emphasizes human and public relations, management of personnel, finance, and accounting procedures.

## **IBUS 1302 Principles of Imports**

*Prerequisites: Must be placed into GUST 0342 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (3 lecture)*

Practices and processes of import management operations. Includes government controls and compliance. Emphasizes the preparation and understanding of import documents such as

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customs invoices, packing lists, and commercial invoices.

## **IBUS 1305 Introduction to International Business and Trade**

*Prerequisites:* Must be placed into GUST 0342 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.

*Credit:* 3 (3 lecture)

The techniques for entering the international marketplace. Emphasis on the impact and dynamics of sociocultural, demographic, economic, technological, and political-legal factors in the foreign trade environment. Topics include patterns of world trade, internationalization of the firm, and operating procedures of the multinational enterprise.

## **IBUS 1341 Global Supply Chain Management**

*Prerequisites:* LMGT 1319; must be placed into GUST 0342 in reading, ENGL 0310 or 0349 in writing and MATH 0312 in math.

*Credit:* 3 (3 lecture)

International purchasing or sourcing. Includes the advantages and the barriers of purchasing internationally, global sourcing, procurement technology, and purchasing processes. Emphasizes issues of contract administration, location, and evaluation of foreign suppliers, total cost approach, exchange fluctuations, customs procedures, and related topics.

## **IBUS 1349 International E-Commerce Systems**

*Prerequisites:*

*Credit:* 3 (3 lecture)

Managing electronic business, commerce, and government information systems and technology. Uses appropriate software such as the National Trade Data Base. Emphasizes the role of global strategic information systems as applied to problem solving and current transportation and customs software.

## **IBUS 1354 International Marketing Management**

*Prerequisites:* Must be placed into GUST 0342 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.

*Credit:* 3 (3 lecture)

Analysis of international marketing strategies using market trends, costs, forecasting, pricing, sourcing and distribution factors. Development of an international export/import marketing plan.

## **IBUS 1370 Economic Geography**

*Prerequisites:* Must be placed into GUST 0342 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.

*Credit:* 3 (3 lecture)

A study of material management, government regulations and distribution systems throughout the world as related to economic factors regarding agriculture, manufacturing, and materials utilization.

## **IBUS 2280 Cooperative Education -**

## **International Business/Trade/Commerce**

*Prerequisites:* IBUS 1305, Must be placed into college-level reading, college-level writing and MATH 0312 in math. \*\*Requires Departmental approval.

*Credit:* 2 (1 lecture, 10 lab)

Career-related activities encountered in the student's area of specialization offered through an individualized agreement among the college, employer, and student. Under the supervision of the college and the employer, the student combines classroom learning with work experience. Includes a lecture component. \*\*Requires Departmental approval.

## **IBUS 2332 Global Business Simulation**

*Prerequisites:* Must be placed into GUST 0342 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.

*Credit:* 3 (3 lecture)

A simulation of a global environment. Students will engage in business practice and theory. The simulation may include researching foreign business cultures and importing and exporting products. Emphasizes participation in all business decisions related to running a simulated company.

## **IBUS 2335 International Business Law**

*Prerequisites:* Must be placed into GUST 0342 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math. Must complete IBUS 1301 & 1302 OR IBUS 1305.

*Credit:* 3 (3 lecture)

A course in law as it applies to international business transactions in the global political-legal environment. Study of inter-relationships among laws of different countries and the legal effects on individuals and business organizations. Topics include agency agreements, international contracts and administrations, regulations of exports and imports, technology transfers, regional transactions, intellectual property, product liability, and legal organization.

## **IBUS 2339 International Banking and Finance**

*Prerequisites:* Must be placed into GUST 0342 in reading, ENGL 0310 or 0349 in writing and MATH 0308 in math.

*Credit:* 3 (3 lecture)

A course in international monetary systems, financial markets, flow of capital, foreign exchange, and financial institutions. Topics include export-import payments and financing the preparation of letters of credit, related shipping documentation, and electronic transfers. An introduction to multinational financial decisions, such as financing foreign investment or working capital.

## **IBUS 2341 Intercultural Management**

*Prerequisites:* IBUS 1305; must be placed into GUST 0342 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.

*Credit:* 3 (3 lecture)

Cross-cultural comparisons of management and communications processes. Emphasizes cultural geographic distinctions and antecedents that affect

individual, group, and organizational behavior. May include sociocultural demographics, economics, technology, political-legal issues, negotiations, and processes of decision making in the international cultural environment.

## **IBUS 2370 Global Issues for Enterprise**

*Must be placed into GUST 0342 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit:* 3 (3 lecture)

Global Issues in Enterprise provides an overview of the challenges and opportunities that exist in different countries for creating social enterprise organizations. Topics include: lack of resources, lack of infrastructure, differing legal systems, cultural and social taboos on certain products or means of earning a living, corruption, lack of education as well as upcoming changes such as the impact of the Internet on education in lesser developed countries.

## **IMED 1301 Digital Media**

*Prerequisites:* Must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.

*Corequisite:* ARTC 1325

*Credit:* 3 (2 lecture, 4 lab)

A survey of the theories, elements, and hardware/software components of digital media. Emphasis on conceptualizing and producing digital media presentations.

## **IMED 1305 Digital Media Courseware Development I**

*Prerequisites:* Associate Degree in Digital Communication or Departmental Approval, IMED 1316, IMED 1341.

*Credit:* 3 (2 lecture, 4 lab)

Instruction in courseware development. Topics include interactivity, branching, navigation, evaluation techniques and interface/information design using industry standard authoring software.

## **IMED 1316 Web Design I**

*Prerequisites/corequisite:* ARTC 1325; must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.

*Credit:* 3 (2 lecture, 4 lab)

Instruction in web design and related graphic design issues including mark-up languages, web sites, and browsers.

## **IMED 1341 Interface Design**

*Prerequisites/corequisite:* ARTC 1325 or Department Approval; must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.

*Credit:* 3 (2 lecture, 4 lab)

Skill development in the interface design process including selecting interfaces relative to a project's content and delivery system. Emphasis on aesthetic issues such as iconography, screen

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composition, colors, and typography.

## **IMED 1345 Interactive Digital Media I**

*Prerequisites:* ARTC 1302, ARTC 1325

*Corequisite:* IMED 1341

*Credit:* 3 (2 lecture, 4 lab)

Exploration of the use of graphics and sound to create interactive digital media applications and/or animations using industry standard authoring software.

## **IMED 1359 Writing for Digital Media**

*Prerequisites/corequisite:* ARTC 1325; must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.

*Credit:* 3 (2 lecture, 4 lab)

Written communication for digital media environments including professional websites or other digital content.

## **IMED 2301 Instructional Design**

**Prerequisites: Associate Degree in Digital Communication or Departmental Approval.**

*Credit:* 3 (2 lecture, 4 lab)

An in-depth study of the instructional design process based on learning theories, including evaluation of models and design examples.

## **IMED 2309 Internet Commerce**

*Prerequisites:* Department Approval; must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.

*Credit:* 3 (2 lecture, 4 lab)

An overview of the Internet as a marketing and sales tool with emphasis on developing a prototype for electronic commerce.

## **IMED 2312 Interactive Audio**

*Prerequisites:* Department Approval; must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.

*Credit:* 3 (2 lecture, 4 lab)

Music and sound effects. Includes formats, working within memory budgets, interactive systems, and foley libraries. Addresses a range of practical audio-related areas.

## **IMED 2313 Project Analysis and Design**

*Prerequisites:* Department Approval; must be placed into GUST 0342 in reading, ENGL 0300 or 0347 in writing and MATH 0308 in math.

*Credit:* 3 (2 lecture, 4 lab)

Application of the planning and production processes for digital media projects. Emphasis on copyright and other legal issues, content design and production management.

## **IMED 2351 Digital Media Programming**

*Prerequisites:* IMED 1316 or Department Approval; must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.

*Credit:* 3 (2 lecture, 4 lab)

Advanced topics in digital media programming including custom scripts for data tracking. Emphasis on developing digital media programs customized to the client's needs.

## **IMED 2388 Internship-Digital Communication and Media/Multimedia**

*Prerequisites:* Department Approval; must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.

*Credit:* 3 (13 lab)

A work-based learning experience that enables the student to apply specialized occupational theory, skills and concepts. A learning plan is developed by the college and the employer.

## **INCR 1302 Physics of Instrumentation**

*Prerequisite/Corequisite:* ELPT 1311; must be placed into GUST 0339 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.

*Credit:* 3 (2 lecture, 2 lab)

An introduction to a simple pneumatic control loop. Introduction to pressure, temperature, level, and flow transmitters and the various transducers used in the detection of changes in process variables. This course is designed to familiarize the student with the instrumentation devices utilized in industrial automation and process control environments.

## **INDS 1301 Basic Elements of Design**

*Prerequisites:* Must be placed into GUST 0342 in reading, ENGL 0310 or 0349 in writing and MATH 0306 in math.

*Credit:* 3 (2 lecture, 3 lab)

A study of basic design concepts with projects in shape, line, value, texture, pattern, spatial illusion, and form.

## **INDS 1311 Fundamentals of Interior Design**

*Prerequisites:* Must be placed into GUST 0342 in reading, ENGL 0310 or 0349 in writing and MATH 0306 in math.

*Credit:* 3 (1 lecture, 3 lab)

An introduction to the elements and principles of design, the interior design profession, and the interior design problem-solving process.

## **INDS 1315 Materials, Methods and Estimating**

*Prerequisites:* Must be placed into GUST 0342 in reading, ENGL 0310 or 0349 in writing and MATH 0306 in math.

*Credit:* 3 (2 lecture, 3 lab)

A study of materials, methods of construction and installation, and estimating for interior design applications.

## **INDS 1319 Technical Drawing for Interior Designers**

*Prerequisites:* Must be placed into GUST 0342 in reading, ENGL 0310 or 0349 in writing and MATH 0306 in math.

*Credit:* 3 (2 lecture, 4 lab)

An Introduction to reading and preparing technical construction drawings for interior design, including plans, elevations, details, schedules, dimensions and lettering.

## **INDS 1341 Color Theory and Application**

*Prerequisites:* Must be placed into GUST 0342 in reading, ENGL 0310 or 0349 in writing and MATH 0306 in math.

*Credit:* 3 (2 lecture, 3 lab)

A study of color theory and its application to interior design.

## **INDS 1345 Commercial Design I**

*Prerequisites:* INDS 2313; Must be placed into GUST 0342 in reading, ENGL 0310 or 0349 in writing and MATH 0306 in math.

*Credit:* 3 (2 lecture, 4 lab)

A study of design principles applied to furniture layout and space planning for commercial interiors.

## **INDS 1349 Fundamentals of Space Planning**

*Prerequisites:* INDS 1301, INDS 1319 and INDS 1311 or Department Approval

*Credit:* 3 (2 lecture, 3 lab)

The study of residential and light commercial spaces, including programming, codes, standards, space planning, drawings and presentations.

## **INDS 1351 History of Interiors I**

*Prerequisites:* Must be placed into GUST 0342 in reading, ENGL 0310 or 0349 in writing and MATH 0306 in math.

*Credit:* 3 (3 lecture, 1 lab)

A historical survey of design in architecture, interiors, furnishings, and decorative elements from the ancient cultures through the Italian Renaissance time period.

## **INDS 1352 History of Interiors II**

*Prerequisites:* Must be placed into GUST 0342 in reading, ENGL 0310 or 0349 in writing and MATH 0306 in math.

*Credit:* 3 (3 lecture, 1 lab)

A multi-cultural historical survey of design in architecture, interiors, furnishings, and decorative elements from the post-Renaissance period to present time.

## **INDS 1370 History of Interiors**

*Prerequisites:* Must be placed into GUST 0342 in reading, ENGL 0310 or 0349 in writing and MATH 0306 in math.

*Credit:* 3 (3 lecture, 1 lab)

The course is a multi-cultural, historical survey of various styles and periods of antiquities, architecture, interiors, and furnishings with consideration of Asia, Egypt, Greece, Italy, Spain, France, post-Renaissance through the present. It offers a critical overview of the history of interior design, its connection to different periods and cultures, and its integral relationship with architecture and decorative arts.

## **INDS 1391 Special Topics/Interior Design**

*Prerequisites:* Associate Degree in Interior Design or Department Approval; Must be placed into GUST 0342 in reading, ENGL 0310 or 0349 in writing and MATH 0306 in math.

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*Credit: 3 (3 lecture)*

Topics address recently identified current events, skills, knowledge, and/or attitudes and behaviors pertinent to the technology or occupation and relevant to the professional development of the student. This course was designed to be repeated multiple times to improve student proficiency.

## **INDS 2210 Kitchen and Bath Design**

*Prerequisite: INDS 1349, INDS 2305 and INDS 2317; Must be placed into GUST 0342 in reading, ENGL 0310 or 0349 in writing and MATH 0306 in math.*

*Credit: 2 (0 lecture, 5 lab)*

The study and application of the National Kitchen and Bath Association's Guideline and Planning Standards and Safety Criteria for residential kitchens and bathrooms including Universal Design concepts. Also includes the study and selection of kitchen and bath materials, equipment and cabinetry. Computer aided kitchen and bath design software is introduced.

## **INDS 2270 Photoshop for Interior Design**

*Prerequisite: INDS 2317; Must be placed into GUST 0342 in reading, ENGL 0310 or 0349 in writing and MATH 0306 in math.*

*Credit: 3 (2 lecture, 6 lab)*

An exploration of Adobe Photoshop and its application to the practice of interior design to create visual design communication materials, renderings, and presentations.

## **INDS 2271 Digital Presentation Methods**

*Prerequisite: INDS 2321; Must be placed into GUST 0342 in reading, ENGL 0310 or 0349 in writing and MATH 0306 in math.*

*Credit: 2 (2 lecture, 4 lab)*

An exploration of Adobe Illustrator, Adobe InDesign, Adobe Photoshop, Google SketchUp and their application to the practice of interior design to create visual design communication materials, renderings, and presentations.

## **INDS 2305 Interior Design Graphics (AutoCAD)**

*Prerequisites: INDS 1319 or Department Approval; Must be placed into GUST 0342 in reading, ENGL 0310 or 0349 in writing and MATH 0306 in math.*

*Credit: 3 (2 lecture, 4 lab)*

Skill development in computer-generated graphics and technical drawings for interior design applications.

## **INDS 2307 Textiles for Interior Design**

*Prerequisites: Must be placed into GUST 0342 in reading, ENGL 0310 or 0349 in writing and MATH 0306 in math.*

*Credit: 3 (2 lecture, 3 lab)*

The study of interior design textiles including characteristics, care, codes, and applications.

## **INDS 2311 Interior Environment Factors**

*Prerequisites: Associate Degree in Interior Design or Department Approval; Must be placed into GUST 0342 in reading, ENGL 0310 or 0349 in writing and MATH 0306 in math.*

*Credit: 3 (2 lecture, 4 lab)*

A study of human factors affecting the interior environment, including proxemics, ergonomics, and universal design.

## **INDS 2313 Residential Design I**

*Prerequisites: INDS 1311, INDS 1341, INDS 1349, INDS 2330 and INDS 2317; Must be placed into GUST 0342 in reading, ENGL 0310 or 0349 in writing and MATH 0306 in math.*

*Credit: 3 (2 lecture, 4 lab)*

The study of residential spaces, including the identification of client needs, programming, standards, space planning, drawings, and presentations.

## **INDS 2315 Lighting for Interior Design**

*Prerequisites: INDS 1319 or Department Approval; Must be placed into GUST 0342 in reading, ENGL 0310 or 0349 in writing and MATH 0306 in math.*

*Credit: 3 (2 lecture, 3 lab)*

Fundamentals of lighting design, including lamps, luminaries, lighting techniques, and applications for residential and commercial projects.

## **INDS 2317 Rendering Techniques**

*Prerequisites: INDS 2321; Must be placed into GUST 0342 in reading, ENGL 0310 or 0349 in writing and MATH 0306 in math.*

*Credit: 3 (2 lecture, 3 lab)*

A study of rendering techniques for formal interior design presentation, using a variety of media.

## **INDS 2321 Presentation Drawing**

*Prerequisites: Must be placed into GUST 0342 in reading, ENGL 0310 or 0349 in writing and MATH 0306 in math.*

*Credit: 3 (2 lecture, 3 lab)*

An introduction to two- and three-dimensional presentations, including drawings with one- and two-point perspectives, plans, and elevations.

## **INDS 2325 Professional Practices for Interior Designers**

*Prerequisites: Must be placed into GUST 0342 in reading, ENGL 0310 or 0349 in writing and MATH 0306 in math.*

*Credit: 3 (3 lecture, 1 lab)*

A study of business practices and procedures for interior designers, including professional ethics, project management, marketing, and legal issues.

## **INDS 2331 Commercial Design II**

*Prerequisites: Associate Degree in Interior Design or Department Approval; Must be placed into GUST 0342 in reading, ENGL 0310 or 0349 in writing and MATH 0306 in math.*

*Credit: 3 (2 lecture, 4 lab)*

Advanced concepts of specialized commercial interior design projects, including hospitality, corporate, retail, health care, institutional or other specialized commercial design projects.

## **INDS 2335 Residential Design II**

*Prerequisite: Associate Degree in Interior Design or Department Approval; Must be placed into GUST 0342 in reading, ENGL 0310 or 0349 in writing and MATH 0306 in math.*

*Credit: 3 (2 lecture, 4 lab)*

A comprehensive study of complex residential interior design problems, including advanced space planning, documentation, specifications, budgets, and presentation renderings.

## **INDS 2337 Portfolio Presentation**

*Prerequisites: Approval of course instructor or Department Approval; Must be placed into GUST 0342 in reading, ENGL 0310 or 0349 in writing and MATH 0306 in math.*

*Credit: 3 (2 lecture, 3 lab)*

A course in the preparation and presentation of a comprehensive interior design portfolio, including resume preparation, employment interview skills, and goal setting.

## **INDS 2370 Digital Presentation Methods**

*Prerequisite:*

*Credit: 3 (2 lecture, 4 lab)*

An exploration of Adobe Illustrator, Adobe InDesign, Adobe Photoshop, Google SketchUp and their application to the practice of interior design to create visual design communication materials, renderings, and presentations.

## **INDS 2371 Advanced Kitchen and Bath Design**

*Prerequisite:*

*Credit: 3 (2 lecture, 4 lab)*

Kitchen and bath design students upon completion of this course demonstrate the knowledge of advanced approaches to their solutions including knowledge of NKBA Planning Guidelines for the kitchen and bath, and NKBA Access Planning Guidelines used in universal design projects. Upon completion students acquire mastery of solving problems, mastery of developing a concept and theme design, mastery of producing professional working documents, mastery of presenting the idea, and mastery of processing NKBA forms through development of an advanced kitchen project and an advanced bathroom project from inception to completion.

## **INDS 2386 Internship-Interior Design**

*Prerequisites: Internship is done the final semester upon completion of the program. Consent of program advisor is required. Must be placed into GUST 0342 in reading, ENGL 0310 or 0349 in writing and MATH 0306 in math.*

*Credit: 3 (18 lab) (288 hours Work Experience)*

An experience external to the college for an advanced student in the specialized field involving a written agreement between the educational institution and a business or industry. Mentored and supervised by a workplace employee, the student achieves objectives that are developed and documented by the college and that are directly related to specific occupational outcomes. This may be a paid or unpaid experience. This course may be repeated if topics and learning

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outcomes vary.

## **INDS 2387 Internship-Interior Design**

*Prerequisites: Associate Degree in Interior Design or Department Approval; Must be placed into GUST 0342 in reading, ENGL 0310 or 0349 in writing and MATH 0306 in math.*

*Credit: 3 (18 lab) (288 hours Work Experience)*

An experience external to the college for an advanced student in a specialized field involving a written agreement between the educational institution and a business or industry. Mentored and supervised by a workplace employee, the student achieves objectives that are developed and documented by the college and that are directly related to specific occupational outcomes. This may be a paid or unpaid experience. This course may be repeated if topics and learning outcomes vary.

## **INEW 1340 ASP.Net Programming**

*Prerequisites: ITSE 1447 or ITSE 1430 ; must be placed into college-level reading, writing and math.*

*Credit: 3 (2 lecture, 4 lab)*

Theory of server side web programming concepts to implement solutions for common web programming tasks. Includes Basic ASP.Net web controls, user management and authentication, state management, and development of database-driven web applications.

## **INEW 2320 Web Analytics**

*Prerequisites: Departmental approval*

*Credit: 3 (2 lecture, 4 lab)*

Course Description: Web monitoring and analytical tools to improve and report site functionality. End-of-Course Outcomes: Use monitoring and analytical tools to improve site functionality; generate data-mining reports for marketing and usability; and collect and evaluate dynamic data to deliver personalized site content.

## **INEW 2332 Comprehensive Software**

### **Project: Coding, Testing, and Implementation**

*Prerequisites: Must be placed into college-level reading, writing and math.*

*Credit: 3 (2 lecture, 4 lab)*

A comprehensive application of skills learned in previous semesters in a simulated workplace. Includes coding, testing, maintenance, and documentation of a complete software and/or hardware solution. This course may be used as a capstone course for a certificate or degree.

## **INEW 2334 Advanced Web Programming**

*Prerequisites: Must be placed into college-level reading, writing and math.*

*Credit: 3 (2 lecture, 4 lab)*

Web programming using industry-standard languages and data stores.

## **INEW 2418 Web Programming Using Java Server Pages and Servlets**

*Prerequisites: ITSE 1356 and ITSE 2417; Must be placed into college-level reading, writing and math.*

*Credit: 4 (2 lecture, 4 lab)*

Web application development using Java, HTML,

Java Servlets, Java Server Pages (JSPs), and a web server.

## **INEW 2438 Advanced Java Programming**

*Prerequisites: ITSE 2417 or COSC 1437 and ITSE 1356; Must be placed into college-level reading, writing and math.*

*Credit: 4 (2 lecture, 4 lab)*

A continuation of advanced JAVA programming techniques such as servlets and advanced graphical functions.

## **INMT 1311 Computer Integrated Manufacturing**

*Prerequisites: TECM 1301, ITSC 1309 ; must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0308 in math.*

*Credit: 3 (2 lecture, 3 lab)*

A study of the principles and application of computer integrated manufacturing. Employs all aspects of a system including but not limited to integration of material handling, manufacturing, and computer hardware and programming.

## **INMT 1317 Industrial Automation**

*Prerequisites: TECM 1301; must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0308 in math.*

*Credit: 3 (2 lecture, 3 lab)*

A study of the applications of industrial automation systems including identification of system requirements, equipment integration, motors, controllers, and sensors. Coverage of set-up, maintenance, and testing of the automated system.

## **INMT 1343 Computer Aided Design/ Computer Aided Manufacturing (CAD/CAM)**

*Prerequisites/Corequisites: ITSC 1309*

*Prerequisites: MCHN 1302, TECM 1301; must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0308 in math.*

*Credit: 3 (2 lecture, 3 lab)*

Computer-assisted applications in integrating engineering graphics and manufacturing. Emphasis on the conversion of a working drawing using computer aided design/computer aided manufacturing (CAD/CAM) software and related input and output devices to translate into machine code.

## **INMT 1345 Computer Numerical Controls**

*Prerequisites/Corequisites: TECM 1301, MCHN 1302, ENTC 1347; ; must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0308 in math.*

*Credit: 3 (2 lecture, 3 lab)*

A study of numerical controlled machine operations. Emphasis on standard and computer numerical controlled (CNC) procedures for planning, preparing, and operating a computer-assisted program.

## **INMT 1370 Lean Manufacturing - Manufacturing Engineering**

*Prerequisites: Department Approval; must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0308 in math.*

*Credit: 3 (2 lecture, 3 lab)*

Study of principles of lean manufacturing -

manufacturing engineering; including a systematic approach to reducing costs and lead-time.

## **INRW 0100 INRW 0410 Companion Course**

*Credits 1 (1 Lab)*

This course is a combined 1 hour lecture/ lab performance-based companion course designed to develop students' critical reading and academic writing skills. Students who enroll in this course are required to enroll in INRW 0410. INRW 0100 is a companion course to INRW 0410. The content of this course is based upon the needs of the accompanying INRW 0410 course. The focus is to prepare, support, and enable students to successfully perform in INRW 0410. The course integrates complementary reading and writing assignments with special emphasis given to reasoning and responding to issues arising from class readings. Students who successfully complete this course and INRW 0410 will qualify to take INRW 0420.)

## **INRW 0120 Accelerated Reading and Writing**

*Credits 1 (1 Lab)*

This course is a combined 1 hour lab performance-based course designed to develop students' critical reading and academic writing skills. Students who enroll in this course wish to accelerate their time in preparatory studies in order to reach credit level English expeditiously. The course integrates complementary reading and writing assignments with special emphasis given to reasoning and responding to issues arising from class readings. Students who successfully complete this course and will qualify to take INRW 0420.

## **INRW 410 Integrated Read & Write I**

*Credits 4 (3 lecture, 2 lab)*

Course description This course is a combined 3 hour lecture/ 2 hour lab (1 hour technology lab & 1 hour writing lab), performance-based course designed to develop student's critical reading and academic writing skills. The focus of the course will be on applying critical reading skills for organizing, analyzing, and retaining material and developing written work appropriate to the audience, purpose, situation, and length of the assignment. The course integrates intermediate reading skills with intermediate writing skills needed in writing a variety of academic essays and written assignments. This course is designed to prepare students for advanced integrated reading and writing and provide the framework to excel in writing intensive courses. Lab required. Students who successfully complete this course will qualify to take INRW 0420.

## **INRW 420 Integrated Read and Write II**

*Credits 4 (3 lecture, 2 lab)*

Course description This course is a combined 3 hour lecture/ 2 hour lab (1 hour technology lab & 1 hour writing lab), performance-based course designed to develop student,s critical reading and academic writing skills. The focus of the course will be on applying critical reading skills for organizing, analyzing, and retaining material and developing written work appropriate to the audience, purpose, situation, and length of the assignment. The course integrates intermediate

# Course Descriptions

reading skills with intermediate writing skills needed in writing a variety of academic essays and written assignments. This course is designed to prepare students for advanced integrated reading and writing and provide the framework to excel in writing intensive courses. Lab required.

## **INSR 1205 Personal Insurance**

*Prerequisites:*

*Credit: 2 (2 lecture)*

Introduction to personal loss exposures and personal insurance policies for handling these exposures including auto, homeowners, life, health, marine, and various government insurance programs. At the end of the course the student would be able to describe the types of property loss exposures, the financial consequences of a property loss, and the insurance available for each; describe liability loss exposures and the insurance available for these losses; describe human loss exposures and the life, health, and disability insurance available; and identify covered losses and calculate the amount of insurance payable in various situations. This course helps prepare for the Insurance (INS) 22 exam.

## **INSR 1209 Principles of Insurance**

*Corequisites: INSR 1205*

*Credit: 2 (2 lecture)*

Organization of insurance companies, state regulations, types of policies, and career opportunities in the field. Topics include concepts of risk, insurance protection, and prohibited practices. Discuss the differences between the types of insurance companies; describe the state regulatory environment for the insurance industry; explain the concept of risk and risk management; differentiate between the types of insurance coverage; and describe the professional career opportunities in the insurance industry. This course helps prepare for the Insurance (INS) 21 exam.

## **INSR 1217 Insurance Customer Service Representative**

*Prerequisites:*

*Credit: 2 (2 lecture)*

Prepares participants to work in insurance agencies as entry-level customer service representatives. Includes information about policies, terminology, and customer service procedures. May prepare students to take the licensing exam sponsored by the Texas Department of Insurance. Define insurance terms and concepts; identify and explain violations of insurance regulations; and explain applicable policy provisions.

## **INSR 1301 Commercial Insurance**

*Prerequisites:*

*Credit: 3 (3 lecture)*

Introduction to personal loss exposures and personal insurance policies for handling these exposures including auto, homeowners, life, health, marine, and various government insurance programs. Describe the types of property loss exposures, the financial consequences of a property loss, and the insurance available for each; describe liability loss exposures and the insurance available for these losses; describe human loss exposures and the life, health, and disability

insurance available; and identify covered losses and calculate the amount of insurance payable in various situations. This course helps prepare for the Insurance (INS) 22 exam.

## **INSR 1371 Sales and Marketing/Multiline Insurance Sales**

*Prerequisites:*

*Credit: 3 (3 lecture)*

For agents who market property and/or casualty insurance. Includes prospecting and presentation, types of coverage, identifying client needs, terminology, and analyzing homeowners coverage. Also covers sales transitions, analyzing automobile and specialized coverage, tax implications, loss ratios and agent responsibilities. Basic telemarketing including selling strategies, prompters, and communication skills. Development of a positive attitude to create a personal selling style. A study of marketing, sales techniques, promotions, and advertising theories as applied to the insurance industry.

## **INSR 2340 Multiline Insurance Sales and Marketing**

*Prerequisites:*

*Credit: 3 (3 lecture)*

Prospecting and presentation, types of coverage, identifying client needs, terminology, and analyzing homeowners coverage. Includes information related to sales transitions, analyzing automobile and specialized coverage, tax implications, loss ratios and agent responsibilities.

## **INTC 1312 Instrumentation and Safety**

*Prerequisites: Must be placed into college-level reading, writing and math.*

*Credit: 3 (3 lecture)*

An overview of industries employing instrument technicians. Includes instrument safety techniques and practices as applied to the instrumentation field.

## **INTC 1343 Application of Industrial Automatic Controls**

*Prerequisites: INTC 1441 or Departmental Approval; Must be placed into college-level reading, writing and math.*

*Credit: 3 (3 lecture)*

Automatic process control including measuring devices, analog and digital instrumentation, signal transmitters, recorders, alarms, controllers, control valves, and process and instrument drawings. Includes connection and troubleshooting of loops.

## **INTC 1441 Principles of Automatic Control**

*Prerequisites: CETT 1403, INTC 1312, INTC 1456, MATH 1314 or Departmental Approval; Must be placed into college-level reading, writing and math.*

*Credit: 4 (3 lecture, 3 lab)*

Basic measurements, automatic control systems and design, closed loop systems, controllers, feedback, control modes, and control configurations.

## **INTC 1456 Instrumentation Calibration**

*Prerequisites: Must be placed into college-level reading, writing and math.*

*Credit: 4 (3 lecture, 3 lab)*

Techniques for configuring and calibrating transmitters, controllers, recorders, valves, and valve positioners.

## **INTC 2330 Instrumentation Systems Troubleshooting**

*Prerequisites: INTC 1441 or Departmental Approval; Must be placed into college-level reading, writing and math.*

*Credit: 3 (2 lecture, 4 lab)*

Techniques for troubleshooting instrumentation systems in a process environment. Includes troubleshooting upsets in processes

## **INTC 2336 Distributed Control and Programmable Logic**

*Prerequisites: INTC 1343 or Department Approval; Must be placed into college-level reading, writing and math.*

*Credit: 3 (2 lecture, 2 lab)*

An overview of distributed control systems including configuration of programmable logic controllers, smart transmitters, and field communicators. Functions of digital systems in a process control environment.

## **INTC 2370 Linking Process Control Systems**

*Prerequisites: INTC 1441; Must be placed into college-level reading, writing and math.*

*Credit: 3 (2 lecture, 4 lab)*

An introduction to linking controls systems, including Distributed Control Systems and Programmable Logic Controllers, using OPC (OLE for Process Control) server systems.

## **INTC 2380 Cooperative Education - Instrumentation Technology/Technician**

*Prerequisites: INTC 1343 or Department Approval; Must be placed into college-level reading, writing and math.*

*Credit: 3 (1 lecture, 14 lab)*

Career-related activities encountered in the student's area of specialization offered through an individualized agreement among the college, employer, and student. Under the supervision of the college and the employer, the student combines classroom learning with work experience. Includes a lecture component.

## **ITCC 1309 CISCO Voice and Data Cabling**

*Prerequisites: Must be placed into college-level reading, writing and math.*

*Credit: 3 (2 Lecture, 4 Lab)*

Introduces the physical aspects of CISCO voice and data network cabling and installation; skills development in reading network design documentations, part list setup and purchase, pulling and mounting cable, cable management, choosing wiring closets and patch panel installation and termination, installing jacks and testing cable.

## **ITCC 1401 Exploration-Network Fundamentals**

*Prerequisites: Must be placed into college-level reading, writing and math.*

*Credit: 4 (2 lecture, 4 lab)*

A course introducing the architecture, structure, functions, components, and models of the internet.

# Course Descriptions

Describes the use of OSI and TCP layered models to examine the nature and roles of protocols and services at the applications, network, data link, and physical layers. Covers the principles and structure of IP addressing and the fundamentals of Ethernet concepts, media, and operations. Build simple LAN topologies by applying basic principles of cabling; perform basic configurations of network devices, including routers and switches; and implementing IP addressing schemes.

## **ITCC 1404 Cisco Exploration 2-Routing Protocols and Concepts**

*Prerequisites: ITCC 1401; Must be placed into college-level reading, writing and math.*

*Credit: 4 (2 lecture, 4 lab)*

This course describes the architecture, components, and operation of routers, and explains the principles of routing and routing protocols. Students analyze, configure, verify, and troubleshoot the primary routing protocols RIPv1, RIPv2, EIGRP, and OSPF. Recognize and correct common routing issues and problems. Model and analyze routing processes.

## **ITCC 1408 Introduction to Voice over Internet Protocol (VoIP)**

*Prerequisite: ITCC 1401; Must be placed into college-level reading, writing and math.*

*Credit: 4 (2 lecture, 4 lab)*

Basic concepts of voice over internet protocol (VoIP). Focuses on technology integration of and data transmission in network communications.

## **ITCC 2359 Advanced Voice Over Internet Protocol (VOIP)**

*Prerequisite: ITCC 1401; Must be placed into college-level reading, writing and math.*

*Credit: 3 (2 lecture, 4 lab)*

Voice Over Internet Protocol (VOIP) architecture, components, and functionality. Includes VOIP signaling, call control, voice dial plans, configuring voice interfaces, dial peers, and quality of service (QoS) technologies.

## **ITCC 2408 Cisco Exploration 3-LAN Switching and Wireless**

*Prerequisites: ITCC 1401; Must be placed into college-level reading, writing and math.*

*Credit: 4 (2 lecture, 4 lab)*

This course helps students develop an in-depth understanding of how switches operate and are implemented in the LAN environment for small and large networks. Detailed explanations of LAN switch operations, VLAN implementation, Rapid Spanning Tree Protocol (RSTP), VLAN Trunking Protocol (VTP), Inter-VLAN routing, and wireless network operations. Analyze, configure, verify, and troubleshoot VLANs, RSTP, VTP, and wireless networks. Campus network design and Layer 3 switching concepts are introduced.

## **ITCC 2410 Cisco Exploration 4 - Accessing the WAN**

*Prerequisites: ITCC 1404, ITCC 2408; Must be placed into college-level reading, writing and math.*

*Credit: 4 (2 lecture, 4 lab)*

This course explains the principles of traffic control and access control lists (ACLs) and provides an

overview of the services and protocols at the data link layer for wide-area access. Describes user access technologies and devices and discover how to implement and configure Point-to-Point Protocol (PPP), Point-to-Point Protocol over Ethernet (PPPoE), DSL, and Frame Relay. WAN security concepts, tunneling, and VPN basics are introduced. Discuss the special network services required by converged applications and an introduction to quality of service (QoS).

## **ITCC 2441 CCNA Security**

*Prerequisites:*

*Credit: 4 (3 lecture, 3 lab)*

Overall security processes with particular emphasis on hands-on skills in the following areas: security policy design and management; security technologies, products, and solutions; and secure router design, installation, configuration, and maintenance; AAA and VPN implementation using routers and firewalls.

## **ITMT 1340 Managing and Maintaining a Microsoft Windows Server 2003 Environment**

*Prerequisites: ITMT 1300; must be placed into college-level reading, writing and math.*

*Credit: 3 (2 lecture, 4 lab)*

Managing accounts and resources, maintaining server resources, monitoring server performance, and safeguarding data in a Microsoft Windows Server 2003 environment.

## **ITMT 1350 Implementing, Managing, and Maintaining a Microsoft Windows Server 2003 Network Infrastructure: Network Services**

*Prerequisite: ITMT 1300; must be placed into college-level reading, writing and math.*

*Credit: 3 (2 lecture, 4 lab)*

Implementing routing; implementing, managing, and maintaining Dynamic Host Configuration Protocol (DHCP), Domain Name System (DNS), and Windows Internet Name Service (WINS); securing Internet Protocol (IP) traffic with Internet Protocol security (IPSec) and certificates; implementing a network access infrastructure by configuring the connections for remote access clients; and managing and monitoring network access.

## **ITMT 1370 Windows Client Operating System**

*Must be placed into college-level reading, writing and math.*

*Credit: 3 (2 lecture, 4 lab)*

Install, configure, and troubleshoot windows to include: Install and upgrade to Windows 8.1 (10/15%) Configure hardware and applications (10/15%) Configure network connectivity (10/15%) Configure access to resources (10/15%) Configure remote access and mobility (15/20%) Monitor and

maintain Windows clients (10/15%) Configure system and data recovery options (10/15%)

## **ITMT 1371 Windows 7 Configuration - MCITP Certification Track**

*Prerequisites: ITNW 1358: Network+ or ITNW 1425 or Department Approval; must be placed into college-level reading, writing and math.*

*Credit: 3 (2 lecture, 4 lab)*

A study of Windows 7 operating system; installation, configuration, and troubleshooting; file management; users accounts and permissions; security features; network connectivity; setup of external devices; optimization and customization; and deployment of application, with hands-on experience.

## **ITMT 2301 Windows Server 2008 Network Infrastructure Configuration**

*Prerequisites: ITMT 1371, ITMT 2302 (70-640); must be placed into college-level reading, writing and math.*

*Credit: 3 (2 lecture, 4 lab)*

A course in Windows Server 2008 networking infrastructure to include installation, configuration, and troubleshooting of Internet Protocol (IP) addressing, network services and security.

## **ITMT 2302 Windows Server 2008 Active Directory Configuration**

*Prerequisites: ITMT 1371; must be placed into college-level reading, writing and math.*

*Credit: 3 (2 lecture, 4 lab)*

A study of Active Directory Service on Windows Server 2008. Concepts of resource management within an enterprise network environment.

## **ITMT 2303 Administering a Microsoft SQL Server Database**

*Prerequisites: Must be placed into college-level reading, college-level writing and MATH 0312 in math.*

*Credit: 3 (2 lecture, 4 lab)*

In-depth coverage of the knowledge and skills required to install, configure, administer, and troubleshoot the client-server database management system of Microsoft SQL Server databases.

## **ITMT 2340 Designing Security for Microsoft Networks**

*Prerequisite: ITMT 1340*

*Credit: 3 (2 lecture, 4 lab)*

Assembling the design team, modeling threats, and analyzing security risks in order to meet business requirements for securing computers in a networked environment. Includes decision-making skills through an interactive tool that simulates real-life scenarios. Focuses on collecting information and sorting through details to resolve a given security requirement.

## **ITMT 2351 Windows Server 2008: Server**

# Course Descriptions

## **Administrator**

*Prerequisites: ITMT 2301; Must be placed into college-level reading, college-level writing and MATH 0312 in math.*

*Credit: 3 (2 lecture, 4 lab)*

Knowledge and skills for the entry-level server administrator or information technology (IT) professional to implement, monitor and maintain Windows Server 2008 servers.

## **ITMT 2371 Installing and Configuring Windows Server 2012**

*Prerequisites: Must be placed into college-level reading, college-level writing and MATH 0312 in math.*

*Credit: 3 (2 lecture, 4 lab)*

Implement a core Windows Server 2012 infrastructure in an existing enterprise environment which includes: Install and configure servers, configure server roles and features, configure Hyper-V, Deploy and configure core network services, Install and administer Active Directory and Create and manage Group Policy.

## **ITMT 2372 Administering Windows Server 2012**

*Prerequisites: Must be placed into college-level reading, college-level writing and MATH 0312 in math.*

*Credit: 3 (2 lecture, 4 lab)*

Administer a Windows Server 2012 infrastructure in an enterprise environment.

## **ITMT 2373 Configuring Advanced Windows Server 2012 Services**

*Prerequisites: Must be placed into college-level reading, college-level writing and MATH 0312 in math.*

*Credit: 3 (2 lecture, 4 lab)*

This course is intended for Information Technology (IT) Professionals with hands on experience implementing, managing and maintaining a Windows Server 2012 or Windows Server 2012 R2 environment who wish to acquire the skills and knowledge necessary to perform advanced management and provisioning of services within that Windows Server 2012 environment.

## **ITMT 2374 Storage Area Network (SAN)**

*Prerequisites: Must be placed into college-level reading, college-level writing and MATH 0312 in math.*

*Credit: 3 (2 lecture, 4 lab)*

Foundational knowledge necessary to perform essential job duties in a Storage Area Network (SAN) environment. Students learn the architecture and components of a SAN and the technology underpinning that make SANs work.

## **ITNW 1308 Implementing & Supporting**

## **Client Operating Systems**

*Prerequisites: Must be placed into college-level reading, ENGL 0310 or 0349 in writing and MATH 0312 in math.*

*Credit: 3 (2 lecture, 4 lab)*

The fundamentals of managing and configuring network clients.

## **ITNW 1313 Computer Virtualization**

*Prerequisites:*

*Credit: 3 (2 lecture, 4 lab)*

Implement and support virtualization of clients of servers in a networked computing environment. This course explores installation, configuration, and management of computer virtualization workstation and servers.

## **ITNW 1351 Fundamentals of Wireless LANs**

*Prerequisites:*

*Credit: 3 (2 Lecture, 4 ab)*

Designing, planning, implementing, operating, and troubleshooting wireless LANs (WLANs). Includes WLAN design, installation, and configuration; and WLAN security issues and vendor interoperability strategies.

## **ITNW 1358 Network+**

*Prerequisites: ITNW 1425 or Department Approval*

*Corequisite: MATH 1314*

*Credit: 3 (2 lecture, 4 lab)*

Prepares individuals for a career as a Network Engineer in the Information Technology support industry. Includes the various responsibilities and tasks required for service engineer to successfully perform in a specific environment. Prepares individuals to pass the Computing Technology Industry Association (CompTIA) Network+ certification exam.

## **ITNW 1380 Cooperative Education - Computer Systems Networking and Telecommunications**

*Prerequisites: Department Approval*

*Credit: 3 (1 lecture, 20 lab)*

Career-related activities encountered in the student's area of specialization offered through an individualized agreement among the college, employer, and student. Under the supervision of the college and the employer, the student combines classroom learning with work experience. Includes a lecture component.

## **ITNW 1425 Fundamentals of Networking Technologies**

*Prerequisites: College ready for English and math (i.e. no remediation needed) and high school computer literacy or equivalent.*

*Credit: 4 (2 lecture, 4 lab)*

Instruction in networking technologies and their implementation. Topics include the OSI reference model, network protocols, transmission media, and networking hardware and software.

## **ITNW 1492 Special Topics in Networking and Telecommunications**

*Prerequisites: Department Approval*

*Credit: 4 (4 lecture)*

Topics address recently identified current events, skills, knowledge, and/or attitudes and behaviors pertinent to technology or occupation and relevant to the professional development of the student.

## **ITNW 2335 Network Troubleshooting and Support**

*Prerequisites: ITMT 2301 with a minimum grade of C or better or ITCC 2408 with a minimum grade of C or better or ITSY 2300 with a minimum grade of C or better. Department Approval.*

*Must be college-level in reading, writing and math.*

*Credit: 4 (2 lecture, 4 lab)*

Troubleshoot and support networks with emphasis on solving real world problems in a hands-on environment. Topics include troubleshooting and research techniques, available resources, and network management hard/software.

## **ITNW 2432 UNIX Network Integration**

*Prerequisites: ITSC 1458*

*Must be college-level in reading, writing and math.*

*Credit: 4 (2 lecture, 4 lab)*

Installation, configuration, management, and support of a network infrastructure in a large computing environment that uses a version of the UNIX server operating system. Includes connectivity requirements, network services, and applications including file, print, database, messaging, proxy server, firewall, Dynamic Host Configuration Protocol, Network Time Protocol, Domain Name Service, and Internet Protocol Version 6 configuration and use.

## **ITSC 1301 Introduction to Computers**

*Prerequisites: Must be placed into GUST 0342 in reading, ENGL 0300 or 0347 in writing and MATH 0308 in math.*

*Credit: 3 (2 lecture, 2 lab)*

Overview of computer information systems. Introduces computer hardware, software, procedures, and human resources.

## **ITSC 1302 Computer Control Language**

*Prerequisites: Must be placed into GUST 0342 in reading, ENGL 0300 or 0347 in writing and MATH 0308 in math.*

*Credit: 3 (2 lecture, 4 lab)*

Skill development in the use of system control language on mid-range/mainframe computers. Topics include command formats, file management, job scheduling, resource management, and utilities.

## **ITSC 1307 UNIX Operating System I**

*Prerequisite/Corequisite: COSC 1436 or Department Approval; Must be placed into GUST 0342 in reading, ENGL 0300 or 0347 in writing and MATH 0308 in math.*

*Credit: 3 (2 lecture, 4 lab)*

A study of the UNIX operating system including multi-user concepts, terminal emulation, use of

# Course Descriptions

system editor, basic UNIX commands, and writing script files. Topics include introductory systems management concepts.

## **ITSC 1309 Integrated Software Applications I**

*Prerequisites:* Must be placed into GUST 0342 in reading, ENGL 0300 or 0347 in writing and MATH 0308 in math.

*Credit:* 3 (2 lecture, 2 lab)

Integration of applications from popular business productivity software suites. Instruction in embedding data, linking and combining documents using word processing, spreadsheets, databases, and/or presentation media software. Emphasis is on developing end-user proficiency skills for the workplace.

## **ITSC 1316 LINUX Installation and Configuration**

*Prerequisites:* Must be placed into GUST 0342 in reading, ENGL 0310 or 0349 in writing and MATH 0312 in math.

*Credit:* 3 (2 lecture, 4 lab)

Open-source Linux operating system. Includes Linux installation, basic administration, utilities and commands, upgrading, networking, security, and application development. Emphasizes hands-on setup, administration, and management of Linux. Also covers maintaining and securing reliable Linux systems.

## **ITSC 1319 Internet/Web Page Development**

*Prerequisites:* BCIS 1405 or ITSC 1309 or ITSC 1301; Must be placed into GUST 0342 in reading, ENGL 0310 or 0349 in writing and MATH 0312 in math.

*Credit:* 3 (2 lecture, 4 lab)

Instruction in the use of Internet concepts and the introduction to web page design and web site development.

## **ITSC 1321 Intermediate PC Operating Systems**

*Prerequisites:* BCIS 1405 or ITSC 1309; Must be placed into GUST 0342 in reading, ENGL 0310 or 0349 in writing and MATH 0312 in math.

*Credit:* 3 (2 lecture, 4 lab)

Continued study in advanced installation and configuration troubleshooting, advanced file management, memory and storage management. Update peripheral device drivers, and use of utilities to increase system performance.

## **ITSC 1342 Shell Programming**

*Prerequisites:* ITSC 1307; Must be placed into GUST 0342 in reading, ENGL 0310 or 0349 in writing and MATH 0312 in math.

*Credit:* 3 (2 lecture, 4 lab)

Reading, writing, and debugging shell scripts. Development of scripts to automate frequently executed sequences of commands. Covers conditional logic, user interaction, loops, and menus to enhance the productivity and effectiveness of the user. Intended for programmers who are familiar with operating environments and reading and writing various shell scripts.

## **ITSC 1380 Cooperative Education-Computer and Information Sciences,**

### **General**

*Prerequisites:* Department Approval; must be placed into college-level reading, writing and math.

*Credit:* 3 (1 lecture, 20 lab)

Career-related activities encountered in the student's area of specialization offered through an individualized agreement among the college, employer, and student. Under the supervision of the college and the employer, the student combines classroom learning with work experience. Includes a lecture component.

### **ITSC 1425 Personal Computer Hardware**

*Prerequisites:* Must be placed into college-level reading, writing and math.

*Credit:* 4 (2 lecture, 4 lab)

Current personal computer hardware including assembly, upgrading, setup, configuration, and troubleshooting.

### **ITSC 1447 UNIX System Administration II**

*Prerequisites:* ITSC 1458; ITSC 1458; must be placed into college-level reading, writing and math.

*Credit:* 4 (2 lecture, 4 lab)

Provides students with the necessary skills to administer UNIX workstations in a network environment. System security features will be presented.

### **ITSC 1458 UNIX System Administration I**

*Prerequisites:* ITSC 1307; ITSC 1458; must be placed into college-level reading, writing and math.

*Credit:* 4 (2 lecture, 4 lab)

Provide new system administrators the basics of administering UNIX workstations. Students will perform basic system administration tasks, such as installing a standalone system, adding users, backing up and restoring file systems, and adding new printer support. Emphasis on the procedures needed to perform these system administration tasks. Introduces the concept of the system and disk management.

### **ITSC 2321 Integrated Software Applications II (Advanced Word)**

*Prerequisites:* ITSC 1309 or BCIS 1405 or Department Approval; ITSC 1458; must be placed into college-level reading, writing and math.

*Credit:* 3 (2 lecture, 2 lab)

Continued study of computer applications from business productivity software suites. Instruction in embedding data and linking and combining documents using word processing, spreadsheets, databases, and/or presentation media software.

### **ITSC 2339 Personal Computer Help Desk**

*Prerequisites:* ITSC 1458; must be placed into college-level reading, writing and math.

*Credit:* 3 (2 lecture, 4 lab)

Diagnosis and solution of user hardware and software related problems with on-the-job projects in either a Help Desk lab or in short-term assignments for local business. Topics include planning, diagnostic techniques, problem

resolution, call tracking, staffing, training, knowledge engineering, work orders, service level agreements, metrics, telephony, scheduling, management issues, customer expectation, selling your services.

### **ITSE 1301 Web Design Tools**

*Prerequisites:* BCIS 1405, ITSC 1309 or Department Approval; must be placed into GUST 0342 in reading, ENGL 0300 or 0347 in writing and MATH 0312 in math.

*Credit:* 3 (2 lecture, 4 lab)

Designing and publishing Web documents. Includes graphic design issues and exploration of tools available for creating and editing Web documents.

### **ITSE 1306 PHP Programming**

*Prerequisites:* IMED 2309, IMED 2351; must be placed into GUST 0342 in reading, ENGL 0300 or 0347 in writing and MATH 0312 in math.

*Credit:* 3 (2 lecture, 4 lab)

Introduction to PHP including the design of web-based applications, arrays, strings, regular expressions, file input/output, e-mail and database interfaces, stream and network programming, debugging, and security.

### **ITSE 1345 Introduction to Oracle SQL**

*Prerequisites:* COSC 1436, ENGL 1301, and MATH 1314; must be placed into college-level reading, writing and math. *Credit:* 3 (2 lecture, 4 lab)

An introduction to the design and creation of relational databases using Oracle. Topics include storing, retrieving, updating, and displaying data using Structured Query Language (SQL).

### **ITSE 1346 Database Theory and Design**

*Prerequisites:* BCIS 1405 or ITSC 1309; must be placed into college-level reading, writing and math.

*Credit:* 3 (2 lecture, 4 lab)

Introduction to the analysis and utilization of data requirements and organization into normalized tables using the four normal forms of database design.

### **ITSE 1350 System Analysis and Design**

*Prerequisites:* COSC 1436 or Department Approval; must be placed into college-level reading, ENGL 0310 or 0349 in writing and college-level math.

*Credit:* 3 (2 lecture, 2 lab)

Comprehensive introduction to the planning, design, and construction of computer information systems using the systems development life cycle and other appropriate design tools.

### **ITSE 1380 Cooperative Education-Computer Programming/Programmer,**

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## **General**

*Prerequisites: Department Approval; must be placed into college-level reading, writing and math.*

*Credit: 3 (1 lecture, 20 lab)*

Career-related activities encountered in the student's area of specialization offered through an individualized agreement among the college, employer, and student. Under the supervision of the college and the employer, the student combines classroom learning with work experience. Includes a lecture component.

## **ITSE 1391 Special Topics in Computer Programming: Oracle 10g New Features**

*Prerequisites: ITSE 1345; must be placed into college-level reading, writing and math. Credit: 3 (2 lecture, 4 lab)*

Topics address recently identified current events, skills, knowledge, and/or attitudes and behaviors pertinent to the technology or occupation and relevant to the professional development of the student. This course was designed to be repeated multiple times to improve student proficiency.

## **ITSE 1402 Computer Programming**

*Prerequisites: Must be placed into college-level reading, writing and math.*

*Credit: 4 (2 lecture, 4 lab)*

Introduction to computer programming with emphasis on the fundamentals of structured design, development, testing, implementation, and documentation. Includes language syntax, data and file structures, input/output devices, and files.

## **ITSE 1430 Introduction to C# Programming**

*Prerequisite: Prerequisite: COSC 1437 or Department Approval; must be placed into college-level reading, writing and math.*

*Credit: 4 (2 lecture, 4 lab)*

Data types, control structures, functions, syntax, and semantics of the language, classes, class relationships, and exception handling.

## **ITSE 1432 Introduction to Visual Basic .Net Programming**

*Prerequisites: COSC 1437 or Department Approval; must be placed into college-level reading, writing and math.*

*Credit: 4 (2 lecture, 4 lab)*

Introduction to Visual Basic.NET (VB.NET) including data types, control structures, functions, syntax, and semantics of the language, classes, class relationships, and exception handling.

## **ITSE 1447 Programming with Visual Basic.Net**

*Prerequisites: ITSE 1432; must be placed into college-level reading, writing and math.*

*Credit: 4 (2 lecture, 4 lab)*

Designing and developing enterprise applications using Microsoft Visual Basic.Net in the Microsoft .Net Framework. Includes reference types, class relationships, polymorphism, operators

overloading, and creating and handling exceptions.

## **ITSE 1456 Extensible Markup Language (XML)**

*Prerequisites: BCIS 1405, ITSC 1309, or ITSE 1301; must be placed into college-level reading, writing and math.*

*Credit: 4 (2 lecture, 4 lab)*

Introduction of skills and practices related to Extensible Markup Language (XML). Includes Document Type Definition (DTD), well-formed and valid XML documents, XML schemes, and Extensible Style Language (XSL).

## **ITSE 2309 Database Programming**

*Prerequisites: Departmental Approval*

*Credit: 3 (2 lecture, 4 lab)*

Database development using database programming techniques emphasizing database structures, modeling, and database access.

## **ITSE 2313 Web Authoring**

*Prerequisites: ARTC 1325, IMED 1316; must be placed into college-level reading, writing and math.*

*Credit: 3 (2 lecture, 4 lab)*

Instruction in designing and developing web pages that incorporate text, graphics, and other supporting elements using current technologies and authoring tools.

## **ITSE 2337 Assembly Language Programming**

*Prerequisites: COSC 1436, ITSC 1302, or ITSE 1402; must be placed into college-level reading, writing and math.*

*Credit: 3 (2 lecture, 4 lab)*

Comprehensive coverage of low-level computer operations and architecture. Includes design, development, testing, implementation, and documentation of programs; language syntax; data manipulation; input/output devices and operations; and file access.

## **ITSE 2343 Advanced Mobile Programming**

*Prerequisites: ITSE 2005, ITSE 2305/2405*

*Credit: 3 (2 lecture, 4 lab)*

Programming for mobile devices including file access methods, data structures, modular programming, program testing and documentation. Design, write, and document mobile programs.

## **ITSE 2346 Oracle: Applications I**

*Prerequisites: ITSE 1345, COSC 1436 and ITSE 1346; must be placed into college-level reading, writing and math.*

*Credit: 3 (2 lecture, 4 lab)*

Forms in a Developer environment. Topics include the use of Object Navigator and Virtual Graphics System (VGS), Layout Editor and Menu options.

## **ITSE 2348 Oracle: Applications II**

*Prerequisites: ITSE 2346; must be placed into college-level reading, writing and math.*

*Credit: 3 (2 lecture, 4 lab)*

A continuation of Oracle Forms: Application I. Includes creating multiple form applications, managing multiple transactions across modules, and enhancing applications with custom menus, and charts.

## **ITSE 2354 Advanced Oracle PL/SQL**

*Prerequisites: ITSE 1402 or COSC 1436 and ITSE 1346; must be placed into college-level reading, writing and math.*

*Credit: 3 (2 lecture, 4 lab)*

A continuation of Oracle SQL. Topics include hierarchical queries, set based queries, correlated subqueries, scripting, and scripting generation.

## **ITSE 2357 Advanced Object-Oriented Programming**

*Prerequisites: ITSE 1430, INEW 2438; must be placed into college-level reading, writing and math.*

*Credit: 3 (2 lecture, 4 lab)*

Application of advanced object-oriented programming techniques such as abstract data structures, class inheritance, polymorphism, and exception handling.

## **ITSE 2359 Advanced Computer Programming**

*Credit: 3 (2 lecture, 4 lab)*

Advanced programming techniques including file access methods, data structures, modular programming, program testing and documentation. This course covers theory and application of the methodology of Object-Oriented Analysis and Design, emphasizing static and dynamic system decomposition into objects and classes. Students may use either C++, C# or Java for the project's programming language.

## **ITSE 2417 JAVA Programming**

*Prerequisites: COSC 1437; must be placed into college-level reading, writing and math.*

*Credit: 4 (2 lecture, 4 lab)*

Introduction to Java programming with object-orientation. Emphasis is on the fundamental syntax and semantics of Java for applications and web applets.

## **ITSE 2421 Object-Oriented Programming**

*Prerequisites: COSC 1437; must be placed into college-level reading, writing and math. Credit: 4 (2 lecture, 4 lab)*

Introduction to object-oriented programming. Emphasis on the fundamentals of structured design with classes, including development, testing, implementation, and documentation. Includes object-oriented programming techniques, classes, and objects.

## **ITSE 2434 Advanced Visual Basic.NET Programming**

*Prerequisites: ITSE 1447; must be placed into college-level reading, writing and math.*

*Credit: 4 (2 lecture, 4 lab)*

Continuation of Visual Basic.NET programming using advanced features.

## **ITSE 2444 Oracle Database Structure and**

# Course Descriptions

## **Data Warehousing**

*Prerequisites: ITSE 2456; must be placed into college-level reading, writing and math.*

*Credit: 4 (2 lecture, 4 lab)*

A practical application course for modeling and designing an Oracle data warehouse using case studies.

## **ITSE 2453 Advanced C# Programming**

*Prerequisites: ITSE 1430 and ITSE 1356; must be placed into college-level reading, writing and math.*

*Credit: 4 (2 lecture, 4 lab)*

Continuation of C# programming using advanced features of the .NET Framework Class Library.

## **ITSE 2456 Oracle Database Administration I (10g)**

*Prerequisites: ITSE 1345; must be placed into college-level reading, writing and math. Corequisite: ITSC 1307*

*Credit: 4 (2 lecture, 4 lab)*

Fundamentals of the tasks and functions required of a database administrator using Oracle.

## **ITSE 2458 Oracle Database Administration II (10g)**

*Prerequisites: ITSE 2456; must be placed into college-level reading, writing and math.*

*Credit: 4 (2 lecture, 4 lab)*

A continuation of Oracle Database Administration I. Topics include recovery procedures, logical backups, standby database capabilities, and performance tuning of the Oracle Server. Common performance problems and the use of diagnostic tools to troubleshoot and optimize throughout will be discussed.

## **ITSW 1391 Special Topics in Data Processing Technology/Technician**

*Prerequisites: Must be placed into college-level reading, writing and math.*

*Credit: 3 (2 lecture, 4 lab)*

Topics address recently identified current events, skills, knowledge, and/or attitudes and behaviors pertinent to the technology or occupation and relevant to the professional development of the student. This course was designed to be repeated multiple times to improve student proficiency.

## **ITSW 2334 Advanced Spreadsheets**

*Prerequisites: ITSC 1309 or BCIS 1405; Must be placed into college-level reading, writing and math.*

*Credit: 3 (2 lecture, 2 lab)*

Advanced techniques for developing and modifying spreadsheets. Includes macros and data analysis functions.

## **ITSW 2337 Advanced Database**

*Prerequisites: ITSC 1309 or BCIS 1405; Must be placed into college-level reading, writing and math.*

*Credit: 3 (2 lecture, 2 lab)*

Advanced concepts of database design and functionality.

## **ITSY 1300 Fundamentals of Information**

## **Security**

*Prerequisites: Must be placed into GUST 0342 in reading, ENGL 0300 or 0347 in writing and MATH 0308 in math.*

*Credit: 3 (2 lecture, 4 lab)*

An introduction to information security including vocabulary and terminology, ethics, the legal environment, and risk management. Identification of exposures and vulnerabilities and appropriate countermeasures are addressed. The importance of appropriate planning, policies and controls is also discussed.

## **ITSY 1342 Information Technology Security**

*Prerequisites: ITMT 2301; must be placed into college-level reading, writing and math.*

*Credit: 3 (2 lecture, 4 lab)*

Instruction in security for network hardware, software, and data, including physical security; backup procedures; relevant tools; encryption; and protection from viruses.

## **ITSY 1371 Security+**

*Prerequisites:*

*Credit: 3 (2 lecture, 4 lab)*

Introduction to security systems that will provide the student a solid foundation of understanding the different computer security concepts, functions, and applications. The course maps to CompTIA Security+ exam objectives which cover general security concepts, communication security, and infrastructure security, basics of cryptography, and operations/organizational security. Upon completion of this course, the student will be prepared to sit for the CompTIA Security+ certification exam.

## **ITSY 2300 Operating System Security**

*Prerequisites: ITSY 1342*

*Credit: 3 (2 lecture, 4 lab)*

Safeguard computer operating systems by demonstrating server support skills and designing and implementing a security system. Identify security threats and monitor network security implementations. Use best practices to configure operating systems to industry security standards.

## **ITSY 2330 Intrusion Detection**

*Prerequisite: ITSY 1342; must be placed into college-level reading, writing and math.*

*Credit: 3 (2 lecture, 4 lab)*

Computer information systems security monitoring, intrusion detection, and crisis management. Includes alarm management, signature configuration, sensor configuration, and troubleshooting components. Emphasizes identifying, resolving, and documenting network crises and activating the response team.

## **ITSY 2345 Network Defense and**

## **Countermeasures**

*Prerequisites: ITSY 2300*

*Credit: 3 (2 lecture, 4 lab)*

This is a practical application and comprehensive course that includes the planning, design, and construction of a complex network that will sustain an attack, document events, and mitigate the effects of the attack. This is a capstone course.

## **ITSY 2401 Firewalls and Network Security**

*Prerequisites: ITSY 1342*

*Credit: 4 (2 lecture, 4 lab)*

Identify elements of firewall design, types of security threats and responses to security attacks. Use Best Practices to design, implement, and monitor a network security plan. Examine security incident postmortem reporting and ongoing network security activities.

## **ITSY 2443 Computer System Forensics**

*Prerequisite: Prerequisite: ITCC 1401; must be placed into college-level reading, writing and math.*

*Credit: 4 (3 lecture, 3 lab)*

In-depth study of system forensics including methodologies used for analysis of computer security breaches. Gather and evaluate evidence to perform postmortem analysis of a security breach.

## **JAPN 1300 Beginning Japanese Conversation I**

*Credit: 3 (3 lecture)*

An introductory Japanese course that emphasizes listening comprehension and speaking skills. Reading and writing may be done as reinforcement to oral communication skills. The course is slower-paced and less comprehensive than Japanese 1411. It is highly recommended for students without previous experience in the Japanese language. This course is not open to students whose first language is Japanese. Generally, does not transfer as foreign language credit but may transfer as elective credit.

## **JAPN 1411 Beginning Japanese I**

*Prerequisites: Must be placed into college - level reading (or take GUST 0342 as a co-requisite) and be placed into college level writing (or take ENGL 0310/0349 as a co-requisite)*

*Credit: 4 (3 lecture, 2 lab)*

Introduction to Japanese language and culture. Development of basic skills in listening comprehension, speaking, reading, writing, and cultural awareness. Course includes vocabulary building, conversation and grammar. Transfers as foreign language credit. Core Curriculum Course.

## **JAPN 1412 Beginning Japanese II**

*Prerequisites: JAPN 1411 or satisfactory score on an advanced placement examination or at least 2 years of high school Japanese within the last two years. Must be placed into college - level reading (or take GUST 0342 as a co-requisite) and be placed into college level writing (or take ENGL 0310/0349 as a co-requisite)*

*Credit: 4 (3 lecture, 2 lab)*

# Course Descriptions

Continuation of JAPN 1411. Further development of listening comprehension, speaking, reading, and writing skills, and cultural awareness. More advanced grammar. Transfers as foreign language credit. Core Curriculum Course.

## **JAPN 2311 Intermediate Japanese I**

*Prerequisites: JAPN 1412 or equivalent; Must be placed into college - level reading (or take GUST 0342 as a co-requisite) and be placed into college level writing (or take ENGL 0310/0349 as a co-requisite)*

*Credit: 3 (3 lecture)*

In-depth study of Japanese grammar. Oral practice based on selected readings on culture and current events. Continuing practice in reading and writing in Hiragana and Katakana, as well as in Kanji (Chinese five characters).

## **JAPN 2312 Intermediate Japanese II**

*Prerequisites: JAPN 2311 or equivalent; Must be placed into college - level reading (or take GUST 0342 as a co-requisite) and be placed into college level writing (or take ENGL 0310/0349 as a co-requisite)*

*Credit: 3 (3 lecture)*

Continuation of JAPN 2311. Extensive practice in conversation and composition with emphasis on reading and writing in Kanji.

## **KORE 1411 Beginning Korean I**

*Prerequisites: Must be placed into GUST 0342 (or higher) in reading and ENGL 0310/0349 (or higher) in writing.*

*Credit: 4 (3 lecture, 2 lab)*

Fundamental skills in listening comprehension, speaking, reading, and writing. Includes basic vocabulary, grammatical structures, and culture. Core Curriculum Course.

## **KORE 1412 Beginning Korean II**

*Prerequisites: Must be placed into GUST 0342 (or higher) in reading and ENGL 0310/0349 (or higher) in writing.*

*Credit: 4 (3 lecture, 2 lab)*

Continuation of fundamental skills in listening comprehension, speaking, reading, and writing. Includes basic vocabulary, grammatical structures, and culture. Core Curriculum Course.

## **KORE 2311 Intermediate Korean I**

*Prerequisites: KORE 1412 or equivalent. Must be placed into college - level reading (or take GUST 0342 as a co-requisite) and be placed into college level writing (or take ENGL 0310/0349 as a co-requisite).*

*Credit: 3 (3 lecture)*

In-depth study of Korean grammar. Oral practice based on selected readings on culture and current events. Continuing practice in reading and writing in Korean.

## **KORE 2312 Intermediate Korean II**

*Prerequisites: KORE 2311 or equivalent. Must be placed into college - level reading (or take GUST 0342 as a co-requisite) and be placed into college level writing (or take ENGL 0310/0349 as a co-requisite)*

*Credit: 3 (3 lecture)*

Continuation of KORE 2311. Extensive practice in conversation and composition with emphasis on reading and writing in Korean.

## **LANG 1311, 1411, 1511 Beginning Foreign Language I**

*Credit: 3, 4, or 5*

This is a state-approved course prefix for posting transfer credit of a foreign language course where there is no home equivalent. Transfer credit with the LANG prefix is utilized in HCC degree plans in the same way as home foreign language courses with the number 1411 is utilized.

## **LANG 1312, 1412, 1512 Beginning Foreign Language II**

*Credit: 3, 4, or 5*

This is a state-approved course prefix for posting transfer credit of a foreign language course where there is no home equivalent. Transfer credit with the LANG prefix is utilized in HCC degree plans in the same way as home foreign language courses with the number 1412 is utilized.

## **LANG 2311, 2411 Intermediate Foreign Language I**

*Credit: 3 or 4*

This is a state-approved course prefix for posting transfer credit of a foreign language course where there is no home equivalent. Transfer credit with the LANG prefix is utilized in HCC degree plans in the same way as home foreign language courses with the number 2311 is utilized.

## **LANG 2312, 2412 Intermediate Foreign Language I**

*Credit: 3 or 4*

This is a state-approved course prefix for posting transfer credit of a foreign language course where there is no home equivalent. Transfer credit with the LANG prefix is utilized in HCC degree plans in the same way as home foreign language courses with the number 2312 is utilized.

## **LBRA 1191 Information Literacy, Student Inquiry and Libraries**

*Credit: 1 (1 lecture)*

An introduction to the nature, relevance, varieties, availability, and uses of information accessible in libraries and elsewhere, with special emphasis on processes of inquiry and self-directed learning in social and academic contexts.

## **LEAD 1370 Workforce Development with Critical Thinking Skills for Student Success**

*Prerequisites:*

*Credit: 3 (3 lecture)*

A study of the development of leadership skills and critical thinking strategies that promote employment readiness, retention, advancement, and promotion for student success.

## **LGLA 1303 Legal Research**

*Prerequisites: Must be placed into GUST 0342 in reading, ENGL 0310 or 0349 in writing and MATH 0308 in math.*

*Credit: 3 (3 lecture)*

This course provides a working knowledge of the fundamentals of effective legal research. Topics include law library techniques, computer assisted legal research, citation forms, briefs, and court opinion discussions.

## **LGLA 1305 Legal Writing**

*Prerequisites: LGLA 1303; Must be placed into GUST 0342 in reading, ENGL 0310 or 0349 in writing and MATH 0308 in math.*

*Credit: 3 (3 lecture)*

This course provides a working knowledge of the fundamentals of effective legal writing. Topics include briefs, legal memoranda, case and fact analysis, citation forms, and legal writing styles.

## **LGLA 1344 Texas Civil Litigation**

*Prerequisites: Must be placed into GUST 0342 in reading, ENGL 0310 or 0349 in writing and MATH 0308 in math.*

*Credit: 3 (3 lecture)*

Fundamental concepts and procedures of Texas civil litigation with emphasis on the paralegal's role.

## **LGLA 1345 Civil Litigation**

*Prerequisites: LGLA 1344*

*Credit: 3 (3 lecture)*

This course presents fundamental concepts and procedures of civil litigation with emphasis on the paralegal's role. Topics include pretrial, trial, and post trial phases of litigation.

## **LGLA 1351 Contracts**

*Prerequisites: Must be placed into GUST 0342 in reading, ENGL 0310 or 0349 in writing and MATH 0308 in math.*

*Credit: 3 (3 lecture)*

This course presents fundamental concepts of contract law with emphasis on the paralegal's role. Topics include formation, performance, and enforcement of contracts under the common law and the Uniform Commercial Code.

## **LGLA 1353 Wills, Trusts and Probate Administration**

*Prerequisites: Must be placed into GUST 0342 in reading, ENGL 0310 or 0349 in writing and MATH 0308 in math.*

*Credit: 3 (3 lecture)*

This course presents fundamental concepts of the law of wills, trusts, and probate administration with emphasis on the paralegal's role.

## **LGLA 1355 Family Law**

*Prerequisites: Must be placed into GUST 0342 in reading, ENGL 0310 or 0349 in writing and MATH 0308 in math.*

# Course Descriptions

*Credit: 3 (3 lecture)*

This course presents fundamental concepts of family law with emphasis on the paralegal role. Topics include formal and informal marriages, divorce, annulment, marital property, and the parent-child relationship.

## **LGLA 1370 Pro Doc for Paralegals**

*Prerequisites: LGLA 1303; Must be placed into GUST 0342 in reading, ENGL 0310 or 0349 in writing and MATH 0308 in math.*

*Credit: 3 (3 lecture)*

The Pro Doc class in Paralegal Technology will include instruction using the automated legal document assembly computer software. The software generates a finished work product for Texas Legal Practitioners. Pro Doc certification is also available for students after passing an exam offered by Pro Doc.

## **LGLA 1380 Cooperative Education-Legal Assistant/Paralegal**

*Prerequisites: LGLA 1303 and LGLA 1344; Must be placed into GUST 0342 in reading, ENGL 0310 or 0349 in writing and MATH 0308 in math.*

*Credit: 3 (1 lecture, 19 lab)*

Career-related activities encountered in the student's area of specialization offered through an individualized agreement among the college, employer, and student. Under the supervision of the college and the employer, the student combines classroom learning with work experience. Includes a lecture component.

## **LGLA 2303 Torts and Personal Injury Law**

*Prerequisites: Must be placed into GUST 0342 in reading, ENGL 0310 or 0349 in writing and MATH 0308 in math.*

*Credit: 3 (3 lecture)*

This course presents fundamental concepts of tort law with emphasis on the paralegal role. Topics include intentional torts, negligence, and strict liability.

## **LGLA 2307 Law Office Management**

*Prerequisites: Must be placed into GUST 0342 in reading, ENGL 0310 or 0349 in writing and MATH 0308 in math.*

*Credit: 3 (3 lecture)*

This course presents the fundamentals of principles and structure of management, administration, and substantive systems in the law office including law practice technology as applied to paralegals.

## **LGLA 2309 Real Property**

*Prerequisites: Must be placed into GUST 0342 in reading, ENGL 0310 or 0349 in writing and MATH 0308 in math.*

*Credit: 3 (3 lecture)*

This course presents fundamental concepts of real property law with emphasis on the paralegal's role. Topics include the nature of real property, rights and duties of ownership, land use, voluntary and involuntary conveyances, and the recording of and searching for real estate documents.

## **LGLA 2311 Business Organizations**

*Prerequisites: Must be placed into GUST 0342 in reading, ENGL 0310 or 0349 in writing and MATH*

*0308 in math.*

*Credit: 3 (3 lecture)*

This course presents basic concepts of business organizations with emphasis on the paralegal's role. Topics include law of agency, sole proprietorships, forms of partnerships, corporations, and other emerging business entities.

## **LGLA 2313 Criminal Law and Procedure**

*Prerequisites: Must be placed into GUST 0342 in reading, ENGL 0310 or 0349 in writing and MATH 0308 in math.*

*Credit: 3 (3 lecture)*

This course introduces the criminal justice system including procedures from arrest to final disposition, principles of federal and state law, and the preparation of pleadings and motions.

## **LGLA 2315 Oil and Gas Law**

*Prerequisites: Must be placed into GUST 0342 in reading, ENGL 0310 or 0349 in writing and MATH 0308 in math.*

*Credit: 3 (3 lecture)*

This course presents fundamental concepts of oil and gas law including the relationship between landowners and oil and gas operators, government regulation, and documents used in the industry.

## **LGLA 2381 Cooperative Education-Legal Assistant/Paralegal**

*Prerequisites: LGLA 1303, LGLA 1305, LGLA 1344, LGLA 1345, or Department Approval; Must be placed into GUST 0342 in reading, ENGL 0310 or 0349 in writing and MATH 0308 in math.*

*Credit: 3 (1 lecture, 19 lab)*

Career-related activities encountered in the student's area of specialization offered through an individualized agreement among the college, employer, and student. Under the supervision of the college and the employer, the student combines classroom learning with work experience. Includes a lecture component.

## **LMGT 1170 Certified Logistics Associate**

*Prerequisites: Must be placed into GUST 0342 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 1 (1 lecture, 1 lab)*

This course satisfies the requirements for a student to take the national Manufacturing Skill Standards Council (MSSC) test for certification as a Certified Logistics Associate. Major topics include understanding the life cycle of global chain logistics, the logistics environment and familiarization with different material handling equipment, introduction to safety principles and safe equipment handling, quality control principles, workplace communications, teamwork and problem solving.

## **LMGT 1270 Equipment Operation**

*Prerequisites: Must be placed into GUST 0342 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 2 (1 lecture, 2 lab)*

This course provides students with skills to demonstrate proficiency in the use of equipment

used in material handling. Topics include forklift truck safety principles and driving, lifting and delivery proficiency with the forklift.

## **LMGT 1271 Certified Logistics Technician Certification**

*Prerequisites: Must be placed into GUST 0342 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 2 (2 lecture)*

Students who have successfully completed the first level logistics associate course are prepared for the second level certification. The focus of the course is on product receiving, storage order processing, packaging and shipment, inventory control, evaluation of transportation modes and dispatch and tracking. This second course is a second level certification from the Manufacturing Skills Standards Council, (MSSC). These are industry led nationally validated skills standards. The assessment for certification will be at the conclusion of the course.

## **LMGT 1319 Introduction to Business Logistics**

*Prerequisites: Must be placed into GUST 0342 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (3 lecture)*

A systems approach to managing activities associated with traffic, transportation, inventory management and control, warehousing, packaging, order processing, and materials handling.

## **LMGT 1321 Introduction to Materials Handling**

*Prerequisites: Must be placed into GUST 0342 in reading, college-level writing and MATH 0312 in math.*

*Credit: 3 (3 lecture)*

Introduces the concepts and principles of materials management to include inventory control and forecasting activities.

## **LMGT 1323 Domestic and International Transportation Management**

*Prerequisites: Must be placed into GUST 0342 in reading, college-level writing and MATH 0312 in math.*

*Credit: 3 (3 lecture)*

An overview of the principles and practices of transportation and its role in the distribution process. Emphasis on the physical transportation systems involved in the United States as well as on global distribution systems. Topics include carrier responsibilities and services, freight classifications, rates, tariffs, and public policy and regulations. Also includes logistical geography and the development of skills to solve logistical transportation problems and issues.

## **LMGT 1325 Warehouse and Distribution**

# Course Descriptions

## **Center Management**

*Prerequisites: Must be placed into GUST 0342 in reading, college-level writing and MATH 0312 in math.*

*Credit: 3 (3 lecture)*

Emphasis on physical distribution and total supply chain management. Includes warehouse operations management, hardware and software operations, bar codes, organizational effectiveness, just-in-time manufacturing, continuous replenishment, and third party.

## **LMGT 1345 Economics of Transportation and Distribution**

*Prerequisites: Must be placed into GUST 0342 in reading, college-level writing and MATH 0312 in math.*

*Credit: 3 (3 lecture)*

A study of the basic economic principles and concepts applicable to transportation and distribution.

## **LMGT 1349 Materials Requirement Planning**

*Prerequisites: Must be placed into GUST 0342 in reading, college-level writing and MATH 0312 in math.*

*Credit: 3 (3 lecture)*

A study of materials requirement planning that includes net change versus regenerative systems, lot sizing, and the time sharing of dependent demand.

## **LMGT 1370 Equipment Operation**

*Prerequisites: Must be placed into GUST 0342 in reading, college-level writing and MATH 0312 in math.*

*Credit: 3 (3 lecture)*

*This program provides students with skills to demonstrate proficiency in the use of equipment used in material handling. Topics include forklift truck safety principles and driving, lifting and delivery proficiency with the forklift.*

## **LMGT 2334 Principles of Traffic Management**

*Prerequisites: Must be placed into GUST 0342 in reading, college-level writing and MATH 0312 in math.*

*Credit: 3 (3 lecture)*

A study of the role and functions of a transportation traffic manager within a commercial or public enterprise. Includes training in rate negotiation, carrier and mode selection, carrier service evaluation, quality control, traffic pattern analysis, documentation for domestic and international shipments, claims, hazardous materials movement, and the state, federal, and international environments of transportation.

## **LMGT 2288 Internship: Logistics and Materials Mgmt**

*Prerequisites: Must be placed into GUST 0342 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 2 (12 lab)*

A work-based learning experience that enables the student to apply specialized occupational theory, skills and concepts. A learning plan is developed by the college and the employer

## **LMGT 2389 Internship: Logistics and Materials Mgmt**

*Prerequisites: Must be placed into GUST 0342 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (1 lecture, 17 lab)*

A work-based learning experience that enables the student to apply specialized occupational theory, skills and concepts. A learning plan is developed by the college and the employer as it applies to Maritime Transportation Logistics.

## **LOTT 1401 Introduction to Fiber Optics**

*Prerequisites: Must be placed into GUST 0342 in reading, ENGL 0310 or 0349 in writing and MATH 0312 in math.*

*Credit: 4 (3 lecture, 3 lab)*

An introductory course in fiber optics and its application including advantages of fiber, light transmission in fiber, types of fiber, sources, detectors, and connectors.

## **MART 1370 Introduction to Maritime Shipping**

*Prerequisites: Must be placed into GUST 0342 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (3 lecture)*

This program will introduce the students to the unique role of the Maritime industry in logistics. Topics include port operations, modes of cargo handling and stowage, general shipping, ship construction, types of transport ships, tankers, shipboard nomenclature and the mission of merchant ships.

## **MATH 0101 Developmental Math**

*Credit: 1 (1 lecture)*

An individualized curriculum intended for students who have completed the college developmental math sequence through MATH 0312, but have yet to demonstrate achievement of the appropriate standard or department chair. Counselor's approval required.

## **MATH 0102 Basic Mathematics**

*Prerequisites: Appropriate assessment score or Counselor's or department chair approval required.*

*Credit: 1 (1 lecture)*

Designed for students who have tested below MATH 0306 and require a self-paced presentation of the basic operations in whole numbers.

## **MATH 0106 Basic Mathematics**

*Prerequisite:*

*Credit: 1 (1 lecture)*

Topics include fundamental operations fractions and decimals, percents, ratios, and proportions. All students who enroll in this course are expected to complete MATH 0409 in the following consecutive semester before attempting either MATH 0312 or MATH 1332. A comprehensive Departmental Final Exam will be given in this course.

## **MATH 0108 Fundamentals of Math II Bridge**

*Prerequisite:*

*Credit: 1 (1 lecture)*

Intensive help and preparatory course for those who have not successfully passed MATH 0308.

## **MATH 0112 Intermediate Algebra Bridge**

*Credit: 1 (1 lecture)*

Intensive help and preparatory course for those who have not successfully passed MATH 0312.

## **MATH 0306 Fundamentals of Mathematics I**

*Prerequisites: Must be placed into MATH 0306 (or higher).*

*Credit: 3 (3 lecture)*

Topics include fundamental operations in whole numbers, fractions and decimals, percents, ratios, and proportion, descriptive statistics, and an introduction to the real numbers. All students who enroll in this course are expected to complete MATH 0308 and MATH 0312 in the following consecutive semesters before attempting their first college-level mathematics course (usually MATH 1314 College Algebra). A departmental final examination must be passed in order to pass the course.

## **MATH 0308 Fundamentals of Mathematics II**

*Prerequisite: Must be placed into MATH 0308 (or higher) or completion of MATH 0306.*

*Credit: 3 (3 lecture)*

Topics include real numbers, basic geometry, polynomials, factoring, linear equations and inequalities, quadratic equations, and rational expressions. A departmental final examination must be passed in order to pass the course.

## **MATH 0311 Developing Mathematical Thinking**

*Prerequisites: Must place into Math 0311/0312 or higher or pass Math 0308 with a grade of C or higher.*

*Credit: 3 (3 lecture, 1 lab)*

The first in a two-term course, to be paired with a college-level MATH 1442 STAT II: Statistics for non-STEM majors in the second term. The course prepares students for the mathematical and statistical reasoning required in order to successfully complete the college-level statistics course. Topics include histograms, measures of central tendency and variation, functions and their graphs, rational exponents, various algebraic expressions, relationships between two variables, scatter diagrams, correlations and regression. A departmental final examination must be passed with 60% or better in order to pass this course.

## **MATH 0312 Intermediate Algebra**

*Prerequisite: Must be placed into MATH 0312 (or higher) or completion of MATH 0308.*

*Credit: 3 (3 lecture, 1 lab)*

Topics include factoring techniques, radicals, algebraic fractions, complex numbers, graphing linear equations and inequalities, quadratic equations, system of equations, graphing quadratic equations, and an introduction to functions. Emphasis is placed on algebraic techniques in order to successfully complete MATH 1314 College Algebra. A departmental final examination must be passed in order to pass this course.

# Course Descriptions

## **MATH 0409 Foundations of Mathematics**

*Prerequisite: MATH 0306 or equivalent test score.*

*Credit: 4 (4 lecture)*

Topics include real numbers, proportions, descriptive statistics, basic geometry, polynomials, factoring, linear equations, inequalities, linear models, percentage models, order of operations, set operations, and an introduction to other models which may include exponential, quadratic and/or rational models. quadratic equations and rational expressions. A departmental final examination must be passed with a score of 60% or more in order to pass the course.

## **MATH 1314 College Algebra**

*Prerequisite: Must be placed into college-level mathematics or completion of MATH 0312.*

*Credit: 3 (3 lecture)*

Topics include quadratics, polynomial, rational, logarithmic and exponential functions, system of equations, progression, sequences and series, matrices and determinants. A departmental final examination will be given in this course. Core Curriculum Course.

## **MATH 1316 Plane Trigonometry**

*Prerequisites: MATH 1314; Must be placed into college-level mathematics.*

*Credit: 3 (3 lecture)*

Topics include solutions of triangles, Euler identity, graphing of trigonometric and inverse trigonometric functions, identities, trigonometric equations and an introduction to vector analysis. Core Curriculum Course.

## **MATH 1324 Mathematics for Business & Social Sciences**

*Prerequisites: MATH 1314; Must be placed into college-level mathematics.*

*Credit: 3 (3 lecture)*

A survey of finite mathematics and its application to problems of business and the natural and social sciences. Topics include set theory, probability, an introduction to matrices, linear programming, and an introduction to statistics. Core Curriculum Course.

## **MATH 1325 Calculus for Business & Social Sciences**

*Prerequisites: MATH 1314; Must be placed into college-level mathematics.*

*Credit: 3 (3 lecture)*

A survey of differential and integral calculus including the study of functions and graphs from a calculus viewpoint as applied to problems in business and the natural and social sciences. Core Curriculum Course.

## **MATH 1332 Contemporary Mathematics**

*Prerequisite: Must be placed into college-level mathematics or completion of MATH 0409.*

*Credit: 3 (3 lecture)*

Mathematics for Liberal Arts is a course designed

for liberal and fine arts, non-mathematics, non-science, and non-business majors. The course provides students with an appreciation of the history, art, and beauty of mathematics in the world around us. Topics include an examination of sets with applications, probability, and statistics, financial management, mathematical modeling, and fundamentals of geometry and its application. Core Curriculum Course.

## **MATH 1333 Math for Technical Arts**

*Prerequisite: passing Math 0409 with a grade of C or higher or placed into college level math*

*Credits 3 (3 lecture)*

Course description Topics may include introductory treatments of sets, logic, number systems, number theory, relations, functions, probability and statistics. Appropriate applications are included.

## **MATH 1342 Elementary Statistical Methods**

*Prerequisite: MATH 1314; Must be placed into college-level mathematics.*

*Credit: 3 (3 lecture)*

Topics include histograms, probability, binomial and normal distributions and their applications, correlation and prediction, and tests of statistical hypotheses. Core Curriculum Course. Students who have completed MATH 1342 successfully should NOT take MATH 1442. Students will Not receive credit for both MATH 1342 and MATH 1442. Core Curriculum Course

## **MATH 1350 Mathematics for Elementary Teachers I**

*Prerequisite: MATH 1314 or equivalent; Must be placed into college-level mathematics.*

*Credit: 3 (3 lecture)*

Concepts of sets, functions, numeration systems, number theory, and properties of the natural numbers, integers, rational, and real numbers systems with an emphasis on problem-solving and critical thinking. Field of Study Course. Core Curriculum Course.

## **MATH 1351 Mathematics for Elementary Teachers II**

*Prerequisite: MATH 1314 or equivalent; Must be placed into college-level mathematics.*

*Credit: 3 (3 lecture)*

Concepts of geometry, probability, and statistics, as well as applications of the algebraic properties of real numbers to concepts of measurement with an emphasis on problem solving and critical thinking. Field of Study Course. Core Curriculum Course.

## **MATH 1442 Stat II: Statistics for Non-STEM Majors**

*Prerequisite: Must pass MATH 0311 with a grade of C or higher.*

*Credit: 4 (4 lecture)*

Topics include probability, binomial and normal distributions, and their applications, random sampling, statistical inference, estimation, confidence intervals, and tests of statistical hypotheses, and analysis of variance. Students

who have completed MATH 1342 successfully should NOT take MATH 1442. Students will Not receive credit for both MATH 1342 and MATH 1442.

## **MATH 2305 Discrete Mathematics**

*Prerequisite: MATH 2318*

*Credit: 3 (3 lecture)*

Topics selected from logic, set theory, combinatorics and graph theory. Core Curriculum Course.

## **MATH 2318 Linear Algebra**

*Prerequisite: MATH 2413*

*Credit: 3 (3 lecture)*

Topics include systems of linear equations, vector spaces, matrices, linear mappings, and determinants. Core Curriculum Course.

## **MATH 2320 Differential Equations**

*Prerequisite: MATH 2414*

*Credit: 3 (3 lecture)*

Topics include initial value problems for first order and linear second order equations, Picard iteration, series solutions, boundary value problems, Laplace transforms and numerical methods. Core Curriculum Course.

## **MATH 2412 Pre-Calculus Math**

*Prerequisite: MATH 1314 and MATH 1316 or Department Approval*

*Credit: 4 (4 lecture)*

Topics include elementary theory of functions and equations, analytic geometry, vectors, introductory logic, mathematical induction, sequences and finite series. Core Curriculum Course.

## **MATH 2413 Calculus I**

*Prerequisite: MATH 2412 or consent of the Department Chair*

*Credit: 4 (4 lecture)*

An integrated study of differential calculus with analytic geometry including the study of functions, limits, continuity, differentiation, and an introduction to integration. Core Curriculum Course.

## **MATH 2414 Calculus II**

*Prerequisite: MATH 2413*

*Credit: 4 (4 lecture)*

Integral calculus including discussions of transcendental functions, applications of integration, techniques and improper integrals, infinite series, Taylor series, plane curves, and polar coordinates. Core Curriculum Course.

## **MATH 2415 Calculus III**

*Prerequisite: MATH 2414*

*Credit: 4 (4 lecture)*

A survey of advanced topics in calculus including vectors and vector-valued functions, partial differentiation, Lagrange multipliers, multiple integrals, Jacobians, divergence and Stoke's theorems. Core Curriculum Course.

## **MCHN 1302 Print Reading for Machine**

# Course Descriptions

## Trades

*Prerequisites:* Must be placed into GUST 0339 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.

*Prerequisites/Corequisites:* TECM 1301, MCHN 1338

*Credit:* 3 (3 lecture)

A study of blueprints for machining trades with emphasis on machine drawings. Use of sketching techniques to create pictorial and multiple-view drawings.

## MCHN 1305 Metals and Heat Treatment

*Prerequisites:* TECM 1301, MCHN 1302;  
*Prerequisites:* Must be placed into GUST 0339 in reading, ENGL 0300 or 0347 in writing and MATH 0308 in math.

*Credit:* 3 (2 lecture, 2 lab)

Designed for students going into the workforce as manual machinists, tool designers, or heat treat operators. Topics include properties of metals and heat treatment of metals.

## MCHN 1308 Basic Lathe

*Prerequisites/Corequisites:* TECM 1301, MCHN 1302, ENTC 1347; *Prerequisites:* Must be placed into GUST 0339 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.

*Credit:* 3 (1 lecture, 7 lab)

An introduction to the common types of lathes. Emphasis on basic parts, nomenclature, lathe operations, safety, machine mathematics, blueprint reading, and theory.

## MCHN 1313 Basic Milling Operations

*Prerequisites/Corequisites:* TECM 1301, MCHN 1302, MCHN 1338, ENTC 1347; *Prerequisites:* Must be placed into GUST 0339 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.

*Credit:* 3 (1 lecture, 7 lab)

An introduction to the common types of milling machines, part nomenclature, basic machine operations and procedures, safety, machine mathematics, blueprint reading, and theory.

## MCHN 1320 Precision Tools and Measurements

*Prerequisites:* MCHN 1302, TECM 1301; *Must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0308 in math.*

*Credit:* 3 (3 lecture, 1 lab)

An introduction to the modern science of dimensional metrology. Emphasis on the identification, selection, and application of various types of precision instruments associated with the machining trade. Practice of basic layout and piece part measurements while using standard measuring tools.

## MCHN 1338 Basic Machine Shop I

*Prerequisites/Corequisites:* TECM 1301, MCHN 1302, MCHN 1320, ENTC 1347

*Credit:* 3 (2 lecture, 4 lab)

An introductory course that assists the student in understanding the machinist occupation in industry. The student begins by using basic machine tools such as the lathe, milling machine, drill press, power saw, and bench grinder. Machine terminology, theory, math, part layout, and bench work using common measuring tools is included. Emphasis is placed on shop safety, housekeeping, and preventative maintenance.

## MCHN 1343 Machine Shop Mathematics

*Prerequisites:*

*Credit:* 3 (3 lecture)

Designed to prepare the student with technical, applied mathematics that will be necessary in future machine shop-related courses.

## MCHN 1370 Lean Manufacturing - Machinist

*Prerequisites:* TECM 1301, MCHN 1302, ENTC 1347; *must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0308 in math.*

*Credit:* 3 (2 lecture, 3 lab)

Study of principles of lean manufacturing for machinists; including a systematic approach to reducing costs and lead-time.

## MCHN 2303 Fundamentals of Computer Numerical Controls (CNC) Machine Controls

*Prerequisites:* TECM 1301, MCHN 2433, MCHN 2437; *must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0308 in math.*

*Credit:* 3 (2 lecture, 3 lab)

An introduction to G and M codes (RS274-D) necessary to program Computer Numerical Controlled (CNC) machines.

## MCHN 2331 Operation of CNC Turning Centers

*Prerequisites/Corequisites:* ITSC 1309

*Prerequisites:* MCHN 1302, TECM 1301; *must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0308 in math.*

*Credit:* 3 (2 lecture, 3 lab)

Continuation of Fundamentals of CNC Machine Controls with an emphasis on turning centers.

## MCHN 2333 Advanced Lathe Operations

*Prerequisites:* MCHN 1308, TECM 1301; *must be placed into GUST 0341 in reading, ENGL 0300 or*

*0347 in writing and MATH 0308 in math.*

*Credit:* 3 (1 lecture, 7 lab)

A study of advanced lathe operations. Identify and use of special cutting tools and support tooling, such as form tools, carbide inserts, taper attachments, follower and steady rest. Close tolerance machining required.

## MCHN 2337 Advanced Milling Operations

*Prerequisites:* MCHN 1313, TECM 1301; *must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0308 in math.*

*Credit:* 3 (1 lecture, 7 lab)

An advanced study of milling machine operations. Identification and/or use of milling cutters and support tooling.

## MCHN 2341 Advanced Machining 1

*Prerequisites/Corequisites:* MCHN 2333, MCHN 2337; *Must be placed into GUST 0339 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit:* 3 (2 lecture, 4 lab)

A study of advanced lathe and milling operations. Emphasis on advanced cutting operations of the lathe and milling machines, including the use of special tooling, bench assembly, and materials identification.

## MCHN 2447 Specialized Tools and Fixtures

*Prerequisites:* TECM 1301, MCHN 1302, MCHN 1320; *Must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0308 in math.*

*Credit:* 4 (3 lecture, 2 lab)

An advanced course in the designing and building of special tools, such as jigs, fixtures, punch press dies, and molds. Machining and assembling of a production tool using conventional machine shop equipment. Application of production tool theory, care, and maintenance.

## MDCA 1165 Practicum (or Field Experience) Medical/Clinical Assistant

*Prerequisites:* Department Approval; *must be placed into college-level reading, ENGL 0310 or 0349 in writing and MATH 0308 in math.*

*Credit:* 1 (7 lab)

Practical, general workplace training supported by an individualized learning plan developed by the employer, college, and student.

## MDCA 1205 Medical Law and Ethics

*Prerequisites:* *Must be placed into college-level reading, ENGL 0310 or 0349 in writing and MATH 0308 in math.*

*Credit:* 2 (2 lecture)

Instruction in principles, procedures, and regulations involving legal and ethical relationships among physicians, patients, and medical assistants in ambulatory care settings.

## MDCA 1213 Medical Terminology

*Prerequisites:* *Must be placed into college-level reading, ENGL 0310 or 0349 in writing and MATH 0308 in math.*

# Course Descriptions

*Credit: 2 (2 lecture)*

A study and practical application of a medical vocabulary system. Includes structure, recognition, analysis, definition, spelling, pronunciation, and combination of medical terms from prefixes, suffixes, roots, and combining forms.

## **MDCA 1254 Medical Assisting Credentialing Exam Review**

*Prerequisites: Must be placed into college-level reading, ENGL 0310 or 0349 in writing and MATH 0308 in math.*

*Corequisite: MDCA 1360 or Department Approval*

*Credit: 2 (1 lecture, 2 lab)*

A preparation for one of the National Commission for Certifying Agencies (NCCA) recognized credentialing exams.

## **MDCA 1264 Practicum - Medical/Clinical Assistant**

*Prerequisites: Department Approval; must be placed into college-level reading, ENGL 0310 or 0349 in writing and MATH 0308 in math.*

*Credit: 2 (15 hours externship per week)*

A health-related work-based external learning experience that enables the student to apply specialized occupational theory, skills and concepts relating to specific occupational outcomes. Practical workplace training is supported by an individualized learning plan developed by the employee, college and student. Direct supervision is provided by the clinical (workplace) professional.

## **MDCA 1291 Special Topics in Medical Assistant: Clinical Protocols in Healthcare**

*Prerequisites: Department Approval; must be placed into college-level reading, ENGL 0310 or 0349 in writing and MATH 0308 in math.*

*Credit: 2 (2 lecture)*

Topics in the course address clinical protocols for healthcare management for families in acute illness when rendering advice and coordination of care in patient-center mode home/ambulatory care settings.

## **MDCA 1310 Medical Assistant Interpersonal and Communication Skills**

*Prerequisites: Department Approval; must be placed into college-level reading, ENGL 0310 or 0349 in writing and MATH 0308 in math.*

*Credit: 3 (3 lecture)*

Emphasis on the application of basic psychological principles and the study of behavior as they apply to special populations. Topics include procedures for self-understanding and social adaptability in interpersonal communication with patients and co-workers in an ambulatory care setting.

## **MDCA 1313 Medical Terminology**

*Prerequisites: Must be placed into GUST 0342 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (3 lecture)*

A study and practical application of a medical vocabulary system. Includes structure, recognition,

analysis, definition, spelling, pronunciation, and combination of medical terms from prefixes, suffixes, roots, and combining forms.

## **MDCA 1321 Administrative Procedures**

*Prerequisites: Must be placed into college-level reading, ENGL 0310 or 0349 in writing and MATH 0308 in math.*

*Credit: 3 (2 lecture, 3 lab)*

Medical office procedures including appointment scheduling, medical records creation and maintenance, interpersonal communications, bookkeeping tasks, coding, billing, collecting, third party reimbursement, credit arrangements, and computer use in the medical office.

## **MDCA 1343 Medical Insurance**

*Prerequisites: Must be placed into college-level reading, ENGL 0310 or 0349 in writing and MATH 0308 in math.*

*Credit: 3 (2 lecture, 2 lab)*

Emphasizes medical office coding procedures for payment and reimbursement by patient or third party payers for ambulatory care settings.

## **MDCA 1352 Medical Assistant Laboratory Procedures**

*Prerequisites: Must be placed into college-level reading, ENGL 0310 or 0349 in writing and MATH 0308 in math.*

*Credit: 3 (2 lecture, 4 lab)*

Application of governmental health care guidelines. Includes specimen collection and handling, quality assurance, and quality control in performance of Clinical Laboratory Improvement Amendments (CLIA)-waived laboratory testing.

## **MDCA 1372 Electronic Medical Record Documentation for Scribes**

*Prerequisites: Must be placed into college-level reading, ENGL 0310 or 0349 in writing and MATH 0308 in math.*

*Credit: 3 (2 lecture, 3 lab)*

This course addresses the basics of history and physical documentation in the electronic medical record. Provides practical application utilizing dictation and/or activities developed for the scribe industry in an ambulatory care setting. Topics include fundamentals of the Electronic Medical Record related to billing and coding. The course prepares students for hands-on skills of medical scribing.

## **MDCA 1391 Special Topics in Medical Assisting EMR Documentation for Scribes**

*Prerequisites: Must be placed into college-level reading, ENGL 0310 or 0349 in writing and MATH 0308 in math.*

*Credit: 3 (2 lecture, 3 lab)*

This course addresses the basics of history and physical documentation in the electronic medical record. Provides practical application utilizing dictation and/or activities developed for the scribe industry in an ambulatory care setting. Topics include fundamentals of the EMR related to billing and coding. The course prepares students for

hands-on skills of medical scribing.

## **MDCA 1409 Anatomy and Physiology for Medical Assistants**

*Prerequisites: Must be placed into college-level reading, ENGL 0310 or 0349 in writing and MATH 0308 in math.*

*Credit: 4 (4 lecture)*

Emphasis on normal human anatomy and physiology of cells, tissues, organs, and systems with overview of common pathophysiology.

## **MDCA 1417 Procedures in a Clinical Setting**

*Prerequisites: Must be placed into college-level reading, ENGL 0310 or 0349 in writing and MATH 0308 in math.*

*Credit: 4 (3 lecture, 3 lab)*

Emphasis on patient-centered assessment, examination, and treatment as directed by physician. Includes vital signs, collection and documentation of patient information, asepsis, office clinical procedures, and other treatments as appropriate for the ambulatory care settings.

## **MDCA 1448 Pharmacology and Administration of Medications**

*Prerequisites: Must be placed into college-level reading, ENGL 0310 or 0349 in writing and MATH 0308 in math.*

*Credit: 4 (2 lecture, 4 lab)*

Instruction in concepts and application of pharmacological principles. Focuses on drug classifications, principles and procedures of medication administration, mathematical systems and conversions, calculation of drug problems, and medico-legal responsibilities of the medical assistant.

## **MDCA 1471 Ambulatory Care and Emergency Procedures**

*Prerequisite: Department Approval; Must be placed into college-level reading, ENGL 0310 or 0349 in writing and MATH 0308 in math.*

*Credit: 4 (3 lecture, 2 lab)*

An introduction to Basic Health Profession skills including, CPR, OSHA safety guidelines, universal health precautions; emergency preparedness and response to basic medical emergencies; perform client monitoring skills; and document health care.

## **METL 1166 Practicum (or Field Experience) - Metallurgical Technology/Technician**

*Prerequisites:*

*Credit: 1 (# lecture, # lab)*

Practical, general workplace training supported by an individualized learning plan developed by the employer, college, and student.

## **METL 1167 Practicum (or Field Experience) - Metallurgical Technology/Technician**

*Prerequisites:*

*Credit: 3 (# lecture, # lab)*

Practical, general workplace training supported by an individualized learning plan developed by the employer, college, and student.

## **METL 1191 Special Topics in Metallurgical**

# Course Descriptions

## **Technology/Technician**

*Prerequisites:*

*Credit: 1 (# lecture, # lab)*

Topics address recently identified current events, skills, knowledge, and/or attitudes and behaviors pertinent to the technology or occupation and relevant to the professional development of the student. This course was designed to be repeated multiple times to improve student proficiency.

## **METL 1266 Practicum (or Field Experience) - Metallurgical Technology/Technician**

*Prerequisites:*

*Credit: 2 (# lecture, # lab)*

Practical, general workplace training supported by an individualized learning plan developed by the employer, college, and student.

## **METL 1267 Practicum (or Field Experience) - Metallurgical Technology/Technician**

*Prerequisites:*

*Credit: 2 (# lecture, # lab)*

Practical, general workplace training supported by an individualized learning plan developed by the employer, college, and student.

## **METL 1291 Special Topics in Metallurgical Technology/Technician**

*Prerequisites:*

*Credit: 2 (# lecture, # lab)*

Topics address recently identified current events, skills, knowledge, and/or attitudes and behaviors pertinent to the technology or occupation and relevant to the professional development of the student. This course was designed to be repeated multiple times to improve student proficiency.

## **METL 1301 Introduction to Metallurgy**

*Prerequisites: Must be placed into GUST 0342 in reading, ENGL1310 in writing and MATH 0312 in math.*

*Credit: 3 (3 lecture)*

A study of refining mechanical and physical properties of ferrous and nonferrous materials including: the theory of alloys, heat treatment, and testing.

## **METL 1313 Introduction to Corrosion**

*Prerequisites: Must be placed into GUST 0342 in reading, ENGL1310 in writing and MATH 0312 in math.*

*Credit: 3 (3 lecture)*

An introduction to internal, external, and atmospheric corrosion including terminology, causes of common problems in industry, and generic remedies such as cathodic protection, protective coatings, material selection, and chemical treatments.

## **METL 1366 Practicum (or Field**

## **Experience) - Metallurgical Technology/Technician**

*Prerequisites:*

*Credit: 3 (# lecture, # lab)*

Practical, general workplace training supported by an individualized learning plan developed by the employer, college, and student.

## **METL 1367 Practicum (or Field Experience) - Metallurgical Technology/Technician**

*Prerequisites:*

*Credit: 3 (# lecture, # lab)*

Practical, general workplace training supported by an individualized learning plan developed by the employer, college, and student.

## **METL 1391 Special Topics in Metallurgical Technology/Technician**

*Prerequisites:*

*Credit: 3 (# lecture, # lab)*

Topics address recently identified current events, skills, knowledge, and/or attitudes and behaviors pertinent to the technology or occupation and relevant to the professional development of the student. This course was designed to be repeated multiple times to improve student proficiency.

## **METL 1466 Practicum (or Field Experience) - Metallurgical Technology/Technician**

*Prerequisites:*

*Credit: 4 (# lecture, # lab)*

Practical, general workplace training supported by an individualized learning plan developed by the employer, college, and student.

## **METL 1467 Practicum (or Field Experience) - Metallurgical Technology/Technician**

*Prerequisites:*

*Credit: 4 (# lecture, # lab)*

Practical, general workplace training supported by an individualized learning plan developed by the employer, college, and student.

## **METL 1491 Special Topics in Metallurgical Technology/Technician**

*Prerequisites:*

*Credit: 4 (# lecture, # lab)*

Topics address recently identified current events, skills, knowledge, and/or attitudes and behaviors pertinent to the technology or occupation and relevant to the professional development of the student. This course was designed to be repeated multiple times to improve student proficiency.

## **METL 1566 Practicum (or Field Experience) - Metallurgical Technology/Technician**

*Prerequisites:*

*Credit: 5 (# lecture, # lab)*

Practical, general workplace training supported by an individualized learning plan developed by the employer, college, and student.

## **METL 1567 Practicum (or Field Experience) - Metallurgical Technology/Technician**

*Prerequisites:*

*Credit: 5 (# lecture, # lab)*

Practical, general workplace training supported by an individualized learning plan developed by the employer, college, and student.

## **METL 2166 Practicum (or Field Experience) - Metallurgical Technology/Technician**

*Prerequisites:*

*Credit: 1 (# lecture, # lab)*

Practical, general workplace training supported by an individualized learning plan developed by the employer, college, and student.

## **METL 2168 Practicum (or Field Experience) - Metallurgical Technology/Technician**

*Prerequisites:*

*Credit: 1 (# lecture, # lab)*

Practical, general workplace training supported by an individualized learning plan developed by the employer, college, and student.

## **METL 2266 Practicum (or Field Experience) - Metallurgical Technology/Technician**

*Prerequisites:*

*Credit: 2 (# lecture, # lab)*

Practical, general workplace training supported by an individualized learning plan developed by the employer, college, and student.

## **METL 2268 Practicum (or Field Experience) - Metallurgical Technology/Technician**

*Prerequisites:*

*Credit: 2 (# lecture, # lab)*

Practical, general workplace training supported by an individualized learning plan developed by the employer, college, and student.

## **METL 2301 Internal Corrosion Control**

*Prerequisites:*

*Credit: 3 (3 lecture)*

An in-depth study of internal corrosion found in oil and gas wells, pipelines, refineries, process plants, and other industrial installations including the common forms of nondestructive testing, internal corrosion monitoring techniques, and chemical corrosion treatment methods.

## **METL 2305 Atmospheric Corrosion Control**

*Prerequisites: Must be placed into GUST 0342 in reading, ENGL1310 in writing and MATH 0312 in math.*

*Credit: 3 (3 lecture)*

An in-depth study of atmospheric corrosion control by coatings which includes surface preparation, coating selection, coating application, inspection,

# Course Descriptions

and failure analysis.

## **METL 2341 Cathodic Protection**

*Prerequisites:*

*Credit: 3 (3 lecture)*

An in-depth study of corrosion control of buried or submerged metallic structures utilizing both impressed and galvanic cathodic protection systems. Emphasis on regulatory compliance for pipelines and underground storage tanks.

## **METL 2366 Practicum (or Field Experience) - Metallurgical Technology/Technician**

*Prerequisites:*

*Credit: 3 (# lecture, # lab)*

Practical, general workplace training supported by an individualized learning plan developed by the employer, college, and student.

## **METL 2368 Practicum (or Field Experience) - Metallurgical Technology/Technician**

*Prerequisites:*

*Credit: 3 (# lecture, # lab)*

Practical, general workplace training supported by an individualized learning plan developed by the employer, college, and student.

## **METL 2441 Cathodic Protection**

*Prerequisites: Must be placed into GUST 0342 in reading, ENGL1310 in writing and MATH 0312 in math.*

*Credit: 4 (3 lecture, 3 lab)*

An in-depth study of corrosion control of buried or submerged metallic structures utilizing both impressed and galvanic cathodic protection systems. Emphasis on regulatory compliance for pipelines and underground storage tanks.

## **METL 2466 Practicum (or Field Experience) - Metallurgical Technology/Technician**

*Prerequisites:*

*Credit: 4 (# lecture, # lab)*

Practical, general workplace training supported by an individualized learning plan developed by the employer, college, and student.

## **METL 2468 Practicum (or Field Experience) - Metallurgical Technology/Technician**

*Prerequisites:*

*Credit: 4 (# lecture, # lab)*

Practical, general workplace training supported by an individualized learning plan developed by the employer, college, and student.

## **METL 2566 Practicum (or Field Experience) - Metallurgical Technology/Technician**

*Prerequisites:*

*Credit: 5 (# lecture, # lab)*

Practical, general workplace training supported by an individualized learning plan developed by the employer, college, and student.

## **METL 2568 Practicum (or Field Experience) - Metallurgical Technology/**

## **Technician**

*Prerequisites:*

*Credit: 5 (# lecture, # lab)*

Practical, general workplace training supported by an individualized learning plan developed by the employer, college, and student.

## **MLAB 1101 Introduction to Clinical Laboratory Science**

*Prerequisites: Must be placed into college-level reading, writing and math.*

*Credit: 1 (1 lecture, 1 lab)*

Introduction to medical laboratory science, structure, equipment, and philosophy.

## **MLAB 1166 Practicum I (or Field Experience)- Clinical/Medical Laboratory Technician (Hematology)**

*Prerequisites: Department Approval; must be placed into college-level reading, writing and math.*

*Credit: 1 (10 lab)*

Practical, general workplace training supported by an individualized learning plan developed by the employer, college, and student.

## **MLAB 1167 Practicum II (or Field Experience)-Clinical/Medical Laboratory Technician (Blood Banking)**

*Prerequisites: Department Approval; must be placed into college-level reading, writing and math.*

*Credit: 1 (10 lab)*

Practical, general workplace training supported by an individualized learning plan developed by the employer, college, and student.

## **MLAB 1211 Urinalysis and Body Fluids**

*Prerequisites: Must be placed into college-level reading, writing and math.*

*Credit: 2 (1 lecture, 4 lab)*

An introduction to urinalysis and body fluid analysis, including the anatomy and physiology of the kidney, and physical, chemical and microscopic examination of urine, cerebrospinal fluid, and other body fluids.

## **MLAB 1227 Coagulation**

*Prerequisites: Must be placed into college-level reading, writing and math.*

*Credit: 2 (1 lecture, 4 lab)*

A course in coagulation theory, procedures, and practical applications. Includes laboratory exercises which rely on commonly performed manual and semiautomatic methods.

## **MLAB 1231 Parasitology/Mycology**

*Prerequisites: Must be placed into college-level reading, writing and math.*

*Credit: 2 (1 lecture, 4 lab)*

A study of the taxonomy, morphology, and pathogenesis of human parasites and fungi, including the practical application of laboratory procedures.

## **MLAB 1235 Immunology/Serology**

*Prerequisites: Must be placed into college-level reading, writing and math.*

*Credit: 2 (1 lecture, 4 lab)*

An introduction to the theory and application of basic immunology, including the immune response, principles of antigen-antibody reactions, and the principles of serological procedures.

## **MLAB 1266 Practicum III (or Field Experience)-Clinical/Medical Laboratory Technician (Chemistry, Urinalysis/Body Fluids)**

*Prerequisites: Department Approval; must be placed into college-level reading, writing and math.*

*Credit: 2 (15 lab)*

Practical, general workplace training supported by an individualized learning plan developed by the employer, college, and student.

## **MLAB 1267 Practicum IV (or Field Experience)-Clinical/Medical Laboratory Technician (Microbiology/Parasitology)**

*Prerequisites: Department Approval; must be placed into college-level reading, writing and math.*

*Credit: 2 (15 lab)*

Practical, general workplace training supported by an individualized learning plan developed by the employer, college, and student.

## **MLAB 1270 Hematology I**

*Prerequisites: Must be placed into college-level reading, writing and math.*

*Credit: 2 (1 lecture, 4 lab)*

Introduction to the theory and practical application of routine and special hematology procedures, both manual and automated, red blood cells and white blood cells maturation sequences, and normal and abnormal morphology and associated diseases. This course is the first part of a two-part course and concentrates on red cell disorders.

## **MLAB 1271 Hematology II**

*Prerequisites: MLAB 1270; Must be placed into college-level reading, writing and math.*

*Credit: 2 (1 lecture, 4 lab)*

Introduction to the theory and practical application of routine and special hematology procedures, both manual and automated, red blood cells and white blood cells maturation sequences, and normal and abnormal morphology and associated diseases. This course is the first part of a two-part course and concentrates on white blood cell disorders.

## **MLAB 1371 Registry Review**

*Prerequisites: Must be placed into college-level reading, writing and math.*

*Credit: 3 (3 lecture)*

Topics address recently identified current events, skills, knowledge, and/or attitudes and behaviors pertinent to the technology or occupation and

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relevant to the professional development of the student.

## **MLAB 2232 Seminar in Medical Laboratory Technology**

*Prerequisites: Must be placed into college-level reading, writing and math.*

*Credit: 2 (1 lecture, 2 lab)*

Designed to reinforce didactic information with laboratory methodologies and to allow exploration of advanced techniques in medical laboratory technology.

## **MLAB 2264 Practicum V (or Field Experience)-Clinical/Medical Laboratory Technician**

*Prerequisites: Department Approval; Must be placed into college-level reading, writing and math.*

*Credit: 2 (14 lab)*

Practical, general workplace training supported by an individualized learning plan developed by the employer, college, and student.

## **MLAB 2270 Clinical Chemistry I**

*Prerequisites: Must be placed into college-level reading, writing and math.*

*Credit: 2 (1 lecture, 4 lab)*

An introduction to the principles and procedures of various tests performed in Clinical Chemistry. Presents the physiological basis for the test, the principle and procedure for the test, and the clinical significance of the test results, including quality control and normal values. Also includes basic chemical laboratory technique, chemical laboratory safety, electrolytes and acid-base balance, proteins, carbohydrates, lipids and NPNS.

## **MLAB 2271 Clinical Chemistry II**

*Prerequisites: MLAB 2270; Must be placed into college-level reading, writing and math.*

*Credit: 2 (1 lecture, 4 lab)*

An introduction to the principles and procedures of various tests performed in Clinical Chemistry. Presents the physiological basis for the test, the principle and procedure for the test, and the clinical significance of the test results, including quality control and normal values. Also includes basic chemical laboratory technique, chemical laboratory safety, electrolytes and acid-base balance, enzymes, cardiac, pancreatic, and liver function, vitamins and endocrinology.

## **MLAB 2331 Immunohematology**

*Prerequisites: MLAB 1235; Must be placed into college-level reading, writing and math.*

*Credit: 3 (2 lecture, 4 lab)*

A study of blood antigens and antibodies. Performance of routine blood banking procedures, including blood group and Rh typing, antibody screens, antibody identification, cross matching, elution, and absorption techniques. Presents quality control, basic laboratory technique and safety. Includes the principles, procedures and clinical significance of test results in genetics, blood group systems, pre-transfusion testing, adverse effects of transfusions, donor selection and components, and hemolytic disease of the newborn.

## **MLAB 2434 (Clinical) Microbiology**

*Prerequisites: BIOL 2120 and BIOL 2320; Must be placed into college-level reading, writing and math.*

*Credit: 4 (3 lecture, 4 lab)*

Instruction in the theory, practical application, and pathogenesis of clinical microbiology, including collection, setup, identification, susceptibility testing, and reporting procedures.

## **MLSC 1210 Military Leadership I**

*Prerequisite: Contact UH Army ROTC*

*Credit: 2 (2 lecture)*

Open to all students. No military commitment is required. Principles of effective leadership; reinforcement of self-confidence through participation in physically and mentally challenging training with upper division ROTC students; development of communication skills to improve individual performance and group interaction. Relate ethical values to the effectiveness of leadership. Survival skills and self-defense. Cooperative program with the University of Houston Army ROTC department.

## **MLSC 1220 Military Leadership II**

*Prerequisite: MLSC 1210*

*Credit: 2 (2 lecture)*

Continuation of MLSC 1210. Cooperative program with the University of Houston Army ROTC department.

## **MLSC 2210 Military Leadership Development I**

*Prerequisite: MLSC 1220*

*Credit: 2 (2 lecture)*

Characteristics of leadership, problem analysis, decision making, oral presentations, first aid, small unit tactics, land navigation, basic radio communication, marksmanship, fitness training, rappelling. Fitness training required three times per week in addition to class and lab. Cooperative program with the University of Houston Army ROTC department.

## **MLSC 2220 Military Leadership Development II**

*Prerequisite: MLSC 2210*

*Credit: 2 (2 lecture)*

Continuation of MLSC 2210. Cooperative program with the University of Houston Army ROTC department.

## **MRKG 1302 Principles of Retailing**

*Prerequisites: Must be placed into GUST 0342 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (3 lecture)*

Introduction to the retailing environment and its relationship to consumer demographics, trends, and traditional/nontraditional retailing markets. The employment of retailing techniques and the factors that influence modern retailing.

## **MRKG 1311 Principles of Marketing**

*Prerequisites: Must be placed into GUST 0342 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (3 lecture)*

Introduction to the marketing functions: identification of consumer and organizational needs; explanation of economic, psychological, sociological, and global issues; and description and analysis of the importance of marketing research.

## **MRKG 1313 Public Relations**

*Prerequisites: Must be placed into GUST 0342 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (3 lecture)*

Exploration of theories, techniques, and processes of public relations including means of influencing methods of building good will, analysis of media, obtaining publicity, and implementation of public relations programs.

## **MRKG 1371 Enterprise Mindset**

*Prerequisites: Must be placed into GUST 0342 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (3 lecture)*

Enterprise Skills provides an overview of the crucial skills needed for individuals to excel at developing both for profit and not-for profit (social) enterprise ventures. All the pertinent skills will be covered, including action oriented activities to provide students with skills necessary to succeed. Topics will include: creativity, experimentation, risk-taking, self-reliance, character, self-leadership, growth mindset, action orientation, persistence, resourcefulness, collaboration and empathy.

## **MRKG 1391 Special Topics in Business Marketing/Marketing Management: Sports & Entertainment Marketing**

*Prerequisites: Must be placed into GUST 0342 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (3 lecture)*

Sports and Entertainment Marketing introduces the basic principles of marketing, economic impact, the history of sports and entertainment, careers, as well as legal and business risks involved in the industry. Students will also learn characteristics and buying behaviors of sports consumers as well as entertainment consumers

## **MRKG 2312 e-Commerce**

*Prerequisites:*

*Credit: 3 (3 lecture)*

Explore electronic tools utilized in marketing; focus on marketing communications in developing customer relationships.

## **MRKG 2333 Principles of Selling**

*Prerequisites: Must be placed into GUST 0342 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (3 lecture)*

Overview of the selling process. Identification of the elements of the communication process between buyers and sellers. Examination of the legal and ethical issues of organizations which

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affect salespeople.

## **MRKG 2348 Marketing Research and Strategies**

*Prerequisites: Must be placed into GUST 0342 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (3 lecture)*

A simulated marketing environment for experience in marketing decision-making. Provides practical experiences in analyzing marketing cases. Includes dynamic interrelationships among marketing price, channels of distribution, promotion, and product responsibility.

## **MRKG 2349 Advertising and Sales Promotion**

*Prerequisites: Must be placed into GUST 0342 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (3 lecture)*

Integrated marketing communications. Includes advertising principles and practices. Emphasizes multi-media of persuasive communication including buyer behavior, budgeting, and regulatory constraints.

## **MRKG 2370 Creativity and Innovation**

*Prerequisite: MRKG 1311; must be placed into GUST 0342 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (3 lecture)*

*Creativity and Innovation will introduce the concepts of creativity and how those concepts spur innovation and the economy. Processes for the development of individual and organizational creativity will be covered as well as importance of innovation in economic communities, strategies for systematic development of innovative products/services/ideas, and topics related to using innovation in marketing to create demand, drive growth and build new industries.*

## **MRKG 2371 Services Marketing**

*Prerequisite: MRKG 1311; must be placed into GUST 0342 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (3 lecture)*

An analysis of the principles, methods and problems of marketing for both professional and consumer services. A study of competition, customer service, services design, pricing, services promotion and distribution strategies.

## **MRKG 2372 Consumer Behavior**

*Prerequisites: Must be placed into GUST 0342 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (3 lecture)*

A study of buyer motives, reference groups, social class, culture, and family and social interrelationships are examined.

## **MRKG 2373 Services Promotion**

*Prerequisites: Must be placed into GUST 0342 in reading, ENGL 0300 or 0347 in writing and MATH*

*0306 in math.*

*Credit: 3 (3 lecture)*

Principles and practices of services promotion including public relations, image advertising, proposal writings, sales presentation design, media planning, public relations campaign planning, lobbying, crisis management, positioning, services selling and event planning are discussed.

## **MRKG 2374 Marketing Case Studies**

*Prerequisites: Must be placed into GUST 0342 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (3 lecture)*

A study of marketing problems and challenges through the use of case histories and actual marketing situations involving advertising, prices, distribution, product selection, client or consumer behavior, marketing training, market segmentation and international marketing.

## **MRKG 2375 Social Enterprise**

*Prerequisites: Must be placed into GUST 0342 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (3 lecture)*

Social Enterprise is a comprehensive overview of the important aspects of enterprise as related to social needs and the development of not-for-profit organizations. Topics will include: the development of enterprise skills related to the creation of not-for profit social organizations such as fund-raising, public affairs, analyses of social needs (market assessment for social interests); organizational planning, marketing and leadership for the social organization, building community support, social media strategy and other topics related to not-for-profit social organizations.

## **MRKG 2376 Enterprise Opportunity Analysis**

*Prerequisites: Must be placed into GUST 0342 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (3 lecture)*

A comprehensive overview of all aspects of opportunity analysis, including how to differentiate a good idea from a lucrative idea, how to analyze current and future markets for products/services, how to develop marketing and operations strategies based on the analyses. The course will culminate in an Enterprise Plan (similar to a business plan, but with more emphasis on analysis for innovation, strategies for taking action and being flexible as the market changes.

## **MRKG 2377 Financial Management/Budgeting for Enterprise Marketing**

*Prerequisites: Must be placed into GUST 0342 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (3 lecture)*

Financial Management/Budgeting for Enterprise Marketing provides a comprehensive overview of the budgeting needs and processes of financial management that relate specifically to marketing

the start-up enterprise (profit or not-for-profit). Enterprises have different financial needs and issues related directly to the development of innovation. This course will teach the students how to market and manage an enterprise will little or no funds, as well as options for obtaining capital with which to launch new ventures.

## **MRKG 2378 Franchises**

*Prerequisites: Must be placed into GUST 0342 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (3 lecture)*

Franchising is a comprehensive course that explores all aspects of utilizing the franchise model for developing a new venture. The pros and cons of the franchising model are explored. The financial requirements and risks, the legal pitfalls and obligations of franchisees, and the process for expanding into franchises (for both franchisee and franchisor) are explored.

## **MRKG 2380 Cooperative Education -Marketing/Marketing Management, General**

*Prerequisites: Department Approval and MRKG 1311; must be placed into GUST 0342 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (1 lecture, 20 lab)*

Career-related activities encountered in the student's area of specialization offered through an individualized agreement among the college, employer, and student. Under the supervision of the college and the employer, the student combines classroom learning with work experience. Includes a lecture component.

## **MRKG 2381 Cooperative Education -Business Marketing/Marketing Management**

*Prerequisites: Department Approval and MRKG 1311; must be placed into GUST 0342 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (1 lecture, 20 lab)*

Career-related activities encountered in the student's area of specialization offered through an individualized agreement among the college, employer, and student. Under the supervision of the college and the employer, the student combines classroom learning with work experience. Includes a lecture component.

## **MRMT 1307 Medical Transcription I**

*Prerequisites: MDCA 1313, POFT 1329; must be placed into GUST 0342 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (2 lecture, 3 lab)*

Fundamentals of medical transcription with hands-on experience in transcribing physician dictation including basic reports such as history and physicals, discharge summaries, consultations,

# Course Descriptions

operative reports, and other medical reports. Utilizes transcribing and information processing equipment compatible with industry standards. Designed to develop speed and accuracy.

## **MUAP courses Numbered 11xx, 12xx, are Freshman level, one-half hour lesson and one-hour lessons per week, respectively.**

Half-hour lessons require six practice hours per week; hour lessons, ten practice hours per week. Hour lessons may be divided into two 30-minute lessons per week by mutual consent of the student and the instructor. Lessons may be repeated (maximum 7 times in any combination) with permission of the respective department heads and are required of appropriate majors(s). Juries are required. Students provide all instruments but piano and percussion equipment. A MUSI co-requisite is required. Private instruction is offered to music majors only. Half-hour lessons earn 1 credit (1 lecture). Hour lessons earn 2 credits (2 lecture).

## **MUAP Courses Numbered 21xx, 22xx, are Sophomore level, one-half hour and one-hour lessons per week respectively.**

Half-hour lessons require six practice hours per week; hour lessons, ten practice hours per week. Hour lessons may be divided into two 30-minute lessons per week by mutual consent of the student and the instructor. Lessons may be repeated (maximum 7 times in any combination) with permission of the respective department heads and are required of appropriate majors(s). Juries are required. Students provide all instruments but piano and percussion equipment. A MUSI co-requisite is required. Private instruction is offered to music majors only. Half-hour lessons earn 1 credit (1 lecture). Hour lessons earn 2 credits (2 lecture).

MUAP 1101, 1201, 2101, 2201. *Violin.*

MUAP 1105, 1205, 2105, 2205. *Viola.*

MUAP 1109, 1209, 2109, 2209. *Cello.*

MUAP 1113, 1213, 2113, 2213. *Bass.*

MUAP 1115, 1215, 2115, 2215. *Electric Bass.*

MUAP 1117, 1217, 2117, 2217. *Flute/Piccolo.*

MUAP 1121, 1221, 2121, 2221. *Oboe, English Horn.*

MUAP 1125, 1225, 2125, 2225. *Bassoon.*

MUAP 1129, 1229, 2129, 2229. *Clarinet.*

MUAP 1133, 1233, 2133, 2233. *Saxophone.*

MUAP 1137, 1237, 2137, 2237. *Trumpet/Coronet.*

MUAP 1141, 1241, 2141, 2241. *French Horn.*

MUAP 1145, 1245, 2145, 2245. *Trombone.*

MUAP 1149, 1249, 2149, 2249. *Euphonium/Baritone.*

MUAP 1153, 1253, 2153, 2253. *Tuba.*

MUAP 1157, 1257, 2157, 2257. *Percussion.*

MUAP 1161, 1261, 2161, 2261. *Guitar*

MUAP 1165, 1265, 2165, 2265. *Organ.*

MUAP 1169, 1269, 2169, 2269. *Piano.*

MUAP 1173, 1273, 2173, 2273. *Electronic Keyboard.*

MUAP 1177, 1277, 2177, 2277. *Harp.*

MUAP 1181, 1281, 2181, 2281. *Voice.*

MUAP 1185, 1285, 2185, 2285. *Improvisation.*

MUAP 1187, 1287, 2187, 2287. *Special Topics - Strings.*

MUAP 1188, 1288, 2188, 2288. *Special Topics - Percussion.*

MUAP 1189, 1289, 2189, 2289. *Special Topics - Keyboard.*

MUAP 1190, 1290, 2190, 2290 *Special Topics - Voice.*

MUAP 1292, 2292. *Arranging and Composition.*

## **MUEN 1130 Guitar Ensemble I**

*Prerequisites:*

*Credit: 1 (3 lab)*

This course serves to enhance reading and performance skills through the practice and performance of technical exercises and ensemble pieces written specifically for the guitar.

## **MUEN 1140 Guitar Ensemble II**

*Prerequisites:*

*Credit: 1 (3 lab)*

This course serves to enhance reading and performance skills through the practice and performance of technical exercises and ensemble pieces written specifically for the guitar.

## **MUSB 1191 Special Topics in Music Business Management and Merchandising**

*Prerequisites: Must be placed into GUST 0342 in reading, ENGL 0310 or 0349 in writing and MATH 0308 in math.*

*Corerequisites: MUSB 1305*

*Credit: 1 (1 lecture)*

Topics address recently identified current events, skills, knowledge, and/or attitudes and behaviors pertinent to the technology or occupation and relevant to the professional development of the student. Learning outcomes/objectives are determined by local occupational need, and business and industry trends.

## **MUSB 1305 Survey of the Music Business**

*Prerequisites: Must be placed into GUST 0342 in reading, ENGL 0310 or 0349 in writing and MATH 0308 in math.*

*Credit: 3 (3 lecture)*

An overview of the music industry including song writing, live performance, the record industry, music merchandising, contracts and licenses, and career opportunities.

## **MUSB 1341 Concert Promotion and Venue Management**

*Prerequisites/Corerequisites: MUSB 1305; Must be placed into GUST 0342 in reading, ENGL 0310 or 0349 in writing and MATH 0308 in math.*

*Credit: 3 (3 lecture, 1 lab)*

A course in the basics of concert promotion and

venue management including considerations in purchasing a club; concert promotion and advertising; talent buying; city codes; insurance; Texas Alcoholic Beverage Commission Regulation; American Society of Composers, Arrangers, and Publishers (ASCAP/BMI) licenses; personnel management; and concert production and administration.

## **MUSB 1391 Special Topics in Music Business Management and Merchandising: Online & Social Media for Music Marketing**

*Prerequisites/Corerequisites: MUSB 1305; Must be placed into GUST 0342 in reading, ENGL 0310 or 0349 in writing and MATH 0308 in math.*

*Credit: 3 (3 lecture)*

Students will define and implement a music marketing strategy that defines career goals and creates online branding, utilizes various forms of social media to enforce online presence, build fan base and drive sales in the digital environment. Students will also participate in a self directed course of independent study that constitutes one hour per week. Proof of participation will be provided by submissions of blog posts that reflect a meaningful contribution each week.

## **MUSB 2301 Music Marketing and Merchandising**

*Prerequisites/Corerequisites: MUSB 1305; Must be placed into GUST 0342 in reading, ENGL 0310 or 0349 in writing and MATH 0308 in math.*

*Credit: 3 (3 lecture)*

A study of the methods of distribution, retailing, and wholesaling. Topics include the basics of purchasing, inventory control, shipping and receiving, returns, pricing and cost analysis, merchandising, retail display, sales promotion, advertising, security and shrinkage, personnel management, and relationships between retailers and distributors.

## **MUSB 2305 Music Publishing**

*Prerequisites/Corerequisites: MUSB 1305; Must be placed into GUST 0342 in reading, ENGL 0310 or 0349 in writing and MATH 0308 in math.*

*Credit: 3 (3 lecture)*

A study of the administrative and marketing aspects of music publishing including the application of current copyright law, developing song writers, rights exploration, and royalty collection.

## **MUSB 2309 The Record Industry**

*Prerequisites/Corerequisites: MUSB 1305; Must be placed into GUST 0342 in reading, ENGL 0310 or 0349 in writing and MATH 0308 in math.*

*Credit: 3 (3 lecture)*

Overview of the record industry and the organization of large and small record companies. Emphasizes record company functions such as artist and repertoire (A & R), promotion, marketing, business affairs, and administration and distribution including Internet-based distribution.

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## **MUSB 2345 Live Music and Talent Management**

*Prerequisites/Corerequisites: MUSB 1305; Must be placed into GUST 0342 in reading, ENGL 0310 or 0349 in writing and MATH 0308 in math.*

*Credit: 3 (3 lecture)*

An examination of the role, scope, and activities of the talent manager including establishing the artist/manager relationship; planning the artist's career; and developing goals, strategies, and tactics with an overall view of the live music business.

## **MUSB 2355 Legal Aspects of the Entertainment Industry**

*Prerequisites/Corerequisites: MUSB 1305; Must be placed into GUST 0342 in reading, ENGL 0310 or 0349 in writing and MATH 0308 in math.*

*Credit: 3 (3 lecture)*

Copyright law and the various agreements used in the entertainment industry. Emphasizes contracts used by music publishers, record companies, artist managers, record producers, film and television producers, and booking agencies.

## **MUSB 2380 Cooperative Education - Music Business Management and Merchandising**

*Prerequisites: 12 hrs. of MUSB and Department Approval*

*Prerequisites/Corerequisites: MUSB 1305; Must be placed into GUST 0342 in reading, ENGL 0310 or 0349 in writing and MATH 0308 in math.*

*Credit: 3 (1 lecture, 20 lab)*

Career-related activities encountered in the student's area of specialization are offered through an individualized agreement between the college, employer, and student. Under supervision of the college and the employer, the student combines classroom learning with work experience. Includes a lecture component.

## **MUSB 2381 Cooperative Education - Music Management and Merchandising**

*Prerequisites: 12 hrs. of MUSB and Department Approval; Must be placed into GUST 0342 in reading, ENGL 0310 or 0349 in writing and MATH 0308 in math.*

*Prerequisites/Corerequisites: MUSB 1305*

*Credit: 3 (1 lecture 20 lab)*

Career-related activities encountered in the student's area of specialization offered through an individualized agreement among the college, employer, and student. Under the supervision of the college and the employer, the student combines classroom learning with work experience. Includes a lecture component.

## **MUSC 1235 Commercial Music Software**

*Prerequisites:*

*Credit: 2 (2 lecture)*

Specialized training in commercial music software applications. This course includes integration of computer-based hardware and software with an emphasis on the utilization of DAW (digital audio

workstation) technology in the professional studio environment.

## **MUSC 1249 Applied Music: Conducting**

*Prerequisites: Commercial Music Theory I and II; must be placed into GUST 0342 in reading, ENGL 0310 or 0349 in writing and MATH 0308 in math.*

*Credit: 2 (1 lecture, 4 lab)*

Private lessons in conducting. Development of technique through the practice of basic beat patterns, beginning beats, gesturing, and cueing. Emphasis on score reading and knowledge of musical terminology.

## **MUSC 1270 Fundamentals of Music Production**

*Prerequisites: MUSI 1301; MUSC 1427, 1331, grade of C or higher. Frequent Requisites: MATH 1308, GUST 0342, ENGL 0310 or 0349.*

*Credit: 2 (1 lecture, 3 lab)*

An introduction to the art of producing music in the modern recording studio. The focus of the course will be on the process involved in taking a song idea from initial inception to final commercial release. Topics will include appropriate choice of genre, song construction, demoing material, producing charts and lead sheets, digital tempo and rhythmic manipulation, managing musicians during sessions, mixing aesthetics, and final mastering and packaging of a product.

## **MUSC 1309 Conducting Class**

*Prerequisites: Must be placed into GUST 0342 in reading, ENGL 0310 or 0349 in writing and MATH 0308 in math.*

*Credit: 3 (2 lecture, 2 lab)*

Introduction to the art of conducting including regular and irregular beat patterns, subdivision, and beat pattern varieties applied to musical literature and practical experience.

## **MUSC 1321 Songwriting**

*Prerequisites: Must be placed into GUST 0342 in reading, ENGL 0310 or 0349 in writing and MATH 0308 in math.*

*Credit: 3 (3 lecture)*

Introduction to techniques of writing marketable songs including the writing of lyrics and melodies, setting lyrics to music, developing lyrical and musical 'hooks,' analyzing the marketplace, and developing a production plan for a song demo.

## **MUSC 1323 Audio Electronics**

*Prerequisites: Must be placed into GUST 0342 in reading, ENGL 0310 or 0349 in writing and MATH 0308 in math.*

*Credit: 3 (2 lecture, 4 lab)*

Basic concepts in electricity, Ohm's Law, circuit analysis and troubleshooting audio problems. Topics include soldering techniques, audio electronic alignment procedures for tape machines, console maintenance, and sound reinforcement equipment maintenance.

## **MUSC 1325 Acoustics**

*Prerequisites: MUSC 1427 or Department Approval; must be placed into GUST 0342 in reading, ENGL 0300 or 0347 in writing and MATH 0308 in math.*

*Credit: 3 (2 lecture, 4 lab)*

Principles of sound in air, sound in recording, and sound reinforcement. Topics include acoustical properties of studios, live performance facilities, resonance, and electronic and acoustic control. Students will be able to describe specific characteristics of sound in air; describe acoustical properties of halls, rooms, and studios; measure and quantify sound characteristics; and utilize electronic and acoustic control measures.

## **MUSC 1327 Audio Engineering I**

*Prerequisites: MUSC 1335; Must be placed into GUST 0342 in reading, ENGL 0310 or 0349 in writing and MATH 0308 in math.*

*Credit: 3 (2 lecture, 4 lab)*

Overview of the recording studio. Topics include basic studio electronics and acoustic principles, waveform analysis, microphone design and placement techniques, studio set up and signal flow, recording console theory, signal processing concepts, tape machine principles and operation, and an overview of mixing and editing. Students are required to attend additional lab hours outside of class.

## **MUSC 1330 Computer Music Notation I**

*Prerequisites: Basic computer skills; must be placed into GUST 0342 in reading, ENGL 0310 or 0349 in writing and MATH 0308 in math.*

*Credit: 3 (1 lecture, 4 lab)*

Survey of music notation software and applications with skill development in computer music notation.

## **MUSC 1331 MIDI I**

*Prerequisites: Must be placed into GUST 0342 in reading, ENGL 0310 or 0349 in writing and MATH 0308 in math.*

*Credit: 3 (2 lecture, 4 lab)*

An overview of the Musical Instrument Digital Interface (MIDI) system and applications. Topics include the history and evolution of MIDI, hardware requirements, computer numbering systems, channels and modes, the MIDI language, and typical implementation of MIDI applications in the studio environment using software-based sequencing programs. Students are required to attend additional lab hours outside of class.

## **MUSC 1335 Commercial Music Software**

*Prerequisites: Frequent Requisites: MATH 1308, GUST 0342, ENGL 0310 or 0349*

*Credit: 3 (2 lecture, 4 lab)*

Specialized training in commercial music software applications. This course includes integration of computer-based hardware and software with an emphasis on the utilization of DAW (digital audio workstation) technology in the professional studio environment.

## **MUSC 1350 Remixing**

*Prerequisites: MUSC 1331 or Department Approval*

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*Credit: 3 (2 lecture, 4 lab)*

Basic techniques necessary to produce finished remixes of previously recorded musical compositions. Includes using audio and MIDI "beats" and "loops."

## **MUSC 1396 Special Topics in Recording Arts Technology/Technician: Advanced Mixing and Mastering in Protools**

*Prerequisites: Must be placed into GUST 0342 in reading, ENGL 0310 or 0349 in writing and MATH 0308 in math.*

*Credit: 3 (2 lecture, 4 lab)*

Topics address advanced mixing and mastering concepts within the ProTools digital software environment. Topics include analysis of mixes by genre, use of advanced effects processing to emphasize depth, clarity, and frequency balance, and time-based editing processes such as time stretching. Students will also practice software-based mastering techniques to optimize mixes for various digital distribution methods.

## **MUSC 1405 Live Sound I**

*Prerequisites: Must be placed into GUST 0342 in reading, ENGL 0310 or 0349 in writing and MATH 0308 in math.*

*Credit: (3 lecture, 2 lab)*

An overview of the field of live sound. Includes principles of live sound and the theory and interconnection of the components of a sound reinforcement system.

## **MUSC 2141 Forum/Recital**

*Prerequisites: Must be placed into GUST 0342 in reading, ENGL 0310 or 0349 in writing and MATH 0308 in math.*

*Credit: 1 (1 lecture)*

Stylistic analysis of commercial music performances presented by students, faculty, and guest artists.

## **MUSC 2201 Audio Engineering Practices**

*Prerequisites: MUSC 2447, RTVB 2232; must be placed into college-level reading, writing and math.*

*Corequisite: MUSC 2448, 2457 or 2458*

*Credit: 2 (1 lecture, 2 lab)*

Application of the concepts and techniques presented in Audio Engineering I and II. (May be repeated three times for credit. Students are required to attend additional lab hours outside of class.)

## **MUSC 2214 Improvisation Theory I**

*Prerequisites: Must be placed into GUST 0342 in reading, ENGL 0310 or 0349 in writing and MATH 0308 in math.*

*Credit: 2 (2 lecture, 1 lab)*

A study of the chordal structures of jazz, rock, country, and fusion with emphasis on extemporaneous performance.

## **MUSC 2230 Commercial Music Arranging**

## **and Composition**

*Prerequisites: MUSC 1321; must be placed into GUST 0342 in reading, ENGL 0310 or 0349 in writing and MATH 0308 in math.*

*Credit: 2 (1 lecture, 4 lab)*

Presentation of arranging and composition for projects in industry recognized genres including song writing, show writing, video, and film.

## **MUSC 2234 Improvisation Theory II**

*Suggested Prerequisites: MUSC 2214; must be placed into GUST 0342 in reading, ENGL 0310 or 0349 in writing and MATH 0308 in math.*

*Credit: 2 (2 lecture, 1 lab)*

A continuation of the study of chordal structures of jazz, rock, country, and fusion with emphasis on extemporaneous performance.

## **MUSC 2249 Applied Music: Conducting II**

*Prerequisites: MUSC 1249; must be placed into GUST 0342 in reading, ENGL 0310 or 0349 in writing and MATH 0308 in math.*

*Credit: 2 (1 lecture, 4 lab)*

Advanced private lessons in conducting. Continues development of conducting techniques, score reading abilities, and study of musical terminology.

## **MUSC 2319 Orchestration**

*Prerequisites: Must be placed into GUST 0342 in reading, ENGL 0310 or 0349 in writing and MATH 0308 in math.*

*Credit: (3 lecture)*

Exploration of writing for voices and instruments to include ranges, transportation, and idiosyncrasies of each instrument with emphasis on commercial music chord voicings.

## **MUSC 2345 Synthesis II**

*Prerequisites: MUSC 2355; must be placed into GUST 0342 in reading, ENGL 0310 or 0349 in writing and MATH 0308 in math.*

*Credit: 3 (2 lecture, 3 lab)*

Course emphasizes technology that integrates MIDI sequencing with digital audio. Topics include computer based hard disk recording systems, MIDI machine control, advanced techniques in synthesizer editing, digital transfers of audio data and CD mastering. The student will demonstrate advanced skill in FM and hybrid synthesis techniques; explain and utilize digital sampling; complete projects using advanced synthesis techniques; and edit samples and synthesizer voices. Students are required to attend additional lab hours outside of class.

## **MUSC 2350 Computer Music Notation II**

*Prerequisites: MUSC 1330; must be placed into GUST 0342 in reading, ENGL 0310 or 0349 in writing and MATH 0308 in math.*

*Credit: 3 (1 lecture, 4 lab)*

Study and practices in music notation software at a professional level, including large score notation.

## **MUSC 2355 MIDI II**

*Prerequisites: MUSC 1331; must be placed into GUST 0342 in reading, ENGL 0310 or 0349 in writing and MATH 0308 in math.*

*Credit: 3 (2 lecture, 4 lab)*

A continuation of MIDI I with emphasis on advanced sequencer operation, and SMPTE-based synchronization in the interaction of multiple recording and playback systems.

## **MUSC 2403 Live Sound II (NOT Being Used)**

*Prerequisites:*

*Credit: 4 (3 lecture, 3 lab)*

Overview of stage monitor systems. Includes monitor systems set-up and operation and stage management. Also covers interactivity between sound management, performance quality, and audience experience.

## **MUSC 2427 Audio Engineering II**

*Prerequisites: MUSC 1427 and MUSC 1331; must be placed into GUST 0342 in reading, ENGL 0310 or 0349 in writing and MATH 0308 in math.*

*Credit: 4 (3 lecture, 2 lab)*

Major topics include the recording process, microphones and placement techniques, audio console operation, multitrack recording and signal processors. Audio software includes Pro Tools and Digital Performer, Spark and Peak audio editors, Toast and Jam CD editors, Acid looping software. Students learn basic tracking techniques, studio set up and break down and participate in 32 hours of recording sessions. Students are required to attend additional lab hours outside of class.

## **MUSC 2433 Scoring for Video and Film**

*Prerequisites: Must be placed into GUST 0342 in reading, ENGL 0310 or 0349 in writing and MATH 0308 in math.*

*Credit: 4 (3 lecture, 3 lab)*

Using Digital Performer and a variety of digital mixers, samplers, sound modules and synthesizers, students learn to integrate MIDI sequencing and digital audio with video productions.

## **MUSC 2447 Audio Engineering III**

*Prerequisites: MUSC 1270, MUSC 2427, RTVB 1240 and MUSC 2355; must be placed into GUST 0342 in reading, ENGL 0310 or 0349 in writing and MATH 0308 in math.*

*Credit: 4 (3 lecture, 2 lab)*

Advanced practice of procedures and techniques in recording and manipulating audio. Includes digital audio editing, advanced recording techniques, and advanced engineering projects.

## **MUSC 2448 Audio Engineering IV**

*Prerequisites: Must be placed into college-level reading, writing and math.*

*Credit: 4 (3 lecture, 3 lab)*

Examination of the role of the producer including recording, mixing, arranging, analyzing projects, session planning, communications, budgeting, business aspects, technical consideration, and music markets. Students are required to attend additional lab hours outside of class.

# Course Descriptions

## **MUSC 2457 Audio Engineering V**

*Prerequisites: MUSC 2448, 2201, 2355; must be placed into college-level reading, writing and math.*

*Credit: 4 (3 lecture, 4 lab)*

Analysis and practice of the operation of a large format, computer-automated analog mixing console. Includes console's signal flow and operation as they pertain to tracking.

## **MUSC 2458 Audio Engineering VI**

*Prerequisites: MUSC 2457, 2201; must be placed into college-level reading, writing and math.*

*Credit: 4 (3 lecture, 4 lab)*

Analysis and practice in the operation of a large format, computer-automated analog mixing console. Includes console's signal flow and operation as they pertain to mixing.

## **MUSI 1131 Special Topics Ensemble I**

*Credit: 1 (0 lecture, 3 lab)*

Group master class for piano, voice, or instruments. Open to all students. May serve as corequisite for MUAP courses.

## **MUSI 1135 Jazz Ensemble I**

*Prerequisite: Department Approval*

*Credit: 1 (0 lecture, 3 lab)*

Small ensemble specializing in jazz improvisation and performance.

## **MUSI 1139 Chamber Music I**

*Prerequisite: Department Approval*

*Credit: 1 (0 lecture, 3 lab)*

Small ensemble concentrating on vocal and/or instrumental chamber music.

## **MUSI 1140 Music Forum I**

*Credit: 1 (1 lecture)*

Emphasis on faculty and student recitals, stylistic interpretation of commercial music forms. Seminar discussions, lectures and demonstrations by music industry representatives and artists.

## **MUSI 1159 Musical Theatre I**

*Credit: 1 (0 lecture, 4 lab)*

Study and performance of literature from musical theatre, including operetta, reviews and musical comedy, basic vocal and movement skills. Performance and rehearsals required. Open to all students by audition.

## **MUSI 1160 Italian Diction for Singers**

*Credit: 2 (1 lecture, 1 lab)*

Study of Italian phonetic sounds to promote ability to sing the language. Open to all vocal students. May be repeated.

## **MUSI 1161 English Diction for Singers**

*Credit: 2 (1 lecture, 1 lab)*

Study of phonetic sounds of English to promote ability to sing the language. Open to all vocal students. May be repeated.

## **MUSI 1163/1164 Improvisation I & II**

*Credit: 1 (0 lecture, 3 lab)*

A study of the chordal structures of jazz with emphasis on extemporaneous performance (improvisation). Some emphasis on the development of a repertory of standard jazz harmonic patterns. Open to all students with Department Approval.

## **MUSI 1166 Instrument Class: Woodwind**

*Credit: 1 (0 lecture, 3 lab)*

Class instruction in woodwind instruments. A skills course. May be repeated. Open to all students.

## **MUSI 1168 Instrument Class: Brass**

*Credit: 1 (0 lecture, 3 lab)*

Class instruction in brass instruments. A skills course. May be repeated. Open to all students.

## **MUSI 1172 Instrument Class: Strings see**

## **MUSI 1190**

## **MUSI 1181 Piano Class I**

*Prerequisite: MUSI 1101 or Department Approval*

*Credit: 1 (0 lecture, 3 lab)*

Class instruction in the fundamentals of keyboard technique for beginning piano students only. A skills course. May be repeated. Required of majors. Open to non-majors.

## **MUSI 1182 Piano Class II**

*Credit: 1 (0 lecture, 3 lab)*

Continuation of MUSI 1181. May be repeated. Required of majors. Open to non-majors.

## **MUSI 1183 Voice Class I**

*Credit: 1 (0 lecture, 3 lab)*

Class instruction in fundamentals of singing: tone production, breath production, diction and standard music repertoire. Designed for students with little or no previous vocal training.

## **MUSI 1184 Voice Class II**

*Credit: 1 (0 lecture, 3 lab)*

Continuation of MUSI 1183.

## **MUSI 1188 Instrument Class: Percussion**

*Credit: 1 (0 lecture, 3 lab)*

Class instruction in percussion instruments. A skills course. May be repeated. Open to all students.

## **MUSI 1190 Instrument Class: Strings**

*Credit: 1 (0 lecture, 3 lab)*

Class instruction in strings. A skills course. May be repeated. Open to all students.

## **MUSI 1192 Guitar Class I**

*Credit: 1 (0 lecture, 3 lab)*

This class is designed to provide students the fundamentals of guitar, aiding them as they learn or improve their reading of music. Consult with instructor concerning instrument availability. A knowledge of music is not required, but helpful. Open to all students.

## **MUSI 1211 Theory I**

*Prerequisites: MUSI 1301 or Department Approval; must be placed into GUST 0342 (or higher) in reading and be placed into MATH 0308 (or higher) and be placed into ENGL 0310/0349 (or higher) in writing.*

*Corequisite: MUSI 1216*

*Credit: 2 (2 lecture, 1 lab)*

Basic music theory with emphasis on part writing of figured bass and melody harmonization requiring all diatonic triads, dominant and supertonic seventh chords, and non-harmonic tones. Keyboard study of harmonic progressions and melodic harmonizations requiring diatonic triads. Required of majors.

## **MUSI 1212 Theory II**

*Prerequisites: MUSI 1211 or Department Approval; must be placed into GUST 0342 (or higher) in reading and be placed into MATH 0308 (or higher) and be placed into ENGL 0310/0349 (or higher) in writing.*

*Corequisite: MUSI 1217*

*Credit: 2 (2 lecture, 1 lab)*

A continuation of MUSI 1211. Required of majors.

## **MUSI 1216 Sight Singing/Ear Training I**

*Prerequisites: MUSI 1171 or Department Approval; must be placed into GUST 0342 (or higher) in reading and be placed into MATH 0308 (or higher) and be placed into ENGL 0310/0349 (or higher) in writing.*

*Credit: 2 (2 lecture, 1 lab)*

Singing tonal music in treble, bass, alto and tenor clefs. Aural study (including dictation) of rhythm, melody and diatonic harmony.

## **MUSI 1217 Sight Singing/Ear Training II**

*Prerequisites: Must be placed into GUST 0342 (or higher) in reading and be placed into MATH 0308 (or higher) and be placed into ENGL 0310/0349 (or higher) in writing.*

*Credit: 2 (2 lecture, 1 lab)*

Singing tonal music in treble, bass, alto and tenor clefs. Aural study (including dictation) of rhythm, melody and diatonic harmony.

## **MUSI 1223 Studio Orchestra I**

*Credit: 2 (1 lecture, 3 lab)*

Major ensemble performing contemporary styles. Open to all students with consent of director. Performances required.

## **MUSI 1226/2266 Symphony Orchestra**

*Credit: 2 (1 lecture, 2 lab)*

Performance and study of chamber, symphonic and string orchestra literature. Solo opportunities for advanced performers. For experienced string players and selected woodwind, brass and percussion players. Previous orchestra experience preferred but not required.

## **MUSI 1227 Community College Band**

*Credit: 2 (1 lecture, 2 lab)*

# Course Descriptions

This class is designed for full or part-time students who desire to improve their performance levels on band instruments, observe rehearsal methods and techniques, and learn band organizational strategies. Performance required.

## **MUSI 1229 Harp Ensemble**

*Credit: 2 (1 lecture, 2 lab)*

This class is designed for full or part-time students who desired to improve their harp ensemble performance levels, observe rehearsal methods and techniques, and learn harp ensemble organizational strategies. Performances required.

## **MUSI 1239 Chamber Ensemble I**

*Credit: 2 (1 lecture, 2 lab)*

Small instrumental ensembles: wind, string, brass, percussion, piano. Designed to provide ensemble experience for instrumental majors. Open to all qualified students. Placement audition required.

## **MUSI 1254 Chamber Vocal Ensemble**

*Credit: 2 (1 lecture, 2 lab)*

Madrigal or other small vocal ensemble. Open to non-majors. Performances required.

## **MUSI 1301 Music Fundamentals**

*Prerequisites: Must be placed into GUST 0342 (or higher) in reading and be placed into MATH 0308 (or higher) and be placed into ENGL 0310/0349 (or higher) in writing.*

*Credit: 3 (3 lecture)*

An introduction to the elements of music, including study of clefs, staff, key signatures, notation, meter, and rhythm, sight singing, major and minor chords, ear training, basic keyboard harmony. Open to all students. This course satisfies the Creative Arts or Component Area Option of the HCC core.

## **MUSI 1306 Music Appreciation**

*Prerequisites: Must be placed into GUST 0342 (or higher) in reading and be placed into MATH 0308 (or higher) and be placed into ENGL 0310/0349 (or higher) in writing.*

*Credit: 3 (3 lecture)*

A foundation course in understanding and enjoyment of music through the use of recorded music and song literature. Elements of music and analysis of music form and how they relate to compositional technique are explored. Open to all students. This course satisfies the Creative Arts or Component Area Option of the HCC core.

## **MUSI 1308 Music Literature I**

*Prerequisites: Must be placed into GUST 0342 (or higher) in reading and be placed into MATH 0308 (or higher) and be placed into ENGL 0310/0349 (or higher) in writing.*

*Credit: 3 (3 lecture)*

An introductory survey of the historical development of music as an art with emphasis on listening. Open to non-majors.

## **MUSI 1309 Music Literature II**

*Prerequisites: MUSI 1308 or Department Approval; Must be placed into GUST 0342 (or*

*higher) in reading and be placed into MATH 0308 (or higher) and be placed into ENGL 0310/0349 (or higher) in writing.*

*Credit: 3 (3 lecture)*

Continuation of MUSI 1308. Required of majors. Open to non-majors.

## **MUSI 1310 History and Literature of Recorded Music in America**

*Prerequisites: Must be placed into GUST 0342 (or higher) in reading and be placed into MATH 0308 (or higher) and be placed into ENGL 0310/0349 (or higher) in writing.*

*Credit: 3 (3 lecture)*

Survey of recorded music in the United States from the earliest recordings to the present, with emphasis on commercial successes. Includes discussion of the technological evolution in sound recording and of record lists. Open to all students. This course satisfies the Creative Arts or Component Area Option of the HCC core.

## **MUSI 1386 Arranging and Composition I**

*Prerequisites: MUSI 1211 or Department Approval*

*Credit: 3 (3 lecture)*

Discussion and practical applications in arranging and composing for various types of musical ensembles and styles. Further study in orchestration.

## **MUSI 2135 Jazz Ensemble II**

*Prerequisite: MUSI 1135*

*Credit: 1 (0 lecture, 3 lab)*

Small ensemble specializing in jazz improvisation and performance. May be repeated for credit.

## **MUSI 2139 Chamber Music II**

*Prerequisite: MUSI 1139 or Department Approval*

*Credit: 1 (0 lecture, 3 lab)*

Small ensemble concentrating on chamber music. May be repeated for credit.

## **MUSI 2140 Music Forum II**

*Credit: 1 (1 lecture)*

Emphasis on faculty and student recitals, stylistic interpretation of commercial music forms. Seminar discussions, lectures and demonstrations by music industry representatives and artists. May be repeated for credit.

## **MUSI 2159 Musical Theatre II**

*Credit: 1 (0 lecture, 4 lab)*

Study and performance of literature from musical theatre, including operetta, reviews and musical comedy, basic vocal and movement skills. Performance and rehearsals required. Open to all students by audition.

## **MUSI 2160 German Diction for Singers**

*Credit: 1 (1 lecture, 1 lab)*

Study of phonetic sounds of German to promote

ability to sing the language. Open to all vocal students. May be repeated.

## **MUSI 2161 French Diction For Singers**

*Credit: 1 (1 lecture, 1 lab)*

Study of phonetic sounds of French to promote ability to sing the language. Open to all vocal students. May be repeated.

## **MUSI 2181 Piano Class III**

*Credit: 1 (0 lecture, 3 lab)*

Continuation of MUSI 1182. May be repeated. Required of majors. Open to non-majors.

## **MUSI 2182 Piano Class IV**

*Credit: 1 (0 lecture, 3 lab)*

Continuation of MUSI 2181. May be repeated. Required of majors. Open to non-majors.

## **MUSI 2211 Theory III**

*Prerequisites: MUSI 1212 or Department Approval*  
*Must be placed into GUST 0342 (or higher) in reading and be placed into MATH 0308 (or higher) and be placed into ENGL 0310/0349 (or higher) in writing.*

*Corequisite: MUSI 2216*

*Credit: 2 (2 lecture, 1 lab)*

Emphasis on part-writing, figured bass, and melody harmonization and compositional techniques using all diatonic chords, modulations, instrumental and choral styles, two- and three-part forms. Keyboard study of harmonic progressions, melody harmonizations and modulations to closely related keys. Required of majors.

## **MUSI 2212 Theory IV**

*Prerequisites: MUSI 2211 or Department Approval*  
*Must be placed into GUST 0342 (or higher) in reading and be placed into MATH 0308 (or higher) and be placed into ENGL 0310/0349 (or higher) in writing.*

*Corequisite: MUSI 2217*

*Credit: 2 (2 lecture, 1 lab)*

Continuation of MUSI 2211. Required of majors.

## **MUSI 2216 Sight Singing/Ear Training III**

*Prerequisites: MUSI 2211 or Department Approval*  
*Must be placed into GUST 0342 (or higher) in reading and be placed into MATH 0308 (or higher) and be placed into ENGL 0310/0349 (or higher) in writing.*

*Credit: 2 (2 lecture, 1 lab)*

Singing more difficult tonal music, including modal, ethnic and 20th century materials. Drills in sight-singing and ear training. Aural study (including dictation) of more complex rhythm, melody, chromatic harmony and extending tertian structures.

## **MUSI 2217 Sight Singing/Ear Training IV**

*Prerequisites: MUSI 2211 or Department Approval*  
*Must be placed into GUST 0342 (or higher) in reading and be placed into MATH 0308 (or higher) and be placed into ENGL 0310/0349 (or higher) in*

# Course Descriptions

writing.

*Credit: 2 (2 lecture, 1 lab)*

Singing more difficult tonal music, including modal ethnic and 20th century materials. Drills in sight-singing and ear training. Aural study (including dictation) of more complex rhythm, melody, chromatic harmony and extended tertian structures.

## **MUSI 2223 Studio Orchestra II**

*Prerequisite: MUSI 1223*

*Credit: 2 (1 lecture, 3 lab)*

Major ensemble performing contemporary styles. Open to all students with consent of director. Performances required. May be repeated for credit.

## **MUSI 2227 Community College Band II**

*Prerequisites: MUSI 1227 or Department Approval*

*Credit: 2 (1 lecture, 2 lab)*

This class is designed for full or part-time students who desire to improve their performance levels on band instruments, observe rehearsal methods and techniques, and learn band organizational strategies. Performance required. May be repeated for credit.

## **MUSI 2229 Harp Ensemble**

*Prerequisite: MUSI 1229*

*Credit: 2 (1 lecture, 2 lab)*

This class is designed for full or part-time students who desire to improve their harp ensemble performance levels, observe rehearsal methods and techniques, and learn harp organizational strategies. Performance required. May be repeated for credit.

## **MUSI 2239 Chamber Ensemble II**

*Credit: 2 (1 lecture, 2 lab)*

A continuation of MUSI 1239. Open to all qualified students. Audition required.

## **MUSI 2241 Community College Chorus**

*Credit: 2 (1 lecture, 2 lab)*

This class is designed for full or part-time students who desire to improve their voice ensemble performance levels, observe rehearsal methods and techniques, and learn choir organizational strategies. Performances required. May be repeated for credit.

## **MUSI 2258 Opera Workshop**

*Prerequisites: Audition or Department Approval.*

*Credit: 2 (1 lecture, 2 lab)*

Designed to provide young singers practical operatic experience in the entire operas or operatic excerpts. May fulfill ensemble requirement for degree. May be repeated. Performance required.

## **MUSP 1201 Applied Commercial Music: Arranging and Composition**

*Prerequisites: Must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 2 (1 lecture, 4 lab)*

Private instruction in arranging and composition with goals related to jazz or commercial music. The student will demonstrate proficiency in commercial music repertoire and technique; develop a

professional, disciplined approach to performance skills; and present a juried performance for faculty.

## **MUSP 1203 Applied Commercial Music: Acoustic Bass**

*Prerequisites: Must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 2 (1 lecture, 4 lab)*

Private instruction in acoustic bass with goals related to jazz or commercial music.

## **MUSP 1204 Applied Commercial Music: Bass Guitar**

*Prerequisites: Must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 2 (1 lecture, 4 lab)*

Private instruction in bass guitar with goals related to jazz or commercial music.

## **MUSP 1205 Applied Commercial Music: Commercial Guitar**

*Prerequisites: Must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 2 (1 lecture, 4 lab)*

Private instruction in commercial guitar with goals related to jazz or commercial music.

## **MUSP 1206 Applied Commercial Music: Dobro Guitar**

*Prerequisites: Must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 2 (1 lecture, 4 lab)*

Private instruction in Dobro guitar with goals related to jazz or commercial music.

## **MUSP 1207 Applied Commercial Music: Electric Guitar**

*Prerequisites: Must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 2 (1 lecture, 4 lab)*

Private instruction in electric guitar with goals related to jazz or commercial music.

## **MUSP 1210 Applied Commercial Music: Piano**

*Prerequisites: Must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 2 (1 lecture, 4 lab)*

Private instruction in piano with goals related to jazz or commercial music.

## **MUSP 1211 Applied Commercial Music: Fiddle**

*Prerequisites: Must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 2 (1 lecture, 4 lab)*

Private instruction in fiddle with goals related to jazz or commercial music.

## **MUSP 1215 Applied Commercial**

## **Music: Mandolin**

*Prerequisites: Must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 2 (1 lecture, 4 lab)*

Private instruction in mandolin with goals related to jazz or commercial music.

## **MUSP 1217 Applied Commercial Music: Percussion**

*Prerequisites: Must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 2 (1 lecture, 4 lab)*

Private instruction in percussion with goals related to jazz or commercial music.

## **MUSP 1221 Applied Commercial Music: Steel Guitar**

*Prerequisites: Must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 2 (1 lecture, 4 lab)*

Private instruction in steel guitar with goals related to jazz or commercial music.

## **MUSP 1223 Applied Commercial Music: Synthesizer**

*Prerequisites: Must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 2 (1 lecture, 4 lab)*

Private instruction in the synthesizer with goals related to jazz or commercial music.

## **MUSP 1225 Applied Commercial Music: Trumpet**

*Prerequisites: Must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 2 (1 lecture, 4 lab)*

Private instruction in the trumpet with goals related to jazz or commercial music.

## **MUSP 1227 Applied Commercial Music: Voice**

*Prerequisites: Must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 2 (1 lecture, 4 lab)*

Private instruction in voice with goals related to jazz or commercial music.

## **MUSP 1240 Large Commercial Music Ensemble: Band**

*Prerequisites: Must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 2 (1 lecture, 2 lab)*

Participation in a large band concentrating on commercial music performance styles.

## **MUSP 1241 Large Commercial Music**

# Course Descriptions

## **Ensemble: Symphony Orchestra**

*Prerequisites: Must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 2 (1 lecture, 2 lab)*

Participation in a large symphony orchestra concentrating on commercial music performance styles.

## **MUSP 1242 Small Commercial Music Ensemble**

*Prerequisites: Must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 2 (1 lecture, 2 lab)*

Participation in a small commercial music ensemble concentrating on commercial music performance styles.

## **MUSP 1250 Small Commercial Music Ensemble: Jazz**

*Prerequisites: Must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 2 (1 lecture, 2 lab)*

Participation in a jazz ensemble concentrating on commercial music performance styles.

## **MUSP 1255 Small Commercial Music Ensemble: Studio Orchestra**

*Prerequisites: Must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 2 (1 lecture, 2 lab)*

Participation in a studio orchestra concentrating on commercial music performance styles.

## **MUSP 1292 Special Topics in Music - Piano and Organ Performance**

*Prerequisites: Must be placed into GUST 0342 in reading, ENGL 0310 or 0349 in writing and MATH 0308 in math.*

*Credit: 2 (1 lecture, 2 lab)*

Topics address recently identified current events, skills, knowledge, and/or attitudes and behaviors pertinent to the technology or occupation and relevant to the professional development of the student.

## **MUSP 1293 Special Topics in Music - Voice and Choral/Opera Performance**

*Prerequisites: Must be placed into GUST 0342 in reading, ENGL 0310 or 0349 in writing and MATH 0308 in math.*

*Credit: 2 (1 lecture, 2 lab)*

Topics address recently identified current events, skills, knowledge, and/or attitudes and behaviors pertinent to the technology or occupation and relevant to the professional development of the student.

## **MUSP 1308 Music Theater I**

*Prerequisites: Department Approval; must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (1 lecture, 8 lab)*

Presentation of literature from the musical theater including operetta, revues, and musical comedy with emphasis on vocal and movement skills.

## **MUSP 2203 Commercial Class Piano**

*Prerequisites: college-level piano skills Must be placed into GUST 0342 in reading, ENGL 0310 or 0349 in writing and MATH 0308 in math.*

*Credit: 2 (2 lecture, 1 lab)*

Development of keyboard skills for commercial music majors including blues progressions and scales, model harmony, and extensive use of the ii-V-I progression with appropriate keyboard voicing.

## **MUSP 2206 Commercial Vocal Ensemble: General**

*Prerequisites: Must be placed into GUST 0342 in reading, ENGL 0310 or 0349 in writing and MATH 0308 in math.*

*Credit: 2 (1 lecture, 2 lab)*

Participation in a vocal ensemble concentrating on commercial vocal music performance styles.

## **MUSP 2207 Commercial Vocal Ensemble: Jazz**

*Prerequisites: Must be placed into GUST 0342 in reading, ENGL 0310 or 0349 in writing and MATH 0308 in math.*

*Credit: 2 (1 lecture, 2 lab)*

Participation in a vocal ensemble concentrating on commercial vocal jazz performance styles.

## **MUSP 2231 Applied Commercial Music: Arranging and Composition**

*Prerequisites: Must be placed into GUST 0342 in reading, ENGL 0310 or 0349 in writing and MATH 0308 in math.*

*Credit: 2 (1 lecture, 4 lab)*

Private instruction in arranging and composition with goals related to jazz or commercial music.

## **MUSP 2304 Piano Studio I**

*Prerequisites: College-level piano performance; Must be placed into GUST 0342 in reading, ENGL 0310 or 0349 in writing and MATH 0308 in math.*

*Credit: 3 (3 lecture, 1 lab)*

Presentation of keyboard, theoretical, and aural instructional strategies. Survey of beginning methods; series, solo, and technique books; basic techniques of improvisation, and professional affiliations.

## **MUSP 2308 Opera Workshop I**

*Prerequisites: MUSP 1227; Must be placed into GUST 0342 in reading, ENGL 0310 or 0349 in writing and MATH 0308 in math.*

*Credit: 3 (1 lecture, 8 lab)*

Skill development in staged performances of operatic literature for singers.

## **MUSP 2338 Music Theater II**

*Prerequisites: MUSP 1308; Must be placed into GUST 0342 in reading, ENGL 0310 or 0349 in writing and MATH 0308 in math.*

*Credit: 3 (1 lecture, 8 lab)*

Advanced presentation of literature from the musical theater including operetta, revues, and/or musical comedy with emphasis on high level vocal and movement skills and an advanced leadership role in a production.

## **MUSP 2339 Opera Workshop II**

*Prerequisites: MUSC 2308; Must be placed into GUST 0342 in reading, ENGL 0310 or 0349 in writing and MATH 0308 in math.*

*Credit: 3 (1 lecture, 8 lab)*

Advanced skill development in staged performances of operatic literature for singers including the leadership role.

## **MUSP 2344 Piano Studio II**

*Prerequisites: MUSC 2304; Must be placed into GUST 0342 in reading, ENGL 0310 or 0349 in writing and MATH 0308 in math.*

*Credit: 3 (3 lecture, 1 lab)*

A course in advanced keyboard, theoretical, and aural instructional strategies. Survey of intermediate to advanced methods; series, solo and technique books; techniques of improvisation; professional affiliations; and piano studio operations. Emphasis on style and performance.

## **NDTE 1305 Introduction to Ultrasonics**

*Prerequisites:*

*Credit: 3 (3 lecture)*

Basic theory and applications of the ultrasonic techniques of materials testing covering the theoretical material from the certification test for Ultrasonic Level I American Society of Non-Destructive Testing.

## **NDTE 1405 Introduction to Ultrasonics**

*Prerequisites: Must be placed into GUST 0342 in reading, ENGL 1310 in writing and MATH 0312 in math.*

*Credit: 4 (3 lecture, 3 lab)*

Basic theory and applications of the ultrasonic techniques of materials testing covering the theoretical material from the certification test for Ultrasonic Level I American Society of Non-Destructive Testing.

## **NMTT 1166 Practicum I-Nuclear Medicine Technology**

*Prerequisites: Department Approval; must be placed into college-level reading, college-level writing and MATH 1314 in math. Credit: 1 (10 lab)*

Practical general workplace training supported by an individualized learning plan developed by the employer, college and student.

## **NMTT 1211 Nuclear Medicine**

# Course Descriptions

## **Patient Care**

*Prerequisites: Admission to program; must be placed into college-level reading, college-level writing and MATH 1314 in math.*

*Credit: 2 (1 lecture, 4 lab)*

Introduction to medical terminology, health care ethics and legal issues, communication and patient interaction skills, patient assessment, and procedures involving transport, infection control, emergency, safety, phlebotomy and injections.

## **NMTT 1267 Practicum II-Nuclear Medicine Technology**

*Prerequisites: NMTT 1266; must be placed into college-level reading, college-level writing and MATH 1314 in math.*

*Credit: 2 (14 lab)*

Practical general workplace training supported by an individualized learning plan developed by the employer, college and student.

## **NMTT 1301 Introduction to Nuclear Medicine**

*Prerequisites: Admission to program; must be placed into college-level reading, college-level writing and MATH 1314 in math.*

*Credit: 3 (2 lecture, 4 lab)*

Introduction to the field of nuclear medicine with emphasis on the principles of radiation safety, health physics, ethics, and the various studies performed in a nuclear medicine area.

## **NMTT 1409 Nuclear Medicine Instrumentation**

*Prerequisites: SCIT 1420, Admission to program; must be placed into college-level reading, college-level writing and MATH 1314 in math.*

*Credit: 4 (3 lecture, 4 lab)*

Application of instrumentation used in the measurement and analysis of ionizing radiation with emphasis on gamma spectrometry and quality assurance.

## **NMTT 2167 Practicum III-Nuclear Medicine Technology**

*Prerequisites: NMTT 1267; must be placed into college-level reading, college-level writing and MATH 1314 in math. Credit: 1 (10 lab)*

Practical general workplace training supported by an individualized learning plan developed by the employer, college and student.

## **NMTT 2201 Radiochemistry and Radiopharmacy**

*Prerequisites: CHEM 1405, NMTT 1409; must be placed into college-level reading, college-level writing and MATH 1314 in math.*

*Credit: 2 (1 lecture, 4 lab)*

Basic concepts of radiochemistry and radiopharmacy including the atomic structure, radioactive decay, and production of various radionuclides. Emphasis on radiopharmaceuticals and their ideal characteristics, biodistribution, and clinical applications; the various dosage forms in

which they may be dispensed; quality control tests; and their formation and dispensing.

## **NMTT 2266 Practicum IV-Nuclear Medicine Technology**

*Prerequisites: NMTT 2167; must be placed into college-level reading, college-level writing and MATH 1314 in math.*

*Credit: 2 (20 lab)*

Practical general workplace training supported by an individualized learning plan developed by the employer, college and student.

## **NMTT 2267 Practicum V-Nuclear Medicine Technology**

*Prerequisites: NMTT 2266; must be placed into college-level reading, college-level writing and MATH 1314 in math.*

*Credit: 2 (20 lab)*

Practical general workplace training supported by an individualized learning plan developed by the employer, college and student.

## **NMTT 2309 Nuclear Medicine Methodology II**

*Prerequisites: NMTT 1409, BIOL 2401, BIOL 2402; must be placed into college-level reading, college-level writing and MATH 1314 in math.*

*Credit: 3 (2 lecture, 4 lab)*

Principles and practices involved in nuclear medicine regarding cardiovascular, genitourinary, respiratory systems, and miscellaneous procedures. Emphasizes patient care, anatomy, physiology, radiopharmaceuticals, instrumentation, data processing and analysis, and diagnostic value.

## **NMTT 2333 Advanced Positron Emission Tomography (PET) and Fusion Technology**

*Prerequisites: NMTT 1409; must be placed into college-level reading, college-level writing and MATH 1314 in math.*

*Credit: 3 (3 lecture)*

Advance study in the field of positron emission tomography and fusion technology

## **NMTT 2335 Nuclear Medicine Technology Seminar**

*Prerequisites: All NMTT courses; must be placed into college-level reading, college-level writing and MATH 1314 in math.*

*Corequisite: NMTT 2267*

*Credit: 3 (2 lecture, 2 lab)*

A capstone course focusing on the synthesis of professional knowledge, skills and attitudes in preparation for professional employment and lifelong learning.

## **NMTT 2413 Nuclear Medicine Methodology III**

*Prerequisites: NMTT 1409, BIOL 2401, BIOL 2402; must be placed into college-level reading, college-level writing and MATH 1314 in math.*

*Credit: 4 (2 lecture, 6 lab)*

Principles and practices involved in nuclear

medicine regarding gastrointestinal, central nervous system, skeletal system, tumor and inflammation processes and miscellaneous procedures. Emphasizes patient care, anatomy, physiology, pathology, radiopharmaceuticals, instrumentation, data processing and analysis, and diagnostic values.

## **NUPC 1320 Patient Care Technician/Assistant**

*Prerequisites: Must be placed into college-level reading, writing and math.*

*Credit: 3 (3 lecture, 3 lab)*

A course designed to provide the student with the necessary training, skills, and knowledge needed to gain employment as a Patient Care Technician in a hospital setting.

## **OSHT 1301 Introduction to Safety and Health**

*Prerequisites: Must be placed into GUST 0342 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (3 lecture)*

An introduction to the basic concepts of safety and health.

## **OTHA 1201 Introduction to Occupational Therapy**

*Prerequisites: Must be placed into college-level reading, college-level writing and MATH 0312 in math.*

*Credit: 2 (2 lecture, 1 lab)*

Introduction to the historical development and philosophy of the profession of occupational therapy. Emphasis on the roles and functions of the occupational therapy assistant in current health care environments including moral, legal, and ethical issues.

## **OTHA 1241 Occupational Performance from Birth through Adolescence**

*Prerequisites:*

*Credit: 2 (2 lecture, 3 lab)*

Occupational performance of newborns through adolescents. Includes frames of reference, evaluation tools and techniques, and intervention strategies.

## **OTHA 1253 Occupational Performance for Elders**

*Prerequisites:*

*Credit: 2 (2 lecture, 3 lab)*

Occupational performance of elders. Includes frames of reference, evaluation tools and techniques, and intervention strategies.

## **OTHA 1305 Principles of Occupational Therapy**

*Prerequisites: Must be placed into college-level reading, college-level writing and MATH 0312 in math.*

*Credit: 3 (2 lecture, 4 lab)*

Introduction to occupational therapy including the historical development and philosophy. Emphasis

# Course Descriptions

on the roles of the occupational therapy assistant. Topics include occupation in daily life; education and functions; occupational therapy personnel; current health care environment; and moral, legal and ethical issues.

## **OTHA 1309 Human Structure and Function in Occupational Therapy**

*Prerequisites: Must be placed into college-level reading, college-level writing and MATH 0312 in math.*

*Credit: 3 (2 lecture, 4 lab)*

Study of biomechanics of human motion. Emphasis on the musculoskeletal system including skeletal structure, muscles and nerves, and biomechanical assessment procedures.

## **OTHA 1311 Occupational Performance Throughout the Lifespan**

*Prerequisites: Must be placed into college-level reading, college-level writing and MATH 0312 in math.*

*Credit: 3 (3 lecture, 1 lab)*

General principles of occupational performance throughout the lifespan.

## **OTHA 1315 Therapeutic Use of Occupations or Activities I**

*Prerequisites: Must be placed into college-level reading, college-level writing and MATH 0312 in math.*

*Credit: 3 (2 lecture, 4 lab)*

Various occupations or activities used as therapeutic interventions in occupational therapy. Emphasis on awareness of activity demands, contexts, adapting, grading, and safe implementation of occupations or activities.

## **OTHA 1319 Therapeutic Interventions I**

*Prerequisites: Must be placed into college-level reading, college-level writing and MATH 0312 in math.*

*Credit: 3 (2 lecture, 4 lab)*

Concepts, techniques, and assessments leading to proficiency in skills and activities used as treatment interventions in occupational therapy (OT). Emphasizes the Occupational Therapy Assistant's role in the OT process.

## **OTHA 2160 Clinical-Occupational Therapist Assistant (Intermediate)**

*Prerequisites: All first semester OTHA courses; Must be placed into college-level reading, college-level writing and MATH 0312.*

*Credit: 1 (3 lab)*

A health-related work-based learning experience that enables the student to apply specialized occupational theory, skills, and concepts. Direct supervision is provided by the clinical professional.

## **OTHA 2161 Clinical-Occupational Therapist Assistant (Intermediate)**

*Prerequisites: All first semester OTHA courses; Must be placed into college-level reading, college-level writing and MATH 0312.*

*Credit: 1 (3 lab)*

A health-related work-based learning experience that enables the student to apply specialized occupational theory, skills, and concepts. Direct supervision is provided by the clinical professional.

## **OTHA 2209 Mental Health in Occupational Therapy**

*Prerequisites: OTHA 1311, OTHA 1315, OTHA 1319; must be placed into college-level reading, college-level writing and MATH 0312 in math.*

*Credit: 2 (2 lecture, 3 lab)*

Promotion of mental health through occupational therapy. Emphasis on theory and intervention strategies to enhance occupational performance.

## **OTHA 2266 Practicum--Occupational Therapy Assistant**

*Prerequisites: All OTHA first and second semester courses; must be placed into college-level reading, college-level writing and MATH 0312 in math.*

*Credit: 2 (20 lab)*

Practical, general workplace training supported by an individualized learning plan developed by the employer, college, and student.

## **OTHA 2267 Practicum--Occupational Therapy Assistant**

*Prerequisites: All OTHA first and second semester courses; must be placed into college-level reading, college-level writing and MATH 0312 in math.*

*Credit: 2 (20 lab)*

Practical, general workplace training supported by an individualized learning plan developed by the employer, college, and student.

## **OTHA 2301 Pathophysiology in Occupational Therapy**

*Prerequisites: OTHA 1305, OTHA 1309, OTHA 1315, OTHA 1319; must be placed into college-level reading, college-level writing and MATH 0312 in math.*

*Credit: 3 (3 lecture, 1 lab)*

Pathology and general health management of diseases and injuries across the lifespan encountered in occupational therapy treatment settings. Includes etiology, symptoms, and the client's physical and psychological reactions to disease and injury.

## **OTHA 2302 Therapeutic Use of Occupations or Activities II**

*Prerequisites: All first semester OTHA courses; must be placed into college-level reading, college-level writing and MATH 0312 in math.*

*Credit: 3 (2 lecture, 4 lab)*

Continuation of OTHA 1315/1415: Therapeutic Use of Occupations or Activities I. Emphasis on advanced techniques and applications used in traditional and non-traditional practice settings.

## **OTHA 2305 Therapeutic Interventions II**

*Prerequisites: All first semester OTHA courses; must be placed into college-level reading, college-level writing and MATH 0312 in math.*

*Credit: 3 (2 lecture, 4 lab)*

Continuation of Therapeutic Interventions I. Emphasis on current rehabilitative interventions.

## **OTHA 2311 Abnormal Psychology in Occupational Therapy**

*Prerequisites: OTHA 1311, OTHA 1315, OTHA 1319; must be placed into college-level reading, college-level writing and MATH 0312 in math.*

*Credit: 3 (3 lecture, 1 lab)*

Fundamental principles and techniques of psychological diagnosis with emphasis on mental health issues including theories, etiology, and treatment intervention.

## **OTHA 2330 Workplace Skills for the Occupational Therapy Assistant**

*Prerequisites: All OTHA courses - simultaneous with Clinical II courses; must be placed into college-level reading, college-level writing and MATH 0312 in math.*

*Credit: 3 (3 lecture)*

Seminar-based course designed to complement Level II fieldwork by creating a discussion forum addressing events, skills, knowledge, and/or behaviors related to the practice environment. Application of didactic coursework to the clinic and test-taking strategies for certification exams.

## **OTHA 2331 Physical Function in Occupational Therapy**

*Prerequisites: OTHA 1305, OTHA 1309, OTHA 1315, OTHA 1319; must be placed into college-level reading, college-level writing and MATH 0312 in math.*

*Credit: 3 (2 lecture, 4 lab)*

Physical function to promote occupational performance. Includes frames of reference, assessment/evaluation tools and techniques, patient/client education, and intervention strategies.

## **PHED 1100 Golf**

*Credit: 1 (1 lecture, 2 activity)*

The student will learn the basic fundamental skills of golf and become familiar with the basic rules, tournament play and terminology involved with beginning golf. Off-campus site.

## **PHED 1103 Yoga**

*Credit: 1 (1 lecture, 2 activity)*

This class will acquaint the student with history, development, branches and practices of yoga with emphasis on physical practice of individual postures, sets of postures, breathing techniques, meditation and relaxation techniques.

## **PHED 1104 Tennis**

*Credit: 1 (1 lecture, 2 activity)*

The student will learn the basic fundamental skills of tennis (e.g. forehand and backhand strokes, serve, return of serve and volley) and become familiar with the basic strategies, rules, tournament play and terminology involved with singles and doubles in beginning tennis.

## **PHED 1111 Aerobics Conditioning**

*Credit: 1 (1 lecture, 2 activity)*

Aerobics for beginners. Introduction and practice in fundamental techniques of aerobics. Achievement

# Course Descriptions

and maintenance of physical fitness through aerobic exercise. Types of exercise will vary from semester to semester.

## **PHED 1113 Physical Fitness**

### **Training**

*Prerequisite: Basic swimming skills*

*Credit: 1 (1 lecture, 2 activity)*

Varied class activities designed to increase strength, endurance and flexibility.

## **PHED 1114 Water Exercise**

*Prerequisite: Basic swimming skills*

*Credit: 1 (1 lecture, 2 activity)*

Students are introduced to a variety of water exercises including hydrotone, aerobics, and deep water.

## **PHED 1115 Aerobics II**

*Credit: 1 (1 lecture, 2 activity)*

Maintenance of physical fitness through aerobic exercises. Continuation of Aerobics I.

## **PHED 1131 Basketball**

*Credit: 1 (1 lecture, 2 activity)*

Instruction in the rules and techniques of basketball. Students will learn game specific techniques (dribbling, shooting, defense, offense) and become familiar with the basic strategies, rules, tournament play and terminology.

## **PHED 1132 Volleyball**

*Credit: 1 (1 lecture, 2 activity)*

Instruction in the rules and techniques of volleyball. Students will learn game specific techniques (spiking, blocking, digging) and become familiar with the basic strategies, rules, tournament play and terminology.

## **PHED 1133 Soccer**

*Credit: 1 (1 lecture, 2 activity)*

Instruction in the rules and techniques of soccer. Students will learn game specific techniques (dribbling, shooting, defense, offense) and become familiar with the basic strategies, rules, tournament play and terminology. Off campus site.

## **PHED 1141 Team Sports**

*Credit: 1 (1 lecture, 2 activity)*

Instruction in the rules and techniques of team sports. Specific sports will vary from semester to semester.

## **PHED 1143 Individual Sports**

*Credit: 1 (1 lecture, 2 activity)*

Instruction in the rules and techniques of individual sports. Specific sports will vary from semester to semester.

## **PHED 1145 Advanced Individual Sports**

*Credit: 1 (1 lecture, 2 activity)*

Continuation of advanced terminology, rules, etc. of an individual sport.

## **PHED 1146 Beginning Bowling**

*Credit: 1 (1 lecture, 2 activity)*

This course includes everything the beginning

bowler needs to know about the game of bowling: rules, regulations, and techniques. In addition to the basics of bowling, this course attempts to give each student a better understanding of the elements involved in the game and enhance his or her enjoyment and performance of the number one indoor participant lifetime sport in the United States. Off-campus site.

## **PHED 1147 Softball**

*Credit: 1 (1 lecture, 2 activity)*

Instruction in the rules and techniques of softball. Students will learn game specific techniques (batting, bunting, running bases, fielding, etc.) and become familiar with the basic strategies, rules, tournament play and terminology.

## **PHED 1150 Beginning Swimming**

*Credit: 1 (1 lecture, 2 activity)*

Basic water safety, breath control, arm/leg movements, treading water, beginning surface strokes. Non-swimmers only.

## **PHED 1153 Jogging**

*Credit: 1 (1 lecture, 2 activity)*

The student will learn proper and safe walking/jogging/running techniques to begin a cardiovascular training program and will learn the basic physiological principles for distance walking/jogging/running.

## **PHED 1154 Martial Arts - Jeet Kune Do**

*Credit: 1 (1 lecture, 2 activity)*

Study Bruce Lee's art of Jun Fan along with the highly effective martial arts of Thailand, China, Japan and the Philippines. The student will learn basic self-defense and martial art skills needed to make good decisions regarding dangerous self-defense situations.

## **PHED 1155 Martial Arts - Tai Kwan Do**

**Credit: 1 (1 lecture, 2 activity)**

A traditional martial arts class which focuses on mental as well as physical development. The student will learn self-control and defensive techniques.

## **PHED 1159 Tai Chi**

*Credit: 1 (1 lecture, 2 activity)*

Emphasis is placed on mastering several styles of Tai Chi. The student will perform such skills as stances, kicks, punches and arm movement. The student will develop greater flexibility, endurance, balance and coordination.

## **PHED 1160 Country and Western Dance**

*Credit: 1 (1 lecture, 2 activity)*

The class will consist of Two Step, Polka, Waltz, East Coast Swing, etc. The student will also gain knowledge in dance floor etiquette, history, rules and specific techniques.

## **PHED 1304 Personal and Community Health**

*Prerequisites: Must be placed into GUST 0342 (or higher) in reading and ENGL 0310/0349 (or higher)*

*in writing.*

*Credit: 3 (3 lecture)*

This course provides an introduction to the fundamentals, concepts, strategies, applications, and contemporary trends related to understanding personal and/or community health issues. This course also focuses on empowering various populations with the ability to practice healthy living, promote healthy lifestyles, and enhance individual well-being. This course fulfills the New Core 2016 requirement under the Component Area Option.

## **PHED 1306 First Aid**

*Credit: 3 (3 lecture)*

Instruction and practice for emergency care. Designed to enable students to recognize and avoid hazards within their environment, to render intelligent assistance in case of accident or sudden illness, and to develop skills necessary for the immediate and temporary care of the victim. Successful completion of the course may enable the student to receive a certificate from a nationally recognized agency. This course fulfills the New Core 2016 requirement under the Component Area Option.

## **PHED 2111 Beginning Weight Training and Conditioning**

*Credit: 1 (1 lecture, 2 activity)*

Basic fundamental skills and techniques of a strength and conditioning program. Emphasis is placed on correct procedures and use of equipment.

## **PHED 2113 Individualized**

### **Fitness Training**

*Credit: 1 (1 lecture, 2 activity)*

Provides opportunity to accomplish fitness objectives at own pace. Some knowledge of concepts of fitness and weight training recommended.

## **PHED 2115 Weight Training and Conditioning II**

*Prerequisite: weight training*

*experience*

*Credit: 1 (1 lecture, 2 activity)*

Emphasis is placed on acquiring advanced training techniques for improving muscular strength, including competitive lifting skills.

## **PHED 2146 Bowling II**

*Credit: 1 (1 lecture, 2 activity)*

This course includes everything the advanced and competitive bowler needs to know about the game of bowling: rules, regulations, and techniques. In addition to the basics of bowling, this course attempts to give each student a better understanding of the elements involved in competitive bowling.

# Course Descriptions

## **PHED 2150 Intermediate Swimming**

*Credit: 1 (lecture, 2 activity)*

Continued acquisition of new strokes. Emphasis is placed on increasing stamina and strength. Beginning skills needed. Basic Water Safety Certification available.

## **PHED 2151 Tennis II**

*Prerequisite: Basic tennis skills*

*Credit: 1 (lecture, 2 activity)*

The course will teach forehand, backhand, serve, volley and lob for advanced players. In addition the more specific tennis strokes, dropshot, spin and slice serves, topspin and slice ground strokes will be taught. The student will become familiar with the specific rules, match and tournament regulations.

## **PHED 2153 Marathon**

*Prerequisite: jogging experience*

*Credit: 1 (1 lecture, 2 activity)*

Successful completion of this course will lead to the ability to complete a full 26.2 mile marathon. In addition to learning the proper and safe techniques of marathon training, the student will develop the ability to complete the GAAC 30k(18.6 miles) at the end of the semester.

## **PHED 2154 Martial Arts II**

*Prerequisite: Basic martial arts skills*

*Credit: 1 (1 lecture, 2 activity)*

The student will become familiar with advanced self-defense and martial arts skills.

## **PHED 2156 Golf II**

*Credit: 1 (1 lecture, 2 activity)*

The student will learn advanced golf skills and become familiar with the rules, tournament play and terminology involved in advanced golf.

## **PHED 2253 Lifeguard Training**

*Prerequisite: must pass skills test to remain in class*

*Credit: 2 (1 lecture, 2 activity)*

Provides the necessary training for qualification as a non-surf lifeguard. Includes training in community CPR and first aid. Strong swimming skills are required. Red Cross certification.

## **PHIL 1301 Introduction to Philosophy**

*Prerequisites: ENGL 1301 or Department Approval*

*Credit: 3 (3 lecture)*

This course is a theoretically diverse introduction to the study of ideas, including arguments and investigations about abstract and real phenomena, particularly in the areas of knowledge, ethics, and religion. This course satisfies the Language, Philosophy and Culture or Component Area Option of the HCC core.

## **PHIL 1304 Introduction to World Religions**

*Prerequisites: ENGL 1301 or Department Approval*

*Credit: 3 (3 lecture)*

This course is a diverse survey of world traditions and religions, including African traditions, Native American traditions, Hinduism, Buddhism, Islam, Tao and Chinese Philosophy, Christianity and Judaism. This course satisfies the Language,

Philosophy and Culture or Component Area Option of the HCC core.

## **PHIL 2289 Academic Cooperative in Philosophy**

*Prerequisites: Must be placed into college-level reading (or take GUST 0342 as a co-requisite) and be placed into college-level writing (or take ENGL 0310/0349 as a co-requisite).*

*Credit: 2 (2 lecture)*

An instructional program designed to integrate on-campus study with practical hands-on work experience. In conjunction with class seminars, the student will set specific goals and objectives in the study of philosophy.

## **PHIL 2303 Introduction to Symbolic Logic**

*Prerequisites: Must be placed into college-level reading (or take GUST 0342 as a co-requisite) and be placed into college-level writing (or take ENGL 0310/0349 as a co-requisite).*

*Credit: 3 (3 lecture)*

An introduction to symbolic logic, focusing on both propositional and predicate logic, emphasizing the rules of translating language into symbols, the rules of inference and replacement, and the mechanism of reasoning used by computers. Core Curriculum Course.

## **PHIL 2306 Introduction to Ethics**

*Prerequisites: ENGL 1302 or Department Approval*

*Credit: 3 (3 lecture)*

A philosophical reflection of the basic principles of the moral life, including traditional and contemporary views concerning the nature of goodness, happiness, duty, and freedom as they apply to individual right, business, medicine, and community well-being. This course satisfies the Language, Philosophy and Culture or Component Area Option of the HCC core.

## **PHIL 2307 Introduction to Social and Political Philosophy**

*Prerequisites: ENGL 1301 or Department Approval*

*Credit: 3 (3 lecture)*

This course is a critical analysis of political theories and social issues. Consideration will be given to historically significant and contemporary systems, problems, and thinkers. This course satisfies the Language, Philosophy and Culture or Component Area Option of the HCC core.

## **PHIL 2316 Survey of Ancient and Medieval Philosophy**

*Prerequisites: ENGL 1302 or Department Approval*

*Credit: 3 (3 lecture)*

An historic survey of critical and reflective thinking as applied to the basic problems of existence and the meaning of human life and institutions; begins with the Greek and Roman philosophers, continues through the Middle Ages, and ends with the Renaissance; a study of the nature of philosophy as applied to the

development of the scientific method, the existence of God, and the political structures of society. This course satisfies the Language, Philosophy and Culture or Component Area Option of the HCC Core.

## **PHIL 2321 Existence and Faith**

*Prerequisites: ENGL 1301 or Department Approval*

*Credit: 3 (3 lecture)*

A critical investigation of major religious ideas, experiences, and questions that form the basis for a philosophy of religion.

## **PHIL 2389 Academic Cooperative in Philosophy**

*Prerequisites: Prerequisites: Must be placed into college-level reading (or take GUST 0342 as a co-requisite) and be placed into college-level writing (or take ENGL 0310/0349 as a co-requisite).*

*Credit: 3 (3 lecture)*

An instructional program designed to integrate on-campus study with practical hands-on work experience. In conjunction with class seminars, the student will set specific goals and objectives in the study of philosophy.

## **PHRA 1243 Pharmacy Technician Certification Review**

*Prerequisites: Successful completion of all 1st & 2nd semester PHRA courses*

*Credit: 2 (2 lecture)*

A review of major topics covered on the National Pharmacy Technician Certification examination (PTCE).

## **PHRA 1247 Pharmaceutical Mathematics II**

*Prerequisites: Successful completion of all 1st semester PHRA courses*

*Credit: 2 (2 lec, 1 lab)*

Advanced concepts of Pharmaceutical Mathematics.

## **PHRA 1260, Clinical-Pharmacy Technician/Assistant**

*Prerequisites: HPRS 1201, PHRA 1309, PHRA 1413*

*Credit: 2 (10 lab)*

A health-related work-based learning experience that enables the student to apply specialized occupational theory, skills, and concepts. Direct supervision is provided by the clinical professional.

## **PHRA 1261 Clinical - Pharmacy**

# Course Descriptions

## **Technician/Assistant**

*Prerequisites: PHRA 1102, PHRA 1205, PHRA 1309, and PHRA 1313 (with a minimum grade of C or better); Admission to the Pharmacy Technician Program; must be placed into college-level reading, college-level writing and MATH 0308 in math.*

*Credit: 2 (8 external lab)*

A health-related work-based learning experience that enables the student to apply specialized occupational theory, skills, and concepts. Direct supervision is provided by the clinical professional.

## **PHRA 1272 Professional Practices for Pharmacy Technicians**

*Prerequisites: HPRS 1201; PHRA 1301; Admission to the Pharmacy Technician Program*

*Credit: 2 (2 lecture, 1 lab)*

Development of the necessary interpersonal and professional skills and abilities needed to become a successful entry-level pharmacy technician.

## **PHRA 1291 Professional Practices for Pharmacy Technicians**

*Prerequisites: HPRS 1201; PHRA 1301; Admission to the Pharmacy Technician Program*

*Credit: 2 (2 lecture, 1 lab)*

Development of the necessary interpersonal and professional skills and abilities needed to become a successful entry-level pharmacy technician.

## **PHRA 1301 Introduction to Pharmacy**

*Prerequisites:*

*Credit: 3 (3 lecture)*

An overview of the qualifications, operational guidelines, and job duties of a pharmacy technician.

## **PHRA 1304 Pharmacotherapy and Disease Process**

*Prerequisites: Successful completion of all 1st semester PHRA courses*

*Credit: 3 (3 lecture)*

A study of the disease state and therapeutic properties of drugs used in pharmaceutical therapy

## **PHRA 1305 Drug Classification**

*Prerequisites: HPRS 1201; PHRA 1301; Admission to the Pharmacy Technician Program; must be placed into college-level reading, college-level writing and MATH 0308 in math.*

*Credit: 3 (3 lecture)*

A study of pharmaceutical drugs, abbreviations, classifications, dosages, side effects, and routes of administration.

## **PHRA 1309 Pharmaceutical Mathematics I**

*Prerequisites: HPRS 1201, PHRA 1301; Admission to the Pharmacy Technician Program; must be placed into college-level reading, college-level writing and MATH 0308 in math.*

*Credit: 3 (3 lecture)*

Solving pharmaceutical calculation problems encountered in the preparation and distribution of drugs.

## **PHRA 1413 Community Pharmacy**

## **Practice**

*Prerequisites: HPRS 1201, PHRA 1301; Admission to the Pharmacy Technician Program; must be placed into college-level reading, college-level writing and MATH 0308 in math.*

*Credit: 4 (2 lecture, 4 lab)*

Introduction to the skills necessary to process, prepare, label, and maintain records of prescriptions in a community pharmacy to include customer service, count and pour techniques, prescription calculations, drug selection and preparation, over-the-counter drugs, inventory management and legal parameters.

## **PHRA 1445 Compounding Sterile Preparations**

*Prerequisites: Successful completion of all 1st semester PHRA courses.*

*Credit: 4 (2 lecture, 6 lab)*

The process of compounding sterile preparations and aseptic technique within legal and regulatory guidelines specified by USP <797> standards.

## **PHRA 1449 Institutional Pharmacy**

### **Practice**

*Prerequisites: Successful completion of all 1st semester PHRA courses.*

*Credit: 4 (2 lecture, 6 lab)*

Fundamentals of the diverse roles and practice of pharmacy technicians in an institutional pharmacy setting. In-depth coverage of hospital pharmacy organization, work flow and personnel, safety techniques, data entry, packaging and labeling operations, inpatient drug distribution systems including investigational drugs, continuous quality improvement and inventory control.

## **PHRA 2260 Clinical - Pharmacy Technician/Assistant**

*Prerequisites: Successful completion of all 1st and 2nd semester PHRA courses*

*Credit: 2 (8 external lab)*

A health-related work-based learning experience that enables the student to apply specialized occupational theory, skills, and concepts. Direct supervision is provided by the clinical professional.

## **PHRA 2261 Clinical - Pharmacy Technician/Assistant**

*Prerequisites: Successful completion of all 1st and 2nd semester PHRA courses.*

*Credit: 2 (10 external lab)*

A health-related work-based learning experience that enables the student to apply specialized occupational theory, skills, and concepts. Direct supervision is provided by the clinical professional.

## **PHTC 1311 Fundamentals of Photography**

*Prerequisites: Must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (2 lecture, 4 lab)*

An introduction to camera operation and image production, composition, supplemental lighting, and use of exposure meters and filters.

## **PHTC 1345 Illustrative Photography I**

*Prerequisites: PHTC 1311; must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (2 lecture, 4 lab)*

Instruction in the technical aspects involved in commercial photography. Topics include lighting equipment, techniques of production photography, reproduction principles, illustrative techniques, and advertising.

## **PHTC 1351 Photojournalism I**

*Prerequisite: PHTC 1311; must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (2 lecture, 4 lab)*

Presentation of photographic techniques used by photojournalists in newspapers, magazines, and trade publications including news, feature, sports, editorial portraits, and photo essays. Includes a study of layout design and the freelance market.

## **PHTC 1353 Portraiture I**

*Prerequisites: PHTC 1311; must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (2 lecture, 4 lab)*

Photographic principles applied to portrait lighting, posing, and subject rapport.

## **PHTC 2340 Photographic Studio Management**

*Prerequisites: Must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (3 lecture)*

Photography business management, pricing, market analysis, promotion, networking, job acquisition, and photographic equipment analysis.

## **PHTC 2343 Portfolio Development**

*Prerequisite: All PHTC courses; must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (2 lecture, 4 lab)*

A culmination experience for the evaluation of the student's photographic competencies. Includes association with a professional photographic organization, skills in resume creation, completion of portfolio, professional self-presentation, comprehensive exam, and seminars in areas of photographic interest.

## **PHTC 2345 Illustrative Photography II**

*Prerequisites:*

*Credit: 3 (2 lecture, 4 lab)*

A continuation of the study of commercial photographic principles with an emphasis on enhancing technical and creative quality.

## **PHTC 2353 Portraiture II**

*Prerequisites: PHTC 1345; must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (2 lecture, 4 lab)*

Advanced concepts in the study of principles

# Course Descriptions

of effective portraiture with specific emphasis on unique presentation and environmental and location studies.

## **PHTC 2451 Photojournalism II**

*Prerequisites:*

*Credit: 3 (2 lecture, 4 lab)*

Advanced concepts of photojournalism. May include documentary, corporate, and annual report photography.

## **PHYS 1305 Introductory Physics I**

*Prerequisites: Must be placed into GUST 0342 (or higher) in reading and ENGL 0310/0349 (or higher) in writing.*

*Credit: 3 (3 lecture)*

General introduction to basic and fundamental principles in physics (with minimal or no computations) including: motion, gravity, momentum, energy, relativity, structures of matter, thermal energy, waves and sound. This course is intended as a non-lab-based preparatory course for students wishing to take PHYS 1401 and PHYS 1402, and also for those students wishing to take PHYS 2325 who have no prior knowledge of physics. This course satisfies the Life and Physical Sciences or Component Area Option of the HCC core.

## **PHYS 1307 Introductory Physics II**

*Prerequisites: Must be placed in GUST 0342 (or higher) in reading and ENGL 0310/0349 (or higher) in writing. PHYS 1307 can be taken without taking PHYS 1305.*

*Credit: 3 (3 lecture)*

A non-lab-based further introduction to the basic principles in physics (with minimal or no computations) which include: light, electricity, electromagnetism, quantum concepts, sub-atomic world, elementary particles and frontiers.

## **PHYS 1401 College Physics I**

*Prerequisites: MATH 1314, 1316; must also be placed into GUST 0341 (or higher) in reading.*

*Credit: 4 (3 lecture, 3 lab)*

Non-calculus based course for medical related majors, architecture majors, technology majors, and other non-engineering and non-science majors. Topics include motion and forces, work and energy, momentum and collision, and the thermal properties of matter. Laboratory exercises include selected related experiments on these topics. This course satisfies the Life and Physical Sciences or Component Area Option of the HCC core.

## **PHYS 1402 College Physics II**

*Prerequisite: Prerequisite: PHYS 1401; must also be placed into GUST 0341 (or higher) in reading.*

*Credit: 4 (3 lecture, 3 lab)*

Continuation of non-Calculus based physics for medical related majors, architecture majors, technology majors and other non-engineering and non-science majors. Topics include wave motion, electricity, magnetism, electromagnetic waves, optics, and topics in modern physics. Laboratory exercises include selected related experiments

on these topics. This course satisfies the Life and Physical Sciences or Component Area Option of the HCC core.

## **PHYS 2125 Physics Laboratory I**

*Prerequisites: Must be placed into GUST 0341 (or higher) in reading and MATH 2414 (or higher) in math.*

*Credit: 1 (3 lab)*

Selected laboratory experiments related to topics in PHYS 2325 (University Physics I) for science and engineering majors. Core Curriculum Course.

## **PHYS 2126 Physics Laboratory II**

*Prerequisite/Corequisite: PHYS 2326; must be placed into GUST 0341 (or higher) in reading and be placed into MATH 2415 (or higher).Credit: 1 (3 lab)*

Selected laboratory experiments related to topics in PHYS 2326 (University Physics II) for science and engineering majors. Core Curriculum Course.

## **PHYS 2325 University Physics I**

*Prerequisites: Must be placed into GUST 0341 (or higher) in reading and MATH 2414 (or higher) in math.*

*Credit: 3 (3 lecture, 1 lab)*

A calculus-based physics course designed specifically for chemistry, physics, and engineering majors. Topics include principles of mechanics, sound, wave phenomena, kinetic theory, fluid flow, and thermal physics. (formerly PHYS 2425) This course satisfies the Life and Physical Sciences or Component Area Option of the HCC core.

## **PHYS 2326 University Physics II**

*Prerequisites: PHYS 2425 or 2325; must be placed into GUST 0341 (or higher) in reading and be placed into MATH 2415 (or higher) in math.*

*Credit: 3 (3 lecture, 1 lab)*

Continuation of calculus based physics. Course designed specifically for chemistry, physics, and engineering majors. Includes principles of electricity and magnetism, optics, electromagnetic waves, relativity, kinetic theory, introduction to quantum theory, thermal physics, and other physics topics. (formerly PHYS 2426) This course satisfies the Life and Physical Sciences or Component Area Option of the HCC core.

## **PHYS 2389 Academic Cooperative in Physics**

*Credit: 3 (3 lecture)*

An instructional program designed to integrate on-campus study with practical hands-on work experience in the physical sciences. In conjunction with class seminars, the individual students will set specific goals and objectives in the scientific study of inanimate objects, processes of matter and energy, and associated phenomena.

## **PLAB 1173 Phlebotomy**

*Prerequisites: Must be placed into college-level reading, writing and math.*

*Credit: 1 (1 lecture, 2 lab)*

Skill development in the performance of a variety of blood collection methods using proper techniques and universal precautions. Includes vacuum collection devices, syringes, capillary skin puncture, butterfly needles and blood culture, and specimen collection on adults, children, and infants. Emphasis on infection prevention, proper patient identification, labeling of specimens and quality assurance, specimen handling, processing, and accessioning. Topics include professionalism, ethics and medical terminology.

## **PLAB 1223 Phlebotomy**

*Prerequisites: Must be placed into college-level reading, writing and math.*

*Credit: 2 (1 lecture, 4 lab)*

Skill development in the performance of a variety of blood collection methods using proper techniques and universal precautions. Includes vacuum collection devices, syringes, capillary skin puncture, butterfly needles and blood culture, and specimen collection on adults, children, and infants. Emphasis on infection prevention, proper patient identification, labeling of specimens and quality assurance, specimen handling, processing, and accessioning. Topics include professionalism, ethics, and medical terminology.

## **PLAB 1323 Phlebotomy**

*Prerequisites: Must be placed into college-level reading, writing and math.*

*Credit: 3 (2 lecture, 3 lab)*

Skill development in the performance of a variety of blood collection methods using proper techniques and standard precautions. Includes vacuum collection devices, syringes, capillary skin puncture, butterfly needles and blood culture, and specimen collection on adults, children, and infants. Emphasis on infection prevention, patient identification, specimen labeling, quality assurance, specimen handling, processing, accessioning, professionalism, ethics, and medical terminology.

## **POFI 1104 Computer Fundamentals**

*Prerequisites: Must be placed into GUST 0342 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 1 (1 lecture, 1 lab)*

Computer applications specific to business-related software. Emphasizes the concurrent development of office skills and computer knowledge.

## **POFI 1301 Computer Applications I**

*Prerequisites: Must be placed into GUST 0342 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (2 lecture, 3 lab)*

Overview of computer office applications including

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current terminology and technology. Introduction to computer hardware, software applications, and procedures.

## **POFI 1341 Computer Applications II**

*Prerequisites: POFI 1301; Must be placed into GUST 0342 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (2 lecture, 3 lab)*

Continued study of current computer terminology and technology. Advanced skill development in computer hardware, software applications, and procedures. The student will demonstrate proficiency in commonly used software applications and identify and explain the concepts involved in producing documents using advanced features of software applications. Emphasis is on developing end-user proficiency skills for office environments.

## **POFI 1349 Spreadsheets**

*Prerequisites: POFT 1329 or POFI 1301; Must be placed into GUST 0342 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (2 lecture, 3 lab)*

Spreadsheet software for business applications.

## **POFI 1380 Cooperative Education - Information Processing/Data Entry Technician**

*Prerequisites: 12 semester hours of business technology courses and program approval; must be placed into GUST 0342 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (1 lecture, 20 lab)*

Career-related activities encountered in the student's area of specialization offered through an individualized agreement among the college, employer, and student. Under the supervision of the college and the employer, the student combines classroom learning with work experience. Includes a lecture component.

## **POFI 2331 Desktop Publishing**

*Prerequisite: Prerequisite: POFI 1341, POFI 1349; must be placed into GUST 0342 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (2 lecture, 3 lab)*

In-depth coverage of desktop publishing terminology, text editing, and use of design principles. Emphasis on layout techniques, graphics, multiple page displays, and business applications.

## **POFI 2380 Cooperative Education - Information Processing/Data Entry Technician**

*Prerequisites: POFI 1380; must be placed into GUST 0342 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit 3 (1 lecture, 20 lab)*

Career-related activities encountered in the student's area of specialization offered through an individualized agreement among the college, employer, and student. Under the supervision of the college and the employer, the student combines classroom learning with work experience. Includes a lecture component.

## **POFL 1305 Legal Terminology**

*Prerequisites: Must be placed into GUST 0342 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (3 lecture)*

An introduction to legal terminology including spelling, pronunciation, and definition of legal terms and an overview of the law and the professions.

## **POFL 1359 Legal Transcription**

*Prerequisites: POFL 1305; must be placed into GUST 0342 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (2 lecture, 3 lab)*

Skill development in comprehensive vocabulary, listening, organizing, and transcribing client-quality documents used in a legal office.

## **POFL 2305 Legal Research**

*Prerequisite: POFL 1305; must be placed into GUST 0342 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (3 lecture)*

Exploration of legal issues utilizing current and emerging research techniques.

## **POFM 1300 Medical Coding Basics**

*Prerequisites: MDCA 1313; must be placed into GUST 0342 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (2 lecture, 3 lab)*

Presentation and application of basic coding rules, principles, guidelines, and conventions utilizing various coding systems.

## **POFM 2333 Medical Document Production (Coding II)**

*Prerequisite: POFM 1300; must be placed into GUST 0342 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (2 lecture, 3 lab)*

Study of advanced concepts of medical office activities, practices, and procedures. Topics include advanced medical reports, transcription, coding, billing, insurance activities, and records management. This course is designed to provide practical applications of the linkage of the CPT-4 coding system. Medical references will be used for research and verification. MEDISOFT software applicable.

## **POFT 1319 Records and Information Management I**

*Prerequisites: Must be placed into GUST 0342 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (3 lecture)*

Introduction to basic records and information management. Includes the life cycle of a record, manual and electronic records management, and basic filing procedures and rules. The student will identify the stages in the life cycle of a record; file and retrieve records using alphabetic, numeric, geographic, and subject filing systems, input, index, code, and cross-reference records; use

tickler file, requisition, and charge-out procedures; and differentiate between manual and electronic filing.

## **POFT 1325 Business Math and Machine Applications**

*Prerequisites: Must be placed into GUST 0342 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (3 lecture)*

Skill development in the use of electronic calculators and business mathematical functions. Emphasis on business problem-solving skills using spreadsheet software and/or electronic calculator/keyboard.

## **POFT 1329 Beginning Keyboarding**

*Prerequisites: Must be placed into GUST 0342 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (2 lecture, 3 lab)*

Skill development in the operation of the keyboard by touch, applying proper keyboarding techniques. Emphasis on development of acceptable speed and accuracy levels and formatting basic documents.

## **POFT 1345 Shorthand/Notetaking**

*Prerequisites: Must be placed into GUST 0342 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (2 lecture, 3 lab)*

An introduction to shorthand/notetaking principles. Mastery of accurate reading and writing of notes to produce mailable documents from dictation.

## **POFT 1370 Introduction to Office Technology**

*Prerequisites: Must be placed into GUST 0342 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (2 lecture, 3 lab)*

An introduction to present and future resources used to facilitate handling of office information. Study will be made of equipment applications and procedures, terminology and environmental factors affecting productivity and career paths.

## **POFT 1380 Cooperative Education I - Administrative Assistant and Secretarial Services, General**

*Prerequisite: Completion of 12 semester hours and Department Approval; must be placed into GUST 0342 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (1 lecture/seminar and 20 hours a week employment)*

Career related activities encountered in the student's area of specialization are offered through a cooperative agreement between the college, employer, and student. Under supervision of the college and the employer, the student combines classroom learning with work experience. Directly related to a technical discipline, specific learning objectives guide the student through the paid work experience. This course may be repeated if topics and learning outcomes vary..

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## **POFT 2301 Intermediate Keyboarding**

*Prerequisite: Prerequisite: POFT 1329; must be placed into GUST 0342 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit 3 (2 lecture, 3 lab)*

A continuation of keyboarding skills in document formatting, speed, and accuracy. Emphasis on proofreading, editing, following instructions, and keying documents from various copy.

## **POFT 2331 Administrative Systems**

*Prerequisite: Prerequisite: POFT 1329 or Department Approval; must be placed into GUST 0342 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (2 lecture, 3 lab)*

Experience in project management and office procedures utilizing integration of previously learned skills.

## **POFT 2380 Cooperative Education II—Administrative Assistant and Secretarial Services, General**

*Prerequisites: POFT 1380 and Department Approval; must be placed into GUST 0342 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (1 lecture/seminar and 20 hours a week employment)*

An experience external to the college for an advanced student in a specialized field involving a written agreement between the educational institution and a business or industry. Mentored and supervised by a workplace employee, the student achieves objectives that are developed and documented by the college and that are directly related to specific occupational outcomes. This may be a paid or unpaid experience. This course may be repeated if topics and learning outcomes vary.

## **PREP 0100 Test Prep and Skill Building**

*Credit: 1 (16 lab)*

Gives students a head start in basic skill building in reading, writing, and mathematics by providing a targeted review of basic skill, test preparation, and utilization of learning resources. Students will retake a TSI test after this intervention to determine proper placement in developmental education.

## **PREP 0200 Test Prep and Skill Building**

*Credit: 1 (16 lab)*

Gives students a head start in basic skill building in reading, writing and mathematics by providing a targeted review of basic skills, test preparation, and utilization of learning resources. Students will retake a TSI test after this intervention to determine proper placement in developmental education.

## **PREP 0300 Test Prep and Skill Building**

*Credit: 1 (16 lab)*

To provide students information and skills in preparation for college, including orientation, test preparation, and completion of the HCC application.

## **PSTR 1301 Fundamentals of Baking**

*Prerequisites: Must be placed into GUST 0339 in reading, ENGL 0300 or 0347 in writing and MATH*

*0306 in math.*

*Credit: 3 (2 lecture, 4 lab)*

Fundamentals of baking including dough, quick breads, pies, cakes, cookies, tarts, and doughnuts. Instruction in flours, fillings, and ingredients. Topics include baking terminology, tool and equipment use, formula conversions, functions of ingredients, and the evaluation of baked products.

## **PSTR 1305 Breads and Rolls**

*Prerequisites: Must be placed into GUST 0339 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (2 lecture, 4 lab)*

Concentration on fundamentals of chemically- and yeast-raised breads and rolls. Instruction on commercial preparation of a wide variety of products.

## **PSTR 1306 Cake Decorating I**

*Prerequisites: Must be placed into GUST 0339 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (2 lecture, 3 lab)*

A course in decoration of specialized and seasonal products.

## **PSTR 1310 Pies, Tarts, Teacakes and Cookies**

*Prerequisites: Must be placed into GUST 0339 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (2 lecture, 4 lab)*

Focus on preparation of American- and European-style pie and tart fillings and dough, cookies, teacakes, custard and batters. Instruction in finishing and presentation techniques.

## **PSTR 1312 Laminated Dough, Pate a Choux and Donuts**

*Prerequisites: Must be placed into GUST 0339 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (2 lecture, 4 lab)*

Focus on preparation of laminated doughs to include puff pastry, croissant, and Danish and a variety of pate a choux (eclair paste) products and donuts. Fillings and finishing techniques included.

## **PSTR 1340 Plated Desserts**

*Prerequisites: Must be placed into GUST 0339 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (2 lecture, 4 lab)*

Preparation and service of hot and cold desserts with a focus on individual desserts, a la minute preparations, and numerous components within one preparation. Emphasis on station organization, timing, and service coordination for restaurant dessert production.

## **PSTR 1381 Cooperative Education—Baking and Pastry Arts/Baker/Pastry Chef**

*Prerequisites: Department Approval; Must be placed into GUST 0339 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (1 lecture, 20 lab)*

Career-related activities encountered in the

student's area of specialization offered through an individualized agreement among the college, employer, and student. Under the supervision of the college and the employer, the student combines classroom learning with work experience. Includes a lecture component.

## **PSTR 1391 Special Topics in Baker/Pastry Chef: Healthy and Special Needs Baking**

*Prerequisites: Must be placed into GUST 0339 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (2 lecture, 4 lab)*

In this course the students will study and prepare baked goods that are specifically formulated to address a variety of dietary conditions. The course will include baking for people with wheat-gluten sensitivities, diabetic baking, fiber rich and low fat baking, allergies free sensitive baking and more. The course will focus on how to modify formulas and use alternative ingredients and substitutes.

## **PSTR 2301 Chocolates**

*Prerequisites: Must be placed into GUST 0339 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (2 lecture, 4 lab)*

Production and decoration of traditional truffles, marzipan, molded and hand-dipped chocolate, caramels, nougats, and pate de fruit.

## **PSTR 2307 Cake Decorating II**

*Prerequisites: PSTR 1306; must be placed into GUST 0339 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (2 lecture, 3 lab)*

A course in decoration of specialized and seasonal products.

## **PSTR 2331 Advanced Pastry Shop**

*Prerequisites: PSTR 1301, PSTR 1310; must be placed into GUST 0339 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (2 lecture, 4 lab)*

A study of classical desserts, French and international pastries, hot and cold desserts, ice creams and ices, chocolate work, and decorations. Emphasis on advanced techniques.

## **PSTR 2350 Wedding Cakes**

*Prerequisites: PSTR 1306; Must be placed into GUST 0339 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (2 lecture, 4 lab)*

Skills, concepts, and techniques for preparing wedding cakes. Includes marzipan, plastic chocolate-rolled fondant, chocolate garnish, flower making, and royal icing piping work.

## **PSTR 2370 Supervised Study: Capstone Study in Baking & Pastry Arts**

*Prerequisites: All PSTR courses*

*Credit: 3 (1 lecture, 5 lab)*

Assigns problems for independent study incorporating previous instruction and supervised by the instructor. Provides the student and instructor an opportunity to work together to identify the critical areas of need in the student's repertoire.

*An individualized plan will be developed to*

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address the student's weaknesses and to lead progressively to a group demonstration of critical skills. Individual assessment constitutes the majority of this course. Lab, lecture, research, and out-of-class projects will be utilized.

## **PSYC 1300 Learning Framework**

*Credit: 3 (3 lecture)*

A study of the research and theory in the psychology of learning, cognition, and motivation; factors that impact learning; and application of learning strategies. Theoretical models of strategic learning, cognition, and motivation serve as the conceptual basis for the introduction of college-level student academic strategies. (May also be offered as EDUC 1300.)

## **PSYC 2301 General Psychology**

*Prerequisites: Must qualify to take college-level reading and writing OR take INRW 0420 (or ESOL 0360) as a co-requisite.*

*Credit: 3 (3 lecture)*

A survey of the basic principles underlying human behavior and mental processes. Emphasis will be placed on major areas of study in the field of psychology, such as motivation, development, thought processes, and personality. This course satisfies the Social and Behavioral Sciences or Component Area Option of the HCC core.

## **PSYC 2302 Applied Psychology - NOT in DB**

*Credit: 3 (3 lecture)*

A study of the application of basic psychological principles to adjustment decisions in daily life. This will include such topics as interpersonal communication, conflict resolution, stress, group processes, friendship, love and marriage, and career choices.

## **PSYC 2306 Human Sexuality**

*Prerequisites: Must be placed into college-level reading.*

*Credit: 3 (3 lecture)*

This course is designed to provide an understanding of human sexuality, identity, orientation, and behavior, and the variations in these dimensions of this important aspect of human experience. It includes information on physical, cognitive, and psychosocial changes associated with sexuality. Theory, research methods, and applications of research to the facilitation of gender identity development and understanding of the human sexual response are covered. The course also provides information on the treatment of sexual dysfunction, and the prevention of sexually transmitted diseases and irresponsible sexual behavior.

## **PSYC 2307 Adolescent Psychology**

*Credit: 3 (3 lecture)*

Psychology of adolescence is a study of the relationships among the physical, emotional, social and psychological factors that influence growth

and development from puberty to early adulthood (ages 12-18).

## **PSYC 2308 Human Growth and Development: Childhood and Adolescence**

*Credit: 3 (3 lecture)*

A study of normal physiological, intellectual, and emotional development and functioning of the child from conception through adolescence. Emphasis on normal child development, the family, parent-child interaction, and the psychological and cultural forces affecting them.

## **PSYC 2311 Human Growth and Development: Adulthood and Aging**

*Prerequisite: PSYC 2301 or 2308 or Department Approval*

*Credit: 3 (3 lecture)*

A study of the normal physiological, intellectual, and emotional development and functioning of the human life cycle from adulthood through death.

## **PSYC 2314 Lifespan Growth & Development**

*Prerequisite: PSYC 2301 or Department Approval; must be placed into college-level reading (or take GUST 0342 as a co-requisite) and be placed into college-level writing (or take ENGL 0310/0349 as a co-requisite).*

*Credit: 3 (3 lecture)*

A developmental psychology course designed to provide an understanding of human behavior and characteristics from conception through death. This course includes information on physical, cognitive, and psychosocial changes throughout the lifespan. Theory, research, and applications are covered. This course satisfies the Social and Behavioral Sciences or Component Area Option of the HCC core.

## **PSYC 2315 Psychology of Adjustment**

*Prerequisite: PSYC 2301; must be placed into college-level reading (or take GUST 0342 as a co-requisite) and be placed into college-level writing (or take ENGL 0310/0349 as a co-requisite).*

*Credit: 3 (3 lecture)*

A study of human behavior, applying psychological theory to the development of the well-adjusted individual. Techniques for managing stress, reducing anxiety, coping with anger, increasing assertiveness, and achieving self-control are considered.

## **PSYC 2316 Psychology of Personality**

*Prerequisite: PSYC 2301; must be placed into college-level reading (or take GUST 0342 as a co-requisite) and be placed into college-level writing (or take ENGL 0310/0349 as a co-requisite).*

*Credit: 3 (3 lecture)*

This course covers personality theories that apply to both normal personality and abnormal behavior. Some of the theories covered are psychoanalytic, cognitive, learning, and sociocultural. Current research on the biological foundations of mental health and illness is covered in detail. These theories are related to mental disorders such as major depression, phobias, obsessive-

compulsive disorder, bipolar disorder and schizophrenia. Case studies of individuals enhance comprehension of mental disorders. Treatment by psychotherapy and drugs is discussed as well as ethical, legal and social issues relating to the mentally ill. This course satisfies the Social and Behavioral Sciences or Component Area Option of the HCC core.

## **PSYC 2317 Statistical Methods in Psychology**

*Prerequisite: MATH 0312(Or Higher, )Must be placed into college-level reading (or take GUST 0342 as a co-requisite) and be placed into college-level writing.*

*Credit: 3 (3 lecture)*

An introduction to the use of scientific methods in psychology and to the statistical analysis of data. Attention is given to descriptive and inferential statistical methodology including t-tests, analysis of variance, correlation and regression. Core Curriculum Course.

## **PSYC 2319 Social Psychology**

*Prerequisite: PSYC 2301; must be placed into college-level reading (or take GUST 0342 as a co-requisite) and be placed into college-level writing*

*Credit: 3 (3 lecture)*

A study of social cognition, social behavior, interpersonal relations, and group membership. Emphasis on theories, research, and applications. This course satisfies the Social and Behavioral Sciences or Component Area Option of the HCC core.

## **PSYC 2370 Cross-Cultural Psychology**

*Prerequisite: Must qualify to take college-level reading and writing OR take INRW 0420 (or ESOL 0360) as a co-requisite.*

*Credit: 3 (3 lecture)*

A course designed to explore and better understand psychology from a multicultural perspective. The course will examine similarities and differences among cultures and the context of their development. Discussions, lectures, and assignments will address how culture influences a group's way of thinking and behaving.

## **PTAC 1302 Introduction To Process Technology**

*Prerequisites: Must be placed into GUST 0342 in reading, college-level writing and MATH 0312 in math.*

*Credit: 3 (3 lecture)*

Introduction to chemical and refinery plant operations. Topics include process technician duties, responsibilities and expectations, plant organizations, plant process and utility systems, and the physical and mental requirements of the process technician.

## **PTAC 1308 Safety, Health, and Environment I**

*Prerequisite or Corequisite: PTAC 1302 or Department Approval. Must be placed into GUST 0342 in reading, college-level writing and MATH 0312 in math.*

*Credit: 3 (3 lecture)*

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Development of knowledge and skills to reinforce the attitudes and behaviors required for safe and environmentally sound work habits. Emphasis on safety, health, and environmental issues in the performance of all job tasks and regulatory compliance issues.

## **PTAC 1332 Process Instrumentation I**

*Prerequisites: PTAC 1302, PTAC 1308 and MATH 1314 or Department Approval. Must be placed into GUST 0342 in reading, college-level writing and MATH 0312 in math.*

*Credit: 3 (2 lecture, 2 lab)*

Study of the instruments and instrument systems used in the process industry including terminology, primary variables, symbology, control loops, and basic troubleshooting.

## **PTAC 1350 Industrial Economics**

*Prerequisites: Must be placed into GUST 0342 in reading, college-level writing and MATH 0308 in math.*

*Credit: 3 (3 lecture)*

Examination of the profitability factors of plant operations including personnel and business strategies.

## **PTAC 1354 Industrial Processes**

*Prerequisites: PTAC 1302 and PTAC 1308; Must be placed into GUST 0342 in reading, college-level writing and MATH 0308 in math.*

*Credit: 3 (3 lecture)*

Study of the processes employed in process plant operations.

## **PTAC 1410 Process Technology I - Equipment**

*Prerequisite: PTAC 1302, PTAC 1308 or Department Approval. Must be placed into GUST 0342 in reading, college-level writing and MATH 0312 in math.*

*Credit: 4 (3 lecture, 3 lab)*

Instruction in the use of common process equipment.

## **PTAC 2314 Principles of Quality**

*Prerequisites: PTAC 1302 and MATH 1314; Must be placed into GUST 0342 in reading, college-level writing and MATH 0312 in math.*

*Credit: 3 (3 lecture)*

Study of the background and application of quality concepts. Topics include team skills, quality tools, and economics and continuous improvement.

## **PTAC 2386 Internship Process Technology/Technician (Not being used)**

*Prerequisites:*

*Credit: 3 (1 lecture, 17 lab)*

A work-based learning experience that enables the student to apply specialized occupational theory, skills and concepts. A learning plan is developed by the college and the employer.

## **PTAC 2420 Process Technology II -**

## **Systems**

*Prerequisite: PTAC 1332, PTAC 1410 SCIT 1414, SCIT 1418 or Department Approval; Must be placed into GUST 0342 in reading, college-level writing and MATH 0312 in math.*

*Credit: 4 (3 lecture, 3 lab)*

Study of the interrelation of process equipment and process systems including related scientific principles.

## **PTAC 2438 Process Technology III - Operations**

*Prerequisite: PTAC 2420; Must be placed into GUST 0342 in reading, college-level writing and MATH 0312 in math.*

*Credit: 4 (3 lecture, 3 lab)*

This course combines systems into operational processes with emphasis on operations under various conditions.

## **PTAC 2446 Process Troubleshooting**

*Prerequisite: PTAC 2420 or Department Approval; Must be placed into GUST 0342 in reading, college-level writing and MATH 0312 in math.*

*Credit: 4 (3 lecture, 3 lab)*

Instruction in the different types of troubleshooting techniques, procedures, and methods used to solve process problems. Topics include application of data collection and analysis, cause effect relationships, and reasoning.

## **PTHA 1229 Applied Physical Principles**

*Prerequisites: Admission to the Program; must be placed into college-level reading, college-level writing and MATH 0312 in math. Credit: 2 (1 lecture, 2 lab)*

The application of physical principles to selected interventions in physical therapy.

## **PTHA 1266 Practicum I-Physical Therapist Assistant**

*Prerequisites: PTHA 2205, PTHA 2509; must be placed into college-level reading, college-level writing and MATH 0312 in math.*

*Credit: 2 (14 lab)*

Practical, general workplace training supported by an individualized learning plan developed by the employer, college, and student.

## **PTHA 1267 Practicum II-Physical Therapist Assistant**

*Prerequisites: PTHA 1266, PTHA 2435, PTHA 2431; must be placed into college-level reading, college-level writing and MATH 0312 in math.*

*Corequisites: PTHA 2239 and PTHA 2250*

*Credit: 2 (14 lab)*

Practical general workplace training supported by an individualized learning plan developed by the employer, college and student.

## **PTHA 1301 The Profession of**

## **Physical Therapy**

*Prerequisites: Admission to the Program; must be placed into college-level reading, college-level writing and MATH 0312 in math.*

*Credit: 3 (2 lecture, 2 lab)*

Introduction to the profession of physical therapy and the role of the physical therapist assistant.

## **PTHA 1321 Pathophysiology for the PTA**

*Prerequisite: Prerequisite: PTHA 1413, PTHA 1301, HPRS 1106; must be placed into college-level reading, college-level writing and MATH 0312 in math.*

*Credit: 3 (3 lecture, 1 lab)*

Study of the pathophysiology of diseases/conditions encountered in physical therapy.

## **PTHA 1391 Special Topics in Physical Therapy Assistant: PTA Learning Strategies**

*Prerequisites: Must be placed into college-level reading, college-level writing and MATH 0312 in math.*

*Credit: 3 (3 lecture)*

This course is specifically tailored to meet the student's needs with regard to success in the PTA program. The class will emphasize time management, study skills and strategies, reading skills, and critical thinking.

Learning outcomes: 1. The student will show competency with all anatomy section exams with a 75% minimum. 2. The student will show improvement in test taking strategies and critical thinking skills as reflected in the student's improved work by the end of the course.

## **PTHA 1405 Basic Patient Care Skills**

*Prerequisites: Admission to the Program; must be placed into college-level reading, college-level writing and MATH 0312 in math.*

*PTHA 1321, PTHA 1413, PTHA 1229, PTHA 1201*

*Credit: 4 (3 lecture, 4 lab)*

Introduction to the theory and application of basic patient handling, functional skills, assessment techniques, and measurement techniques. The student will distinguish and examine the theory, principles, and techniques of patient handling and functional skills; perform basic patient handling, functional skills, assessment techniques, and measurement techniques; and utilize relevant communication techniques.

## **PTHA 1413 Functional Anatomy**

*Prerequisites: Admission to the Program; must be placed into college-level reading, college-level writing and MATH 0312 in math.*

*Corequisite: BIOL 2401*

*Credit: 4 (3 lecture, 4 lab)*

The relationship of the musculoskeletal and neuromuscular systems to normal and abnormal movement.

# Course Descriptions

## **PTHA 1431 Physical Agents**

*Prerequisites: PTHA 1413, PTHA 1229, PTHA 1301, PTHA 1305, HPRS 1106; must be placed into college-level reading, college-level writing and MATH 0312 in math.*

*Credit: 4 (2 lecture, 6 lab)*

Biophysical principles, physiological effects, efficacy, and application of physical agents.

## **PTHA 2205 Neurology**

*Prerequisites: PTHA 1321; must be placed into college-level reading, college-level writing and MATH 0312 in math.*

*Credit: 2 (2 lecture, 1 lab)*

Study of neuroanatomy and neurophysiology as it relates to commonly encountered neurological conditions.

## **PTHA 2239 Professional Issues**

*Prerequisites: PTHA 2431, PTHA 2435; must be placed into college-level reading, college-level writing and MATH 0312 in math.*

*Corequisites: PTHA 1267, PTHA 2266, PTHA 2250*

*Credit: 2 (2 lecture, 1 lab)*

Discussion of professional issues and behaviors related to clinical practice; preparation for transition into the workforce.

## **PTHA 2250 Current Concepts in Physical Therapy**

*Prerequisites: PTHA 2435, PTHA 2431; must be placed into college-level reading, college-level writing and MATH 0312 in math.*

*Corequisites: PTHA 1267, PTHA 2239, PTHA 2266*

*Credit: 2 (1 lecture, 4 lab)*

Current concepts, skills, and knowledge in the provision of physical therapy services. Includes enhancement of professional development.

## **PTHA 2266 Practicum III-Physical Therapist Assistant**

*Prerequisites: PTHA 2435, PTHA 2431, PTHA 1267; must be placed into college-level reading, college-level writing and MATH 0312 in math.*

*Corequisites: PTHA 2239 and PTHA 2250*

*Credit: 2 (14 lab)*

Practical general workplace training supported by an individualized learning plan developed by the employer, college and student.

## **PTHA 2267 Practicum IV-Physical Therapist Assistant**

*Prerequisites: PTHA 1267, PTHA 2266, PTHA 2250; must be placed into college-level reading, college-level writing and MATH 0312 in math.*

*Credit: 2 (14 lab)*

Practical general workplace training supported by an individualized learning plan developed by the employer, college and student.

## **PTHA 2301 Essentials of Data Collection**

*Prerequisites: PTHA 1305, PTHA 1321, PTHA 1413, PTHA 1229, PTHA 1301, HPRS 1106; must be placed into college-level reading, college-level writing and MATH 0312 in math.*

*Corequisites: PTHA 1431, HPRS 2332*

*Credit: 3 (2 lecture, 4 lab)*

Data collection techniques used to assist in patient/client management.

## **PTHA 2431 Management of Neurological Disorders**

*Prerequisites: PTHA 2205, PTHA 2509, PTHA 2435; must be placed into college-level reading, college-level writing and MATH 0312 in math.*

*Credit: 4 (2 lecture, 6 lab)*

Advanced course integrating previously learned and new skills/techniques into the comprehensive rehabilitation of selected neurological disorders.

## **PTHA 2435 Rehabilitation Techniques**

*Prerequisites: PTHA 2205, PTHA 2509; must be placed into college-level reading, college-level writing and MATH 0312 in math.*

*Credit: 4 (2 lecture, 6 lab)*

Advanced course integrating previously learned and new skills/techniques into the comprehensive rehabilitation of selected musculoskeletal, neuromuscular, cardiopulmonary, and integumentary disorders.

## **PTHA 2509 Therapeutic Exercise**

*Prerequisites: PTHA 1321, PTHA 1431, PTHA 2301, HPRS 2332; must be placed into college-level reading, college-level writing and MATH 0312 in math.*

*Credit: 5 (3 lecture, 6 lab)*

Concepts, principles, and application of techniques related to therapeutic exercise and functional training.

## **PTRT 1301 Introduction to Petroleum Industry**

*Prerequisites:*

*Credit: 3 (3 lecture)*

An introduction to the various aspects of petroleum industry including equipment, systems, instrumentation, operations, and the various scientific principles. Addresses a variety of petroleum technologies: exploration, drilling, production, transportation, marketing, and chemical processing industries.

## **PTRT 1313 Industrial Safety**

*Prerequisites:*

*Credit: 3 (3 lecture)*

An overview for petroleum and manufacturing workers of state/federal regulations and guidelines which require industrial safety training. Topics include the 29 C.F.R 1910, 1926 standards.

## **PTRT 1321 Oil Field Hydraulics**

*Credit: 3 (2 lecture, 4 lab)*

Study hydraulics applicable to drilling, completion, and production. Includes calculating and evaluating the characteristics of the flowing and static fluids in various tubular and annular systems.

## **PTRT 1370 Petroleum Geology**

*Prerequisites: PTRT 1301, MATH 1314*

*Credit: 3 (3 lecture)*

Principles of geological patterns, rock shapes and structures, and reservoir formations associated with petroleum operations.

## **PTRT 1403 Principles of Drilling**

*Prerequisites: PTRT 1301*

*Credit: 4 (2 lecture, 4 lab)*

A study of practices and procedures for drilling operations. Rig equipment, casing design, fishing, and proper procedures to successfully drill a well are discussed.

## **PTRT 1470 Petroleum Data Management I-Exploration**

*Prerequisites: PTRT 1301, PTAC 1308, MATH 1314 OR Departmental Approval*

*Credit: 4 (2 lecture, 4 lab)*

Overview of computer applications in exploration; covers the history, fundamentals, terminology and software for exploration; introduction to the principles of geology, geophysics and petrophysics.

## **PTRT 1471 Exploration and Production I**

*Prerequisites: PTRT 1301*

*Credit: 4 (2 lecture, 4 lab)*

Overview of various aspects of deepwater operations deepwater exploration, drilling and completing wells, development of production systems.

## **PTRT 1472 Petroleum Data Management II-Drilling and Production**

*Prerequisites: PTRT 1470*

*Credit: 4 (2 lecture, 4 lab)*

Overview of computer applications in drilling and production. Covers the history, fundamentals, terminology and software for drilling and production. Introduction to the principles of drilling, production and reservoir.

## **PTRT 1473 Exploration and Production II**

*Prerequisites: PTRT 1470*

*Credit: 4 (2 lecture, 4 lab)*

Continue with exploration and production principles including drilling rigs, giant oil and gas fields, beam pumps, and geological classifications.

## **PTRT 2331 Well Completions**

*Prerequisites: PTRT 1473, MATH 1325*

*Credit: 3 (3 lecture)*

Drilling and wellbore analysis data to develop a well completion plan.

## **PTRT 2370 Petroleum Operations**

*Prerequisites: PTRT 1470*

*Credit: 3 (3 lecture)*

Course covers the principles and fundamentals of onshore and offshore operations implemented

# Course Descriptions

in oil recovery.

## **PTRT 2371 Principles of Reservoir Engineering**

*Prerequisites:* PTRT 1370, PTRT 1470

*Credit:* 3 (3 lecture)

An overview of reservoir engineering techniques and calculations employed in the proper operation and management of underground oil reservoirs.

## **PTRT 2372 Internship-Petroleum Technology/Technician**

*Prerequisite:* PTRT 2331, Department Approval

*Credit:* 3 (18 lab)

A work-based learning experience that enables the student to apply specialized occupational theory, skills and concepts. A learning plan is developed by the college and the employer.

## **PTRT 2373 Principles of Enhanced Oil and Gas Recovery and Hydraulic Fracturing**

*Prerequisites:* PTRT 1470

*Credit:* 3 (3 lecture)

Introduction in the development, basic operations, enhancement, optimization, and monitoring of fundamental and commonly implemented enhanced oil and gas recovery best practices.

## **PTRT 2380 Cooperative Education - Petroleum Technology/Technician**

*Prerequisites:* PTRT 2331, Department Approval

*Credit:* 3 (1 lecture, 19 lab)

Career-related activities encountered in the student's area of specialization offered through an individualized agreement among the college, employer, and student. Under the supervision of the college and the employer, the student combines classroom learning with work experience. Includes a lecture component.

## **PTRT 2423 Natural Gas Production**

*Prerequisites:* PTRT 2331

*Credit:* 4 (2 lecture, 4 lab)

An overview of the aspects of natural gas and oil production including various aspects of hydrocarbon production, processing equipment, and gas compression/transportation systems.

## **PTRT 2470 Petroleum Data Management III-Facilities and Performance**

*Prerequisites:* PTRT 2331

*Credit:* 4 (2 lecture, 4 lab)

Overview of computer applications in surface facilities and automation. Covers the history, fundamentals, terminology and software for surface facilities and automation.

## **QCTC 1341 Statistical Process Control**

*Prerequisite:* Must be placed into GUST 0341 in reading, ENGL 0310 or 0349 in writing and MATH 0306 in math.

*Credit:* 3 (3 lecture)

Components of statistics, including techniques of collection, presentation, analysis, and interpretation of numerical data as applied to statistical control. Stresses application of correlation methods, analysis of variance, dispersion, sampling quality control, reality, mathematical models, and programming.

## **RADR 1160 Clinical - Radiologic Technology/Science - Radiographer**

*Prerequisites:* Admission to the program; must be placed into college-level reading, writing and math.

*Credit:* 1 (5 lab)

A health-related work-based learning experience that enables the student to apply specialized occupational theory, skills, and concepts. Direct supervision is provided by the clinical professional.

## **RADR 1266 Radiographic Practicum I**

*Prerequisites:* RADR 1160, RADR 1303, RADR 1411; ; must be placed into college-level reading, writing and math.

*Credit:* 2 (16 lab)

Practical, general workplace training supported by an individualized learning plan developed by the employer, college, and student.

## **RADR 1303 Patient Care (Ethics)**

*Prerequisites:* Admission to the program; must be placed into college-level reading, writing and math.

*Credit:* 3 (3 lecture)

An introduction in patient assessment, infection control procedures, emergency and safety procedures, communication and patient interaction skills, and basic pharmacology.

## **RADR 1313 Principles of Radiographic Imaging I**

*Prerequisites:* Admission to the program; must be placed into college-level reading, writing and math.

*Credit:* 3 (3 lecture, 1 lab)

Radiographic image quality and the effects of exposure variables.

## **RADR 1411 Basic Radiographic Procedures**

*Prerequisites:* Admission to the program; must be placed into college-level reading, writing and math.

*Credit:* 4 (3 lecture, 4 lab)

An introduction to radiographic positioning terminology, the proper manipulation of equipment, positioning and alignment of the anatomical structure and equipment, and evaluation of images for proper demonstration of basic anatomy.

## **RADR 2167 Practicum (or Field Experience) - Radiologic Technology/Science - Radiographer**

*Prerequisites:* RADR 2213, RADR 2217, RADR 2367; must be placed into college-level reading, writing

and math.

*Credit:* 1 (10 lab)

Practical, general workplace training supported by an individualized learning plan developed by the employer, college, and student.

## **RADR 2213 Radiation Biology and Protection**

*Prerequisites:* RADR 2309; must be placed into college-level reading, writing and math.

*Credit:* 2 (2 lecture)

Effects of radiation exposure on biological systems. Includes typical medical exposure levels, methods for measuring and monitoring radiation, and methods for protecting personnel and patients from excessive exposure.

## **RADR 2217 Radiographic Pathology**

*Prerequisites:* RADR 2331; must be placed into college-level reading, writing and math.

*Credit:* 2 (2 lecture)

Disease processes and their appearance on radiographic images.

## **RADR 2260 Clinical - Radiologic Technology/Science - Radiographer**

*Prerequisites:* RADR 2309, RADR 2401, RADR 1266; must be placed into college-level reading, writing and math.

*Credit:* 2 (8 lab)

A health-related work-based learning experience that enables the student to apply specialized occupational theory, skills, and concepts. Direct supervision is provided by the clinical professional.

## **RADR 2309 Radiographic Imaging Equipment**

*Prerequisites:* RADR 2305, RADR 2331; ; must be placed into college-level reading, writing and math.

*Credit:* 3 (3 lecture)

A study of the equipment and physics of x-ray production, basic x-ray circuits and relationship of equipment components to the imaging process.

## **RADR 2331 Advanced Radiographic Procedures**

*Prerequisite:* RADR 1313, RADR 2401; ; must be placed into college-level reading, writing and math.

*Credit:* 3 (2 lecture, 2 lab)

Continuation of positioning; alignment of the anatomical structure and equipment, evaluation of images for proper demonstration of anatomy and related pathology.

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## **RADR 2333 Advanced Medical Imaging**

*Prerequisite: RADR 1313, RADR 2401; ; must be placed into college-level reading, writing and math.*

*Credit: 3 (3 lecture)*

Specialized imaging modalities. Includes concepts and theories of equipment operations and their integration for medical diagnosis.

## **RADR 2335 Radiologic Technology Seminar**

*Prerequisites: all RADR courses or by Department Approval; ; must be placed into college-level reading, writing and math.*

*Credit: 3 (3 lecture, 1 lab)*

A capstone course focusing on the synthesis of professional knowledge, skills and attitudes in preparation for professional employment and lifelong learning.

## **RADR 2340 Sectional Anatomy for Medical Imaging**

*Prerequisites: RADR 2333; must be placed into college-level reading, writing and math.*

*Credit: 3 (3 lecture)*

Anatomic relationships that are present under various sectional orientations as depicted by computed tomography or magnetic resonance imaging.

## **RADR 2366 Radiographic Practicum III**

*Prerequisites: RADR 2260, RADR 2333; ; must be placed into college-level reading, writing and math.*

*Credit: 3 (24 lab)*

Practical, general workplace training supported by an individualized learning plan developed by the employer, college, and student.

## **RADR 2367 Radiographic Practicum IV**

*Prerequisites: RADR 2333, RADR 2366*

*Credit: 3 (24 lab)*

Practical, general workplace training supported by an individualized learning plan developed by the employer, college, and student.

## **RADR 2401 Intermediate Radiographic Procedures**

*Prerequisites: RADR 1303, RADR 1411; must be placed into college-level reading, writing and math.*

*Credit: 4 (3 lecture, 4 lab)*

A continuation of the study of the proper manipulation of radiographic equipment, positioning and alignment of the anatomical structure and equipment, and evaluation of images for proper demonstration of anatomy.

## **RBPT 1305 Residential Lighting, Appliances, and Plug Loads**

*Prerequisites: Must be placed into GUST 0339 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (3 lecture, 1 lab)*

A study of the use of appliances, lighting, plug loads, and techniques to lower energy and water consumption in the home. Includes basic electrical concepts, calculation of energy and water usage, and selection of water- and energy-efficient appliances and lighting. Also covers the impact of human behavior on energy and water consumption. Investigation of future trends will be explored.

## **RBPT 1310 Residential Mechanical Systems**

*Prerequisites: Must be placed into GUST 0339 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (3 lecture, 1 lab)*

Identification and operation of space heating and cooling, ventilation, water heating, and swimming pool/spa systems. Includes comparisons of mechanical systems based on fuel type and efficiency. Also explores the impact of human behavior on energy usage.

## **RBPT 2315 Green Rating Systems for Homes**

*Prerequisites: Must be placed into GUST 0339 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (3 lecture, 1 lab)*

Use of computer software and rating criteria to evaluate and score homes using residential green rating systems. Emphasizes gathering data from building plans, manufacturers' specifications, and on site testing.

## **RBPT 2320 Residential Energy Conservation Codes**

*Prerequisites: Must be placed into GUST 0339 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (3 lecture, 1 lab)*

Use of computer software and code documents to determine compliance with residential energy conservation codes. Emphasizes gathering data from building plans and manufacturers' specifications.

## **RBPT 2325 Energy Rating Systems for Homes**

*Prerequisites: Must be placed into GUST 0339 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (3 lecture, 1 lab)*

Use of computer software and rating criteria to evaluate and score homes using residential energy rating systems. Emphasizes gathering data from building plans, manufacturers' specifications, and on site testing.

## **RBPT 2330 Advanced Residential Building Science and Systems**

*Prerequisites: Must be placed into GUST 0339 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (3 lecture, 1 lab)*

A study of advanced energy efficient and environmentally responsible residential building methodologies and technologies. Includes exploration of alternate residential building systems

and climate applicability.

## **RBPT 2340 Advanced Residential Mechanical Systems**

*Prerequisites: Must be placed into GUST 0339 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (3 lecture, 1 lab)*

A study in matching the size of a mechanical system with a specific heating and/or cooling load to optimize energy efficiency. Ventilation and humidity requirements will be determined. Includes air distribution fundamentals and an exploration of efficiency testing and verification.

## **RBPT 2355 Sustainable Neighborhood Development**

*Prerequisites: Must be placed into GUST 0339 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (3 lecture, 1 lab)*

A study of neighborhood-sustained design strategies and applications that integrate the principles of green building and smart growth. Emphasizes basic neighborhood planning, utility infrastructure, land-use patterns, general zoning, subdivision practices, and quantitative methods to evaluate neighborhood development.

## **RBTC 1301 Programmable Logic Controllers**

*Prerequisites: CETT 1425 or INTC 1441 or Department Approval, Must be placed into college-level reading, writing and math.*

*Credit: 3 ( 2 lecture, 4 lab)*

A study in programmable logic controllers (PLC). Topics include processor units, numbering systems, memory organization, relay type devices, timers, counters, data manipulators, and programming. Emphasis will be placed on converting ladder diagrams into programs; explaining digital/analog devices used with programmable logic controllers; and executing and evaluating control system operation.

## **RELE 1200 Contract Forms and Addenda**

*Prerequisites: Must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0308 in math.*

*Credit: 2 (2 lecture)*

Promulgated Contract Forms, which shall include but is not limited to unauthorized practice of law, broker-lawyer committee, current promulgated forms, commission rules governing use forms and case studies involving use of forms.

## **RELE 1201 Principles of Real Estate**

*Prerequisites: Must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH*

# Course Descriptions

0308 in math.

Credit: 2 (2 lecture)

A beginning overview of licensing as a real estate broker or salesperson. Includes ethics of practice as a license holder, titles to and conveyance of real estate, legal descriptions, deeds, encumbrances and liens, distinctions between personal and real property, appraisal, finance and regulations, closing procedures, and real estate mathematics. Covers at least three hours of classroom instruction on federal, state, and local laws relating to housing discrimination, housing credit discrimination, and community reinvestment. Fulfills at least 30 of 60 hours of required instruction for salesperson license.

## **RELE 1211 Law of Contracts**

*Prerequisites: Must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0308 in math.*

Credit: 2 (2 lecture)

Elements of a contract, offer and acceptance, statute of frauds, specific performance and remedies for breach, unauthorized practice of law, commission rules relating to use of adopted forms, and owner disclosure requirements.

## **RELE 1219 Real Estate Finance**

*Prerequisites: Must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0308 in math.*

Credit: 2 (2 lecture)

Monetary systems, primary and secondary money markets, sources of mortgage loans, federal government programs, loan applications, processes and procedures, closing costs, alternative financial instruments, equal credit opportunity laws affecting mortgage lending, Community Reinvestment Act, and the state housing agency.

## **RELE 1238 Principles of Real Estate II**

*Prerequisites: Must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0308 in math.*

Credit: 2 (2 lecture)

Overview of licensing as a broker or salesperson. Includes ethics of practice as a license holder, titles to and conveyance of real estate, legal descriptions, deeds, encumbrances and liens, distinctions between personal and real property, appraisal, finance and regulations, closing procedures, and real estate mathematics. Covers at least three hours of classroom instruction on federal, state, and local laws relating to housing, discrimination, housing credit discrimination, and community reinvestment. Fulfills at least 30 of 60 hours of required instruction for salesperson

license.

## **RELE 1303 Real Estate Appraisal**

*Prerequisites: Must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0308 in math.*

Credit: 3 (3 lecture)

A study of the central purposes and functions of an appraisal, social and economic determinants of value, appraisal case studies, cost, market data and income approaches to value estimates, final correlations, and reporting. Accredited: Texas Appraiser Licensing and Certification Board. (Formerly REAL 2301)

## **RELE 1307 Real Estate Investment**

*Prerequisites: Must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0308 in math.*

Credit: 3 (3 lecture)

Characteristics of real estate investments. Includes techniques of investment analysis, time-valued money, discounted and non-discounted investment criteria, leverage, tax shelters, depreciation, and applications to property tax.

## **RELE 1309 Real Estate Law**

*Prerequisites: Must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0308 in math.*

Credit: 3 (3 lecture)

Provides a study of legal concepts of real estate, land description, real property rights, estates in land, contracts, conveyances, encumbrances, foreclosures, recording procedures, and evidence of title.

## **RELE 1315 Property Management**

*Prerequisites: Must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0308 in math.*

Credit: 3 (3 lecture)

A study of the role of the property manager, landlord policies, operating guidelines, leases, lease negotiations, tenant relations, maintenance, reports, habitability laws, and the Fair Housing Act.

## **RELE 1321 Real Estate Marketing**

*Prerequisites: Must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0308 in math.*

Credit: 3 (3 lecture)

A study of real estate professionalism and ethics; characteristics of successful salespersons; time management; psychology of marketing; listing procedures; advertising; negotiating and closing financing; and the Deceptive Trade Practice Act.

## **RELE 1323 Real Estate Computer**

## **Application**

*Prerequisites: Must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0308 in math.*

Credit: 3 (3 lecture)

A study of the availability of technology, current software, and its ability to help a real estate agent become more productive. Includes database, mapping, mortgage interest, contact management, presentation and real estate related software application packages.

## **RELE 1324 Loan Origination and Quality Control**

*Prerequisites: Must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0308 in math.*

Credit: 3 (3 lecture)

An introduction to the mortgage loan application process. Topics include regulatory compliance and documentation; real estate contracts; the mortgage application process, interview techniques; credit, income and property qualification, quality controls and procedures.

## **RELE 1325 Real Estate Mathematics**

*Prerequisites: Must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0308 in math.*

Credit: 3 (3 lecture)

Basic arithmetic skills. Includes mathematical logic, percentages, interest, time value of money, depreciation, amortization, proration, and estimation of closing statements.

## **RELE 1329 Fundamentals of Environmental Issues**

*Prerequisites: Must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0308 in math.*

Credit: 3 (3 lecture)

A study of environmental issues affecting the real estate industry including hazardous substances, underground storage tanks, wetlands, radon, asbestos, lead, endangered species protection, sick building syndrome and electromagnetic fields.

## **RELE 1335 Real Estate Construction**

*Prerequisites: Must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0308 in math.*

Credit: 3 (3 lecture)

A study of the basic principles of design and construction of real estate properties. This course meets part of the educational requirements, as determined by The Texas Real Estate Commission, to become a licensed inspector.

## **RELE 1371 Loan Processing**

*Prerequisite: Department Approval; Must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0308 in math.*

Credit: 3 (3 lecture)

A study of the theoretical and practical framework necessary to understand the complex field

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of mortgage lending with emphasis on loan application, qualifications, and processing. Also includes the role of lenders, residential loan appraisals, closing, and funding the loan. This course emphasizes workforce training in the areas of loan processing and originating procedures as determined by the needs of industry. Accredited: Texas Savings and Loan Department.

## **RELE 1381 Cooperative Education - Real Estate**

*Prerequisite: Department Approval and RELE 2301; Must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0308 in math.*

*Credit: 3 (1 lecture, 20 lab)*

Career related activities encountered in the student's area of specialization are offered through an individualized agreement between the college, employer, and student. Under supervision of the college and the employer, the student combines, classroom learning with work experience. Includes a lecture component.

## **RELE 1391 Special Topics in Real Estate: Commercial Real Estate**

*Prerequisite: Department Approval; Must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0308 in math.*

*Credit: 3 (3 lecture)*

Commercial Real Estate is an overview of the commercial real estate industry which includes: commercial real estate culture, real estate professionalism and ethics, types of properties, investors, end users, leasing, developing, marketing psychology, advertising, time management, negotiating and closing, financing and characteristics of a successful salesperson.

## **RELE 2201 Law of Agency**

*Prerequisites: Must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0308 in math.*

*Credit: 2 (2 lecture)*

A study of Law of agency including principal-agent and master-servant relationships, the authority of an agent, the termination of an agent's authority, the fiduciary and other duties of an agent, employment law, deceptive trade practices, listing or buying representation procedures, and the disclosure of an agency.

## **RELE 2305 Real Estate Inspections**

*Prerequisites: Must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0308 in math.*

*Credit: 3 (3 lecture)*

A study of the different types of building systems and materials used in the design and construction of real property. Covers residential construction and commercial building systems and materials. Includes different structural building systems with emphasis on wood-related products, concrete and masonry, brick, stone, and steel units. This course meets part of the educational requirements, as determined by The Texas Real Estate Commission, to become a licensed inspector.

## **RELE 2307 Real Estate Title and**

## **Settlement**

*Prerequisites: Must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0308 in math.*

*Credit: 3 (3 lecture)*

Examines the procedural aspects required to research land titles, establish and administer title closings, escrow, determination of settlement requirements, and filing. In addition, the lender's closing instructions, document review, funding procedures, post closing audit and file set up will be presented. This course emphasizes workforce training in the area of closing and funding procedures as determined by the needs of industry. Accredited: Texas Savings and Loan Department.

## **RELE 2311 Fundamentals of Mortgage Lending**

*Prerequisites: Must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0308 in math.*

*Credit: 3 (3 lecture)*

A study of the theoretical and practical framework necessary to understand the complex field of mortgage lending with emphasis on loan application, qualifications, and underwriting. Also includes the role of lenders, security instruments, residential loan appraisals, and closing and funding the loan. This course emphasizes workforce training in the areas of loan processing and underwriting procedures as determined by the needs of industry.

## **RELE 2331 Real Estate Brokerage**

*Prerequisites: Must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0308 in math.*

*Credit: 3 (3 lecture)*

A study of law of agency, planning and organization, operational policies and procedures, recruiting, selection and training of personnel, records and control, and real estate firm analysis and expansion criteria.

## **RELE 2381 Cooperative Education-Real Estate**

*Prerequisite: Department Approval and RELE 1381; Must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0308 in math.*

*Credit: 3 (1 lecture, 20 lab)*

Career related activities encountered in the student's area of specialization are offered through a cooperative agreement between the college, employer, and student. Under supervision of the college and the employer, the student combines, classroom learning with work experience. Directly related to a technical discipline, specific learning objectives guide the student through the paid work experience. This course may be repeated if topics and learning outcomes vary. The student is required to work a minimum of 20 hours a week and attend a weekly seminar. An approved project and final report is required.

## **RNSG 1105 Nursing Skills I**

*Prerequisites: Admission to the A.D.N program.*

*Corequisites: RNSG 1413, RNSG 1360*

*Credit: 1 (3 Lab)*

Study of concepts and principles essential for demonstrating competence in the performance of nursing procedures. Topics include knowledge, judgment, skills, and professional values within a legal/ethical framework.

## **RNSG 1144 Nursing Skills II**

*Prerequisites: RNSG 1251, RNSG 2213*

*Corequisites: RNSG 1343, RNSG 2221, RNSG 2130, RNSG 2361*

*Credit: 1 (3 Lab)*

Study of concepts and principles necessary to perform intermediate or advanced nursing skills; and demonstrate competence in the performance of nursing procedures. Topics include knowledge, judgment, skills and professional values within a legal/ethical framework.

## **RNSG 1160 Clinical Nursing Care of the Childbearing Family**

*Pre-requisites: RNSG 2201, RNSG 1341*

*Co-requisites: RNSG 1251, RNSG 2213*

*Credit: 1 (6 clinical)*

Study of the concepts related to the provision of nursing care for childbearing families; application of systematic problem-solving processes and critical thinking skills, including a focus on the childbearing family during preconception, prenatal, antepartum, neonatal, and postpartum periods; and competency in knowledge, judgment, skill, and professional values within a legal/ethical framework.

## **RNSG 1163 Clinical Nursing-Transition**

*Prerequisite: Admission to the ADN transition program; must be placed into college-level reading, college-level writing and MATH 0312 in math.*

*Corequisite: RNSG 1327, RNSG 1215*

*Credit: 1 (3 clinical)*

A health-related work-based learning experience that enables the student to apply specialized occupational theory, skills, and concepts. Direct supervision is provided by the clinical professional.

## **RNSG 1201 Pharmacology**

*Prerequisites: Admission to the program.*

*Credit: 2 (2 lecture)*

Introduction to the science of pharmacology with emphasis on the actions, interactions, adverse effects, and nursing implications of drug classifications. Content includes the roles and responsibilities of the nurse in safe administration of medications within a legal/ethical framework.

## **RNSG 1251 Care of the Childbearing**

# Course Descriptions

## **Family**

*Pre-requisites: RNSG 1413, RNSG 1360, RNSG 2201, RNSG 1341, RNSG 2360*

*Co-requisites: 1160, RNSG 2213*

*Credit: 2 (2 lecture)*

Study of the concepts related to the provision of nursing care for childrearing families; application of systematic problem-solving processes and critical thinking skills, including a focus on the childrearing family from birth to adolescence; and competency in knowledge, judgment, skill, and professional values with a legal/ethical framework.

## **RNSG 1327 Transition from Vocational to Professional Nursing**

*Prerequisites: Admission to the ADN transition program; must be placed into college-level reading, college-level writing and MATH 0312 in math.*

*Corequisite: RNSG 1163*

*Credit: 3 (3 lecture)*

Topics include health promotion, expanded assessment, analysis of data, nursing process, pharmacology, multidisciplinary teamwork, communication, and applicable competencies in knowledge, judgment, skills, and professional values within a legal/ethical framework throughout the life span.

## **RNSG 1341 Common Concepts of Adult Health**

*Pre-requisites: RNSG 1360, RNSG 1413*

*Co-requisites: RNSG 2360, RNSG 2201, RNSG 2261*

*Credit: 3 (3 lecture)*

Basic integration of the role of the professional nurse as a provider of patient-centered care, patient safety advocate, member of the profession. Study of the common concepts of caring for adult patients and families with medical-surgical health care needs related to body systems, emphasizing knowledge, judgment, skills, and professional values within a legal/ethical framework.

## **RNSG 1343 Complex Concepts of Adult Health**

*Prerequisites: RNSG 2213, RNSG 1251*

*Corequisites: RNSG 2361, RNSG 1144*

*Credit: 3 (3 lecture)*

Integration of previous knowledge and skills related to common adult health needs into the continued development of the professional nurse as a provider of care, coordinator of care, and member of a profession in the care of adult clients/families in structured health care settings with complex medical-surgical health care needs associated with each body system. Emphasis on knowledge, judgments, skills, and professional values within a legal/ethical framework. This course lends itself to a blocked approach.

## **RNSG 1360 Clinical Nursing-Foundations**

*Prerequisite: Admission to the ADN program.*

*Corequisite: RNSG 1105, RNSG 1413*

*Credit: 3 (9 Clinical)*

A health-related work-based learning experience that enables the student to apply specialized occupational theory, skills, and concepts. Direct supervision is provided by the clinical professional.

## **RNSG 1413 Foundations for Nursing Practice**

*Prerequisites: Admission to the ADN program.*

*Corequisites: RNSG 1115, RNSG 1360, BIOL 2402*

*Credit: 4 (3 lecture, 2 lab)*

Introduction to the role of the professional nurse as provider of care, coordinator of care, and member of the profession. Topics include but are not limited to the fundamental concepts of nursing practice, history of professional nursing, a systematic framework for decision-making, mechanisms of disease, the needs and problems that nurses help patients manage, and basic psychomotor skills. Emphasis on knowledge, judgment, skills and professional values within a legal/ethical framework. This course lends itself to a blocked approach.

## **RNSG 2130 Professional Nursing Review and Licensure Preparation**

*Prerequisites: RNSG 2213, RNSG 1251*

*Corequisites: RNSG 1343 or Department Approval*

*Credit: 1 (1 lecture)*

Review of concepts required for licensure examination and entry into the practice of professional nursing. Includes application of National Council Licensure Examination for Registered Nurses (NCLEX-RN) test plan, assessment of knowledge deficits, and remediation. This course lends itself to either a blocked or integrated approach.

## **RNSG 2160 Clinical Nursing-Mental Health**

*Pre-requisites: RNSG 1341, RNSG 2201, 1413, RNSG 1360,*

*Co-requisites: RNSG 2213, RNSG 1251*

*Credit: 1 (6 clinical)*

A health related work-based learning experience that enables the student to apply specialized occupational theory, skills, and concepts. Direct supervision is provided by the clinical professional.

## **RNSG 2201 Care of Children and Families**

*Pre-requisites: RNSG 1413, RNSG 1360, RNSG 1105*

*Co-Requisites: , RNSG 1341, RNSG 2360, RNSG 2261*

*Credit: 2 (2 lecture)*

Study of concepts related to the provision of nursing care for children and families, emphasizing judgment, and professional values within a legal/ethical framework.

## **RNSG 2213 Mental Health Nursing**

*Prerequisites: RNSG 2201, RNSG 1341*

*Corequisites: RNSG 1251, RNSG 2160*

*Credit: 2 (2 lecture)*

Principles and concepts of mental health, psychopathology, and treatment modalities related

to the nursing care of clients and their families.

## **RNSG 2221 Professional Nursing: Leadership and Management**

*Pre-requisites: RNSG 1251, RNSG 2213*

*Credits: 2 (2 lecture)*

Exploration of leadership and management principles applicable to the roles of the professional nurse. Includes application of knowledge, judgment, skills, and professional values within a legal/ethical framework.

## **RNSG 2261 Clinical Nursing-Care of Children and families**

*Pre-requisites: RNSG 1413, RNSG 1360, , RNSG 1105,*

*Co-Requisites: RNSG 2360, RNSG 2201, RNSG 1341*

*Credit: 2 (6 clinical)*

Study of the concepts related to the provision of nursing care for childrearing families; application of systematic problem-solving processes and critical thinking skills, including a focus on the childrearing family from birth to adolescence; and competency in knowledge, judgment, skill, and professional values with a legal/ethical framework.

## **RNSG 2360 Clinical Nursing-Adult I**

*Prerequisites: RNSG 1413, RNSG 1360*

*Corequisites: RNSG 1341*

*Credit: 3 (9 clinical)*

A health-related work-based learning experience that enables the student to apply specialized occupational theory, skills, and concepts. Direct supervision is provided by the clinical professional.

## **RNSG 2361 Clinical Nursing-Adult II**

*Prerequisites: RNSG, 1251, RNSG 2213*

*Corequisites: RNSG 1144, RNSG 1343*

*Credit: 3 (9 clinical)*

A health-related work-based learning experience that enables the student to apply specialized occupational theory, skills, and concepts. Direct supervision is provided by the clinical professional.

## **RSPT 1201 Introduction to Respiratory Care**

*Prerequisites: Must be placed into college-level reading, writing and math.*

*Credit: 2 (2 lecture)*

An introduction to the field of respiratory care. Topics include the history of respiratory care, hospital organization, medical malpractice, ethics, vital signs, body mechanics, basic cardiopulmonary assessment, infection control, and cardiopulmonary resuscitation (CPR).

## **RSPT 1213 Basic Respiratory Care Pharmacology**

*Prerequisites: RSPT 1201*

# Course Descriptions

*Corequisite: RSPT 1225*

*Credit: 2 (2 lecture)*

A study of basic pharmacological principles/practices of respiratory care drugs. Emphasis on classification, routes of administration, dosages/calculations, and physiological interaction.

## **RSPT 1225 Respiratory Care Sciences**

*Prerequisites: RSPT 1201*

*Corequisite: RSPT 1213*

*Credit: 2 (2 lecture, 1 lab)*

Physics, mathematics, and chemistry as related to respiratory care.

## **RSPT 1240 Advanced Cardiopulmonary Anatomy and Physiology**

*Prerequisites: BIOL 2301, BIOL 2101 BIOL 2302, BIOL 2102; must be placed into college-level reading, writing and math.*

*Credit: 2 (2 lecture)*

Provides an advanced presentation of anatomy and physiology of the cardiovascular and pulmonary system.

## **RSPT 1262 Clinical-Respiratory Care**

*Prerequisites: RSPT 1361, RSPT 1225; must be placed into college-level reading, writing and math.*

*Corequisite: RSPT 2314*

*Credit: 2 (8 lab)*

Practical, general workplace training supported by an individualized learning plan developed by the employer, college, and student.

## **RSPT 1310 Respiratory Care Procedures I**

*Prerequisites: RSPT 120; must be placed into college-level reading, writing and math.*

*Corequisite: RSPT 1361*

*Credit: 3 (2 lecture, 3 lab)*

Essential knowledge of the equipment and techniques used in the treatment of cardiopulmonary disease. Content areas include: oxygen therapy, humidity and aerosol therapy, lung expansion therapy, bronchial hygiene therapy, pulse oximetry, arterial blood gas sampling and interpretation.

## **RSPT 1311 Respiratory Care Procedures II**

*Prerequisites: RSPT 1361, RSPT 1310; must be placed into college-level reading, writing and math.*

*Corequisite: RSPT 1362*

*Credit: 3 (2 lecture, 3 lab)*

Provides essential knowledge of airway care and mechanical ventilation. Airway care includes indications, techniques, equipment, and hazards and complications. Mechanical ventilation includes indications, initiation, modes, clinical application, management, complications, and weaning.

## **RSPT 1360 Clinical-Respiratory Care**

*Prerequisites: RSPT 1201; Must be placed into college-level reading, writing and math.*

*Corequisite: RSPT 1310*

*Credit: 3 (16 lab)*

A health-related work-based learning experience

that enables the student to apply specialized occupational theory, skills, and concepts. Direct supervision is provided by the clinical professional.

## **RSPT 1361 Clinical-Respiratory Care**

*Prerequisites: Must be placed into college-level reading, writing and math.*

*Corequisite: RSPT 1310*

*Credit: 3 (16 lab)*

A health-related work-based learning experience that enables the student to apply specialized occupational theory, skills, and concepts. Direct supervision is provided by the clinical professional.

## **RSPT 2230 Respiratory Care Examination Preparation**

*Prerequisites: RSPT 2325; Must be placed into college-level reading, writing and math.*

*Corequisites: RSPT 2262*

*Credit: 2 (1 lecture, 4 lab)*

Theory and history of clinical simulation examinations. Includes construction types, scoring, and mechanics of taking the computerized simulation examination.

## **RSPT 2239 Advanced Cardiac Life Support**

*Prerequisites: RSPT 2317, RSPT 2325, RSPT 2255, RSPT 2258; Must be placed into college-level reading, writing and math.*

*Credit: 2 (1 lecture, 2 lab)*

Advanced Cardiac Life Support (ACLS) with an emphasis on airway management. Designed to develop skills for resuscitation of the adult. Includes strategies for managing and stabilizing the cardiopulmonary arrested patient. May include certification.

## **RSPT 2255 Critical Care Monitoring**

*Prerequisites: RSPT 2260; Must be placed into college-level reading, writing and math.*

*Corequisite: RSPT 2266*

*Credit: 2 (2 lecture)*

Advanced monitoring techniques used to assess a patient in the critical care setting.

## **RSPT 2258 Respiratory Care Patient Assessment**

*Prerequisites: RSPT 1201; Must be placed into college-level reading, writing and math.*

*Credit: 2 (2 lecture)*

Integration of patient examination techniques, including patient history and physical exam, lab studies, x-ray, pulmonary function, arterial blood gases, and invasive and noninvasive hemodynamics.

## **RSPT 2262 Clinical - Respiratory Care Therapy/Therapist**

*Prerequisites: RSPT 2362*

*Corequisites: RSPT 2230*

*Credit: 2 (8 lab)*

A health-related work-based learning experience that enables the student to apply specialized occupational theory, skills, and concepts. Direct supervision is provided by the clinical professional.

## **RSPT 2210 Cardiopulmonary Disease**

*Prerequisites: RSPT 1240, RSPT 2361*

*Credit: 2 (2 lecture)*

A discussion of pathogenesis, pathology, diagnosis, history, prognosis, manifestation, treatment, and detection of cardiopulmonary diseases.

## **RSPT 2314 Mechanical Ventilation**

*Prerequisites: RSPT 1213, RSPT 1262*

*Credit: 3 (3 lecture, 1 lab)*

The study of mechanical ventilation with emphasis on ventilator classification, methods, principles, and operational characteristics. Includes indications, complications, and physiologic effects/principles of mechanical ventilation. Emphasizes initiation, management, and weaning of ventilatory support.

## **RSPT 2325 Cardiopulmonary Diagnostics**

*Prerequisites: RSPT 2255, RSPT 2310 ; must be placed into college-level reading, writing and math.*

*Corequisite: RSPT 2233*

*Credit: 3 (3 lecture)*

A study of physical, radiological, hemodynamic, laboratory, nutritional, and cardiopulmonary diagnostic assessment of the pulmonary patient.

## **RSPT 2353 Neonatal/Pediatric Cardiopulmonary Care**

*Prerequisites: Must be placed into college-level reading, writing and math.*

*Corequisite: RSPT 2267*

*Credit: 3 (3 lecture)*

A study of acute care, monitoring, and management as applied to the neonatal and pediatric patient.

## **RSPT 2361 Clinical - Respiratory Care Therapy/Therapist**

*Prerequisites: RSPT 1262; Must be placed into college-level reading, writing and math.*

*Corequisite: RSPT 2255*

*Credit: 3 (16 lab)*

A health-related work-based learning experience that enables the student to apply specialized occupational theory, skills, and concepts. Direct supervision is provided by the clinical professional.

## **RSPT 2362 Clinical-Respiratory Care Therapy/Therapist**

*Prerequisites: RSPT 2361; Must be placed into college-level reading, writing and math.*

*Corequisite: RSPT 2353*

*Credit: 3 (16 lab)*

A health-related work-based learning experience that enables the student to apply specialized occupational theory, skills, and concepts. Direct supervision is provided by the clinical professional.

## **RSTO 1371 Principles of Food Preparation for Hospitality**

*Prerequisites:*

*Credit: 3 (2 lecture, 4 lab)*

A study in the fundamentals of food preparation to introduce hospitality administration students to basic culinary skills. Topics include kitchen professionalism, proper station set up, basic knife skills, basic cooking technique, proper handling and storage of food items and appropriate portion and plating techniques.

# Course Descriptions

## **RSTO 1491 Special Topics in Food and Beverage/Restaurant Operations Manager**

*Prerequisites: Must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 4 (3 lecture, 3 lab)*

This course addresses the general principles of food preparation including the safe use of kitchen tools and equipment and a general survey of basic food preparation.

## **RSTO 2301 Principles of Food and Beverage Controls**

*Prerequisites: Must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (3 lecture)*

A study of financial principle and controls of food service operation including review of operation policies and procedures. Topics include financial budgeting and cost analysis emphasizing food and beverage labor costs, operational analysis, and internal and regulatory reporting procedures.

## **RTVB 1240 Audio/Radio Production Lab II**

*Prerequisites: MUSC 1427, MUSC 1331; Must be placed into GUST 0342, ENGL 0310 or 0349 and MATH 0308 in math.*

*Corequisite: MUSC 2427*

*Credit: 2 (1 lecture, 3 lab)*

Introduces through practical hands-on experience the equipment and procedures used in multitrack recording. Includes basic tracking, simple overdubs and operation of specific recording equipment commonly found in audio facilities, mixing, and equalization.

## **RTVB 1309 Audio/Radio Production I**

*Prerequisites: Must be placed into college-level reading, writing and math.*

*Credit: 3 (2 lecture, 4 lab)*

Concepts and techniques of sound production including basic recording, mixing, and editing techniques.

## **RTVB 1317 Convergence of Electronic Media**

*Prerequisites: Must be placed into GUST 0342 in reading, ENGL 0310 or 0349 in writing and MATH 0306 in math.*

*Credit: 3 (3 lecture)*

History and future of electronic media. Includes radio, television, Internet, and convergent technologies. Recognizes regulatory and economic issues. Explores career opportunities in electronic media.

## **RTVB 1321 TV Field Production**

*Prerequisites: Must be placed into GUST 0342 in reading, ENGL 0310 or 0349 in writing and MATH 0308 in math.*

*Credit: 3 (2 lecture, 4 lab)*

Pre-production, production, and post-production process involved in field television production. Topics include field camera setup and operation, field audio, television directing, and in-camera or basic continuity editing with an emphasis on underlying principles of video technology.

## **RTVB 1325 TV Studio Production**

*Prerequisites: RTVB 1317; Must be placed into GUST 0342 in reading, ENGL 0310 or 0349 in writing and MATH 0306 in math.*

*Credit: 3 (2 lecture, 4 lab)*

Basic television production. Includes studio program content, studio camera operation, and television audio.

## **RTVB 1329 Scriptwriting**

*Prerequisite: ENGL 1301*

*Credit: 3 (2 lecture, 4 lab)*

Writing scripts for film and electronic media. Emphasizes format and style for commercials, public service announcements, promos, news, and documentaries.

## **RTVB 1355 Radio and Television Announcing**

*Prerequisites: Must be placed into GUST 0342 in reading, ENGL 0310 or 0349 in writing and MATH 0306 in math.*

*Credit: 3 (2 lecture, 4 lab)*

Radio and television announcing skills such as voice quality, articulation, enunciation and pronunciation. Preparation for opportunities in announcing employment in news, sports, commercial, voice talent and disk jockey, and radio and TV.

## **RTVB 1401 Broadcast News Writing**

*Prerequisites: ENGL 1301; Must be placed into college-level reading, writing and math.*

*Credit: 4 (3 lecture, 2 lab)*

Instruction in the writing of news copy according to standard broadcast formats.

## **RTVB 1447 Audio/Radio Production II**

*Prerequisites: RTVB 1309*

*Credit: 4 (3 lecture, 2 lab)*

Audio production theories regarding multitrack recording, studio live production and equipment operation.

## **RTVB 2164 Practicum (or Field Experience) - Radio and Television**

*Prerequisites: FLMC 1304, FLMC 2333, FLMC 2344.*

*Credit: 1 (10 lab, 160 Contact Hours)*

Practical, general workplace training supported by an individualized learning plan developed by the employer, college, and student.

## **RTVB 2232 Audio Production Lab III**

*Prerequisites: MUSC 2427, MUSC 2355; Must be placed into GUST 0342 in reading, ENGL 0310 or 0349 in writing and MATH 0308 in math.*

*Corequisite: MUSC 2447*

*Credit: 2 (1 lecture, 3 lab)*

Topics include special effects, automated overdubbing, operation of specific recording equipment commonly found in large format multitrack audio facilities, mixing, and equalization. Complete one recording project using the lab time and facilities.

## **RTVB 2282 CO-OP Radio and Television Broadcasting Technology/Technician**

*Prerequisites: MUSC 2447; Must be placed into college-level reading, writing and math.*

*Credit: 2 (1 lecture, 10 lab)*

Career-related activities encountered in the student's area of specialization offered through an individualized agreement among the college, employer, and student. Under the supervision of the college and the employer, the student combines classroom learning with work experience. Includes a lecture component.

## **RTVB 2330 Film and Video Editing**

*Prerequisites: Must be placed into GUST 0342 in reading, ENGL 0310 or 0349 in writing and MATH 0308 in math.*

*Credit: 3 (2 lecture, 4 lab)*

Film and broadcast editing for the preparation and completion of shorts, trailers, documentaries, and features.

## **RTVB 2335 Television Production**

*Prerequisites: Must be placed into GUST 0342 in reading, ENGL 0310 or 0349 in writing and MATH 0306 in math.*

*Credit: 3 (2 lecture, 4 lab)*

Pre-production, production, and post-production process involved in multiple-camera studios. Includes advanced instruction in camera operation, lighting, audio, and television directing.

## **RTVB 2337 TV Production Workshop I**

*Prerequisites: Must be placed into college-level reading, writing and math.*

*Credit: 3 (2 lecture, 4 lab)*

Application and design of video productions in location or studio shoots with real deadlines and quality control restrictions.

## **RTVB 2343 Commercial Recording Techniques**

*Prerequisites: MUSC 2447; Must be placed into college-level reading, writing and math.*

*Credit: 3 (2 lecture, 4 lab)*

Student will operate audio production and editing equipment, coordinate and direct music production projects from booking to post-production, and characterize the music industry and surrounding labor market. This class provides a capstone experience during which the student will use all of the skills acquired throughout this program.

# Course Descriptions

Students are required to attend additional lab hours outside of class.

## **RTVB 2386 Internship–Radio and Television Broadcasting**

*Prerequisites:* RTVB 1317 and Department Approval; Must be placed into GUST 0342 in reading, ENGL 0310 or 0349 in writing and MATH 0306 in math.

*Credit:* 3 (18 lab)

A work-based learning experience that enables the student to apply specialized occupational theory, skills and concepts. A learning plan is developed by the college and the employer.

## **RUSS 1411 Beginning Russian I**

*Prerequisites:* Must be placed into college - level reading (or take GUST 0342 as a co-requisite) and be placed into college level writing (or take ENGL 0310/0349 as a co-requisite)

*Credit:* 4 (3 lecture, 2 lab)

Introduction to Russian language and culture. Development of basic skills in listening comprehension, speaking, reading, writing, and cultural awareness. Course includes vocabulary building, conversation and grammar. Transfers as foreign language credit. Core Curriculum Course.

## **RUSS 1412 Beginning Russian II**

*Prerequisites:* RUSS 1411 or satisfactory score on an advanced placement examination or at least 2 years of high school Russian within the last two years Must be placed into college - level reading (or take GUST 0342 as a co-requisite) and be placed into college level writing (or take ENGL 0310/0349 as a co-requisite)

*Credit:* 4 (3 lecture, 2 lab)

Continuation of RUSS 1411.

Further development of listening comprehension, speaking, reading, and writing skills, and cultural awareness. More advanced grammar. Transfers as foreign language credit. Core Curriculum Course.

## **RUSS 2311 Intermediate Russian I**

*Prerequisites:* RUSS 1412 or equivalent; must be placed into college - level reading (or take GUST 0342 as a co-requisite) and be placed into college level writing (or take ENGL 0310/0349 as a co-requisite)

*Credit:* 3 (3 lecture)

Further development of listening, speaking, reading and writing skills and cultural awareness acquired in Beginning Russian. Study of more complex language structures. Oral and written practice based on readings and dialogues. Directed composition. Class conducted largely in Russian. Core Curriculum Course.

## **RUSS 2312 Intermediate Russian II**

*Prerequisite:* Prerequisite: RUSS 2311 or equivalent; must be placed into college - level reading (or take GUST 0342 as a co-requisite) and be placed into college level writing (or take ENGL 0310/0349 as a co-requisite)

*Credit:* 3 (3 lecture)

Continuation of RUSS 2311. Oral practice and compositions based on readings. Class conducted mainly in Russian. Core Curriculum Course.

## **SCIT 1320 Physics for Allied Health**

*Prerequisites:* Must be placed into college-level reading, writing and math.

*Credit:* 3 (2 lecture, 2 lab)

An introduction to physics with emphasis on applications to health related fields of study. Topics include forces, motion, work and energy, fluids, heat, electricity and magnetism, wave motion, sound, electromagnetic radiation, and nuclear radiation.

## **SCIT 1407 Applied Human Anatomy and Physiology I**

*Prerequisites:* Must be placed into GUST 0342 in reading, college-level writing and MATH 0312 in math.

*Credit:* 4 (4 lecture, 1 lab)

An applied systematic study of the structure and function of the human body designed for students considering a career in the health field. Includes anatomical terminology, cells, tissues, and the following systems: integumentary, skeletal, muscular, nervous, and endocrine. Emphasis on homeostasis.

## **SCIT 1408 Applied Human Anatomy and Physiology II**

*Prerequisites:* SCIT 1407; must be placed into GUST 0342 in reading, college-level writing and MATH 0312 in math.

*Credit:* 4 (4 lecture, 1 lab)

A continuation of Applied Human Anatomy and Physiology I designed for students considering a career in the health field. The following body systems are included: digestive, respiratory, cardiovascular, lymphatic/immune, renal/excretory, and reproductive. Emphasis is on homeostasis.

## **SCIT 1414 Applied General Chemistry I**

*Prerequisites:* Must be placed into GUST 0342 in reading, college-level writing and MATH 0312 in math.

*Credit:* 4 (3 lecture, 3 lab)

Applications of general chemistry emphasizing industry-related laboratory skills and competencies including laboratory safety and report writing. Addresses supporting chemical theories including atomic and molecular structure, nomenclature, chemical reactivity, gas laws, acids and bases, and solutions.

## **SCIT 1415 Applied General Chemistry II**

*Prerequisites:* SCIT 1414 or Department Approval; must be placed into college-level reading, writing and math.

*Credit:* 4 (3 lecture, 3 lab)

Applications of general chemistry emphasizing industry-related laboratory skills and competencies including laboratory safety and report writing. Addresses supporting chemical theories including covalent bonding, thermodynamics, equilibrium,

reaction rates, electrochemistry, nuclear chemistry, and organic compounds.

## **SCIT 1418 Applied Physics**

*Prerequisites:* SCIT 1414 or Department Approval; must be placed into college-level reading, writing and math.

*Credit:* 4 (3 lecture, 3 lab)

Introduction to physics for industrial applications including vectors, motion, mechanics, simple machines, matter, heat, and thermodynamics.

## **SCIT 1543 Applied Analytical Chemistry**

*Prerequisite:* SCIT 1414 and MATH 1314 or CHEM 1411 and MATH 1314 or Department Approval; must be placed into college-level reading, writing and math.

*Credit:* 5 (4 lecture, 2 lab)

Principles of quantitative analysis as related to industrial applications. Includes gravimetric and titrimetric analysis of practical samples by classical and standard methods.

## **SCIT 2401 Applied Organic Chemistry I**

*SCIT 1414 or CHEM 1411 or Department Approval; must be placed into college-level reading, college-level writing and MATH 0312 in math.*

*Credit:* 4 (2 lecture, 4 lab)

Applications of the chemistry carbon emphasizing industry-related laboratory skills and competencies.

## **SCIT 2402 Applied Organic Chemistry II**

*Prerequisite:* SCIT 2401; must be placed into college-level reading, college-level writing and MATH 0312 in math.

*Credit:* 4 (2 lecture, 4 lab)

Continuation of the applications of the chemistry of carbon compounds emphasizing industry-related laboratory skills and competencies. Includes reaction mechanisms, spectroscopy, and synthetic methods.

## **SCWK 1321 Orientation to Social Services**

*Prerequisites:* Must be placed into GUST 0342 in reading, ENGL 0310 or 0349 in writing and MATH 0308 in math.

*Credit:* 3 (3 lecture)

Introduction to the basic concepts, information, and practices within the field of social services. Topics include a survey of the historical development of social services; social, legal, and clinical definitions; and review of current information regarding indications for and methods of treatment and/or services.

## **SGNL 1401 American Sign Language (ASL): Beginning I**

*Prerequisites:* Must be placed into GUST 0342 in reading, ENGL 0310 or 0349 in writing and MATH 0306 in math.

*Credit:* 4 (3 lecture, 2 lab)

An introduction to the basic skills in production and comprehension of American Sign Language (ASL). Includes the manual alphabet and numbers. Develops conversational ability, culturally

# Course Descriptions

appropriate behaviors, and exposes students to ASL grammar. Student must complete the course with a 'B' or better.

## **SGNL 1402 American Sign Language (ASL): Beginning II**

*Prerequisite:* SLNG 1307, SLNG 1311, SGNL 1401; *Must be placed into GUST 0342 in reading, ENGL 0310 or 0349 in writing and MATH 0306 in math.*

*Credit: 4 (3 lecture, 2 lab)*

Develops receptive and expressive ability and allows recognition and demonstration of more sophisticated grammatical features of American Sign Language (ASL). Increases fluency and accuracy in fingerspelling and numbers. Provides opportunities for interaction within the deaf community. Student must complete the course with a B or better.

## **SGNL 2301 American Sign Language (ASL) Intermediate I**

*Prerequisite:* SLNG 1311, SGNL 1401, SGNL 1402; *Must be placed into college-level reading, college-level writing and MATH 0312 in math.*

Integrates and refines expressive and receptive skills in American Sign Language (ASL), including recognition of sociolinguistic variation. A practice oriented approach to language acquisition. Student must complete the course with a B or better.

## **SGNL 2302 American Sign Language (ASL) Intermediate II**

*Prerequisite:* SGNL 1401, SGNL 1402, SGNL 2301, SLNG 1311; *Must be placed into college-level reading, college-level writing and MATH 0312 in math.*

An integration of expressive and receptive skills in American Sign Language (ASL) with emphasis on grammar, linguistics, literature, and discourse styles at an intermediate level. Provides students with information on linguistic and cultural variations.

## **SLNG 1207 Intra-lingual Skills Development for Interpreters**

*Prerequisites:* SGNL 1401, 1402, 2301, 2302

*Credit: 2 (2 lecture, 1 lab)*

Concentration on the development of intra-lingual (English to English) skills necessary for future development of inter-lingual (English to American Sign Language [ASL]/ASL to English) skills. Focus on linguistic and cognitive skills development in areas of paraphrasing, summarizing, main idea identification, comprehension, memory, delayed repetition, multi-tasking, vocabulary, and cultural literacy.

## **SLNG 1248 Vocabulary Development for Interpreters**

*Prerequisites:* *Must be placed into college-level reading, college-level writing and MATH 0312 in math.*

*Credit: 2 (1 lecture, 3 lab)*

A course in vocabulary building in English and American Sign Language for interpreters.

## **SLNG 1211 Fingerspelling and Numbers (ASL)**

*Prerequisites:* *Must be placed into college-level reading, college-level writing and MATH 0312 in math.*

*Credit: 2 (2 lecture, 1 lab)*

Development of expressive and receptive skills in fingerspelling and numbers. Receptive skills focus on whole word phrase recognition and fingerspelling/number comprehension in context. Expressive skills focus on the development of speed, clarity, and fluency.

## **SLNG 1317 Introduction to the Deaf Community**

*Prerequisites:* *Must be placed into college-level reading, college-level writing and MATH 0312 in math.*

*Credit: 3 (3 lecture)*

An overview of the physical, educational, social, and cultural implications within the context of a deaf or hard-of-hearing individual's personal life, family, and community in today's multicultural world. Emphasis on current educational and vocational programs, legislation, technology, oppression, and other issues.

## **SLNG 1321 Introduction to the Interpreting Profession**

*Prerequisites:* *Must be placed into college-level reading, college-level writing and MATH 0312 in math.*

*Credit: 3 (3 lecture)*

An overview of the field of sign language interpretation. Provides a historical framework for the principles, ethics, roles, responsibilities, and standard practices of the interpreting profession.

## **SLNG 1347 Deaf Culture**

*Prerequisites:* *Must be placed into college-level reading, college-level writing and MATH 0312 in math.*

*Credit: 3 (3 lecture)*

Provides a historical and contemporary perspective of American deaf culture using a sociocultural model. Includes cultural identity and awareness, values, group norms, communication, language, and significant contributions made by deaf people to the world.

## **SLNG 1350 Sign-to-Voice**

*Prerequisites:*

*Credit: 3 (2 lecture, 2 lab)*

Skill development in interpreting and transliterating from American Sign Language and other modes of communication to English and analysis of increasingly complex tasks utilizing simulated interpreting experiences including skills analysis and peer evaluation.

## **SLNG 1391 Special Topics in Sign Language Interpreting**

*Prerequisite:* SLNG 1307, SLNG 1311, SLNG 2401, SLNG 2402, SGNL 1401, SGNL 1402, SGNL 2301, *Department Approval.* *Must be placed into college-level reading, college-level writing and MATH 0312 in math.*

*Credit: 3 (2 lecture, 2 lab)*

Topics address recently identified current events, skills, knowledge, and/or attitudes and behaviors pertinent to the technology or occupation and relevant to the professional development of the student.

## **SLNG 2301 Interpreting I**

*Prerequisites:* SGNL 1401, SGNL 1402, SGNL 2301, SGNL 2302, SLNG 1307, SLNG 1311, *Department Approval.* *Must be placed into college-level reading, college-level writing and MATH 0312 in math.*

*Credit: 3 (2 lecture, 4 lab)*

An overview of the interpreting process and models of interpretation. Introduces the skills necessary to achieve dynamic message equivalence in interpreting American Sign Language (ASL) to English and English to ASL.

## **SLNG 2302 Interpreting II**

*Prerequisites:* SGNL 1401, SGNL 1402, SGNL 2301, SGNL 2302, SLNG 1307, SLNG 1311, SLNG 1321, SLNG 2401; *Department Approval.*

*Credit: 3 (2 lecture, 4 lab)*

Continued development of discourse analysis and interpreting skills for increasingly complex tasks. Utilization of consecutive and simultaneous interpreting scenarios including monologues and dialogues. Emphasizes skill development, self-analysis, and peer evaluation.

## **SLNG 2315 Interpreting in Educational Settings**

*Prerequisites:* *Must be placed into college-level reading, college-level writing and MATH 0312 in math.*

*Credit: 3 (2 lecture, 2 lab)*

Overview of education programs (K-12 and post secondary), focusing on the roles and skills of the interpreter as a member of the educational team. Includes current practices, communication methods, legislation, trends, and ethical issues. Introduces resources for content-specific vocabulary.

## **SLNG 2331 Interpreting III**

*Prerequisites:* SGNL 1401, SGNL 1402, SGNL 2301, SGNL 2302, SLNG 1307, 1311, SLNG 1321, SLNG 2401, SLNG 2402; *Department Approval.*

*Credit: 3 (2 lecture, 4 lab)*

A practice-oriented course to strengthen skills in the integration and application of interpreting using complex source materials. Continued exposure to simulated interpreting/transliterating experiences.

## **SLNG 2380 Cooperative Education - Sign Language Interpretation and Translation**

*Prerequisites:* *Departmental Approval*

*Credit: 3 (1 lecture, 240 contact hours)*

Career-related activities encountered in the student's area of specialization offered through an individualized agreement among the college, employer, and student. Under the supervision of the college and the employer, the student combines classroom learning with work experience. Includes a lecture component.

## **SLNG 2586 Internship (Last Used in 2011 - 2012)**

*Prerequisites:* SLNG 1307, SLNG 1311, SLNG 1321, SLNG 1317, SLNG 1347, SGNL 1401, SGNL 1402, SGNL 2301, SGNL 2302, SLNG 1248, SLNG 1317, SLNG 1321, SLNG 1347, SLNG 1391, SLNG 2315, SLNG 2401, SLNG 2402, SLNG 2431

*Credit:*

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A work-based learning experience that enables the student to apply specialized occupational theory, skills and concepts. A learning plan is developed by the college and the employer.

## **SOCI 1301 Introduction to Sociology**

*Prerequisites: Must be placed into college-level reading (or take GUST 0342 as a co-requisite) and be placed into college-level writing (or take ENGL 0310/0349 as a co-requisite).*

*Credit: 3 (3 lecture)*

A survey course which focuses on the nature of human groups in American and world societies, their social and cultural adaptations, and the impact which various social processes may have on their social organization and social change. This course satisfies the Social and Behavioral Sciences or Component Area Option of the HCC core.

## **SOCI 1306 Social Problems**

*Prerequisites: Must be placed into college-level reading (or take GUST 0342 as a co-requisite) and be placed into college-level writing (or take ENGL 0310/0349 as a co-requisite).*

*Credit: 3 (3 lecture)*

An inquiry into selected current social problems with specific reference to their original development, and suggested solutions. This course satisfies the Social and Behavioral Sciences or Component Area Option of the HCC core.

## **SOCI 2301 Marriage and the Family**

*Prerequisites: Must be placed into college-level reading (or take GUST 0342 as a co-requisite) and be placed into college-level writing (or take ENGL 0310/0349 as a co-requisite).*

*Credit: 3 (3 lecture)*

This course is a sociological analysis of marriage and family relations based on fundamental principles in the discipline. Both theory and current research findings are covered. Areas explored include family dynamics, interpersonal relations, demographic trends, and conflict management. Current and classical research is reviewed and applied. Core Curriculum Course.

## **SOCI 2319 Minority Studies I**

*Prerequisites: Must be placed into college-level reading (or take GUST 0342 as a co-requisite) and be placed into college-level writing (or take ENGL 0310/0349 as a co-requisite).*

*Credit: 3 (3 lecture)*

An in depth theoretical and practical Sociological analysis that examines historical and contemporary minority issues, including race and ethnicity, using historical and modern demographic data such as life span, birth rates, marriage patterns, business ownership, educational attainment, migration data, and assimilation/pluralism patterns as well as the impact of economic and social globalization on minorities in the United States and the world.

## **SOCI 2336 Criminology**

*Prerequisites: Must be placed into college-level reading (or take GUST 0342 as a co-requisite) and be placed into college-level writing (or take ENGL*

*0310/0349 as a co-requisite).*

*Credit: 3 (3 lecture)*

An analysis of the social dimensions of crime as a form of deviant behavior; the nature and extent of crime; classic and modern theories; the role of the police and the courts, group and community oriented programs, with an evaluation of prevention, control, and treatment programs. This course satisfies the Social and Behavioral Sciences or Component Area Option of the HCC core.

## **SOCI 2374 Global Issues and Social Change**

*Prerequisites: Must be placed into college-level reading (or take GUST 0342 as a co-requisite) and be placed into college-level writing (or take ENGL 0310/0349 as a co-requisite).*

*Credit: 3 (3 lecture)*

A macro level analysis of the dynamic processes of change affecting the increasingly global community, with emphasis on the role of technology. The course will focus on current trends in the broad topics of human ecology, human rights, the environment, culture and the social institutions. Special attention will be devoted to the conflict and security, international governmental and nongovernmental entities, social movements, and the role of the "global citizen."

## **SOLR 1370 Principles of Solar Photovoltaic**

*Prerequisites: Must be placed into college-level reading, writing and math.*

*Credit: 3 (3 lecture)*

Study of basic solar cells, parameters, efficiency limits, spectrum and radiation, and manufacturing concepts; photovoltaic plates and energy conversion; thermal dynamics; basic safety and efficiency performance; basic systems components and applications; careers as PV installers.

## **SOLR 1371 Solar Safety Operations**

*Prerequisites: Must be placed into college-level reading, writing and math.*

*Credit: 3 (3 lecture)*

Overview of safety, health, and environmental issues associated with the production, installation, maintenance, troubleshooting, and disposal of PV electrical systems.

## **SOLR 1372 Off-Grid Solar Energy**

*Prerequisites: Must be placed into college-level reading, writing and math.*

*Credit: 3 (1 lecture, 2 lab)*

Principles of policymaking regarding interconnecting issues, advantages and disadvantages of battery operating grid-tied systems, benefits and costs, future developments and ramifications.

## **SOLR 1373 Solar Energy Systems**

*Prerequisite: SOLR 1370, SOLR 1372, SOLR 1371 or Departmental Approval. Must be placed into*

*college-level reading, writing and math.*

*Credit: 3 (3 lecture)*

Overview of solar energy PV & TH systems and their economic and practical impacts.

## **SOLR 1374 Principles of Solar Thermal Technology**

*Prerequisites: Must be placed into college-level reading, writing and math.*

*Credit: 3 (2 lecture, 4 lab)*

Study of basic solar heat producing units, parameters, efficiency limits, heat transfer, and manufacturing concepts; thermodynamic variables associated with solar thermal operations; basic safety and efficiency performance; basic systems components and applications; careers as Solar Thermal installers; mechanical devices used in solar thermal installations.

## **SOLR 1470 PV Installation Maintenance and Troubleshooting**

*Prerequisites: SOLR 1370, SOLR 1371, SOLR 1372 or Department Approval. Must be placed into college-level reading, writing and math.*

*Credit: 4 (2 lecture, 4 lab)*

Overview of site evaluation and installation of batteries, PV arrays, control and inverters, and PV wiring. Principles materials and tools lists, code regulations, PV components maintenance, troubleshooting of: common system faults, wiring problems using measuring equipment, specific PV related problems.

## **SOLR 1471 Photovoltaic Electrical Systems**

*Prerequisites: SOLR 1370, SOLR 1371, SOLR 1372 or Departmental Approval. Must be placed into college-level reading, writing and math.*

*Credit: 4 (2 lecture, 4 lab)*

Overview of terminology associated with PV power electric principles, PV system applications and electrical circuits, series and parallel connections to power supplies, wiring best practices, and electric loads.

## **SOLR 1472 Solar Thermal Installation Maintenance and Troubleshooting**

*Prerequisites: Must be placed into college-level reading, writing and math.*

*Credit: 4 (2 lecture, 4 lab)*

Overview of site evaluation and installation of solar thermal generation systems, units, controls and inverters, and thermal plumbing. Principles materials and tools lists, code regulations, heating and cooling components maintenance, troubleshooting of: common system faults, piping problems using measuring equipment, specific heat generation related problems.

## **SPAN 1300 Beginning Spanish Conversation I**

*Credit: 3 (3 lecture)*

An introductory Spanish course which emphasizes

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listening comprehension and speaking skills. Reading and writing may be done as reinforcement to oral communication skills. The course is slower-paced and less comprehensive than Spanish 1411. It is highly recommended for students without previous experience in the Spanish language. This course is not open to students whose first language is Spanish. Generally, does not transfer as foreign language credit, but may transfer as elective credit.

## **SPAN 1310 Beginning Spanish Conversation II**

*Prerequisite: SPAN 1300 or equivalent*

*Credit: 3 (3 lecture)*

Continuation of SPAN 1300. Emphasizes oral communication skills. Generally, does not transfer as foreign language credit, but may transfer as elective credit. Students who continue the study of Spanish following this course must take SPAN 1411.

## **SPAN 1411 Beginning Spanish I**

*Prerequisites: Must be placed into GUST 0342 (or higher) in reading and ENGL 0310/0349 (or higher) in writing.*

*Credit: 4 (3 lecture, 2 lab)*

Introduction to the Spanish language and Hispanic culture. Development of basic skills in listening comprehension, speaking, reading, writing, and cultural awareness. Course includes vocabulary building, conversation and grammar. Transfers as foreign language credit. Core Curriculum Course.

## **SPAN 1412 Beginning Spanish II**

*Prerequisite: SPAN 1411 or satisfactory score on an advanced placement examination or at least 2 years of high school Spanish within the last two years; must be placed into GUST 0342 (or higher) in reading and ENGL 0310/0349 (or higher) in writing.*

*Credit: 4 (3 lecture, 2 lab)*

Continuation of SPAN 1411. Further development of listening comprehension, speaking, reading, and writing skills, and cultural awareness. More advanced grammar. Transfers as foreign language credit. Core Curriculum Course.

## **SPAN 2306 Intermediate Conversational Spanish**

*Prerequisite: SPAN 1412 or SPAN 1310*

*Credit: 3 (3 lecture)*

Refinement of conversational skills through practice of idiomatic usage and discussion of contemporary issues and/or current events.

## **SPAN 2311 Intermediate Spanish I**

*Prerequisite: SPAN 1412 or equivalent; Must be placed into GUST 0342 (or higher) in reading and ENGL 0310/0349 (or higher) in writing.*

*Credit: 3 (3 lecture)*

Further development of listening, speaking, reading and writing skills and cultural awareness acquired in Beginning Spanish. Presentation of more complex language structures. Oral and written practice based on selected readings. Class

conducted mainly in Spanish.

## **SPAN 2312 Intermediate Spanish II**

*Prerequisite: SPAN 2311 or equivalent; Must be placed into GUST 0342 (or higher) in reading and ENGL 0310/0349 (or higher) in writing.*

*Credit: 3 (3 lecture)*

Continuation of SPAN 2311. Special emphasis on written communication. Readings, discussions and compositions. Class conducted mainly in Spanish.

## **SPAN 2313 Spanish for Native Speakers I**

*Prerequisite: test placement; Must be placed into GUST 0342 (or higher) in reading and ENGL 0310/0349 (or higher) in writing.*

*Credit: 3 (3 lecture)*

Designed for Hispanic-American and other students from a Spanish speaking background. Emphasis on basic skills in reading, spelling, and composition. Credit will not be given for both SPAN 2313 and SPAN 2311.

## **SPAN 2315 Spanish for Native Speakers II**

*Prerequisite: SPAN 2313; must be placed into GUST 0342 (or higher) in reading and ENGL 0310/0349 (or higher) in writing.*

*Credit: 3 (3 lecture)*

Continuation of SPAN 2313. Continued development of reading and writing skills and control of universal Spanish style.

## **SPAN 2316 Career-Oriented Conversational Spanish**

*Prerequisite: SPAN 2311*

*Credit: 3 (3 lecture)*

A course emphasizing the development of listening and speaking skills at the intermediate level. The course will use vocabulary, structures, conversational situations and cultural information appropriate for a designated activity or topic such as business, music, travel or other specialized areas. Each time the course is offered, the particular focus will be specified. May be repeated for credit with permission of the Dean.

## **SPAN 2321 Readings in Spanish Literature**

*Prerequisite: SPAN 2312*

*Credit: 3 (3 lecture)*

An introduction to Spanish literature through representative selections by major Spanish authors. Conducted in Spanish.

## **SPCH 1311 Introduction to Speech Communication**

*Prerequisites: Must be placed into college-level reading (or take GUST 0342 as a co-requisite) and be placed into college-level writing (or take ENGL 0310/0349 as a co-requisite).*

*Credit: 3 (3 lecture)*

A survey course in the basic principles of oral communication. Includes the study of the use of the body and voice, the speaker-listener relationship, and preparation and delivery of platform speeches. Open to all students. Required for speech majors. Core Curriculum Course.

## **SPCH 1315 Public Speaking**

*Prerequisites: SPCH 1311 or ENGL 1301 or Department Approval. Must be placed into college-level reading (or take GUST 0342 as a co-requisite) and be placed into college-level writing (or take ENGL 0310/0349 as a co-requisite).*

*Credit: 3 (3 lecture)*

Designed to develop proficiency in public speaking situations; emphasis on content, organization, and delivery of speeches for various occasions. Open to all students. Required for speech majors. Core Curriculum Course.

## **SPCH 1318 Interpersonal Communication**

*Prerequisites: Must be placed into college-level reading (or take GUST 0342 as a co-requisite) and be placed into college-level writing (or take ENGL 0310/0349 as a co-requisite).*

*Credit: 3 (3 lecture)*

A course designed to improve the student's effectiveness in small-group and one-to-one communication. Open to all students. Required for speech majors. Core Curriculum Course.

## **SPCH 1321 Business and Professional Communication**

*Prerequisites: Must be placed into college-level reading (or take GUST 0342 as a co-requisite) and be placed into college-level writing (or take ENGL 0310/0349 as a co-requisite).*

*Credit: 3 (3 lecture)*

Applies the techniques of oral communication to situations most common to business and professional people. Covers discussion methods, conference techniques, committee reports, instructions, lectures, and public speeches. Open to all students. Required for speech majors. Core Curriculum Course.

## **SPCH 1342 Voice and Diction**

*Prerequisites: Must be placed into college-level reading (or take GUST 0342 as a co-requisite) and be placed into college-level writing (or take ENGL 0310/0349 as a co-requisite).*

*Credit: 3 (3 lecture)*

Training in the effective use of the voice and body. Includes study of the vocal mechanism and the phonetic alphabet; improvement of enunciation, pronunciation, and articulation. Recommended for non-native speakers. Open to all students. Required for speech majors.

## **SPCH 2333 Discussion and Small Group Communication**

*Prerequisites: Must be placed into college-level reading (or take GUST 0342 as a co-requisite) and be placed into college-level writing (or take ENGL 0310/0349 as a co-requisite).*

*Credit: 3 (3 lecture)*

Examines the dynamics of small group communication and discussion situations, including body language. Open to all students, required of majors.

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## **SPCH 2335 Argumentation and Debate**

*Prerequisites:*

*Credit: 3 (3 lecture)*

Study of principles of argumentation and debate. Practice in preparing written and spoken arguments. Open to all students.

## **SPCH 2341 Oral Interpretation**

*Prerequisites: Must be placed into college-level reading (or take GUST 0342 as a co-requisite) and be placed into college-level writing (or take ENGL 0310/0349 as a co-requisite).*

*Credit: 3 (3 lecture)*

Cultivation of the art of oral presentation of literary forms, analysis of thought, development of imagination, communication of emotional values, and individual projects in interpretive reading. Open to all students. Required for speech majors.

## **SRGT 1361 Clinical-Surgical Technology/Technologist**

*Prerequisites: Department Approval; Must be placed into GUST 0342 in reading, college-level writing and MATH 0312 in math.*

*Credit: 3 (9 clinical)*

A health-related work-based learning experience that enables the student to apply specialized occupational theory, skills, and concepts. Direct supervision is provided by the clinical professional.

## **SRGT 1371 Sterile Processing**

*Prerequisites: Must be placed into GUST 0342 in reading, ENGL 0310 or 0349 in writing and MATH 0308 in math.*

*Credit: 3 (2 lecture, 2 lab)*

In-depth coverage of specialized surgical modalities in endoscopy, microsurgery, therapeutic surgical energies, and other integrated science technologies.

## **SRGT 1372 Comprehensive Anatomy and Physiology for the Surgical Technologist**

*Prerequisites: Department Approval; Admission to the program. Must be placed into GUST 0342 in reading, ENGL 0310 or 0349 in writing and MATH 0308 in math.*

*Credit: 3 (3 lecture)*

Comprehensive study of the structure and function of human cells, tissues, and organ systems including integumentary, skeletal, muscular, and nervous system, endocrine, digestive, respiratory, cardiovascular, lymphatic/immune, renal/excretory, and reproductive. Fast-paced online course designed for the surgical technologist.

## **SRGT 1405 Introduction to Surgical Technology**

*Prerequisites: Must be placed into GUST 0342 in reading, college-level writing and MATH 0312 in math.*

*Credit: 4 (3 lecture, 3 lab)*

Orientation to surgical technology theory, surgical pharmacology and anesthesia, technological sciences, and patient care concepts.

## **SRGT 1409 Fundamentals of Perioperative Concepts and Techniques**

*Prerequisites: Must be placed into GUST 0342 in reading, college-level writing and MATH 0312 in math.*

*Credit: 4 (3 lecture, 3 lab)*

In-depth coverage of perioperative concepts such as aseptic principles and practices, infectious processes, wound healing, and creation and maintenance of the sterile field.

## **SRGT 1441 Surgical Procedures I**

*Prerequisites: SRGT 1405, SRGT 1409; Must be placed into GUST 0342 in reading, college-level writing and MATH 0312 in math.*

*Credit: 4 (3 lecture, 3 lab)*

Introduction to surgical pathology and its relationship to surgical procedures. Emphasis on surgical procedures related to the general, OB/GYN, genitourinary, and orthopedic surgical specialties incorporating instruments, equipment, and supplies required for safe patient care.

## **SRGT 1442 Surgical Procedures II**

*Prerequisite: SRGT 1441; Must be placed into GUST 0342 in reading, college-level writing and MATH 0312 in math.*

*Credit: 4 (3 lecture, 3 lab)*

Introduction to surgical pathology and its relationship to surgical procedures. Emphasis on surgical procedures related to the thoracic, peripheral vascular, plastic/reconstructive, EENT, cardiac, and neurological surgical specialties incorporating instruments, equipment, and supplies required for safe patient care.

## **SRGT 1463 Clinical-Surgical Technology/Technologist**

*Prerequisites: SRGT 1361; must be placed into GUST 0342 in reading, ENGL 0310 or 0349 in writing and MATH 0308 in math.*

*Credit: 4 (24 clinical)*

A health-related work-based learning experience that enables the student to apply specialized occupational theory, skills, and concepts. Direct supervision is provided by the clinical professional.

## **SRGT 1560 Clinical-Surgical Technology/Technologist**

*Prerequisites: Must be placed into GUST 0342 in reading, ENGL 0310 or 0349 in writing and MATH 0312 in math.*

*Credit: 5 (25 external hours)*

A health-related work-based learning experience that enables the student to apply specialized occupational theory, skills, and concepts. Direct supervision is provided by the clinical professional.

## **SRGT 2130 Professional Readiness**

*Credit: 1 (1 lecture, 1 lab)*

Transition into the professional role of the surgical technologist. Includes professional readiness for employment, attaining certification, and maintaining certification status. A capstone experience may be included.

## **SRGT 2463 Clinical-Surgical Technology/Technologist**

*Prerequisite: SRGT 1463; must be placed into GUST 0342 in reading, college-level writing and MATH 0312 in math.*

*Credit: 4 (17 clinical)*

A health-related work-based learning experience

that enables the student to apply specialized occupational theory, skills, and concepts. Direct supervision is provided by the clinical professional.

## **SRVY 1301 Introduction to Surveying**

*Prerequisites: Must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (2 lecture, 4 lab)*

An overview of the surveying profession. The history of surveying and its impact on the world. Review of the mathematics used in surveying. Introduction to basic surveying equipment with emphasis on measurements. Instruction on surveying procedures and the limitation of errors. Calculation to determine precision and error of closure.

## **SRVY 1341 Land Surveying**

*Prerequisites: Must be placed into GUST 0342 in reading, ENGL 0310 or 0349 in writing and MATH 0308 in math.*

*Credit: 3 (2 lecture, 4 lab)*

A study of the measurement and determination of boundaries, areas, shapes, location through traversing techniques. Instruction in a variety of adjustment methods using programmed and non-programmed hand-held calculators and computers. Methods of traversing and adjustment of errors according to prevailing and applicable professional standards.

## **SRVY 1342 Global Positioning System Techniques for Surveying and Mapping**

*Prerequisites:*

*Credit: 3 (3 lecture)*

Introduction to the Global Positioning System (GPS) in surveying and mapping activities. Major topics include structuring a GPS system, designing a GPS data collection project, using GPS data collection equipment, collecting and processing GPS data, and correcting data errors.

## **SRVY 1442 Global Positioning System Techniques for Surveying and Mapping**

*Prerequisites:*

*Credit: 4 (2 lecture, 2 lab)*

Introduction to the Global Positioning System (GPS) in surveying and mapping activities. Major topics include structuring a GPS system, designing a GPS data collection project, using GPS data collection equipment, collecting and processing GPS data, and correcting data errors.

## **SRVY 2348 Plane Surveying**

*Prerequisites:*

*Credit: 3 (2 lecture, 4 lab)*

Surveying instruments, basic measuring procedures, vertical and horizontal control, and traverse closure.

## **TECA 1303 Family, School, and Community**

*Prerequisites: Must be placed into college-level reading and college-level writing.*

*Credit: 3 (3 lecture)*

A study of the child, family, community, and schools, including parent education and involvement, family and community lifestyles, child abuse, and

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current family life issues. Course content must be aligned as applicable with State Board for Educator Certification Pedagogy and Professional Responsibilities standards and coincide with the National Association for the Education of Young Children position statement related to developmentally appropriate practices for children from birth through age eight.

Requires students to participate in field experiences with children from infancy through age 12 in a variety of settings with varied and diverse populations. The course includes a minimum of 16 hours of field experiences.

## **TECA 1311 Educating Young Children**

*Prerequisites: Must be placed into college-level reading and college-level writing.*

*Credit: 3 (3 lecture)*

An introduction to the education of the young child, including developmentally appropriate practices and programs, theoretical and historical perspectives, ethical and professional responsibilities, and current issues. Course content must be aligned as applicable with State Board for Educator Certification Pedagogy and Professional Responsibilities standards and coincide with the national Assessment of Educational Progress position statement related to developmentally appropriate practices for children from birth through age eight. Requires students to participate in field experiences with children from infancy through age 12 in a variety of settings with varied and diverse populations; and the course includes a minimum of 16 hours of field experiences.

## **TECA 1318 Wellness of the Young Child**

*Prerequisites: Must be placed into college-level reading and college-level writing.*

*Credit: 3 (2 lecture, 3 lab)*

A study of the factors that impact the well-being of the young child including healthy behavior, food, nutrition, fitness, and safety practices. Focuses on local and national standards and legal implications of relevant policies and regulations. Course content must be aligned as applicable with State Board for Educator Certification Pedagogy and Professional Responsibilities standards and coincide with the National Assessment of Educational Progress position statement related to developmentally appropriate practices for children from birth to age eight. Requires students to participate in field experiences with children from infancy through age 12 in a variety of settings with varied and diverse populations. Course includes a minimum of 16 hours of field experiences.

## **TECA 1354 Child Growth and Development**

*Prerequisites: Must be placed into college-level reading and college-level writing.*

*Credit: 3 (3 lecture)*

A study of the physical, emotional, social, language, and cognitive factors impacting growth and development of children through adolescence. (Cross-listed with PSYC 2308)

## **TECM 1301 Industrial Mathematics**

*Prerequisites: Must be placed into GUST 0339 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (3 lecture)*

Math skills applicable to industrial occupations. Includes fraction and decimal manipulation, measurement, percentage, and problem solving techniques for equations and ratio/proportion applications.

## **TRAI 1176 Business Terminology for Translation and Interpretation**

*Prerequisites: Must be placed into college-level reading and college-level writing.*

*Credit: 1 (1 lecture)*

This course provides an introduction to the concepts and terminology of international business and has a broad coverage of essential elements of international business. It also focuses on the language of contracts, including Incoterms, and builds foundation for translation and interpretation in commercial areas.

## **TRAI 1271 Technology for Translation & Interpretation**

*Prerequisites: Must be placed into college-level reading and college-level writing.*

*Credit: 2 (1 lecture, 2 lab)*

This course is an introduction to the equipment and electronic tools used by professional translators and interpreters throughout their workflow.

## **TRAI 1272 Terminology Management and Research**

*Prerequisites: TRAI 1371; Must be placed into college-level reading and college-level writing.*

*Credit: 2 (1 lecture, 2 lab)*

Basic terminology in the fields of medicine, law, computers, business, and technical fields will be covered. Students will learn how to ensure accuracy for highly specialized fields for which terminology may not yet be available. Different tools and techniques to find, store, and manage search results will be discussed.

## **TRAI 1371 Fundamentals of the Theory & Practice of Translation & Interpretation**

*Prerequisites: Must be placed into college-level reading and college-level writing.*

*Credit: 3 (3 lecture)*

This course, taught in English, is an introduction to translation into English and target language. Its goal is to teach students the basic principles of the theory of translation, the linguistic and cultural aspects of language transfer, the main techniques and strategies for translating and interpreting as well as the differences between English and target language regarding grammar, syntax, punctuation, and style.

## **TRAI 1372 Writing, Editing & Revising for**

## **Translation**

*Prerequisites: Must be placed into college-level reading and college-level writing.*

*Credit: 3 (3 lecture)*

This course is designed for translators, editors and writers of business and other specialized and technical documents. Learning activities focus on requirements for the production of final English drafts of good quality.

## **TRAI 1373 Intercultural Communication**

*Prerequisites: Must be placed into college-level reading and college-level writing.*

*Credit: 3 (3 lecture)*

This course focuses on important issues of global, national, regional and gender identities seen through the prism of translation activity. It scrutinizes the linguistic and cultural resources employed by translators to assimilate, channel, exploit, and localize discourses and voices in their respective environments. The focus will be on such areas as business, medical and legal areas as well as technical environments.

## **TRAI 2271 Fundamentals of Specialized Written Translation**

*Prerequisites: Must be placed into college-level reading and college-level writing.*

*Credit: 2 (1 lecture, 2 lab)*

This course focuses on translation of scientific and technical texts from source language (Spanish// Chinese/Russian/French) into the English language and vice versa, presenting linguistic and cultural issues affecting meaning transfer from one language to another.

## **TRAI 2273 Fundamentals of Specialized Written Translation (Legal & Medical)**

*Prerequisites: Must be placed into college-level reading and college-level writing.*

*Credit: 2 (1 lecture, 2 lab)*

This course focuses on translation of legal and medical texts from source language (Spanish// Chinese/Russian/French) into the English language and vice versa, presenting linguistic and cultural issues affecting meaning transfer from one language to another.

## **TRAI 2274 Introduction to Interpreting (Consecutive and Sight)**

*Prerequisites: Must be placed into college-level reading and college-level writing.*

*Credit: 2 (1 lecture, 2 lab)*

This course is designed to teach students the specialized techniques of consecutive and sight interpreting to prepare them for the career in the field. Techniques for note taking are also included in the course.

## **TRAI 2275 Advanced Project in Translation**

*Prerequisites: Must be placed into college-level reading and college-level writing.*

*Credit: 2 (1 lecture, 3 lab)*

Students will conduct a translation project demonstrating their ability to apply all the skills and tools taught in the Program.

## **TRAI 2277 Fundamentals of Specialized**

# Course Descriptions

## **Written Translation (Legal)**

*Prerequisites: TRAI 1371, 1372, 1373; Must be placed into college-level reading and college-level writing.*

*Credit: 2 (1 lecture, 2 lab)*

This course focuses on translation of legal texts from English into a target language (Spanish/French/Chinese Mandarin/Russian, etc) and vice versa, presenting linguistic, cultural, and subject-related issues affecting meaning transfer from one language to another.

## **TRAI 2278 Fundamentals of Specialized Written Translation (Medical)**

*Prerequisites: TRAI 1371, 1372, 1373, 1271, 1272; Must be placed into college-level reading and college-level writing.*

*Credit: 2 (1 lecture, 2 lab)*

This course focuses on translation of medical texts from English into a target language (Spanish/French/Chinese Mandarin/Russian, etc) and vice versa, presenting linguistic, cultural, and subject-related issues affecting meaning transfer from one language to another.

## **TRAI 2376 Internship - Translation & Interpretation**

*Prerequisites: Must be placed into college-level reading and college-level writing.*

*Credit: 3 (9 lab)*

Practical, general workplace training supported by an individualized learning plan developed jointly by the internship site supervisor, college and student. This will serve as the capstone course for the award.

## **TRVM 1300 Introduction to Travel and Tourism**

*Prerequisites: Must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (3 lecture)*

An overview of the travel industry. Emphasis on travel careers and the impact of tourism on society.

## **TRVM 1306 Travel Automation I**

*Prerequisites: TRVM 1300 and TRVM 1313, or Department Approval. Must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (2 lecture, 2 lab)*

An introduction to computer training using one of the major computer reservation systems for the travel industry.

## **TRVM 1308 Travel Destinations I - Western Hemisphere**

*Prerequisites: Must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (3 lecture)*

Study of countries located in the Western Hemisphere including Canada, United States, Latin America, South America, and the Caribbean Islands. Emphasis on the culture, customs, seasonal attractions, climate, physical features, language, currency, political conditions, and how they affect both the business and leisure traveler.

## **TRVM 1313 Ticketing Forms and Procedures**

*Prerequisites: Must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (3 lecture)*

An introduction to manual travel agency operations and basic hands-on reservations techniques. An overview of the ARC ticketing, forms, and procedures.

## **TRVM 1323 Group Tour Operations**

*Prerequisites: Must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (3 lecture)*

A study of the role of the group planner, selling to groups, and planning itineraries, including components of a tour package, tour costing, advertising and promotion, group dynamics, and tour guide qualifications.

## **TRVM 1327 Special Events Design**

*Prerequisites: Must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (3 lecture)*

The development of a special event from the conceptual stage through completion. Emphasis on industry terminology, factors to consider when planning a special event, and contingency plans.

## **TRVM 1341 Travel Destinations II-Eastern Hemisphere**

*Prerequisites: Must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (3 lecture)*

Study of countries located in the Eastern Hemisphere including Europe, Asia, Africa, Middle East, Australia, and New Zealand. Emphasis on the culture, customs, climate, physical features, language, currency, and political conditions and how they affect both the business and leisure traveler.

## **TRVM 1345 Travel and Tourism Sales and Marketing Techniques**

*Prerequisites: Must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (3 lecture)*

A study of marketing, sales techniques, promotions, and advertising theories as applied to the travel and tourism industry. Exposure to the marketing mix relating to market segmentation, market planning, advertising, and other communication techniques. Emphasis on role playing scenarios and consumer buying behavior. Product-service mix will be addressed.

## **TRVM 1348 International Fare Construction**

*Prerequisites: Must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (3 lecture)*

A survey of international ticket pricing, fare construction, and ticketing.

## **TRVM 1391 Special Topics in Travel and Tourism: Travel Retail Sales**

*Prerequisites: Must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (3 lecture)*

Topics address recently identified current events, skills, knowledge, and/or attitudes and behaviors pertinent to the technology or occupation and relevant to the professional development of the student. This course was designed to be repeated multiple times to improve student proficiency.

## **TRVM 2305 Travel Industry Management**

*Prerequisites: Must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (3 lecture)*

An overview of mid-management responsibilities within the travel and tourism industry. Students will describe the management functions including: analyzing, coordinating, implementing, and supervising tasks of managing a business.

## **TRVM 2335 Travel Automation II**

*Prerequisites: TRVM 1306; Must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (2 lecture, 2 lab)*

A continuation of the study of airline computer reservation systems. Emphasis on reserving cars and hotels, using queues, creating passenger profiles, interpreting air fares, rules, and routing, and explaining these to passengers.

## **TRVM 2380 Cooperative Education-Tourism and Travel Services Management**

*Prerequisite: Department Approval; Must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (1 lecture, 20 hours work experience)*

Career-related activities encountered in the student's area of specialization offered through an individualized agreement among the college, employer, and student. Under the supervision of the college and the employer, the student combines classroom learning with work experience. Includes a lecture component.

## **TRVM 2381 Cooperative Education-Tourism and Travel Services Management**

*Prerequisites: TRVM 2380 and Department Approval; Must be placed into GUST 0341 in reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (1 lecture, 20 hours work experience)*

Career-related activities encountered in the student's area of specialization offered through an individualized agreement among the college, employer, and student. Under the supervision of the college and the employer, the student combines classroom learning with work experience. Includes a lecture component.

# Course Descriptions

## **VNSG 1122 Vocational Nursing Concepts**

*Prerequisites: Admission to program; must be placed into college-level reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 1 (1 lecture)*

Introduction to the nursing profession and its responsibilities. Includes legal and ethical issues in nursing practice. Concepts related to the physical, emotional, and psychosocial self-care of the learner/professional.

## **VNSG 1161 Clinical-Licensed Vocational Nurse (LVN) Training**

*Prerequisites: Admission to program; must be placed into college-level reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Corequisite: VNSG 1423*

*Credit: 1 (6 lab)*

A health-related work-based learning experience that enables the student to apply specialized occupational theory, skills, and concepts. Direct supervision is provided by the clinical professional.

## **VNSG 1162 Clinical-Licensed Vocational Nurse (LVN) Training**

*Prerequisites: VNSG 1161; Must be placed into college-level reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Corequisite: VNSG 1330*

*Credit: 1 (4 lab)*

A health-related work-based learning experience that enables the student to apply specialized occupational theory, skills, and concepts. Direct supervision is provided by the clinical professional.

## **VNSG 1163 Clinical-Licensed Vocational Nurse (LVN) Training**

*Prerequisites: VNSG 1162; Must be placed into college-level reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Corequisite: VNSG 1334*

*Credit: 1 (4 lab)*

A health-related work-based learning experience that enables the student to apply specialized occupational theory, skills, and concepts. Direct supervision is provided by the clinical professional.

## **VNSG 1216 Nutrition**

*Prerequisites: Admission to program; Must be placed into college-level reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 2 (2 lecture)*

Introduction to nutrients and the role of diet therapy in growth and development and in the maintenance of health.

## **VNSG 1219 Leadership and Professional Development**

*Prerequisites: VNSG 1122; Must be placed into college-level reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 2 (2 lecture)*

Study of the importance of professional growth. Topics include the role of the licensed vocational

nurse in the multi-disciplinary health care team, professional organizations, and continuing education.

## **VNSG 1227 Essentials of Medication Administration**

*Prerequisites: Admission to program; Must be placed into college-level reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 2 (2 lecture, 1 lab)*

General principles of medication administration including determination of dosage, preparation, safe administration, and documentation of multiple forms of drugs. Instruction includes various systems of measurement.

## **VNSG 1238 Mental Illness**

*Prerequisites: VNSG 1400; Must be placed into college-level reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 2 (2 lecture)*

Study of human behavior with emphasis on emotional and mental abnormalities and modes of treatment incorporating the nursing process.

## **VNSG 1266 Practicum-Licensed Vocational Nurse (LVN) Training**

*Prerequisites: VNSG 1161; Must be placed into college-level reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Corequisite: VNSG 1409 and VNSG 2331*

*Credit: 2 (15 lab)*

Practical, general workplace training supported by an individualized learning plan developed by the employer, college, and student.

## **VNSG 1267 Practicum-Licensed Vocational Nurse (LVN) Training**

*Prerequisites: VNSG 1266; Must be placed into college-level reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Corequisite: VNSG 1410*

*Credit: 2 (16 lab)*

Practical, general workplace training supported by an individualized learning plan developed by the employer, college, and student.

## **VNSG 1320 Anatomy and Physiology for Allied Health**

*Prerequisites: Admission to program; Must be placed into college-level reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Credit: 3 (3 lecture)*

Introduction to the normal structure and function of the body including an understanding of the relationship of body systems in maintaining homeostasis.

## **VNSG 1330 Maternal-Neonatal Nursing**

*Prerequisites: VNSG 1400; Must be placed into college-level reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Corequisite: VNSG 1162*

*Credit: 3 (3 lecture)*

Utilization of the nursing process in the assessment and management of the childbearing family. Emphasis on the bio-psycho-socio-cultural needs of the family during the phases of pregnancy, childbirth, and the neonatal period including abnormal conditions.

## **VNSG 1334 Pediatrics**

*Prerequisites: Must be placed into college-level reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Corequisite: VNSG 1163*

*Credit: 3 (3 lecture)*

Study of childhood diseases and childcare from infancy through adolescence. Focus on the care of the well and the ill child utilizing the nursing process.

## **VNSG 1400 Nursing in Health and Illness I**

*Prerequisites: Admission to program; Must be placed into college-level reading, ENGL 0300 or 0347 in writing and MATH 0306 in math. Credit: 4 (4 lecture)*

Introduction to general principles of growth and development, primary health care needs of the client across the life span, and therapeutic nursing interventions.

## **VNSG 1409 Nursing in Health and Illness II**

*Prerequisites: VNSG 1400; Must be placed into college-level reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Corequisite: VNSG 1266*

*Credit: 4 (4 lecture)*

Introduction to common health problems requiring medical and surgical interventions.

## **VNSG 1410 Nursing in Health and Illness III**

*Prerequisites: VNSG 1409; Must be placed into college-level reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Corequisite: VNSG 1267*

*Credit: 4 (4 lecture)*

Continuation of Nursing in Health and Illness II. Further study of common medical-surgical health problems of the client including concepts of mental illness. Incorporates knowledge necessary to make the transition from student to graduate vocational nurse.

## **VNSG 1423 Basic Nursing Skills**

*Prerequisites: Admission to program; Must be placed into college-level reading, ENGL 0300 or 0347 in writing and MATH 0306 in math.*

*Corequisite: VNSG 1161*

*Credit: 4 (3 lecture, 4 lab)*