HACC

CENTRAL PENNSYLVANIA'S COMMUNITY COLLEGE®

Founded in 1964

Course Catalog 2022-23

Academically YOURS.

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The statements in this catalog are not to be regarded as a contract between a student and the College. The College reserves the right to change course descriptions and academic requirements at any time within a student's enrollment. It will not be responsible for interruptions in a student's educational program due to circumstances beyond its control, such as inadequate enrollment in offered classes. A student planning to transfer is responsible for arranging a course of study acceptable to the transfer institution. HACC, Central Pennsylvania's Community College, in full accordance with the law, does not discriminate in employment, student admissions, and student services on the basis of race, color, religion, age, political affiliation or belief, sex, national origin, ancestry, disability, place of birth, General Education Development Certification (GED), marital status, sexual orientation, gender identity or expression, veteran status, or any other legally protected classification. HACC recognizes its responsibility to promote the principles of equal opportunity for employment, student admissions, and student services, taking active steps to recruit minorities and women. Inquiries should be directed to the Vice President of Inclusion, Diversity and Belonging and Title IX Coordinator, One HACC Drive, Harrisburg, PA 17110, or phone: 717-736-4102.

About HACC

Our Purpose:

Learning for all; learning for life.

HACC, Central Pennsylvania's Community College
One HACC Drive
Harrisburg, PA 17110
717-780-2300
800-ABC-HACC (222-4222)
start@hacc.edu

Gettysburg Campus
731 Old Harrisburg Road Gettysburg, PA 17325
717-337-3855

Harrisburg Campus
One HACC Drive Harrisburg, PA 17110
717-780-2300

Lancaster Campus
1641 Old Philadelphia Pike Lancaster, PA 17602
717-293-5000

Lebanon Campus
735 Cumberland Street Lebanon, PA 17042
717-270-4222

York Campus
2010 Pennsylvania Avenue York, PA 17404
717-718-0328

History

Harrisburg Area Community College was established February 14, 1964, as the first community college in Pennsylvania. HACC welcomed its first class of 426 students on September 21 of the same year. In seeking to fulfill its mission of “providing educational and cultural opportunities to the community it serves,” HACC has become the largest community college in Pennsylvania, with over 14,000 students enrolled.

Over the past 56 years HACC has grown and expanded its mission to include campuses at Gettysburg, Harrisburg, Lancaster, Lebanon and York, as well as a robust online education program and Midtown location to house the College’s technology and trade programs. HACC now has more than 107 associate degree, certificate and diploma programs. Global opportunities also are available.

HACC's Office of Workforce Development and Continuing Education offers professional development, job training, and personal enrichment courses/programs designed for both individuals and corporations. The College is one of the largest providers of workforce training in the state serving over 500 companies with over 16,000 enrollments in the areas of public safety, job skills, healthcare, technology and trades training, and computer skills.

Today, HACC, Central Pennsylvania’s Community College, has many strengths: exceptional faculty, student-centered libraries, well-equipped laboratories and studios, modern, well-maintained campuses, and quality programs and services. HACC’s reputation reflects the quality and dedication of its faculty and staff and its commitment to meeting the needs of the community and the students it serves.

Accreditation
HACC is accredited by the Middle States Commission on Higher Education (MSCHE). MSCHE is an institutional accrediting agency recognized by the U.S. Secretary of Education and the Council for Higher Education Accreditation. MSCHE granted initial accreditation in April 1967 and reaffirmed that accreditation most recently on June 21, 2018. Visit the Middle States website at www.msche.org for more information.

Anti-discrimination Statement
In full accordance with the law, HACC does not discriminate in employment, student admissions, and student services on the basis of race, color, religion, age, political affiliation or belief, sex, national origin, ancestry, disability, place of birth, General Education Development Certification (GED), marital status, sexual orientation, gender identity or expression, veteran status or any other legally protected classification. HACC recognizes its responsibility to promote the principles of equal opportunity for employment, student admissions, student activities and student services taking active steps to recruit minorities and women. Inquiries should be directed to the Vice President of Inclusion, Diversity and Belonging and Title IX Coordinator at cido@hacc.edu or 717-736-4102.

HACC Locations

Gettysburg Campus
731 Old Harrisburg Road
Gettysburg, PA 17325
717-337-3855
start@hacc.edu

The Gettysburg Campus, established in 1990, is located close to downtown Gettysburg. The campus enrolls over 1,500 students in credit courses and offers a selection of workforce development courses and customized employee training programs for business and industry.

HACC renovated a 1960s shopping mall into a modern college campus. A Welcome Center brings admissions, registration, student accounts and financial aid services

- The Learning Commons incorporates library information resources, instructional technology, career development and academic support services and comfortable study areas.
- Our spacious and colorful student commons, known as the HUB, features a fireplace lounge, Ragged Edge coffee bar, full-service bookstore, and the Robert C. Hoffman Community Room for events.
- The Gettysburg Hospital WellSpan Health Care Learning Center houses HACC's nursing and medical assisting programs.
- The campus mechatronics labs prepare students to perform maintenance on electronic, electrical, pneumatic, hydraulic and other mechanical equipment.
- Campus technology includes student-focused classrooms, campus-wide wireless Internet access, podcasting capabilities, and a laptop loan program for students.

The Campus includes environmentally-friendly materials, sustainable design and energy efficient systems, including a geothermal heating and cooling system.

HACC's Gettysburg Campus features small class sizes, individual attention from faculty, an active Student Government Association (SGA) and Student Programming Board (SPB) and a full array of student services.

The Gettysburg Campus offers full or part-time study, day or evening classes and online courses for associate degree, certificate and diploma programs. For more information, please see the individual program descriptions in this catalog or call at 717-337-3855.

Harrisburg Campus
One HACC Drive
Harrisburg, PA 17110
717-780-2300
start@hacc.edu

The Harrisburg Campus was HACC's first campus. Between 1964 and 1967, classes were offered at locations throughout Harrisburg. In 1967, McCormick Library, Clyde E. Blocker Hall and a student center (now Stabler Hall) opened their doors at the current location.

HACC's Harrisburg Campus enrolls over 6,500 students every semester in credit courses in associate degree, certificate and diploma programs. Program offerings include a variety of liberal arts, fine arts, science, technology, engineering, health careers, and math transfer and career programs.

The Harrisburg Campus spans over 200 acres and consists of 26 academic and student service buildings. The campus serves as a public garden to the community and boasts nine distinct gardens and over 900 trees.

- The campus facilities include the McCormick Library and Learning Commons, the Bruce E. Cooper Student Center and the Rose Lehrman Arts Center, which contains a 380 fixed-seat theater and fine arts studio spaces.
- The Select Medical Health Educational pavilion houses an up-to-date nursing lab and dental assisting, EFDA, and dental hygiene along with numerous other health career programs and state-of-the art lab facilities. Students and the public can visit the dental hygiene clinic for professionally supervised dental services at an affordable cost.
- The Grace M. Pollock Childcare and Early Childhood Educational Center is a daycare facility operated by U-Gro®, Learning Care Group that provides classrooms and offices for our Education Program.
- The James W. Evans Physical Education Center is a teaching and general recreation facility that includes a swimming pool, fitness center, gymnasium, dance studio, and racquetball squash courts. Nearby are lighted tennis courts, a golf putting green and athletic fields. It is home to HACC's athletic programs in the National Junior College Athletic Association (NJCAA). The College participates in region XIX for intercollegiate sports, including golf, soccer, volleyball, basketball, and cross country.
- The Harrisburg Campus is also home to the Senator John J. Shumaker Public Safety Center which serves as a regional public safety training center for fire, police and emergency medical services (EMS) personnel.
- Our Midtown Trade and Technology Center, located at 1523 N 4th St, Harrisburg, PA 17102, is our premier training space for skilled trades programs including welding, HVAC, electrical occupations and precision metal working technology.

Students can choose from day, evening, or weekend offerings as well as online courses. For more information, please see the individual program descriptions in this catalog or call at 717-780-2300.

Lancaster Campus
1641 Old Philadelphia Pike
Lancaster, PA 17602
717-293-5000
start@hacc.edu

Conveniently located in the heart of Lancaster County, HACC's Lancaster Campus has served its surrounding communities for over 30 years. With such diverse offerings and multiple partnerships with four-year institutions, it is not surprising that LNP, the newspaper for Lancaster County, awarded the campus with the Readers' Choice Award for "Favorite Place to Take College Courses" 13 years in a row.

While enrolled at HACC's Lancaster Campus, students are well supported. The campus provides an inviting Welcome Center, supportive advising and career development teams, a resource-rich Learning Commons, which includes a campus library, and centers for testing and tutoring, and an IT user support area. The entire campus aims to create a positive college experience for all students.

- As a community leader, HACC's Lancaster Campus proudly partners with the Spanish American Civic Association's Tec Centro, which is Lancaster's first and only bilingual vocational training school.
- Additionally, as a leader in the region's economic and workforce development training, HACC's Lancaster Campus plays an active role in assisting industry leaders with recruiting and retaining the highly skilled workforce required to compete in increasingly competitive markets.
- Known for its quality academics, HACC offers programs in allied health and nursing, business, social sciences, biology, engineering, and early childhood education, as well as many others, at the Lancaster Campus.

Each year, over 600 students complete clinical rotations, practicum experiences, child care and education placements, and internships at over 100 sites in Lancaster County. HACC's Lancaster Campus is proud to support students who are working to directly enter the workforce or transfer to a four-year institution. For more information, please see the individual program descriptions in this catalog or call 717-293-5000.

Lebanon Campus
735 Cumberland Street
Lebanon, PA 17042
717-270-4222
start@hacc.edu

The rich history of HACC's Lebanon Campus, providing education excellence to the Lebanon Valley, began in the fall of 1990 when the newly renovated Francis J. Dixon Hall opened its doors. However, soon after, a fire destroyed the campus and nearby businesses. The campus was rebuilt on its original site, and the new building opened in January 1992.

Today, HACC's Lebanon Campus is charting a new course. The building was purchased by the City of Lebanon in June 2020. The HACC campus is located on the third floor, with a classroom laboratory on the second floor.

- Serving the Lebanon Valley for more than 25 years, the campus remains a vital hub offering a Welcome Center that brings admissions, registration, financial aid and advising into one convenient location.
- Lounge areas and wireless internet throughout the second and third floor areas will continue to provide students with the opportunity to study and socialize conveniently.
- The newly constructed Learning Commons area houses a student life space, the Pushnik Family Library, lounge area, tutoring and testing, on-site support and comfortable spaces for individual and group study.
- Computers are available for student use and online access to academic information and virtual reference services are provided 24/7 for all HACC students.

The Lebanon Campus offers workforce development courses and many of the general education courses for HACC's programs can be completed at the Lebanon Campus.

Students can choose from day, evening, blended, and virtual course offerings. In addition, students have access to support services offered by the Office of Inclusion, Diversity and Belonging, career and transfer services and military and veteran's affairs. For more information, please see the individual program description in this catalog or call 717-270-4222.

York Campus
2010 Pennsylvania Avenue
York, PA 17404
717-718-0328
start@hacc.edu

HACC's York Campus includes three academic buildings, the Arthur J. Glatfelter Community Room, a campus services building, large parking lots, and a Rabbit Transit bus transfer station. 2,300 students are enrolled in classes making the York Campus the third-largest campus of HACC.

The York Campus offers associate degree, certificate, and diploma programs as well as workforce development courses and employee training for business and industry. Students attending the York Campus will receive a quality educational experience in a student-centered environment.

- Our career training programs provide students with hands-on, skills- based learning in preparation for the workforce while our transfer programs enable students to begin working toward a bachelor's degree.
- The Governor George M. Leader building is home to a full-service bookstore, library, allied health, nursing program and science labs.
- The William F. Goodling Center is home to our trade and technology programs and houses computer and networking labs, an electrical occupations lab, automotive lab, heating ventilation and air conditioning (HVAC) lab and welding lab.

- The Cytec building houses an art studio, Galleryork art gallery, computer graphics lab, classrooms and a fitness classroom.
- Wireless internet access in all buildings is part of our campus learning environment.
- Students have access to free tutoring, academic skills workshops and a writing lab.
- Student Government Association (SGA), clubs, and an active Phi Theta Kappa Honor Society chapter provide students with opportunities to be involved on campus and in their local community.

With students from over 29 countries attending classes, HACC's York Campus is one of the most diverse places in York County. This multicultural learning environment prepares students to work and live in a global community.

Flexible day, evening, and weekend class schedules are offered at the York Campus. Most of the general education and science courses for health career programs can be completed at the York Campus. For more information, please see the individual program description in this catalog or call 717-718-0328.

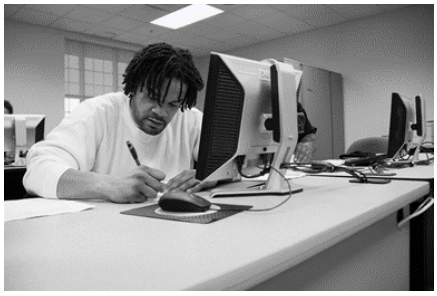
Workforce Development and Continuing Education

HACC's Office of Workforce Development and Continuing Education conducts a variety of industry-driven training programs designed to increase employee productivity and organizational efficiency. Some courses are offered directly to the public, while contract and customized training are offered to employers.

Workforce training gives working professionals a competitive edge in their careers and provides companies with an excellent training opportunity for their employees. Programs are provided at HACC's five campus locations or at the company's location.

Career Readiness programming delivers essential job readiness skills through the STEP Academy as well as offers workforce skills assessments as a local provider of the National Career Readiness Certificate (WorkKeys). Please call 717-780-2449 for more information.

CDL and Forklift training are available. CDL training includes class A and B truck driver training, refresher/upgrade classes and customized driver training, as well as a Diesel Technician certificate program. The CDL program is a licensed third-party testing site for the Commonwealth of Pennsylvania. Testing is available to the public by appointment only. For more information, call 717-221-1337. We offer stackable forklift training options from the forklift prep class which is taken prior to one of our practical certification options: sit down, stand-up, or both. For information, call 717-780-2315.



Certificate Programs to include Medical Cannabis Education and Workplace Foundations are currently available. Please call 717-780-1112 for more information.

Computer and IT Training provides customized and public subscription computer training in a comprehensive assortment of Microsoft Office software packages. Certification training is available for Cisco CCNA, CompTIA A+, Network+, and Security+ and Ethical Hacking. HACC is also a Microsoft Imagine Academy member. For information, call 717-780-1112.

Construction & Environmental Training programs are available for Wastewater and Drinking Water Treatment Operator, Construction Print Reading, Estimating, Basic Construction, Heavy Equipment Fundamentals, Basic Plumbing, Masonry and specialty HVAC areas like EPA Refrigerant or NATE Certification. For information, call 717-780-2315.

Continuing Education & Personal Enrichment courses in Adult Basic Education, GED Test Preparation, English as a Second Language (ESL), youth programming and PA KEYS Early Childhood Education as well as various personal enrichment subjects are available. Please call 717-780-2449 for more information.

Corporate Training and Professional Development creates bottom-line results for stronger organizational performance. HACC's workforce staff coordinates with your team to customize curriculum and deliver professional

training that facilitates achievement of strategic company goals. Training is suitable for all employees within an organization, but can be focused on particular levels of management, employee classes or locations as needed. Highly qualified instructors host learning sessions in a variety of locations and provide in-demand topics including, but not limited to, performance management, leadership, communication, team building, diversity and interpersonal skills. Please call 717-780-1112 for more information.

In **Healthcare**, HACC offers an ever-expanding variety of workforce development training programs, including Birth Doula, Certified Recovery Specialist/Certified Family Recovery Specialist, End of Life Specialist, Medical Coding Specialist, Nurse Aide, Massage Therapy, Medical Assistant/CCMA, Nursing Home Administrator, Pharmacy Technician, Physician Office Assistant, Personal Trainer, Phlebotomy, Reflexology, and RN/LPN Re-activation and Refresher. These comprehensive programs prepare students to enter healthcare careers, and continuing education offerings help current healthcare professionals meet their continuing education requirements. Many of the entry-level programs prepare students to sit for professionally-recognized certification exams.

Completed coursework can often be converted into college credits for those students who continue their healthcare education in HACC's programs. For more information on workforce development healthcare programs, call 717-221-1352.

Industry Safety and Quality programs enhance and improve all of the other technical skills areas with over 20 different safety topics for customized mix-and-match training or standard OSHA 10 and 30 classes for both General Industry or Construction. Additionally, for those focused on safety culture, Behavioral Based Safety and several quality training options are offered in Lean Manufacturing/5S, Continuous Improvement, Total Quality Management, Effective Problem Solving, Statistical Process Control and Six Sigma. To keep it all organized, logistics programs from Fundamentals of Logistics to Certified Logistics Technician are offered. For information, call 717-780-2315.

Manufacturing and Design Training is available for a variety of subjects including design software such as AutoCAD and SolidWorks. For hands-on skills, there is Certified Production Technician (CPT) and Industrial Manufacturing Technician (IMT) that include manufacturing specific safety, quality, production and maintenance awareness modules. Focused programs in Precision Machining Technology and Welding are offered utilizing our recently upgraded, program specific training labs dedicated to each of these discipline areas. Other classes in programmable logic controllers (PLCs), electrical technology, mechatronics, industrial print reading and geometric dimensioning are also available. For information, call 717-780-2315.

Public Safety

At HACC's Senator John J. Shumaker Public Safety Center, we provide a wide variety of training programs for law enforcement, fire, rescue, hazardous materials, and emergency medical services personnel, as well as response and safety training in business and industry environments. Most programs are provided throughout South Central Pennsylvania at locations which are convenient to the students or at HACC. Some public safety courses require criminal background checks or related prerequisites prior to enrollment.

Our **Law Enforcement** training programs meet the needs of current law enforcement professionals, as well as those seeking to enter the law enforcement field. The Municipal Police Academy is authorized to provide the Act 120 certification required for all new and prospective municipal police officers as well as mandated and elective continuing education for veteran police officers. In addition to training officers who have already been hired by police departments, the Academy accepts pre-service cadets. Those who complete the Police Academy can also obtain college credits for their work when transferring into HACC's Criminal Justice or Police Science programs. County probation and parole officers across the Commonwealth are also provided continuing education. Finally, HACC is an authorized provider of Act 235 (lethal weapons) certification training under the authority of the State Police.

The Indoor Firing Range at the Piccola Law Enforcement Complex is utilized for a wide range of law enforcement training programs as well as for basic handgun safety and marksmanship courses for civilians. It is also rented to a wide variety of law enforcement agencies, including private, local, county, state and federal. There are also civilian Laser Shot® programs offered at this facility, as well as, utilizing a firearms simulator.

In the **Fire Training Unit**, HACC's Career Fire Academy is designed to recruit and prepare for a career in the fire service. The Academy offers structured training in firefighting, emergency, hazardous materials and rescue. Participants test for Firefighter I, Firefighter II, Emergency Medical Technician and Hazardous Materials Awareness and Operations level certifications throughout the course of the Academy. Academy graduates may be awarded college credit applicable to HACC's Associate Degree in Fire Science Technology. Also offered at the Shumaker Public Safety Center are the following:
Entry level fire suppression training for volunteer firefighters and emergency services personnel National Incident Management System (NIMS) Incident Command System (ICS) training Pennsylvania Emergency Management Agency (PEMA) G series emergency management courses and training National Fire Protection Association (NFPA) professional certification testing for various levels in accordance with the National Board on Fire Service Professional Qualifications and the International Fire Service Accreditation Congress Business/industry OSHA related emergency response training.

Emergency Medical Services training is available for HACC's entire service region. Certification programs are currently offered at the Emergency Medical Responder (EMR), Emergency Medical Technician (EMT), Advanced Emergency Medical Technician (AEMT), Paramedic (NRP), and Pre-Hospital Registered Nurse (PHRN) levels. Along with the traditional program delivery models, the EMT and AEMT programs are also available in an online format which combines elements of online instruction with traditional face-to-face practical sessions. The EMS Academy provides a full-time educational opportunity for those interested in beginning a career in EMS. All of these programs prepare students to become eligible for the PA Department of Health certification and National Registry exams. HACC also offers EMS continuing education programs such as International Trauma Life Support and Critical Care Emergency Medical Transport. These, as well as other HACC programs can be used to fulfill continuing education requirements for Emergency Medical Service personnel. Finally, as an American Heart Association Community Training Center, HACC offers various certifications in First Aid, and CPR/AED for both the public and for Health Care Professionals, in addition to Advanced Cardiac Life Support and Pediatric Advanced Life Support. For general information on all public safety programs, call 800-222-4222, ext. 2510, or 717-780-2510.

HACC Foundation

The HACC Foundation is a private nonprofit organization established in 1985 by visionary leaders who believed in the College's mission and the value of investing for the future.

The mission of the HACC Foundation is to provide funding for student scholarships, innovation with academic programs and student services and upgrades in facilities for our students. The HACC Foundation Board of Directors are comprised of accomplished business and community leaders who are committed to raising funds and awareness for HACC and its students.

Individuals and organizations interested in contributing to the HACC Foundation and individuals interested in applying for membership on the HACC Foundation Board should visit www.haccfoundation.org.

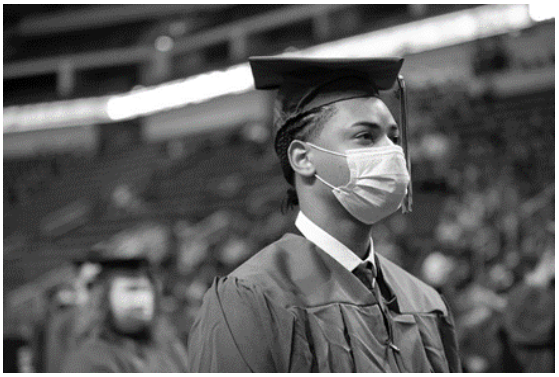
HACC Alumni Association

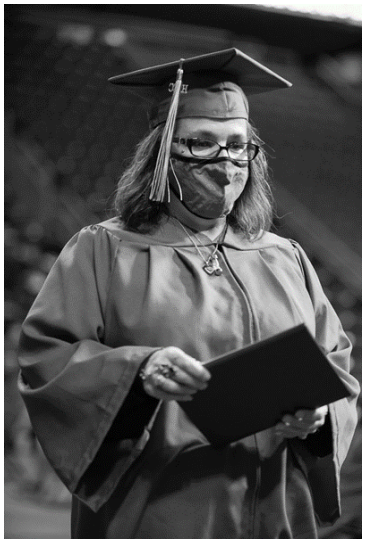
Former students of the College who have graduated from a degree, certificate or diploma program or have earned 30 or more credit hours are automatically members of the HACC Alumni Association.

Alumni benefit from HACC through networking and volunteer opportunities, career services (for example, job searches or participating in a mentorship), social events, professional development and giving back to support students and/or programs.

Alumni are also eligible to receive a variety of benefits and services through the association's Alumni College Card. The list of benefits is available at www.hacc.edu/Alumni/Benefits.

For more information, please visit www.hacc.edu/Alumni.





Student Affairs

Application Information

Applicants who meet the following criteria will be admitted to the college:
Earned a high school diploma or received a General Education Development Diploma (GED)
Satisfied the conditions for early admission of secondary school students
Are 18 years of age or older

Who should apply for admission to the college?
Anyone who has never previously applied for credit courses
Anyone who has previously applied for credit courses, but never took classes
Anyone who previously studied at HACC but has not attended for five or more years

How to apply for admission to the college:
Complete and submit the online application for admission found at www.hacc.edu. Apply as early as possible to ensure that there is adequate time to complete the enrollment process.

Submit an official high school transcript or copy of high school equivalency diploma if you:
Have graduated high school in the last 10 years
Are applying as an international (F-1) student
Are seeking admission into a selective program. (Admission to the college does not ensure acceptance into selective programs because of available physical facilities, clinical spaces, student/faculty ratios, or other factors. Admission into selective programs is competitive).

Submit an official college transcript if you are:
Transferring credits to HACC
Seeking acceptance to a selective program

Other documents may be required for the following admission types:

College in the High School and Dual Enrollment Programs – Students seeking enrollment into college courses at HACC while attending high school.

Guest Student Admissions – Students currently enrolled at another institution and taking courses at HACC to fulfill the home institution's degree requirements.

International Student Admissions – Students seeking enrollment with an F-1 Visa need to complete the International Admissions Application. Please contact the International Admissions Coordinator for an application at 717-780-2403.

Permanent Resident/Non- Resident – Those living in the United States who are not U.S. citizens are required to submit either a copy of their permanent resident card or a current visa with the application for admission. A non-resident alien is defined as a person who is not a citizen and who is in the United States on a visa or temporary basis without the right to remain indefinitely.

How to apply for financial aid:
The financial aid department encourages all students to apply for financial aid by completing the Free Application for Federal Aid (FAFSA). Students should apply at www.fafsa.gov.

Who to contact for more information:
The college welcomes and encourages applicants to visit any campus and learn more about HACC. Call 800-ABC-HACC or meet an admissions counselor by visiting www.hacc.edu.

Where do I find an application?
Go to www.hacc.edu to apply online.

Once a student is admitted to the college, a welcome email is sent. The welcome email includes the student's assigned HACC ID as well as information on the next steps of the enrollment process. Please find more information and admissions steps located at www.hacc.edu/Admissions.

Placement Testing
At HACC, we want to ensure that our students have the necessary skills to succeed in college-level courses. Some students may need to take placement tests to assess math and English skills.

Students who meet one or more of the following criteria, are exempt from taking math or English placement tests:

Math Exemption Criteria[1]	Minimum Grade/Score	English Exemption Criteria[3]	Minimum Grade/Score
High School Algebra II Grade	B	Transfer in Credits of College-level Coursework	12
High School GPA[2]	3.0	High School GPA**	3.0
SAT Math Score	530	SAT Evidence-based Reading & Writing (ERQ) or Critical Reading Score	480
ACT Math Score	21	ACT Reading Score and ACT English Score	18 21
General Equivalency Diploma Math Score	175	PSAT Evidence-based Reading and Writing Score	450

[1] Math scores must have been recorded within the past five years; eligible for MATH 100, 103, 104, 111, 113, 114 and 202

[2] For Math, High School GPA is valid from half-way through senior year or final transcript

[3] English scores must have been recorded within the past 10 years; eligible for ENGL 101

**High School GPA is valid at mid-point of junior year.

If exempt from math and English placement testing, students are eligible to enroll in college-level math and English courses.

Students who have completed a baccalaureate degree and provide transcripts are exempt from English placement testing, but depending on the program of study, may need to take the math placement test.

Students who are interested in studying English for Academic purposes or are English language learners, must take the Accuplacer ESL placement tests, unless they present acceptable TOEFL scores. Students with an IELTS score of 6.5 or higher should take standard placement exams, not ESL exams.

All students are allowed to retake the placement test. After the original placement test, it is recommended that any student choosing to retest wait at least two weeks after the initial test. The initial test and the first retest are free of charge. Any subsequent retest will incur a $25.00 non-refundable fee.

A student with a documented disability who requires special assistance with testing should contact Student Access Services at the appropriate campus to schedule testing.

New Student Orientation

After placement testing and *before* registering for classes, new student orientation helps students start or continue their educational journey. New Student Orientation programs are specifically designed and implemented in order to prepare students to transition into and through college, acquiring skills and knowledge requisite for success and completion.

New Student Orientation is a ***mandatory*** part of the enrollment process. Not attending an orientation could impact or delay the enrollment process. Soon after completing the admissions process, students will be sent an email with instructions on how to register for orientation. After students are admitted to the college and activate their HAWKMail account, students will receive an email with next steps and instructions on how to schedule an orientation.

New Student Orientation (NSO) is a 1.5 – 2 hour session designed to help students make a successful transition to college. Additionally, students have access to the Orientation Homebase at sites.google.com/hacc.edu/yourorientationhomebase, which is a one-stop location to access need-to-know information about being a student at HACC, links to essential services and resources, and contact information for HACC offices.

For more information and our current orientation schedule, please visit the New Student Orientation webpage at www.hacc.edu/Admissions/Orientation or contact New Student Orientation at orientation@hacc.edu or 717 780-2513.

Meeting with an Advisor

Advising is an important part of the educational experience. The student and advisor can discuss program objectives and the student's goals to develop an educational plan that fits the student's needs. Students who choose to register without seeking advice or register in classes not recommended by their advisor assume full responsibility for their actions. To learn more about advising, please visit our webpage at www.hacc.edu/advising or call us at 717-780-2498.

Students should refer to the Academic Programs pages of this catalog, or go to www.hacc.edu for information on the suggested sequence of courses for the program they are pursuing and planning suggestions for those students who plan to transfer to another college after completing their education at HACC. Class schedules are also available at www.hacc.edu/courseschedule.

Applying for Admissions

MAJORS AND MAJOR CODES

SPECIAL MAJOR CODES

General Studies (Pursuing a General Studies Degree)	**7606**	**General Studies/Undecided** (Undecided about degree program choice)	**7661**
Guest Student (Currently enrolled in good standing at another college but taking course(s) at HACC to fulfill that institution's degree requirements)	**GTST**	**Non-Degree/Personal Enrichment** (Seeking non-degree personal enrichment. Not eligible for financial aid)	**NDGR**

**These programs have additional requirements, procedures and deadlines beyond admission to the college.*

***Students initially enroll in a pre-clinical portion of the program before entering clinical components. Clinical programs are selective and competitive. Admission to the college does not guarantee acceptance into the clinical portion of the program*.

All Programs are not necessarily offered at all campuses. Contact the specific campus for more information.

DIPLOMA PROGRAMS

Diploma programs are designed to provide essential entry-level skills for immediate employment and can be completed in one semester. In some programs, some diploma credits may not apply to the certificate and associate degree. Ask an advisor for specific information.

Program	Code	Program	Code
Advanced Automotive Specialty Skills*	0660	Geospatial Technology	0580
Auctioneering	0100	Gerontology	0231
Architecture	0656	Introduction to Residential HVAC/R	0280
Computer Information Systems – Software Specialist	0220	Music Audio and Recording Technology	0161
Entrepreneurship	0276	Welding	0500

CERTIFICATE CURRICULA

Certificate curricula are concentrated programs in specific skill areas. They are designed to provide skills for employment that can be completed in one year (two semesters). Students may continue to study for the associate degree in most curricula.

Program	Code	Program	Code
Administrative Office Management	1371	Liberal Studies	7166
Architecture	4476	Gerontology	3300
Automotive Service Advisor*	4206	Graphic Design*	2200
Automotive Technology*	4200	Heating, Ventilation, Air Conditioning/Refrigeration (HVAC/R)	4280
Baking and Pastry Arts	1321	Mechanical Technology	4350
Building Construction Management	4250	Mechatronics	4261
Computer Information Systems	1312	Paralegal Studies	5301
Computer Support Specialist	SS-C	Photography	2400
Database Analyst	DA-C	Practical Nursing**	3270
Computer Networking Technology	4230	Professional Bookkeeping	1206
Culinary Arts Catering	1261	Radiologic Informatics	3296
Dental Assisting**	3200	Structural Engineering Technology	4581
Early Childhood Care and Education	5170	Web Development and Design	1450
Electrical Technology	4370	Welding Technology	4161
Fire Science Technology	6260		

CAREER ASSOCIATE DEGREE CURRICULA

Career curricula are Associate Degree programs that provide students with specific skills for employment.

Program	Code
Addiction and Recovery Services	5516
Administrative Office Management	1926
Architecture	4476
Automotive Technology – GM ASEP*	4570
Automotive Technology*	4480
Building Construction Management	4510
Business Management	1510
Business	1516
Accounting	ACCT
General Business	BGNR
Management	MGMT
Marketing	MKTG
Computer Information Systems	1796
Computer Support Specialist	SUP
Database Analyst	DATA
Computer Networking Tech	4590
Culinary Arts	1586
CVT-Invasive Cardiovascular Technology*	3510
CVT-Cardiac Sonography**	3530
Dental Hygiene**	3416
Diagnostic Medical Sonography**	3426
Early Care and Education	5506
Electronic Engineering Technology	4580
Electrical Technology	4750
Film and Theatre	2500
Fire Science Technology	6636
Geospatial Technology	4760
Gerontology	3476
Graphic Design*	2841
Health Science**	3656
Health Care Management	3606
Heating, Ventilation, Air Conditioning/Refrigeration (HVAC/R)	4780
Hospitality Management	1606
Human Services	5556
Industrial Technology	4680
Mechanical Engineering Technology	4700
Mechatronics	4711
Medical Laboratory Technician**	3486
Music Business	1806
Nanofabrication Manufacturing	4690
Nursing**	3456
Paralegal Studies	5706
Photography	2850
Police Science	6806
Radiologic Technology**(X-ray)	3760
Respiratory Therapist**	3920
Surgical Technology**	3646
Radiology Informatics (PACS)	3786
Structural Engineering Technology	4850
Web Development and Design	1816
Wellness and Health Promotion	3610

TRANSFER ASSOCIATE DEGREE CURRICULA

Transfer curricula are the equivalent of the first two years of a four-year program. After earning an associate degree, students transfer to a four-year institution to complete the last two years of the bachelor's degree.

Program	Code
Art	2130
Biology	3096
Business Administration	1026
Chemistry	3026
Communication	2036
Human Communications	HCOM
Public Relations	PREL
Journalism	JOUR
Computer Information Security	1030
Criminal Justice	6050
Law Enforcement	LWEN
General Transfer	GNRL
Early Childhood- Elementary Education	5070
Engineering	4120
English	2076
Environmental Science	3046
Liberal Arts	2091
Mathematics - Computer Science	4030
Mathematics	4076
Exercise Science	3121
Physical Science	3076
Pre-Health Professions	3150
General Transfer	TRNS
General Allied Health Transfer	GNAH
Political Science	5026
Psychology	5156
Social Sciences	5090
Social Services	5060

Registration
Registration includes the selection of and registration for classes, and the payment of tuition and fees. Registration generally begins several months prior to the start of classes and ends the day prior to the start of class. Early registration is encouraged, and full payment is not required until the tuition due date. Registration, dates, times, deadlines, and details about registration methods can be found online at www.hacc.edu.

Purchasing Textbooks and Supplies

Course materials and school supplies are available before the beginning of each semester in the campus bookstores as well as online at www.bookstore.hacc.edu. Students can pick up orders from the bookstore or ship orders via UPS. Financial aid, if available, can be used three weeks before the beginning of classes for the fall and spring terms and two weeks prior for summer and winter. Students are encouraged to purchase textbooks before the term begins to ensure materials can be used on the first day of class. Course materials listed as “To Be Determined” indicates a course for which the stores have not yet received an assigned textbook. The bookstore is an Apple® authorized reseller and Apple® repair center. The bookstore also sells HACC swag such as clothing and gift items, food and beverage, commencement items, uniforms, bus passes, and more.

Independent Study
HACC offers students the opportunity to engage in independent study courses to complement the traditional educational program. This permits a student to conduct special study or pursue an academic interest. A special fee beyond tuition will be charged (see the Tuition and Fees Schedule). Students interested in applying for an independent study should consult a faculty member in the discipline. Preparation for the study must be completed prior to the opening of the term in which the independent study will be completed. Students should be aware that transfer schools may not accept independent study credits.

Auditing a Course
Students eligible to enroll in courses for credit may also audit courses. Students may change credit and audit status of a course during the tuition refund period. Students auditing courses pay the regular course tuition charge and are expected to attend all lectures and laboratory classes but are not required to take examinations. Students who do not meet the instructor’s attendance requirements may be dropped from the class. The audit grade does not reflect mastery of material covered in a course and no credit is awarded. Financial aid cannot be used to pay for an audited course.

Academic Load
In order to be considered a full-time student in a fall or spring term, a student must be enrolled in courses totaling at least 12 credit hours. Recommended sequences of classes are generally based on at least 15 credits per term in order to facilitate timely completion of the program of study. Students who wish to schedule more than 18 credit hours during a fall or spring term must obtain approval from their academic advisor. During a summer term, the normal load should not exceed one credit hour for each week of classes.

To give themselves the best opportunity to succeed, the college recommends that students plan weekly study time of at least two hours for each hour of class. It is unwise to plan work and study totaling more than about sixty hours a week.

Class Attendance

Students are expected to attend, participate, and engage in all scheduled academic activities in the lecture, laboratory, or online course and are responsible for all class work and assignments. Instructors will present an outline of class work and an attendance policy on the first day of class. Students who miss the first day of class are responsible for requesting this information. Students who do not plan to continue in a class or classes must initiate a drop or withdrawal. Failure to do so during the posted refund period may have academic and financial consequences.

An instructor's attendance policy must be approved by the Department Chair. Some programs are accredited by external agencies that mandate specific attendance requirements; students must observe these special attendance policies, which are contained in the course syllabus. Students should be careful to observe the college and course specific attendance policies since these policies may sometimes affect either grades or continued status in the class. Students who miss all classes during the first week of a class risk being dropped from the course. Students dropped for this reason may be allowed to reenter the course if space is available and upon receiving instructor approval. Instructors must withdraw students who have missed all of the first three weeks of a regular term (or the equivalent of a shorter term).

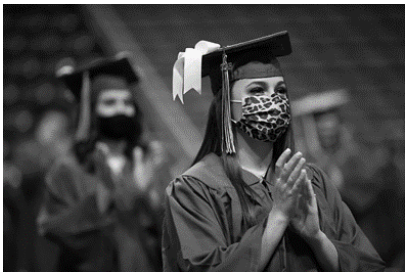
The college is sometimes required to make attendance reports to outside agencies concerning students who are receiving veterans' benefits, social security payments, and various other federal, state, and financial aid. Faculty are required to maintain accurate attendance records for reporting purposes.

Adding Classes

After initial registration and prior to the start date of the class, a student may add a class for which the prerequisites have been met providing that the class is not restricted and has seats remaining. Entrance to a class that has already begun or is full requires the approval of the instructor. Students seeking entrance to restricted classes such as Nursing, Allied Health, Graphic Design, etc., must obtain the appropriate approvals and signatures. Students wishing to add a class after the class has begun must obtain instructor approval.

Dropping a Class

Prior to the start of a term and through the full refund period, a student may drop a class with no withdrawal status and no course charges. From the end of the full refund period through the end of the partial refund period, a student may drop a class with no withdrawal status, but will be responsible for the published percentage of tuition and fees. Students who initiate a drop or withdrawal after the refund period has ended and prior to the published last day to drop for the part of term will receive a withdrawal status of 'W' and will be responsible for tuition and fee charges. Incidents of Academic Dishonesty may result in the student being withdrawn with a failing grade. Students who do not plan to continue in a class or classes must initiate a drop or withdrawal. Failure to do so during the posted refund period may have academic and financial consequences. Students receiving financial aid, veterans' benefits, other state or federal benefits should determine the impact of dropping classes on their benefits or coverage of policies. Once a student initiates a W, a hold of *pending* is listed for 7 days until confirmed a W. Within this time, a student can change their status and re-enroll in the class.



Request for Graduation

At registration for the last term of a program, a student must complete an Application for Graduation. A student is not automatically certified and without applying will not receive a credential. A student may apply to graduate online at myHACC, Student tab, Registration/Records, Student Records.

Finances

The College strives to maintain its position as the lowest-cost institution of higher education in the area as the tuition and fee schedules below indicate. However, students should investigate their eligibility for financial aid. Each year, students at the College receive over $80 million in financial aid. There are many aid programs sponsored by government agencies, the College itself, and private groups.

Tuition and Fees

Tuition and fees vary depending on the residence of the student and must be paid in order to complete the registration process. Students who fail to pay the tuition and fees or make payment arrangements by the payment deadline risk being dropped from classes.

Students who reside in one of the 22 sponsoring school districts must submit a Certificate of Residence by the tuition due dates in order to pay sponsoring district rates. Students who reside outside one of the sponsoring districts will be required to pay out-of-district tuition and a capital outlay fee. The list of sponsoring school districts and contacts is available on our website. Tuition and fees are subject to change and may be viewed at www.hacc.edu/tuition.

Laboratory and Special Fees

Many programs and courses require additional fees. These are stated in the Credit Course Schedule, in course descriptions in this catalog, and in other informational materials. They often are labeled laboratory fees, and cover special costs in certain courses that include insurance, equipment and materials, software use, special testing, and transportation for field trips.

Residence Requirements for Tuition Subsidy

Students are considered Pennsylvania residents if they maintained continuous residence in the Commonwealth for 12 months prior to the start of the enrolled term. A student may rebut this presumption by convincing evidence. Exceptions also apply to citizens of foreign countries depending upon one's Visa status.

Students who wish to claim subsidy from one of the 22 sponsoring school districts of the College must obtain a Certificate of Residence by applying through their school district website. Upon approval, the school district will submit the certificate to HACC electronically. The College itself does not determine residency in one of the districts. The student's address as of July 1 determines the district responsible for issuing a Certificate, and each district sets its own requirements for residency. A Certificate of Residence is valid from July 1 to June 30, and a new Certificate must be obtained yearly for the new academic year.

Students Who Wish Sponsorship at another Pennsylvania Community College

Students who live in school districts that sponsor HACC may pursue associate degrees at other Pennsylvania community colleges (with sponsorship only in curricula not offered by HACC) by making a request to the Board of Trustees. HACC will provide tuition assistance to cover the sponsoring district's share of the tuition, but will not assist in payment of any fees or other costs to the other community college.

Some school districts may refuse to sponsor students at other colleges; therefore, students should check with their school districts concerning this matter. A list of sponsoring school districts is available at www.hacc.edu. Students must complete an Application for Approval to attend a Non-Sponsored Pennsylvania Community College, available from the Assistant Vice President for Student Enrollment Services. Students seeking sponsorship must submit to the Assistant Vice President for Student Enrollment Services a current, valid Certificate of Residence from their school district. Only after the Board of Trustees approves each application submitted by the Assistant Vice President for Student Enrollment Services will the student be assured of sponsorship at another community college in Pennsylvania.

Time and Method of Payment
Students are expected to pay their account in full for the term as of the published due date or enroll in HACC's tuition payment plan. The due dates are available on the Schedule/Bill and at www.hacc.edu.

The College accepts payment by credit card (MasterCard, VISA, and Discover), by check, or by cash. Credit card or check payment may be made online via myHACC at my.hacc.edu. A $20 service fee is charged for returned checks and repeat offenders will be required to remit payment via only cash, a money order, or a certified check. The College offers a tuition payment plan designed for students to pay tuition over a period of time rather than all at one time. See www.hacc.edu for details.

The College may refuse to issue grades or transcripts and deny registration or readmission to students who owe money to the College or who have failed to return college books or equipment.

Refunds
Students who choose to withdraw from courses according to published deadlines may receive a refund. The refund amount is based upon the total cost of the course and the premise that a student paid the balance in full. A refund is calculated as follows: full refund of all tuition charges and fees up to the end of the first week of classes (or the equivalent for shorter parts of terms), refund of one half of tuition charges up through the third week of classes (or the equivalent). Course drops or withdrawals are not eligible for a refund after the third week of class of the major part of term or the equivalent for shorter parts of term. Refund dates are published on the reverse side of the Schedule/Bill and at www.hacc.edu.

Students dropped or withdrawn for disciplinary reasons may not be eligible for a refund. Students who withdraw prior to the completion of 60 percent of the term and are receiving federal grants or loans, such as a Federal Pell Grant, SEOG and Direct Loan, will have their financial aid recalculated which may result in a balance owed to the College.

Paying for College

Academic Year 2022-2023

Tuition and Fees are subject to change at the discretion of the college.

In-State Resident, **Sponsored** (Fall and Winter 2022, Spring and Summer 2023):

Credits	Tuition	SGA & Institutional Fee	Capital Outlay Fee	Technology Fee	Total Cost
1	$191.25	$32.25	$0	$12.75	$236.25
3	$573.75	$96.75	$0	$38.25	$708.75
6	$1,147.50	$193.50	$0	$76.50	$1,417.50
9	$1,721.25	$290.25	$0	$114.75	$2,126.25
12	$2,295.00	$387.00	$0	$153.00	$2,835.00
15	$2,868.75	$483.75	$0	$191.25	$3,543.75

To calculate tuition for credits not listed, multiply $236.25 by the total number of credits.

In-State Resident, **Non-Sponsored** (Fall and Winter 2022, Spring and Summer 2023):

Credits	Tuition	SGA & Institutional Fee	Capital Outlay Fee	Technology Fee	Total Cost
1	$235.50	$32.25	$5.00	$12.75	$285.50
3	$706.50	$96.75	$15.00	$38.25	$856.50
6	$1,413.00	$193.50	$30.00	$76.50	$1,713.00
9	$2,119.50	$290.25	$45.00	$114.75	$2,569.50
12	$2,826.00	$387.00	$60.00	$153.00	$3,426.00
15	$3,532.50	$483.75	$75.00	$191.25	$4,282.50

To calculate tuition for credits not listed, multiply $285.50 by the total number of credits.

Out-of-State Resident, (Fal and Winter 2022, Spring and Summer 2023):

Credits	Tuition	SGA & Institutional Fee	Capital Outlay Fee	Technology Fee	Total Cost
1	$283.25	$32.25	$10.00	$12.75	$338.25
3	$849.75	$96.75	$30.00	$38.25	$1,014.75
6	$1,699.50	$193.50	$60.00	$76.50	$2,029.50
9	$2,549.25	$290.25	$90.00	$114.75	$3,044.25
12	$3,399.00	$387.00	$120.00	$153.00	$4,059.00
15	$4,248.75	$483.75	$150.00	$191.25	$5,073.75

To calculate tuition for credits not listed, multiply $338.25 by the total number of credits.

Additional Fees

Independent Study Fee = $50.00 per course

Private Music Lessons Fee

Return Check Fee = $20.00 (All returned check payments must be made in cash, money order or by certified check. After the third offense, all future payments must be in cash, money order or by certified check.)

Other miscellaneous fees (e.g. laboratory, liability, clinical experience, etc.) may be charged for certain courses. These fees vary by course and will be noted in the credit course schedule adjacent to the course information.

NOTE: Tuition and Fees are subject to change and pending Board approval.

Financial Aid
Many students benefit from a variety of financial aid programs at HACC. The financial aid process can be divided into five main areas:
Applying for Financial Aid
Determining Aid Eligibility
Awarding Financial Ai
Disbursing Financial Aid
Financial Aid Programs.

The Financial Aid staff at each campus provides assistance to students throughout the year. Contact us at 1-800-222-4222, financialaid@hacc.edu or view additional contact information at www.hacc.edu.

Applying for Financial Aid
To begin the financial aid process, students complete a Free Application for Federal Student Aid (FAFSA) online at https://studentaid.gov. HACC's Title IV school code is 003273.

The recommended filing date is February 15th before the academic year begins. Students can complete the FAFSA at any point during the academic year; however, students who apply by February 15th of the previous year receive maximum consideration for aid eligibility.

After completing the FAFSA online, students receive the results of the application in the form of Student Aid Report (SAR) within three to five business days via email and/or letter mail. Students should check the SAR for accuracy to ensure all information reported on the FAFSA is correct.

Some students may be required to submit additional documentation before they receive financial aid. If this occurs, the student will be notified via HawkMail and the required items listed on the Financial Aid Tab in *myHACC*.

Students who have their financial aid file complete by June 30 are guaranteed to have their aid processed by the first day of fall classes. The date for students attending in the spring is October 31. Students who apply after these dates may need to sign up for HACC's payment plan until their aid is finalized.

Determining Aid Eligibility
Federal student aid programs are based on the principle that students (and their parent/stepparent or spouse, if applicable) is considered the primary source of financial support for postsecondary education. Financial aid is intended to supplement, not replace, family resources.

Formula for determining financial need:

Cost of Attendance (COA)
–
Expected Family Contribution (EFC)
_____

= Financial Need (Financial Aid Eligibility)

The Cost of Attendance (COA) estimates the cost to attend HACC for an academic year. It includes direct charges (tuition and fees) and related expenses (room and board, books, transportation, and other miscellaneous expenses). The Expected Family Contribution (EFC) is calculated using the information provided on the FAFSA and determines eligibility for financial aid. Financial Need is simply the difference between the Cost of Attendance and the student's Expected Family Contribution. If there is a remaining figure, the student is considered to have financial need. Most aid programs require students to have financial need; however, if there is no remaining need the student may still be eligible for a Federal Direct Unsubsidized Loan. For additional information about Cost of Attendance, visit www.hacc.edu.

The chart below uses estimated costs for two semesters for the 2022-2023 academic year: Full-time status is based on an enrollment status of 12 credits per term and Part-time status based on 6 credits per term.

COMMUTER *Students who reside with their parents*		
Commuter Expenses	**Full Time**	**Part Time**
Tuition and Fees	$6,852	$3,426
Living Expenses	$5,756	$2,878
Books and Supplies	$1,362	$511
Miscellaneous Expenses	$2,309	$1,155
Transportation	$2,036	$1,221
Total	**$18,315**	**$9,191**

OFF-CAMPUS *Students not residing with their parents*		
Off-Campus Expenses	**Full Time**	**Part Time**
Tuition and Fees	$6,852	$3,426
Living Expenses	$8,357	$4,179
Books and Supplies	$1,362	$511
Miscellaneous Expenses	$2,309	$1,155
Transportation	$2,036	$1,221
Total	**$20,916**	**$10,492**

Non-Pennsylvania Residents – attending full time will pay approximately $8,118 for tuition and fees and approximately $4,059 for part-time status.

Special Circumstances – If a student or their family's situation has changed significantly from what is reflected on the federal income tax return, students may be eligible to have their financial aid adjusted. Complete the FAFSA questions as instructed on the application (including the transfer of tax return and income information) and submit the FAFSA form. Examples include loss of employment, divorce, separation, or death of a parent or spouse. To have the change in income reviewed by the financial aid office, complete the online form at www.hacc.edu/Paying/CanIGetAid/FinancialAidBasics/Financial-Aid-Situation-Changes.cfm or contact our office for more information.

Additional Eligibility Criteria
To be eligible for Federal Student Aid a student must:

- Be enrolled in an eligible degree, certificate or diploma program;
- Be a citizen or eligible noncitizen of the United States;
- Have a valid Social Security Number (with the exception of students from the Republic of the Marshall Islands, Federated States of Micronesia, or the Republic of Palau);
- Have a high school diploma or GED certificate, or have completed homeschooling;
- Maintain satisfactory academic progress;
- Not owe a refund on federal student aid or be in default on a federal student loan;
- Not have received financial aid in excess of annual or aggregate limits.

Federal regulations mandate that students should only take courses that apply to their program of study. No aid is awarded for audited courses or credit by examination.

Satisfactory Academic Progress (SAP) To remain eligible for financial aid, students must make Satisfactory Academic Progress (SAP) as defined by the U.S. Department of Education. SAP is different from the College's definition of academic standing.

Both full-time and part-time HACC students who have completed a Free Application for Federal Student Aid (FAFSA) and wish to be considered for federal financial aid must meet the criteria stated in this policy for all terms within an academic year.

According to regulatory requirements, Satisfactory Academic Progress (SAP) will be checked after **every** term (fall, spring, summer).

SAP is measured in the three following ways, and students must meet all three measures to remain eligible for financial aid.

Quantitative Measure (PACE/credit hour progression). Students must complete at least 67% of all the credits they attempt.

Qualitative Measure (Cumulative GPA). Students must maintain an acceptable Grade Point Average (GPA).

Maximum Time Frame to Complete a degree. Students must be able to complete their program within 150% of the maximum time frame allowed for their program. For most associate degree programs that is a maximum of 90 credits.

Warning Status: At the end of a term in good standing, students who do not meet the cumulative GPA and/or 67% overall credit hour completion rate will be placed on financial aid warning for the following term. During their warning term, students are permitted to receive federal aid.

Suspension Status: Students who do not meet the SAP criteria after their warning term and cannot complete their program of study within the maximum time frame will be placed on financial aid suspension. Their aid will be canceled for all upcoming terms.

Appeal Process: Students placed on financial aid suspension may appeal the decision if extenuating circumstances exist. Students can find the appeal form in the myHACC portal – Student – Financial Aid tab - Online Forms.

For more details about HACC's SAP policy, students can use the following resources:

- Financial Aid and Your Grades – How SAP is measured: www.hacc.edu/Paying/CanIGetAid/FinancialAidBasics/Financial-Aid-and-Your-Grades.cfm

- Details about completing a SAP appeal are located at the following location: Student myHACC portal > Online Forms > Satisfactory Academic Progress (SAP) Appeal Form

PA State Grant regulations: The Satisfactory Academic Progress policy for Pennsylvania State Grants is not covered under this policy, but is instead determined separately by the Pennsylvania Higher Education Assistance Agency (PHEAA).

Awarding Financial Aid
Eligible students who complete the aid process will receive an award letter, identifying the type(s) and amount(s) of aid for which the student is eligible. Generally, aid is awarded for a full academic year. These awards are divided between the terms for which the student plans to enroll. Financial aid awards may be modified at any time during the award year due to the situations listed below.

- Failure to maintain Satisfactory Academic Progress.
- Any change in status (including grade level, program study or credit hours attempted).
- Receipt of additional funding not listed on the award letter such as PA State Grant, private scholarships, vocational rehabilitation assistance, veteran benefits, Pennsylvania EAP, tuition waivers, employee tuition assistance, etc.
- Previously submitted inaccurate, incomplete or conflicting information.

Students will be notified of changes through their student email and should review awards through myHACC.

Disbursing Financial Aid

Students' estimated financial aid will appear on their schedule bill once their financial aid package is complete and meets all requirements. If the student does not have enough financial aid to pay charges, it is the student's responsibility to pay the difference by the tuition due date or be at risk of being dropped from classes. Students who have financial aid in excess of their tuition and fees can charge their books at the bookstore. Visit bookstore.hacc.edu for more information.

Payment of Financial Aid – Generally, financial aid is paid to a student's account 30 days after the student's first day of class each term. Single-term student loans are disbursed in two disbursements during the term with the second disbursement occurring after the middle of the term. Aid must be applied to charges on the student's account before a refund will be generated.

Refunds – Students whose financial aid award is greater than their charges will receive a refund within 14 days from the date their award is paid to their account. This refund is to be used for other educationally related expenses. Refunds are distributed to students through Bank Mobile, a third-party servicer. Refunds are sent based on the student's refund preference through Bank Mobile.

Withdrawing or Failing courses

Students who receive all "F" grades, all "W" grades, or a combination of all "F" and "W" grades for a term will have their aid recalculated at the end of that term. When this occurs, students may owe money on their account even if the term is over. Students should meet with Financial Aid Staff before withdrawing from courses. This is important because a withdrawal may affect the student's eligibility for financial aid and result in the student having to repay all or a portion of their financial aid. If the student officially or unofficially withdraws from HACC prior to completing 60 percent of the term, the aid received (or a calculated portion of the aid) will be returned to its source.

Financial Aid Programs

There are two types of aid programs, Gift Aid and Self Help. Gift Aid is not repaid and includes Grants and Scholarships. Self Help are funds which are repaid or earned and include loans and Federal Work Study. With the exception of the Pell Grant program, enrollment of six (6) or more credits is required to receive financial aid Grants.

Federal Pell Grants - awarded to undergraduate students with high need. Students are limited to six years of full-time Pell regardless of when or where they receive the Pell Grant.

Supplemental Educational Opportunity Grant (SEOG) - awarded to students with high need who complete the FAFSA by February 15th. Funds are awarded on a first come, first served basis.

PA State Grant – limited to Pennsylvania residents who have resided in the state for one (1) year without attending college AND are pursuing an associate degree. Students are limited to the equivalent of two full time years of State Grant. This award is not determined by HACC but is determined by the Pennsylvania Higher Education Assistance Agency (PHEAA).

Scholarships are offered through the HACC Foundation or from outside groups. They can be based on merit, financial need, or other criteria. To be considered for HACC scholarships, students must file a FAFSA and complete a scholarship application. For more information and a list of outside scholarships, please visit www.hacc.edu/scholarships.

Federal Work-Study (FWS) provides jobs to students with financial need, allowing them to earn money to help pay for educational expenses. Jobs may be available on campus and at approved off-campus locations. Students are paid bi-weekly based on the number of hours worked. The money is earned and is not deducted from the student's bill.

Loan Programs: Loans are borrowed money that must be repaid with interest. For Federal Direct Stafford loans, repayment does not begin until six months after the student graduates, withdraws, or drops below six (6) credits. If students drop below six (6) credits, they may not be eligible to receive a student loan disbursement. HACC will award loans up to a student's maximum eligibility. Annual base loan limits are $3,500 for freshman students and $4,500 for sophomores (30 or more earned credits). Dependent students may be eligible to receive up to an additional $2,000 in unsubsidized loans and independent students an additional $6,000. Before loans are applied to the bill, students are required to take action by accepting, declining or reducing their loan funds. Students should borrow wisely and reduce or cancel their loans with HACC if they do not need the full amount listed on their award letter. Dependent students are limited to $31,000 and independent students are limited to $57,500 in lifetime loan undergraduate borrowing.

Federal Direct Stafford Loans are either subsidized or unsubsidized. A SUBSIDIZED loan is awarded on the basis of financial need. Students will not be charged any interest while enrolled in at least six credits. An UNSUBSIDIZED loan is NOT awarded on the basis of need. Students will be charged interest from the time the loan is disbursed until it is paid in full. The student has the option of paying or not paying the interest and principle while in school.

First-time students are required by the Federal government to complete loan entrance counseling and sign a Master Promissory Note (MPN) online at https://studentaid.gov. The FSA ID is required to complete both.

PLUS Loan: Parents of dependent students may also borrow to pay for educational expenses. The annual limit is equal to the student's cost of attendance minus any other financial aid received by the student. Dependent students whose parents are denied a PLUS loan may be eligible to borrow up to an additional $4,000 through the Unsubsidized Federal Stafford Loan program. The parent PLUS loan application is available in the student's myHACC account.

Veteran Benefits

Military and Veteran Affairs (MVA) is located at each HACC campus. MVA staff provide information about GI Bill® benefits for veterans, eligible dependents of veterans, members of the National Guard, Selected Reserves and Active Duty service persons. Military and Veteran Affairs also assists students in applying for Veteran benefits. Students may contact the MVA at their respective campus:

Harrisburg Campus and Virtual (Central)	717-780-2331	Gettysburg Campus	717-337-3855 x113534
Lancaster Campus	717-358-2954	Lebanon Campus	717-270-6346
York Campus	717-718-0328 x513226		

Information about the VA work-study program and tutorial assistance is also available.

Students should refer to the Military and Veteran Affairs page at www.hacc.edu/students/veterans or email vaoffice@hacc.edu. Information and current benefit rates can be found at www.benefits.va.gov/gibill. The major benefit programs are:

GI Bill® – Chapters 30, 32, and 33 (Post 9/11 both Veteran and Dependent)
GI Bill® – National Guard & Selected Reserves – Chapter 1606
Survivors & Dependents Education Assistance Program – Chapter 35
Veteran Readiness & Employment (VR&E) – Chapter 31
PA National Guard Education Assistance Program (EAP)
Military Family Education Program (MFEP)
Federal Tuition Assistance (FTA/TA)

Application: Veterans must complete an initial application for GI Bill benefits or a Change of Place of Training application if they use benefits at another school before coming to HACC at www.benefits.va.gov/gibill. A Veterans Benefits Request Form (Yellow Sheet) must be completed each term to receive benefits. The Yellow Sheet is found in your myHACC account under the Registration/Records tab-Veterans Benefits tab.

Advance pay: Veterans may request Advance Pay (GI Bill Chapters 30, 35 & 1606 only) if they are new students or have more than a 30-day break between terms. Advanced pay form must be submitted 30 days prior to the start of the term. Advance Pay checks are sent directly to the school.

Disabled Veterans: Veterans with service-connected disabilities can contact a VA VR&E Counselor at 717-221-4445.

Any student receiving GI Bill benefits should contact the VetSuccess on campus VA Counselor at 717-376-9915.

Student Access Services (SAS): Veterans with service-connected disabilities can receive accommodations at HACC. Student Access Services provides reasonable accommodations, auxiliary aids and support services. To learn more, contact the nearest campus SAS office or visit www.hacc.edu/Students/DisabilityServices. Our webpages have a wealth of information including contact information and ways to submit documentation securely.

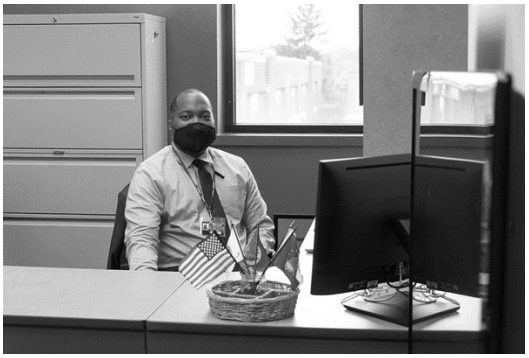
Eligibility: All credit programs offered by HACC are approved for VA Education Benefits. Most workforce development programs are also approved for benefits. Please contact HACC's MVA-Central office for additional details. HACC is a fully accredited Service members Opportunity College, NAVPA and a ConAP member.

Financial Aid: Veterans are encouraged to apply for financial aid by submitting a Free Application for Federal Student Aid (FAFSA). Veterans must report on the FAFSA if they will be receiving veterans' benefits.

PA National Guard members: Education Assistance Program (EAP), Federal Tuition Assistance, and Loan Repayment Program may be available. Students should contact their unit of assignment on these additional programs. Family Member Education Program (FMEP) is also available for those family members who qualify.

Satisfactory Progress: Veterans should be aware of the requirements for satisfactory academic progress mandated by the Department of Veterans Affairs in accordance with College academic policy described in this catalog. The VA will be notified when a student is not making satisfactory progress.

Selected Reserves: Federal Tuition Assistance and other benefits may be available. Students should contact their unit of assignment on these additional programs.



Summer terms: Summer benefit rates will vary for each summer term. A Training Time Equivalency Table can be found on the MVA webpage. Military and Veteran Affairs will assist students in calculating their benefit estimate.

VA Work-Study Allowance Program: Veterans attending ¾ time or more and receiving GI Bill benefits may apply for VA Work-Study to work in the Military and Veteran Affairs offices on a HACC campus. For more information on this program call 717-780-2331.

Veterans Benefits Request Form (Yellow Sheet): This form must be completed **each** term a veteran/ dependent registers for classes in order for HACC to certify attendance to the Department of Veterans Affairs (VA). Failure to complete this form will result in an interruption of benefits.

**GI Bill® is a registered trademark of the U.S. Department of Veterans Affairs (VA). More information about education benefits offered by VA is available at the official U.S. government website www.benefits.va.gov/gibill.*

Student Involvement

HACC students who participate in college activities are more satisfied with their college experience. These students feel connected to the College and they enjoy meeting other students while developing their leadership qualities and

skills. Activities are organized at all campus locations and online. HACC offers a variety of activities, and they can consume as much or as little time as a student prefers. Students can check the campus calendar at hacc.edu/calendar and look to HACC Facebook and Instagram at www.hacc.edu/Social-Media-Resources.cfm to stay informed of campus activities and happenings.

The funds collected as SGA and Institutional fee from currently enrolled students support student groups and activities. Students will find clubs based on shared interests in recreational activities, career, or special interests. New clubs can be formed by interested students by contacting Student Involvement. Students may access Student Involvement information online at www.hacc.edu/Students/GetInvolved/StudentActivities.

Intercultural Programs
HACC is committed to diversity by promoting a wide range of ideas and working to foster mutual respect among people of every race, ethnicity, economic class, religious preference, gender and gender expression, physical ability, sexual orientation, and age. We believe that meaningful interaction with others from different backgrounds is one of the best ways to build understanding and to prepare students for the diverse world into which they will graduate, work and live. HACC strives to provide a supportive atmosphere for students of diverse backgrounds by sponsoring activities that increase awareness and build mutual respect and understanding. Intercultural celebrations at HACC present an opportunity to enjoy the richness that a variety of cultures, ethnicities, and backgrounds bring to the community. These special events include distinguished speakers, panel discussions, art exhibits, cultural dances, ethnic food festivals, arts and crafts and poetry readings. For more information on intercultural programming and opportunities for engagement email studentinvolvement@hacc.edu or visit the HACC Student Involvement webpage at www.hacc.edu/Students/GetInvolved/StudentActivities.

Student Programming Boards
Student Programming Boards (SPB) plan and develop student activities and events for the student body at each campus and online. SPB members select events, organize details and marketing, and contribute to establish the sense of community on each HACC campus. Events are student-directed and include opportunities to learn, socialize, have fun, and make a connection to campus life. If interested in becoming involved in the Student Programming Board, please contact Student Involvement.

Student Government
Student Government Association (SGA) officers and senators are chosen through general elections in which all students are eligible to participate as electors. Student candidates must follow eligibility guidelines outlined in the SGA Constitution and Bylaws. The SGA prepares a budget that allocates funds to student organizations and events. SGA represents student views on current issues to the faculty and administration. Student representatives participate in the college's Shared Governance process, ensuring that the student voice is heard in matters pertaining to the HACC student experience. Further information about the Student Government Association at HACC may be obtained by contacting SGA@hacc.edu or at www.hacc.edu/Students/GetInvolved/StudentGovernment. As a resource for students, the Student Handbook is published online in myHACC and at www.hacc.edu/Students/GetInvolved/Student-Handbook.cfm, which includes information about College resources, student activities, and school regulations.

Honor Societies
Alpha Delta Nu: Alpha Delta Nu is the Honor Society for Associate Degree Nursing Programs, established to promote scholarship and academic excellence in the profession of nursing. Membership is offered to nursing students who have maintained a cumulative GPA of 3.0 and have earned a grade of B or better in each nursing class in the program. Students have also demonstrated conduct on campus and the clinical areas that reflect integrity and professionalism. Members of this honor society wear peach colored honor cords at graduation.

Lambda Beta National Honor Society for Respiratory Care: Lambda Beta is a national honor society for those in the profession of respiratory care. The purpose of the society is to promote, recognize and honor scholarship, scholarly achievement, service and character of students, graduates and faculty members of the profession. The name of the

society is based on the goals of the profession: sustaining life (lambda) and breath (beta) for all. Lambda Beta members can be recognized by the blue and green honor cords worn on their gowns. The HACC Chapter was formed in 2010.

Mu Alpha Theta National Mathematics Honor Society: Mu Alpha Theta, a National Mathematics Honor Society, is dedicated to inspiring interest and scholarship in two-year college students for the subject of mathematics. Members are recommended by mathematics faculty, have completed college algebra, and have at least a 3.0 GPA overall and in mathematics. The HACC Chapter was established in 2000.

Phi Theta Kappa International Honor Society: HACC is home to the Alpha Nu Omega chapter of Phi Theta Kappa (PTK), the national honor society serving two-year colleges. Since its founding in 1918, Phi Theta Kappa has sought to recognize and encourage scholarship among associate degree students. HACC's chapter has received national recognition for the excellence and integrity of its programs. Membership in Phi Theta Kappa is extended by invitation. To be considered, a student must be enrolled in classes, have completed at least twelve hours of coursework leading to an associate degree, have a grade point average of at least 3.5, have established a record of academic excellence as judged by the faculty, be of good moral character, and possess recognized qualities of citizenship. For more information, see www.hacc.edu or www.ptk.org.

Child Care

Many HACC students are also parents, and for their convenience U-GRO Learning Centers offers childcare on both the Harrisburg and Lancaster Campuses. Children are eligible for acceptance into the center if they are between six weeks and six years of age.

Applications are accepted on a first come, first-served basis and a discount is provided to HACC students who show verification of HACC enrollment. Additional information can be found at u-gro.com or by calling 717-276-0251 for the Harrisburg Campus and 717-366-8550 for the Lancaster Campus.

Capital Area Head Start is available at HACC's Harrisburg Campus in the Whitaker Building. Programming is available for children ages 3-5 for HACC students, faculty and community. HACC students receive priority. Care is free to eligible families. Call 717-541-1795 to enroll or visit www.keystonehumanservices.org.

Adams County Head Start is available at HACC's Gettysburg Campus and eight other locations across Adams County. Comprehensive preschool services, including health, nutrition, dental, and family engagement services are available for children ages 3-5 and their families. Program services are at no cost to eligible families. Call 717-337-1337 to enroll or visit www.adamscountyheadstart.org.

Film, Theatre, Music, and Fine Art

The Rose Lehrman Arts Center is located on the Harrisburg Campus of HACC, Central Pennsylvania's Community College. It houses two theatres (a smaller Studio Theatre and the large Auditorium Theatre) in addition to classrooms and facilities for Film, Theatre, Music, and Fine Art. The theatres host performances by HACC Film and Theatre and the Music Industry programs as well as lectures and events by area performing arts groups. Like us on Facebook at Facebook.com/RoseLehrmanArtsCenter to stay up to date on events.

The Film and Theatre Program produces diverse offerings to include the classics and contemporary works. The Theatre for Young People, a specialty theatre group, annually produces professionally mounted children's theatre. Auditions for productions are open to all students, staff and the community. The center supports a successful theatre outreach program that brings thousands of young people to the campus to experience and learn about live theatre. The Rose Lehrman Art Gallery in the Rose Lehrman Arts Center features the work of guest artists from across the country as well as student honors shows. Shows change monthly

and admission is free. The Gallery is open weekdays Monday - Friday, 11 a.m. - 3 p.m.; Tuesdays and Thursdays 5 p.m. - 7 p.m. For more information, call 717-780-2478.

Health and Mental Health
HACC does not have an infirmary or a student health center. Students who become ill or need emergency treatment may be taken to nearby medical facilities for treatment. College public safety & security officers are trained in basic first aid which is the medical attention that is given to an ill or injured person before medical experts are requested or arrive on the scene. The College neither assumes financial responsibility for medical treatment of students, nor assists with additional medical services. Students who need routine medication or medical assistance must provide for their own care, as the College may not serve such medical needs.

Additionally, HACC partners with Mazzitti & Sullivan to provide mental health counseling to currently enrolled students. Information about seeking counseling services is shared regularly with students and is available on hacc.edu/mentalhealth.

CARE Center
HACC proudly established the CARE (Consultation Advocacy Referrals Empowerment) Center as a single stop where students can go for assistance with non-academic challenges. This is a free and confidential resource available to all current HACC students. The CARE Center is invested in the success and well-being of our students, and is here to help. The CARE Center views students holistically and creates a “HACC has your back” culture to empower students to overcome obstacles and succeed on their journey to degree completion.

HACC’s first priority is providing a high-quality, affordable, accessible, and inclusive education to all. However, we know that some students need support outside the classroom in order to succeed inside the classroom. In order to serve our students, the CARE Center provides immediate assistance and long-term support with community resources in these areas: food and housing insecurity, mental health, childcare, transportation, social services, and daily necessities. HACC’s CARE Center understands that our students have complex lives and may need assistance in multiple areas.

Students can contact the CARE Center by completing a CARE Center Intake Form at www.hacc.edu/carecenter. A CARE Center Coordinator will be in contact within 48 hours of receiving the Intake Form. The CARE Center Coordinators will schedule a 30-minute meeting to obtain facts and determine needs to customize an individualized, actionable plan for student success and empowerment. For more information visit www.hacc.edu/carecenter.

Housing
HACC has no dormitories and does not approve or supervise housing for students. Any agreements concerning rent or conditions of occupancy are made between the student and/or parents and the landlord. The College does not participate in any housing arrangements or assume responsibility for any housing contracts.

Wellness, Athletics, Recreation and Engagement
The WARE department appreciates the unique needs and interests of all our students and strives to provide opportunities for engagement on many levels.

The HACC Athletics program is composed of eight varsity intercollegiate teams and one club team. The varsity intercollegiate sports participating in the National Junior College Athletic Association offered are men and women’s basketball, golf, men’s and women’s soccer, men’s and women’s cross country and women’s volleyball. Men’s volleyball is a club sport. Participation is open to students at all HACC campuses, as long as they meet the eligibility requirements.

At the Harrisburg Campus, the Evans Center and outdoor athletic facilities, include a fitness center, gym, racquetball court, sand volleyball court, tennis courts, and athletic fields, and are available for all students to enjoy with a current HACC ID. The Lancaster Campus has a gym for student use as well.

Wellness activities include yoga, tai chi, strength training, meditation sessions and informational sessions on a variety of topics presented to enhance an individual's wellbeing. The programs are offered online and in person when available. The schedule is posted at www.hacchawks.com/composite_wellness.

In 2020, the HACC Hawks welcomed the addition of Esports as an intercollegiate program. The Esports program is co-ed and is a member of the National Junior College Athletic Association Esports (NJCAAe). It competes against institutions around the U.S. This is a competitive program where students have the opportunity to compete in the cyber arena. The Hawks Esports program runs throughout the academic year.

In the fall of 2022, the NJCAAe implemented an intramural program that is open to all students, but does not compete at the intercollegiate level. Each match can be seen live on the Esports Hawks Twitch Channel at www.twitch.tv/haccesports.

The Esports intercollegiate program games vary each semester, depending on offering and interest. Generally, the following games are offered on the intercollegiate level:

- Super Smash Bros. Ultimate
- Call of Duty
- Rocket League
- Overwatch

Intramural sports are offered in a diverse array of sporting activities that include team sports, individual sports, and events. Credit courses are available in Physical Education/Exercise Science Department information. More information can be found online at www.hacchawks.com.

College Policies

CP 074 Statement of Individual Rights of All Members of the College Community, Visitors, and Guests.
These rights of all members of the College community, students, faculty, administration, authorized visitors and guests, shall remain inviolable:

- To learn, teach, study and search for truth without interference or harassment.
- To move about the campus and in campus buildings freely and without interference or harassment of any kind.
- To express opinions freely and without interference, individually or in groups, as long as such expression does not interfere with any other individual rights hereby guaranteed, other College policies/procedures, or result in damage to property.
- To be treated at all times with the courtesy and respect due to all human beings, regardless of ethnic origin, cultural background, sex, gender identity, sexual orientation, religion, creed, or ideology, as long as one displays a decent regard for the rights of others as provided in this Statement of Individual Rights.

The right to express oneself is strongest in those campus places and activities that are organized for the purpose of speaking and listening. Examples include the classrooms and organized academic discussions. In such situations, it is expected that diverse views may be voiced, including those that may be distasteful. In other such places and situations where members of the College community do not gather primarily for the purpose of speaking and listening in an open forum, such as common dining areas, the right to express oneself is tempered by the right to be free of harassment. In situations involving External Entities, the rights articulated herein are subject to the College's policy on Facilities and Grounds Use by External Entities (College Policy 372) and other policies of the Board pertaining to the same subject. Outside individuals and groups invited by recognized faculty, student, or staff organizations are not subject to CP 372 but may be subject to other policies of the Board.

CP 071 Statement of Practices Constituting Unacceptable Conduct
The following list constitutes practices and conduct, which are unacceptable for any member of the College community, students, faculty, administration, visitors and guests.

- Physical obstruction or interference with College classes or activities or approved activities of External Entities:
    - Any person participating in such activities
    - Any person going to or from such activities
- Permanently posting materials on any walls, windows, doors, sidewalks, trees, light poles, etc., or any other College equipment (except in designated posting areas) or writing graffiti.
- Violating College harassment policy (SGP 285, Harassment).
- Physical abuse of or detention of any person on College-owned property, or at any College-sponsored or supervised function, including the detention of any person by the actual threat of serious bodily harm or the destruction of property, or conduct which unreasonably endangers the health or safety of any person.
- Theft of or damage to College-owned or controlled property or that of any person lawfully on the campus.
- Threatening other individuals with physical harm.
- Committing any act likely to create an imminent safety or health hazard.
- Entry to or upon, or use of College grounds, buildings, or facilities, when such entry or use constitutes a violation of College policies and procedures.
- Engaging in speech that includes fighting words, which are those words that by their very utterance tend to incite an immediate breach of peace.
- Interfering with, impeding or causing blockage of the flow of vehicular or pedestrian traffic.
- Use, possession, distribution, or being under the influence of alcohol, narcotics, or prescription drugs (not as legally prescribed) on College-owned or controlled property, or at any off- campus College-sponsored or supervised activities.
- Use or possession of firearms, explosives, dangerous chemicals, or other items commonly used primarily for the purpose of inflicting harm on human beings or causing damage to property, on College owned or controlled property, except to the extent that permission to possess the same is granted by the person or persons duly authorized for this purpose.
- Failure to comply with the lawful directions of College personnel acting in performance of their duties.

- Willful and persistent conduct, by noise or other action, which unreasonably interferes with any lawful activity on College-owned or College-controlled property. In the enforcement of this policy, care shall be exercised to avoid inhibiting the right of free speech guaranteed in the Statement of Individual Rights.
- Hunting, fishing, or trapping animals or engaging in other conduct designed to harm or remove animals from the premises of the College unless authorized to do so by the Vice President, Finance and College Resources.
- Willful misuse of College-owned or controlled technology infrastructure including, but not limited to software, computers, telephones, Internet access, classroom instructional technology, network systems, etc.
- Violations of law on College owned or controlled property, or at any off-campus College sponsored or supervised activities.
- Violation of College policies or procedures not already noted above.

The regulations are located on the HACC website.

SGP 505 Student Disciplinary Action
Student: The term "student" for the sake of SGP 505 includes any individual taking courses at the college (in either full-time or part-time status), as well as those participating in non-credit courses and off-campus programs. The term "student" also includes individuals who withdraw during the student conduct process, individuals who have been notified of their acceptance for admission, and individuals who are not officially enrolled for a particular term but have a continuing relationship with the College. The College may sanction students for violations of the College policies that occur either at physical College locations or virtually, or engaging in a college sponsored activity.

Continuing Relationship: Any individual who was enrolled during the previous academic term or who has the intention to register for the current or next academic term.

Policy:
The College will respond to and resolve instances of alleged student violations of approved College rules and procedures within the context of the "Statement of Individual Rights" (CP 71) and the "Statement of Practices Constituting Unacceptable Conduct." (CP 74). Provisions of this procedure apply to student behavior while on College property, or at College-sponsored and College-approved activities. The College reserves the right to discipline students for off-campus conduct unrelated to the College. Off-campus conduct will be considered only in cases where there is an articulable and specific threat to a member or members of the College community. Further, students must understand that HACC offers some programs in which students cannot participate if they have been convicted of certain crimes.

To fully understand incident response, the investigation process, the hearing process, the appeals process, and due process rights, please see SGP 505.

Suspension/Expulsion
The College reserves the right to remove a student whose conduct proves unsatisfactory. Students found to have violated behavior regulations established by the College may be suspended or expelled. The HACC website contains detailed information about College regulations governing student behavior and about Student Disciplinary Action (SGP 505).

The College may require that any student submit evidence of satisfactory physical or mental health, certified by a licensed medical practitioner. To qualify for honorable dismissal, students must settle all outstanding obligations to the College and account for all College property that may have been issued to them. Students satisfying these requirements are then eligible to receive a copy of their College transcripts. Students who do not qualify for honorable dismissal will not be recommended by HACC to another institution.

Student Grievances - Shared Governance Procedure 504
Purpose:
To establish procedures related to the response to and resolution of student grievances.

Definitions:
Student Grievance Committee (SGC) – A committee, made up of representatives from multiple college constituency groups, responsible for adjudicating and resolving formal complaints from students.

Handbook Detail:
STUDENT GRIEVANCES (SGP 504)
1. In order to ensure speedy resolution of a grievance, the time limits prescribed herein shall be strictly adhered to unless a waiver is granted by the Chief Student Affairs Officer (CSAO) or designee. The College will maintain the confidentiality of grievances among those persons who have a need to know. The Student Grievance Committee (SGC) will also observe confidentiality throughout its processes.
2. Informal Phase
    a. Within ten* (10) business days of the date the student knew of the occurrence of the circumstance(s) causing the grievance, the student shall, if possible, contact the source of the grievance first. If that is not possible, or if the grievance alleges intentional misconduct by the source of the grievance, the student may contact that person's Administrative Level Supervisor (ALS) to attempt resolution of the problem. If neither of these two persons are available, a College Ombudsperson (Administrative Procedure 121, Ombudspersons) must be contacted in an effort to obtain an informal resolution to the problem. The ALS or College Ombudsperson may require the student to submit the concern in writing. The ALS or College Ombudsperson will maintain notes on any action taken on student complaints according to HACC documentation retention guidelines. Shared Governance Policy (SGP 504), Student Grievances.
3. Formal Phase
    a. If a student is unsuccessful in resolving the grievance in the informal phase, or if a student chooses to grieve a decision or action by the College, the student must compose a grievance letter. This letter must be sent to the CSAO or designee within ten*(10) business days of the occurrence of the circumstance(s) causing the grievance or after exhausting attempts at resolving the matter during the informal phase. The letter shall state the circumstance(s) of the grievance and the remedy requested, and include any documents supporting the request.
    b. The CSAO or designee shall schedule a meeting with the student and the SGC no later than ten*(10) business days after the receipt of the written grievance.
    c. The CSAO or designee in consultation with the participants will determine the meeting site.
    d. The CSAO or designee will forward any documents detailing previous action to date to the SGC members at least three (3) business days prior to the meeting date.
    e. At least five (5) SGC members including at least one representative from each constituency group must be present for the meeting to proceed. These members can be any representative from the established constituency group pool.
    f. Any party involved in the formal phase may bring witnesses and/or counsel to the meeting. If the SGC or any party intends to have another person in attendance at the meeting, they must notify the CSAO or designee at least three (3) business days before the meeting and the CSAO or designee must notify all parties within two (2) business days before the meeting, if possible. The role of the student's legal counsel is limited to advising the student. Any person who becomes disruptive shall be removed from the meeting at the discretion of the CSAO or designee.
    g. Recordings or verbatim records may be maintained only upon agreement of all parties concerned. The records are to be maintained per SGP 139.
    h. After hearing all available evidence, the SGC shall render a decision within five (5) business days using the standard of preponderance of evidence (more likely than not).
    i. The CSAO will notify all parties of the decision and include a written summary of the decision rendered. The notification of the student will be sent via certified letter (return receipt requested) or emailed with read receipt response.
    j. The CSAO will retain a summary of notes of the meeting with other pertinent material of the grievance, for a minimum of five (5) years.
    k. The decision of the SGC ends the formal grievance process.
4. Student Grievance Committee (SGC) Composition
    a. SGC shall consist of the Chief Student Affairs Officer (CSAO) or designee, two (2) administrators appointed by the Administrative and Professional Organization (APO), two (2) full-time tenured faculty

appointed by Faculty Organization, and two (2) students appointed by the SGAEC (Student Government Association Executive Council). Administrators and faculty members shall be appointed for three-year terms; students will be appointed for one-year terms. Pools of representatives from each constituency group will be recruited at least one time per year and must be trained. Anyone trained can be the representative for the constituency group during a hearing.

b. The Grievance Committee membership pool shall be appointed for three-year terms with staggered term dates. The pool will be designated effective July 1 of each year:
    1. Twelve (12) full-time faculty members from each academic department of the college including the library and counseling.
    2. Twelve (12) students designated by the president of SGAEC.
    3. Twelve (12) administrative/professional employees designated by APO.

c. The Grievance Committee will be comprised of six (6) members from the pool as defined above and contingent on the constituency group's membership of the parties involved in the grievance as follows:
    1. The committee for grievances involving parties from the same constituency group will be selected from that constituency group pool.
    2. The committee for grievances involving parties from different constituency groups will contain two members from the respective constituency groups, with a fifth member selected by mutual agreement of the respective constituency heads.
    3. Members of the grievance committee will be randomly selected from the committee pool to ensure members are not over utilized and/or continued objectivity of the grievance process.

d. The CSAO or designee will serve as the Ex-Officio Chair of the SGC and will be responsible for communicating the rules of order to all parties and documenting proceedings. The CSAO is a voting member of the committee.

e. Any member of this committee who has a potential conflict of interest shall be replaced only for the duration of the grievance. Any party involved in the grievance may request in writing that a member be removed and the CSAO or designee will make the determination if a conflict of interest does exist. The appropriate organizational body shall replace the member. In the event that there is a claim of a conflict of interest for the CSAO, the President of the College will make the determination. If a conflict of interest does exist, the President shall appoint a replacement to chair the committee.

***** *Time limits may be extended by the mutual consent of both parties at any step of the grievance. In cases where a grievance is filed after the time limit specified in this Administrative Procedure, the CSAO may authorize the grievance to continue under these procedures at his/her sole discretion.*

College Computer Use, Security, and Internet Access Policy

The purpose of this policy is to accommodate reliable access to technology hardware, software, Internet, and network accounts in support of the educational mission, while remaining in accordance with state, federal**,** and industry compliance requirements. Refer to the *Acceptable Use of Technology Resources Policy* for full details.

Computer Security

Computer security is critically important to the College. Each person at HACC who gains access to the computer network, including students and student workers, should do so under that individual's unique user ID and password. Use of another person's user ID and password is prohibited by law and by College policy. User IDs and passwords should not be loaned to another person even on a temporary basis. Any compromise of security is a serious matter, and College employees and students are responsible for all actions performed under their user IDs and passwords.

The College may monitor access to and use of the equipment and networking structures and systems for the following purposes:
To ensure the security and operating performance of its systems and networks
To investigate possible violations of federal, state, or local laws as well as College policies.

System Maintenance
Authorized College staff may monitor equipment, systems, and network traffic at any time. The privacy of personal information stored on the College's networked systems is not guaranteed. In addition, information stored on the College's networked systems may be copied.

Family Education Rights and Privacy Act
Employees at HACC may have access to education records that contain personally identifiable information, the disclosure of which is prohibited by the Family Education Rights and Privacy Act of 1974. Disclosure of this information to any unauthorized person (including a parent or a spouse) is contrary to College policy.

Software License and Copyrights
It is the policy of the College to honor the copyrights of all software packages used by or licensed to the College and to recognize the intellectual property rights of the owner. All software run on computers owned or controlled by the College must be purchased and used in accordance with College policies and procedures. Participating in the unauthorized distribution of copyrighted material using College resources, including unauthorized peer-to-peer file sharing, may subject students to civil and criminal liabilities. HACC has implemented technology-based deterrents in accordance with the statutes in the Higher Education Opportunity Act (HEOA) of 2008. HACC researches, documents, and responds to each DMCA (Digital Millennium Copyright Act) notice received. Legal alternatives for legally downloading copyrighted materials can be found at the following web address: www.educause.edu/legalcontent.

Business Records
Any and all records generated by the College, including but not limited to personnel records, payroll records, business and other related records are considered to be confidential. Willful or intentional unauthorized disclosure of such information violates College policy.

System Tampering
It is a violation of College policy to intentionally disrupt the performance of the College's computer system or the College network; introduce computer viruses; read, execute, modify or delete any file belonging to someone else without permission; or damage or remove without permission from the Office of Information Technology & Learning Experience (OITLE) any hardware that supports the College's computer system or College network.

Internet
User Online Behavior
Resources available on the Internet are used to support the College's educational mission. While interacting online, a user's behavior is subject to the College Policies 071, Statement of Individual Rights, and 074, Statement of Practices Constituting Unacceptable Conduct. Users may make incidental personal use of Internet resources, provided that such use does not interfere with the fulfillment of that user's job responsibilities or disrupt the College's network environment. Users who make incidental personal use of the college's Internet resources do so at their own risk and the college cannot guarantee the security or continued operation of any Internet resource.

1. Illegal Activity
    a. Use of the Internet, including email, to create, display, or transmit language and/or materials that violate local, state, or federal laws or regulations is strictly prohibited. Such use includes, but is not limited to, the violation of applicable laws regarding copyright and trademark infringement, fraud, forgery, harassment, discrimination, obscenity, libel, identity theft, or slander.
    b. Access to the Internet is a privilege and not a right, and is made available to the entire College community of users. The College reserves the right to terminate any network session at any time.
    c. Unless use is for scholarly or medical purposes or pursuant to a formal College investigation, users may not utilize the college network resources to store, display, or disseminate pornographic or other sexually explicit content. Child pornography is illegal and, in the event, it is discovered on the college's premises, it will be immediately reported to the local authorities.
2. User Responsibility/College Liability

a. Users, NOT the College or its staff, are responsible for the Internet information selected and/or accessed. The College does not generally monitor Internet use and is not responsible for its content, and consequently has no control over the information accessed, either on workstations on campus or remotely. The College assumes no responsibility and shall have no liability for any direct, indirect**,** or consequential damages arising from the use of information found on the Internet, and any communications sent through College Internet connections.

Email Privacy, Distribution, and Usage

Email Privacy

Users should have no expectation of privacy in anything they store, send or receive on the College's email system. However, with the exception of automated scans which monitor email communications for sensitive content, the College does not monitor the content of electronic mail as a routine procedure. The College reserves the right to inspect, copy, store, or disclose the contents of electronic mail messages, but will do so only when it believes these actions are appropriate to:

- Prevent or correct improper use of the College email facilities;
- Ensure compliance with College policies, procedures, or regulations;
- Satisfy a legal obligation; or ensure the proper operations of College email facilities;
- Establish compliance with College policies, procedures, or regulations;
- Address a legal obligation; or ensure the proper operations of the College email facilities or data network. (See Administrative Procedure 651, "Disclosure of Information and Students.")

Anti-Virus

All inbound email services must be directed through the College's spam and antivirus scanners at the Internet gateway. Once email is scanned, the antivirus scanners will relay the email to the respective location for delivery.

Email Courtesy

When emailing, be respectful, professional**,** and courteous. Defamatory, abusive, discriminatory, harassing, intimidating, profane**,** and/or offensive language is prohibited and will be subject to disciplinary actions in association with personnel policies. Emails sent through the employee email distribution service shall not be shared with individuals other than employees unless there is prior written consent from the author of the email.

Disclaimer

The College makes no warranties of any kind, whether expressed or implied, with respect to the College email services it provides. The College will not be responsible for damages resulting from the use of College email, including, but not limited to, loss of data resulting from delays, non-deliveries, missed deliveries, service interruptions caused by the negligence of a College employee, or by User error or omission. The College specifically denies any responsibility for the accuracy or quality of information obtained through College email except material represented as an official document.

Wireless Access

The College grants wireless access to the Internet and network resources as a privilege and must manage them responsibly to maintain the integrity and availability of all wireless information assets. Only wireless access points installed and managed by the Office of Information Technology & Learning Experience (OITLE) will be allowed on the College's wireless network.

Removable Media

College faculty and staff are responsible for the secure and responsible use of removable media. The College reserves the right to disable and/or restrict access for USB ports and writable CD/DVD drives on College-owned and maintained systems.

Remote Access

Access to the College's network resources remotely shall follow the same policies and procedures as an on-site connection to College network resources.

Academic Affairs

Program Requirements

The College awards Associate in Arts (AA), Associate in Science (AS), Associate in Fine Arts (AFA) and Associate in Applied Science (AAS) degrees, Certificates of Proficiency, and Diplomas. Program guides contained in this catalog outline the required courses needed to obtain the credential that is awarded upon successful completion. Most programs are offered at the Harrisburg Campus, and many are available at all of HACC's five campus locations, as well as through Virtual Learning. Program descriptions provide information about their availability.

Diploma

Diploma programs offer a concentrated study of technical job skills, are usually chosen by students who need to acquire a specific technical skill as quickly as possible, and require the equivalent of one full-time semester to complete. A diploma is awarded to students who complete an approved Program of Study of at least 16 credits with a Cumulative and Program grade point average of at least a 2.0. A Diploma must include coursework totaling at least nine credits earned at the College.

Certificates of Proficiency

Certificate programs require one year or two terms (full-time) for completion, and all of the required courses focus on an occupational skill. These programs are most suitable for students with a specifically defined occupational goal. A certificate is awarded to students who complete an approved Program of Study of at least 30 credits with a Cumulative and Program grade point average of at least 2.0. A Certificate must include coursework totaling at least 15 credits earned under HACC faculty instruction. Of those 15 credits, six credits must be taken in the area concentration of the certificate.

Associate Degrees

Associate degree programs are designed either for transfer to a four-year institution or to prepare students to enter the workforce upon graduation. Full-time students, who are prepared for college-level reading, writing, and mathematics, may complete associate degrees within two years.

Students must complete an approved Program of Study of a least 60 credits with a Cumulative and Program grade point average of at least a 2.0. Coursework for a degree must include at least 15 credits earned under HACC faculty instruction and at least six of those credits must be in the student's area of concentration. Courses numbered below the 100-level may not be used to meet graduation requirements.

General Education Goals

General Education Goals are an established baseline and common body of knowledge and skills that are integrated throughout the coursework of every associate degree program, and reflect HACC's values and priorities.

***Quantitative Literacy**:* Quantitatively literate students appropriately and correctly use numerical data specific to the task.

***Communication**:* Effective student communicators create and express ideas in speaking and writing in a clear, organized manner appropriate for the intended audience.

***Critical Thinking**:* Critical thinkers problem solve, create and evaluate. Critical thinking encompasses and is assessed through the following general education goals: information literacy, technology literacy, cultural awareness, communication and quantitative literacy.

***Technology Literacy**:* Technologically literate students effectively use and apply technology appropriate to the task.

***Information Literacy**:* Information literate students access, evaluate and cite sources to meet information needs.

***Cultural Awareness**:* Culturally aware students investigate issues related to global interdependence and reflect upon their impact as global citizens.

These goals are taught and reinforced through Core Knowledge Area requirements.

Core Knowledge Area Requirements
Core Knowledge Area requirements are part of the College's explicit associate degree requirements and are designed to ensure that students are exposed to a broad range of content areas and ways of thinking. These courses represent the standard in higher education for what is referred to as "General Education Requirements" and are often the foundation of articulation agreements with four-year institutions. In addition, these courses constitute the 30-credit framework mandated by the Pennsylvania Department of Education. Core Knowledge Areas are written communication, oral communication, humanities and arts, social and behavioral sciences, mathematics, natural and physical science, and wellness. The chart below outlines the requirements for each degree designation. Please see the list of approved Core Knowledge Area courses.

Core Knowledge Areas	AS	AA	AFA	AAS
Written Communication	6 Credits	6 Credits	6 Credits	3 Credits
Oral Communication	3 Credits	3 Credits	3 Credits	3 Credits
Humanities & Arts Elective	3 Credits	3 Credits	3 Credits	3 Credits
Social & Behavioral Science Elective	3 Credits	3 Credits	3 Credits	3 Credits
Humanities & Arts Elective or Social & Behavioral Science Elective	----------	3 Credits	----------	----------
Mathematics Elective	3 Credits	3 Credits	----------	----------
Science with a Laboratory Elective	3 Credits	3 Credits	----------	----------
Mathematics or Science Elective	3 Credits	----------	3 Credits	3 Credits
Wellness	1 Credit	1 Credit	1 Credit	1 Credit
First-Year-Seminar	1 Credit	1 Credit	1 Credit	1 Credit

Degree-seeking students are required to complete a First-Year Seminar (FYS). It is recommended that they complete this course prior to completing their 13th credit hour. FYS courses are designed to introduce students to essentials of college success, including goal setting, decision-making, academic skill building, and identifying college.

Subsequent Degrees
After earning an associate degree from HACC, students must complete a minimum of 15 additional credits at HACC to be eligible for an additional degree.

Special Application Requirements
Additional documents and procedures are required for students seeking admission into certain programs. Some programs may require students to submit to State and/or Federal Criminal Background Checks, child abuse clearance, and other verifications prior to enrollment, the start of a clinical experience, testing and/or obtaining employment. Some clinical placements require physicals and proof of immunizations. Students should consider this factor before enrolling in programs which require these checks. Students should contact the chair of the appropriate academic department with questions about these requirements.

Core Knowledge Area Courses Effective Fall 2022

Humanities and Arts (H & A)
Arabic 101, 102
Art 121, 131, 181, 182
Chinese 101
English 107, 201, 202, 203, 204, 205, 206, 207, 207H, 217
Film & Theatre 101, 103
French 101, 102, 201, 202
German 101, 102, 201, 202
Spanish 101, 102, 104, 201, 202
Humanities 101, 101H, 115, 117, 118, 201, 201H, 202, 202H
Music 102, 102H, 104
Philosophy 101, 101H, 102, 200, 225, 225H
Theatre 101, 110

Social and Behavioral Sciences (S & BS)
Anthropology 101, 201, 205
Communication 120, 253, 253H
Economics 201, 202
Geography 201, 230
Geographic Information Systems 141, 141H
Government and Politics 201, 202
History 101, 101H, 102, 102H. 103, 103H, 104, 107, 201, 202, 214
Psychology 101, 101H, 213, 221, 229
Sociology 201, 201H, 202, 203, 205

Mathematics (Math)
Mathematics 100, 103, 104, 110, 111, 111H, 113, 116, 119, 121, 122, 202

Natural and Physical Sciences (Sci/Lab)
Astronomy 103, 104
Biology 101, 103*, 103H*, 108, 111, 121, 122, 203, 221
Biotechnology 101*
Chemistry 100, 101, 102, 203
Geology 101, 101H, 102, 201, 201H
Meteorology 101
Physical Science 113, 114
Physics 105, 201, 202, 211
**Notes courses that do not contain a laboratory component. Indicated by abbreviation of (Sci).*

Wellness
Health 101
Nursing 150
Physical Education 109, 131, 135, 137, 138, 139, 141,142, 143 165, 166, 178, 179, 180, 181, 183, 184, 201

First Year Seminar (*fulfill the 1-credit FYS requirement*)

Allied Health 140
Architecture 111
Art 125
Automotive GM 101
Automotive Technology 101
Business 101
Cardiovascular Technology 100
Communication 110
Dental Hygiene 101
Education 110, 111
Emergency Medical Services 231
Engineering 102
Film & Theatre 147
Fire Technology 101
Foundational Studies 100
Foundational Studies 101
Foundational Studies 102
Foundational Studies 103
Geographic Information Systems 201
Honors Studies 101H
Hospitality Management 101
Industrial Automation 101
Medical Laboratory Technology 100
Nursing 143
Paralegal 101
Science 100

3 Credit First Year Seminar (*fulfill FYS requirement for students advised to take 3-credit FYS*)
Foundational Studies 100
Foundational Studies 103

Note: The Core Knowledge Area Course Requirements listed above are required for students enrolling into programs in the 2022-2023 Academic Year. Students who enrolled at HACC in prior years should consult the appropriate college catalog for elective requirements.

Credential Requirements by State
A variety of programs require a license or certification to work in a chosen field. The licensing and certification requirements can vary by state. For more information on any licensing and certification requirements needed for employment, please visit www.hacc.edu.

Programs with Special Accreditation
Multiple programs at HACC receive national accreditation. Visit www.hacc.edu for more information about programs with special accreditation.

Articulated Credit

Students earn credits for successful completion of courses under faculty instruction at the College, including independent study. Students may also earn credits through a variety of other avenues.

Credit by Examination
The College allows and encourages students who have completed advanced classes in high school or who have previous training or experience in an academic area to take examinations in those areas (see SGP 606: Transfer of Credit into HACC Credit Programs).

Upon successful completion of an examination and proper notification to the Registrar's Office, the student will be awarded credit, which may be used to meet program requirements. Information on accepted exams and required scores is available for review in the Registrar's Office.

The Advanced Placement (AP) Program, administered by the College Entrance Examination Board, is designed for high school students who wish to earn college credits while in high school. These are national examinations which are designed to measure the competence of the student. HACC honors the requirements of the Transfer and Articulation Oversight Committee of the PA Department of Education (www.patrac.org/Student/Earn-Credit-by-Exam) in determining the specific tests that are accepted and the scores necessary to receive credit.

College Level Examination Program (CLEP): Students who wish to earn credit for courses based upon previous training or experience may complete examinations offered through CLEP. HACC honors the requirements of the Transfer and Articulation Oversight Committee of the PA Department of Education (www.patrac.org/Student/Earn-Credit-by-Exam) in determining the specific tests that are accepted and the scores necessary to receive credit.

International Baccalaureate (IB) programs are offered by approved secondary schools throughout the world. Student performance on IB assessments may allow students to earn credit for some HACC scores. HACC honors the requirements of the Transfer and Articulation Oversight Committee of the PA Department of Education (www.patrac.org/Student/Earn-Credit-by-Exam) in determining the specific tests that are accepted and the scores necessary to receive credit.

DSST (formerly known as DANTES) Exams, are administered by Prometric on a variety of subjects. HACC honors the requirements of the Transfer and Articulation Oversight Committee of the PA Department of Education (www.patrac.org/Student/Earn-Credit-by-Exam) in determining the specific tests that are accepted and the scores necessary to receive credit.

Excelsior College Examinations (ECE) are administered through Excelsior College on a variety of subjects. Students may be eligible to earn credit based on ECE exam scores. The specific tests accepted and the scores necessary to receive credit have been determined by HACC faculty, and are reviewed and updated periodically as necessary.

HACC Credit by Examination: Credit by an examination, similar to a comprehensive final examination, is available for many of the courses offered by the College. These examinations may be taken by students who have reason to believe that they can pass examinations of this nature because of completed formal or informal training and experience in topics presented with the rigor of a college-level curriculum. Examinations offered under this program are scored on a pass/fail basis. Students who wish to petition to earn credit by examination should contact the Chair of the Department that offers the course. A fee is required.

Experiential Learning or Prior Learning Assessment

Students may request credit for knowledge, experience or skills gained outside the normal educational structure. In such cases, the student should contact the appropriate department chair. Students must be currently enrolled at the College and may not request credit for a course they have previously received a grade for (including Y, W or F). Students are required to submit credentials and/or a portfolio for evaluation. Experiential Learning includes both formal and informal learning resulting from work experience, non-credit courses, seminar training, workshops, professional licenses and certifications, community volunteerism, and unique life experiences. Upon assessment of the credentials and/or portfolio, the assigned assessor from the discipline may recommend awarding credit. A fee is required. (See SGP 606: Transfer of Credit into HACC Credit Programs)

Other Professional Certifications

The College also awards credit for certain licenses or certifications from professional bodies, agencies, and institutions. Professional certification/licensure may entitle a student to receive equivalent semester course credit towards a certificate or degree with the appropriate alignment of course learning outcome from recognized industry certification/licensure. Please contact the Registrar's Office for information. The College may also award credit for training completed in the military, industry or other non-collegiate setting that has been evaluated by the American Council of Education (ACE) or the National Program on Non-collegiate Sponsored Instruction (PONSI). Credit will be granted only when the training is directly relevant to the student's program of study. Credit from the military is awarded on a limited basis. To request an evaluation of non-collegiate training contact the Registrar's Office.

Credit by Transfer

Students admitted to HACC seeking to earn a degree, certificate or diploma and who are currently taking or have completed courses at another post-secondary school, may request to have official transcripts from other schools officially evaluated for transfer of credits (see SGP 606: Transfer of Credit into HACC Credit Programs). Degree-seeking students may transfer up to 45 credits from other post-secondary institutions. Transcripts from foreign educational institutions must be sent by the student to a recognized national credential evaluation service for possible transfer of credit to HACC. World Education Services, Inc. is the service normally used by HACC. Additional information can be found at www.wes.org.

When taking course work at another college with the intent to transfer this course work to HACC, a HACC student is advised to submit a prior authorization for transfer of credit. This confirms for the student how the course will transfer to HACC. This form is available in the Registrar's Office. Generally, credit is awarded only for coursework in which the student received credit with a letter grade of A, B, or C, except for Physical Education credit, which will transfer if a grade of P or S was received, where P or S grades are considered the equivalent of a C or above. Developmental Education courses do not transfer.

Students wishing to apply for transfer credit must submit an official transcript from the originating institution. In some instances, it may be necessary to provide course descriptions or syllabi. The official transcript and any supporting documentation should be sent directly to the HACC Registrar's Office. An official transcript is one that is officially authorized by the Records official at the institution and sent directly to the HACC Registrar's Office. Questions regarding transfer of credit requirements should be directed to the Registrar's Office, phone 717-780-2373 or email at record@hacc.edu.

Articulation of Courses with Area High Schools/Career and Technical Education Centers
Secondary school students may earn college credit through articulated coursework taken at an area high school or vocational-technical school. When it is determined that work comparable to that in a college course is taught at the secondary level, HACC enters into an articulation partnership with the secondary school. These articulation agreements enable students to earn college credit while at the secondary level if they meet a designated performance standard. Students must enter a program at HACC within two academic years of completing high school in order to be awarded articulated credit. Articulation agreements are in effect at many area secondary schools. Since additional agreements are being negotiated, a student should check with a guidance counselor at his or her secondary school.

HACC is a partner post-secondary institution in the statewide articulation of career and technical programs of study with the Pennsylvania Department of Education Bureau of Career and Technical Education. High school students who complete a career and technical education program of study may qualify for advanced credit. For more information on the articulated programs of study, contact an admissions counselor.

Dual Enrollment for High School Students
HACC offers dual enrollment options for high school students looking to enhance their academic profile, save money on a future post-secondary degree or just get a jump-start on life after graduation. High school juniors and seniors can earn college credit at their high school through College in the High School (CHS) opportunities by taking HACC classes taught by their own high school teachers who have been course-qualified to teach HACC classes, or at a HACC campus, remotely and virtually through courses taught by HACC faculty. Students can choose from a variety of courses, but are not permitted to take developmental level courses and the cost is significantly reduced. For more information, contact CHSandDE@hacc.edu.

The Honors Program

The Honors Program is designed to meet the scholarly needs of students demonstrating academic excellence. Qualified students who are interested in interdisciplinary, seminar-style learning and rigorous General Education curricula are encouraged to enroll. This program provides curricular, co-curricular, and experiential educational opportunities that promote student excellence. The program encourages the knowledge, skills, experience, critical thinking, and leadership abilities essential for a lifetime of integrative learning.

Honors classes are small, and enrollment is limited to no more than 15 students. They are often conducted as seminars and tutorials within which students do independent research. The classes are discussion based and interdisciplinary, linking developments in arts, humanities, sciences, and technologies. Focusing on diverse intellectual questions, students explore multiple points of view.

Honors Application Process
Students may apply to the Honors Program prior to, or at any time during, their enrollment at HACC. To apply, students should submit the online application, which can be accessed at www.hacc.edu/honors. Qualified students will be invited for an interview with the Honors Program Coordinator. An acceptance letter will be sent to all accepted honors students.

To be admitted to the Honors Program, incoming high school students must have at least a 3.5 GPA, or be in the top 20% of their class at the time of High School graduation, or have a combined 1150 SAT score (Reading and Math), or have an ACT Composite score of 24. Current HACC students must have at least a 3.5 GPA. All English developmental course requirements (writing and reading)

must be satisfied prior to enrollment in the program. Any interested and motivated student may sign up for honors courses without being enrolled in the program.

Honors Program Requirements
The total number of college credits to earn an Associate degree is the same as for non-honors students. The critical difference is in the depth and content of honors courses. In order to complete the Honors Program, students must complete 15 honors credit hours (including the required HONS 101H: Honors Foundation Seminar) and maintain at least a 3.25 overall GPA. The Honors Foundation Seminar satisfies the first-year seminar requirement; therefore, it should be taken during the first year in the program. Honors students are expected to take at least one honors course each academic year to maintain their honors status. For the list of currently offered honors courses please go to www.hacc.edu/honors.

Students who have completed the Honors Program as well as their Associate degree will have the "Honors Scholar Graduate" designation on their transcript. They will also receive a certificate of completion. As part of the student's regalia, a distinctive purple and white Honors cord will symbolize successful completion of the program.

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College Readiness Services

New students often require preparatory courses for college level work. This need is most commonly identified by the College's Testing and Placement Program, which measures reading, writing and mathematical knowledge. HACC's Developmental Education Services include diagnostic assessment and placement services as well as advising, academic monitoring, tutoring and other support services.

Developmental Courses
HACC offers several courses designed for students who need to sharpen their skills for college-level work. Students who would benefit from developmental courses are identified through the HACC Testing and Placement Program. Students who score below a certain threshold in two or more areas are required to enroll in a 3-credit dedicated First-Year Seminar (FYS), offered through the Foundational Studies discipline, before attempting their 13th credit. Students should consult with their academic advisor to determine if this enhanced FYS is required.

English as a Second Language (ESL)
HACC offers instruction in English for academic purposes. Students interested in pursuing an academic credential can enroll in courses to continue their academic English development in reading, writing, listening, and speaking. For further information on HACC's ESL Program, refer to the Academic Planning section of this catalog, or online at www.hacc.edu.

GED® Testing
HACC's Harrisburg Campus administers the General Educational Development (GED®) test on a regular basis. Those who achieve a satisfactory score on the test receive a Commonwealth Secondary School Diploma. This diploma, issued by the Department of Education and regarded as the equivalent of an earned high school diploma, certifies that the recipient meets the high school graduation requirements set by the State Board of Education. The Commonwealth Secondary School Diploma is also issued to applicants who successfully complete 30 semester hours of college level work.

To be eligible to take the GED test, a Pennsylvania resident must be 18 years of age or older and must not be enrolled in an approved or licensed secondary school. Persons 16 to 18 years of age may take the GED test at the written request of an employer who requires a high school equivalency diploma; a college, technical/trade school or university official who requires GED test scores for admission to their institutions; a recruiting officer of the armed forces who requires a high school equivalency diploma for enlistment; or a director of a state institution for residents, patients or inmates who is requiring testing for persons prior to their release or discharge from the institution. It should be noted that the Commonwealth Secondary School Diploma is issued only to persons 18 years of age or older. GED tests are scheduled on-campus through www.ged.com. An admission ticket and photo ID are required. The test consists of four parts and costs $30 per part. Call 717-780-2442 for GED test information and registration.

Center for Global Opportunities & Education

International Student Programs

Each year, HACC welcomes over 800 non-U.S. citizens including over 150 international students (F1 student visa holders) from more than 60 countries around the world. A diverse student population helps create a global perspective in our classrooms and campuses, brings a rich diversity to our communities, and reflects HACC's commitment to inclusion, diversity, and belonging.

International Student Admissions and International Student Programs support international students from admission to graduation in all aspects of their attendance at the College. Staff members are dedicated to assisting students with immigration responsibilities and benefits, academic advising, supporting academic success, promoting activities that lead to social integration, and acting as a reference point for all college services.

Global Opportunities

The impact of a global experience is boundless, transformative, and lifelong. HACC supports high impact experiences in an interconnected global world by connecting educational opportunities with culture that enhances collaboration, understanding and appreciation. This impact can be felt on one's personal and professional growth whether affective, behavioral, or cognitive. HACC has sponsored trips to a variety of locations around the world including China, Italy, UK, France, Costa Rica, Guatemala, Romania, Serbia, Spain and Morocco.

Academic Support Services

The Learning Commons

The Learning Commons is an academic support hub for students and includes the library, testing, tutoring, and user support. Services are offered at all five campuses as well as online to meet a variety of student needs. The HACC Learning Commons also provides study rooms and computer work spaces on each campus for individual or collaborative work. No matter how students access its services or what kinds of projects they are working on, the Learning Commons can help students reach their academic goals through access to resources and research instruction, technology integration, testing needs, and tutoring for that extra boost. The Learning Commons also offers a Technology Loan program (TechLoan) for students who may need to borrow technology, including computers, in order to complete their coursework. Students may find additional information for the program at https://libguides.hacc.edu/pcloan, including how and when to apply. To learn more about the Learning Commons, please visit https://libguides.hacc.edu/learningcommons.

Library Information Services

Empowering student success. Inspiring lifelong learning. The HACC Library is here to meet this mission. The Library has five physical locations, online resources, and a dynamic group of librarians and staff to assist faculty, staff, and students at the college.

Library faculty are available to teach students face-to-face in campus libraries or classrooms, in virtual classes, as well as via Zoom, phone, and online chat.

Library faculty teach a wide range of topics, including how to choose the best database or resource to start research, evaluation of resources, web or print, and how to properly cite research. Faculty and students can schedule classroom instruction or individual research appointments at https://libanswers.hacc.edu.

Students also have librarian support 24/7 through Access Pennsylvania's Ask a Librarian. Students are automatically referred to the Access Pennsylvania site when they click the HACC chat link if no HACC librarian is available.

HACC Library resources include physical books, magazines, journals, DVDs, and medical models. The Library's online resources include databases of reference materials; magazines, journals, and newspaper articles; streaming videos; anatomy resources; and ebooks and ejournals. These online materials are available both on and off campus. Students use their HACC login credentials to access these materials when off campus. Laptop computers may be checked out at the service desks for use on campus or at home. Other equipment and medical models are available in some campus libraries for use in the library.

HACC students may borrow materials from other libraries through interlibrary loan. Students may also present their HACC ID at many local colleges to access these colleges' resources and borrow materials. Visit the Library website www.hacc.edu/Library to find all the resources available, contact information, online chat connections, and hours of operation.

Tutoring

HACC Tutoring provides free on-campus tutoring, remote tutoring (including Smarthinking), online essay review, tutor-led (facilitated) study groups, embedded (in-class) tutoring, and additional academic support services to all HACC students. Professional and peer tutors assist students seeking to improve their skills in a variety of subjects. Academic coaching is also available for students who would like additional help with time management, organization, test preparation, and other academic skills. Contact the tutoring office at any campus location, or email tutoring@hacc.edu, for additional information.

To make an appointment or see our current schedule, students can visit https://libguides.hacc.edu/learningcommons/tutoring/. Tutoring is also home to our in-class tutoring (ICT) program, where a specially trained tutor is paired with particular classes and provides in-class and out-of-class support to students in that specific class. Students should check with their instructors to verify if a tutor has been paired with the class. Tutors are both professional and peer; professional tutors have at least a bachelor's degree while peer tutors are high-caliber students. This mix of experience types enhances the student learning experience. HACC's Online Writing Lab (HOWL) program is an email tutoring service for students who would like feedback on writing projects that fits with their schedule. Access HOWL at https://libguides.hacc.edu/learningcommons/tutoring/HOWL.

Academic coaching is a voluntary support service for students who want to improve their academic and study skills. Academic coaches assist students in determining their academic concerns, identifying campus resources available to help them, and refining their time management, organizational, and test preparation skills. Personalized sessions are conducted by appointment and are confidential.

Testing

The Test Center provides a variety of services that promote academic success, personal growth, and career development. Its mission is to provide a secure, professional environment for testing candidates while maintaining testing integrity within a system of support for faculty and professional organizations.

Exams offered by the Test Center may include:

- Academic Placement Testing
- Academic Make-Up Exams
- Virtual Learning Proctored Exams
- Health Career Admissions Testing
- CLEP Exams

For additional information regarding Test Center services, please visit https://libguides.hacc.edu/learningcommons/testing.

User Support
User support, or tech support, offers technology solutions for HACC students. User Support helps with myHACC, Hawkmail, Zoom, and Office 365 accounts. Getting help is easy with 24/7 availability via email or phone call. Drop-in technology support sessions are also offered.

User Support supports the TechLoan program. If a student needs a webcam, computer, headset, or hotspot, and is enrolled in at least six credit hours (or demonstrates some other critical support need), the student may be eligible for our TechLoan program. For more information about receiving technology loans, please visit our Technology and Internet Access Loan page: https://libguides.hacc.edu/pcloan/about. For other technology questions, students can email supportcenter@hacc.edu, call 717-780-2570, or chat from the homepage at https://libguides.hacc.edu/learningcommons/usersupport.

The Strengthening Career and Technical Education for the 21st Century Act (Perkins V)
Students enrolled in career and technical education (CTE) programs who need assistance to successfully complete their programs may have access to support services through the Perkins Act. These federally funded initiatives help support eligible students with resources such as academic and career advising, tutoring and academic support focusing on equity and accessibility for students in CTE programs.

Academic Monitoring
HACC's academic monitoring system is an early-alert program. This method is used to identify students who may be in danger of academic failure to suggest avenues of assistance available from tutoring and academic coaching services, academic advising, and other college services. Students are notified via email when an alert has been issued by faculty. This alert notification is not meant to be punitive, but supportive. Further support to students and maintenance of the early-alert process is arranged through the Student Success Coaching office.

First Year Seminar
FYS courses are designed to help students realize personal and career goals based on their values, needs, skills, and interests. Credit from these courses can count as elective credits toward the associate degree, and many FYS courses fulfill the first-year seminar requirement. Some FYS courses are program specific. All students pursuing an associate degree must meet the FYS requirement by either taking appropriate coursework or using the test-out option. The test-out option includes a multiple-choice test and fee to earn one credit. A full list of FYS courses can be found on www.hacc.edu. It is strongly encouraged that a student takes the FYS course during the first semester.

Student Access Services (formerly Office for Disability Services)
At HACC, it's our goal to support students throughout their educational journey. We remain committed to providing reasonable accommodations to qualified students with disabilities to ensure that they have an equal opportunity to succeed and participate in their college and career goals. The College in accordance with federal compliance of the Americans with Disabilities Act as Amended (ADAAA), Section 504 of the Rehabilitation Act of 1973 and Title IX of the Education Amendment of 1972. Title IX provides protection for students who are pregnant, parenting and may need to take a medical leave of absence due to pregnancy, childbirth, miscarriage, abortion and or recovery.

No qualified person will be denied access to, participation in, or the benefits of, any program or activity operated by the college because of disability, pregnancy, or related conditions. Nor will individuals with a disability be subjected to discrimination while participating in college programs or activities due to disability. Whether students had an IEP in high school or not, they may be eligible for accommodations. We encourage students who feel they may benefit from accommodations to contact us to learn more and review the webpage at www.hacc.edu.

Each HACC campus center provides physical accommodations according to ADA guidelines. Electric doors are installed throughout the campuses providing access for students with mobility impairments. Parking spaces for individuals with disabilities are identified at all campuses. Additionally each campus has identified secure and confidential lactation spaces for employees and students.

Men of Color Initiatives

The Men of Color Initiatives at HACC is designed to recognize, reinforce, and support the recruitment, retention, and completion of male identifying students across all the campuses. Supported by six pillars that include scholarship, service, leadership, integrity, responsibility, and cultural awareness.

The Men of Color Initiatives recognizes and appreciates the role of the intersecting identities as it relates to the individual journey of each member. Some of the goals for our members include amplifying voices, empowerment, promotion of self-advocacy, and making healthy life choices to move beyond historical structural and systemic barriers for a successful transition in their personal and professional lives through education.

KEYS Program

The KEYS program is designed to help students succeed in community college. If a student or their family is receiving cash benefits (TANF) or food stamps (SNAP) and they want additional training and education in order to obtain self-supporting employment, this program is for them!

The KEYS Program provides academic support, career counseling, job search assistance, financial aid guidance, personal encouragement, college and community resource information, peer support, participation reimbursements, and incentives for accomplishments. Students enrolled may also be eligible for childcare, books and supplies, and transportation (mileage, repairs, and public transportation) allowances.

The KEYS Program is available at all five HACC campuses. Referrals are received from the County Assistance offices or a reverse referral form can be completed at www.hacc.edu/keys. For more information, contact your County Caseworker, visit the KEYS office at any HACC campus, or call 717-780-1181.

Transferring from HACC

Many students attend HACC with the primary goal of earning an associates degree and transferring to a bachelor's degree program at another college or university. To help students with this process, HACC has formed partnerships with colleges and universities assuring admission with junior standing, providing students meet the following requirements:

- Approved program of study is followed
- Required GPA is maintained
- An associate degree is earned

Many of these partnerships include scholarships or other benefits for HACC graduates who transfer. A list of these colleges/ universities is located at www.hacc.edu/transfer.

Transfer services include transfer coaching, information sessions, transfer fairs, opportunities to meet with representatives from many colleges and universities, and other transfer resources.

Career Services

An integral part of any college student's educational experience should be career development. To be successful in the challenging workforce of the twenty-first century, students need to be proactive and have the foresight to connect their education to the world of work. Thus, our primary function is to support our students' professional growth and development toward their career goals.

The Career Services offices can help students at all stages of their educational journey. Early in their experience, students can use Career Services resources to explore career options and make informed decisions about majors and occupations.

Once a student has decided on a major, the Career Services staff can help design a career development plan and explore in-field experience options such as informational interviews, job shadowing, and internships, etc. As students begin to move toward completion of their programs, Career Services staff can help them prepare for the job search. Thus, the Career Services office is a "one-stop source" for everything career related.

Students are encouraged to visit their local career office and to explore the Career Services webpage at www.hacc.edu/careerservices in order to learn more about how Career Services can and should be a vital part of their educational experience at HACC.

Academic Policies

Board of Trustees Policies and Shared Governance Policies may be examined by any member of the College community. Copies of these documents are available through myHACC. The statements of policy in this section are summaries, not the full policies, procedures, and guidelines that the College will follow.

Final Exams

A final examination period is scheduled at the conclusion of each fall and spring semester. The schedule allows for examinations to be up to two hours in length.

Appeal of Academic Decisions

Students have a right to appeal decisions affecting their academic status, including final grades, if they believe they can show that the academic decision meets a ground(s) for an appeal as outlined in SGP 608. The first step for appeal is discussion with the person who made the decision. If resolution is not achieved, a formal appeal may be started following the procedures outlined in SG Handbook 608: Appeal of Academic Decisions. These steps must be taken within ten business days of the decision.

Grading System

Midterm and final grades are available to students online through the myHACC portal at my.hacc.edu. Midterm grades are issued in the fall and spring terms for courses meeting 12 or more weeks. Midterm grades are not issued during the summer terms or for courses that meet for fewer than 12 weeks. Final grades are available online at the conclusion of each term.

Letter Grade	Grade Definition	Points Per Credit
A	Superior	4.00
B	Good	3.00
C	Average	2.00
D	Passing	1.00
YD	Work in Progress, Converted to a D	
F	Failure	
IF	Incomplete Work, Not Completed	
YF	Work in Progress, Not Completed	
W	Withdrawal	0.00
I	Incomplete	
Y	Work in Progress	0.00
S	Audit (No Credit)	0.00
CR/DR/FR	Academic Renewal	0.00

The following grading system is used:

The W (withdrawal) grade should not be construed as prejudicial to a student's record, although excessive use of the W may jeopardize academic standing and financial aid or veterans' benefits. (Refer to the definition of Satisfactory Academic Progress.)

During the tuition refund period, no grade is recorded if a student drops the class. After the tuition refund period has ended and during the Drop/Withdrawal Period (prior to the completion of 70% of class time), a student must submit a request to drop the course either online through the myHACC portal or in-person at the Welcome Center. The request to drop is in pending status for 7 days during which time the student and instructor may communicate about the decision to withdraw. In cases where the student has violated the instructor's academic dishonesty policy, a grade of 'F' may be assigned. If no action is taken prior to the end of the pending status period by either the student or instructor, the course drop will be processed with a 'W' status.

The I (incomplete) grade: An "I" grade may be awarded at the discretion of the faculty member, to students who, because of extenuating circumstances, request additional time beyond the term to complete course work. The course work must be completed within the deadline set by the faculty member prior to the upcoming Fall or Spring term. An incomplete grade is computed as an F in the student's cumulative grade point average when not completed within the allotted period. On the recommendation of the instructor and subject to the School dean's approval, the deadline to complete may be extended.

The Y (work in progress) grade is restricted to 0-level courses, unless otherwise approved by an academic department and the Vice President of Academic Affairs. The Y is assigned only after consultation with the student, who agrees to the following conditions:

- In the judgment of the instructor, the student has shown sufficient progress but needs more time to complete the course objectives.
- The student will be given the option of accepting the D or F grade.
- At the time the grade is agreed upon, the student must complete the Y grade form provided by the instructor.

- The student must re-enroll in the course no later than the next regular term in which the course is offered.
- The student may not receive a Y grade twice in the same course.
- If a student is already registered for the next term, the student must sign a Drop/Add Form to re-enroll in the course for which a Y grade is given.
- If the student has not completed the course by the end of the next regular term in which the course is offered, the Y grade will be counted as an F grade in computing the student's cumulative grade point average.

Course Repeat Limitations

A student may attempt a course up to three times for credit. Thereafter, the student must meet with an advisor or a counselor to discuss the educational plan and obtain permission from the department chair to repeat the course. Certain programs and academic disciplines may have time and frequency limitations on course repeats. In all repeats, the highest grade earned for the course will be used to calculate the grade point average; however, all grades will be recorded on the student's transcript. (Complete information is found in SG Handbook 601: Credit Enrollment, Withdrawal, Attendance, and Refunds).

Satisfactory Academic Progress

The College has established standards for overall academic achievement, for progress toward a degree, and for advancement from one course to the next in a sequence. Students should be aware of the several meanings of Satisfactory Academic Progress. Failure to progress according to standards will result in probation or suspension. Students placed on probation or suspension will be notified of their status and the conditions for continuing.

Beyond the information given here, there is a special definition of satisfactory progress for students receiving financial aid; this definition is explained in the Financial Aid section of this catalog and in SGP 500: Financial Aid Satisfactory Academic Progress (FASAP) and Appeals.

- A 2.0 Grade Point Average must be maintained.
- Students who have attempted more than 30 credit hours of coursework may not have received a W (withdrawal) grade for more than half of the credit hours they have attempted.
- While credit is given for grades of D or higher in all courses, some courses must be completed with a grade of C or higher in order to advance to the next course in a sequence. The course descriptions in this catalog identify the courses with this requirement.

Certain programs with special accreditation have standards for progress that are more stringent than the general college standards. These include the programs in Nursing and other Health Careers (for specific programs and their standards, refer online to www.hacc.edu).

Honors/Dean's List

Each term the College publishes a Dean's List naming students who have achieved the academic distinction of at least a 3.25 grade point average. Full-time students on the Dean's List have completed 12 or more college level credit hours in a term. Part-time students are eligible for the Dean's List issued in August if they have not been full-time in either the fall or spring terms and have completed a minimum of 12 college level credits during the year (beginning fall and ending second summer term). The Dean's List is distributed for publication to area news media. Students on the Dean's List will receive a Certificate of Commendation.

Students with a cumulative Grade Point Average (GPA) of 3.25 or better will graduate with academic honors. The honor is recorded on the student's transcript, using the following definitions:

- summa cum laude 3.75 or higher GPA (Highest Honors)
- magna cum laude 3.50 - 3.74 GPA (High Honors)
- cum laude 3.25 - 3.49 GPA (Honors)

Academic Probation

At the end of each term, a student whose minimum required cumulative grade point average is below a 2.00 GPA is placed on probation (unless the student meets suspension criteria).

Students on academic probation must see their assigned advisor to register for classes and may register for a maximum of 13 credit hours per fall or spring term and 7 credit hours per summer term. Students are removed from academic probation only when the cumulative Grade Point Average reaches 2.00 or above. Students on academic probation are required to enter an advising code when registering online. The advising code is available from the student's advisor. It is the student's responsibility to consult with his/her advisor to devise a plan for academic success.

Academic Suspension

A student is placed on academic suspension if he/she is already on academic probation and earns a semester GPA below 2.00.

Minimum Required Cumulative Grade Point Average	Cumulative GPA Credit Hours
1.20	12-24
1.4	25-36
1.6	37-48
1.8	49-60
2.00	61 or more

At the end of each term, a student who receives a grade of "W" in 50% or more credits, after attempting 30 credit hours, is placed on Suspension Due to Excessive W's. Students placed on academic suspension are notified by letter and the standing is listed as a part of the students' final grades. Reinstatement Applications are available at www.hacc.edu. Applications must be submitted at least two weeks before the term begins. The reinstatement Committee reviews applications and makes decisions to approve or deny reinstatement and assigns stipulations, including, but not limited to, credit restrictions and course recommendations. Students who are denied readmission may appeal in writing to the Vice President of Academic Affairs within five days of receipt of their notification letter. The decision of the Vice President of Academic Affairs is final.

Change of Curriculum

Students wishing to change their program of study must complete a Change of Major Form. This online form is located in myHACC. Program changes made after the audit date for each term will become effective for the subsequent term. Students will follow the graduation requirements in effect for the term in which the change of program was made.

Academic Renewal

The Academic Renewal process allows students to continue their academic careers without being penalized for past academic performance. The sole purpose is to allow a student to improve his/her grade point average. While courses and grades are never deleted from a student's record, an Academic Renewal allows certain courses to be excluded from the GPA calculation. An Academic Renewal may be requested when a student has not attended HACC for at least five consecutive years (Complete Academic Renewal) or when a student changes major (Curriculum-Based Academic Renewal).

Complete Academic Renewal - Students who have not completed any credit classes at HACC for at least five consecutive years, and who upon their return complete 12 credits at HACC (100 or higher-level courses) with a grade of “C” or higher in each course, may request to begin anew the accumulation of their grade point average. When a Complete Academic Renewal is granted all courses with grades of “C” or higher taken prior to the student’s return to HACC will remain in the calculation of the GPA. All courses with grades of “D” or “F” taken prior to the student’s return will be removed from calculation in the GPA and may not be used to fulfill graduation requirements.

Curriculum-Based Academic Renewal - All courses taken in the original curriculum are deleted from computation in the GPA. Excluded from the renewal process are courses that satisfy English writing requirements of the new major; courses that meet current general education core requirements; and courses numbered below 100.

An Academic Renewal may be granted only once. Once an Academic Renewal has been processed, the courses excluded may not be re-entered into the GPA calculation and may not be used to fulfill requirements for any HACC program.

Students attempting to complete a second or subsequent degree may not have courses needed to fulfill graduation requirements in a previously completed curriculum deleted from inclusion in the GPA. Students who wish to find out more about the Academic Renewal process should contact the Records Office at 717-780-2373, or via email, record@hacc.edu.

Transcript Requests

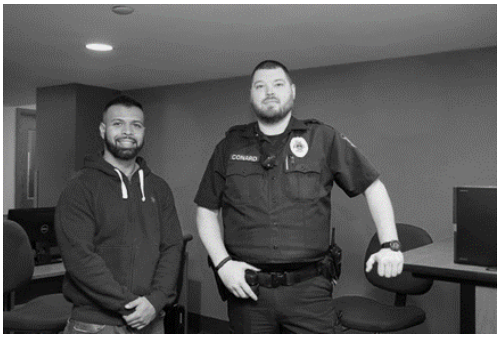
Students may request a transcript of their permanent academic records through the secure student portal myHACC, Student tab- Registration/Records- Student Records or by utilizing our Electronic (eTranscript) service with the National Student Clearinghouse. All official transcript requests require a fee of $6. Students with a financial obligation to the College must satisfy the obligation prior to requesting a transcript. Students may also view and print their unofficial transcript through www.hacc.edu.

Family Educational Rights and Privacy Act (FERPA)

What is FERPA?

The Family Educational Rights and Privacy Act of 1974 helps protect the privacy of student education records. The Act provides for the right to inspect and review education records, the right to seek to amend those records and to limit disclosure of information from the records. The intent of the legislation is to protect the rights of students and to ensure the privacy and accuracy of education records. The Act applies to all institutions that are recipients of federal aid administered by the Secretary of Education.

What rights does FERPA afford students with respect to their education records?



STUDENTS HAVE THE RIGHT TO INSPECT AND REVIEW THEIR EDUCATIONAL RECORDS.

A student seeking to review their records should contact the Welcome Center at any campus and ask for a Records Review Request form. HACC must comply with the request to review the records within 45 days of receiving the request. Students may request copies of their records, which will be reproduced at a cost of $0.10 per page, the cost to be borne by the student. However, the College may refuse to duplicate records in situations where the student has outstanding financial or other obligations to the College.

STUDENTS HAVE THE RIGHT TO SEEK TO AMEND THEIR EDUCATIONAL RECORDS.

Students may ask HACC personnel to amend a record if they believe it is inaccurate or misleading. They should write to the Registrar, clearly identifying the part of the record they want changed, and specifying why it is inaccurate or misleading. If the decision is not to amend the record as requested by the student, HACC staff will notify the student of the decision and advise the student of the right to a hearing regarding the request for amendment. If the student requests a hearing, the Registrar or designee shall gather the records which are being challenged and appoint a committee of one faculty member, one administrator, and a member of the Student Affairs staff to hold a hearing with the student to review
and discuss the information in question.
The following conditions must be met:

The hearing must take place within 45 days of the written request of the student at a time which is convenient for both the student and the other parties involved.
Minutes shall be recorded from the hearing.
Due process shall be the guideline used for the conduct of the meeting.
If the records cannot be mutually agreed upon, the student has the right to submit information for the file to explain more adequately the information in question.

STUDENTS HAVE THE RIGHT TO LIMIT DISCLOSURE OF INFORMATION FROM THEIR EDUCATIONAL RECORDS.

With certain exceptions (described below) HACC may not release or disclose personally identifiable information unless the student has given prior consent in writing. A student may contact the Welcome Center at any campus for Consent to Release Information form.

There are exceptions to non-disclosure. FERPA allows the release of directory information to anyone without the student's consent, although HACC does not promote the widespread release of directory information.
Directory information is defined as that information which would not generally be considered harmful or an invasion of privacy if disclosed. Designated directory information at HACC includes:

- Student name, address, telephone listing
- Email address
- Date of birth
- Major field of study at HACC
- Participation in officially recognized activities and sports
- Dates of attendance at HACC
- Degrees and awards received
- Photograph
- Educational institution most recently attended
- Full or part-time enrollment status
- Academic level (i.e. Freshman or Sophomore)

Students have the right to refuse to permit the release or disclosure of directory information by making a request in writing. Contact the Welcome Center at any HACC location or the Records Office for information. Students should be aware that requesting non-disclosure may have negative consequences. (For instance, HACC personnel will not be able to confirm the student's degree to a prospective employer; their names will not be listed in the graduation program.) A request for non-disclosure will remain in effect unless revoked with a written request from the student.

HACC personnel may provide non-directory information to school officials with legitimate educational interest. A school official is defined as:

- a person employed by HACC in an administrative, supervisory, academic or research, or support staff position (including law enforcement unit personnel);
- a person or company with whom HACC has contacted as its agent to provide a service instead of using HACC employees or officials (such as attorney, National Student Clearinghouse, auditor, or collection agent);
- a person serving on the Board of Trustees;

- a student serving on an official committee, such as disciplinary or grievance committee, or assisting another school official in performing his or her tasks.

A school official has a legitimate educational interest if the official needs to review an education record in order to fulfill his or her professional responsibilities for HACC. HACC personnel may disclose education records without consent to officials at another school in which a student seeks or intends to enroll.

There are certain other situations where non-directory information may be released without consent. These situations include: to parents of dependent students, as defined by the Internal Revenue Code; to accrediting organizations; to federal, state, and local authorities involving an audit or evaluation of compliance with educational programs; to organizations conducting studies for or on behalf of educational institutions; to respond to a subpoena or court order; in connection with financial aid; in health or safety emergencies; to release the results of a disciplinary hearing to an alleged victim of a crime of violence.

STUDENTS HAVE THE RIGHT TO FILE A COMPLAINT CONCERNING ALLEGED FAILURES BY THE COLLEGE TO COMPLY WITH FERPA.

Complaints alleging FERPA violations may be made with the U.S. Department of Education. The name and address of the Office that administers FERPA is:

Family Policy Compliance Office
U.S. Department of Education
400 Maryland Avenue, SW
Washington D.C. 20202-0001

Academic Programs

ADDICTION & RECOVERY SERVICES, Associate in Applied Science Degree - 5516

Social Science Department

The Addiction and Recovery Services AAS degree is a specialized program that prepares students to work as human service professionals, who work directly with individuals being served through Drug and Alcohol Rehabilitation and Recovery Centers. Students are required to complete a Pennsylvania Child Abuse History Clearance, FBI Criminal Background Check, and a State Police Criminal Record Check prior to enrollment into the practicum course. If the student has any questions regarding this, he or she should contact the Program Director or Practicum Coordinator. This program can be completed at the Harrisburg Campus, as well as online through virtual learning. In addition, students can complete this program at the Lancaster and York campuses provided some of their coursework is complete online through virtual learning.

Career Opportunities
Graduates of this program receive the training and education for entry-level positions in rehabilitation centers for alcohol and drug dependence and addictions.

Competency Profile
This curriculum is designed to prepare students to:

- Describe drug and alcohol use from historical, social, biological, and psychological perspectives
- Summarize current counseling approaches and treatment trends in drug and alcohol treatment
- Identify the symptoms and behaviors that constitute the basis for diagnostic assessments
- Establish and maintain effective and culturally-competent relationships with clients
- Conduct effective crisis and brief intervention counseling
- Apply ethical principles and laws to professional practice

PROGRAM REQUIREMENTS (TOTAL CREDITS = 60)

General Education		Major Requirements		Other Required Courses	
ENGL 101 English Composition I	3	HUMS 100 Introduction to Human Services	3	SOCI 201 Introduction to Sociology	3
COMM 101 Effective Speaking **(or)**	3	HUMS 108 Drugs & Alcohol: Use & Abuse	3	Program Specific Electives*	9
COMM 203 Interpersonal Communication	(3)	HUMS 109 Drugs & Alcohol: Issues & Treatment	3		12
Humanities & Arts Elective	3	HUMS 122 Skills & Methods in Human Services II	3		
Mathematics or Science Elective - MATH 111	3	HUMS 200 Group Work Practice	3		
Social & Behavioral Science Elective - PSYC 101	3	HUMS 215 Fieldwork Practicum	4		
First-Year-Seminar Elective	1	HUMS 216 Crisis & Brief Intervention Counseling	3		
Wellness	1	HUMS 217 Addictions Counseling Interventions	3		
	17	HUMS 218 Co-Occurring Disorders	3		
		HUMS 219 Drug & Alcohol Screening & Assessment	3		
			31		

**Students are to select from the following courses: AH 105; BIOL 111; CJ 101; ENGL 106; GERT 211, 215, 220, 232; HUMS 206; PSYC 213, 229; and SOCI 202, 203.*

RECOMMENDED SEQUENCE FOR FULL-TIME STUDENTS

Part-time students can complete this program by taking one or more courses each semester.

Fall Semester I		Spring Semester I		Fall Semester II		Spring Semester II	
ENGL 101	3	COMM 101 **or** 203	3	HUMS 122	3	Humanities/Arts Elective	3
FYS Elective	1	HUMS 109	3	HUMS 216	3	HUMS 200	3
HUMS 100	3	HUMS 218	3	HUMS 217	3	HUMS 215	4
HUMS 108	3	HUMS 219	3	SOCI 201	3	Program Electives*	6
MATH 111	3	PSYC 101	3	Program Electives*	3		
Wellness	1						

ADMINISTRATIVE OFFICE MANAGEMENT, Associate in Applied Science Degree - 1926

Engineering, Trades & Computer Technologies Department

The Administrative Office Management AAS degree program prepares students to perform clerical, administrative, management, and information systems support in a variety of office-related environments. Students are able to gain exposure to emerging technologies and other online and mobile business solutions through hands-on application and conducting research. Graduates utilize skills in office transcription, written and oral communication, and integrated software applications. Students may complete this program entirely online through virtual learning.

Career Opportunities
Graduates find employment in business offices, private industry, public service, state and federal government, and specialized environments such as legal, medical, financial, insurance, law enforcement, engineering, and management as administrative office specialists.

Competency Profile
This curriculum is designed to prepare students to:
- Show proficiency in keyboarding and office transcription
- Apply advanced software skills to produce business documents
- Integrate software applications
- Research using the Internet
- Manage records manually and electronically
- Perform basic accounting functions
- Create effective presentations
- Implement up-to-date office technologies and procedures
- Assess current business-related technologies and resources to enhance professional administrative productivity

PROGRAM REQUIREMENTS (TOTAL CREDITS = 62)

General Education		**Major Requirements**		**Other Required Courses**	
ENGL 101 English Composition I	3	AOS 101 Document Processing	3	CIS 105 Introduction to Software for Business	3
ENGL 106 Business Writing	3	AOS 110 Microsoft Word	3	CIS 108 Introduction to Power Point	1
COMM 101 Effective Speaking **(or)**	3	AOS 111 Grammar & Punctuation Essen.	3	CIS 135 Intermediate Spreadsheet Applica	3
COMM 203 Interpersonal Communication	(3)	AOS 112 Desktop Publishing	3	MGMT 204 Human Relations in Business	3
				(or)	
Humanities & Arts Elective*	3	AOS 160 Office Accounting	3	MGMT 201 Principles of Management	(3)
Mathematics or Science Elective - MATH 100	3	AOS 203 Records & Imaging Management	3	WEB 102 Web Exploration & Design	3
Social & Behavioral Science Elective	3	AOS 224 Office Applications	3		13
First-Year Seminar Elective - BUSI 101	3	AOS 225 Office Procedures	3		
Wellness	1	AOS 226 Office Transcription	3		
	22		27		

**Select from the following courses: ART 181 or 182; ENGL 206; HUM 101, 115 or 201: MUS 104; PHIL 200; FMTH 101 or THTR 101; or a foreign language course.*
Note: A grade of C, or higher, is required for all courses in this program.

RECOMMENDED SEQUENCE FOR FULL-TIME STUDENTS

Part time students can complete this program by taking one or more courses each semester.

Fall Semester I		**Spring Semester I**		**Fall Semester II**		**Spring Semester II**	
AOS 101	3	AOS 110	3	AOS 112	3	AOS 160	3
AOS 111	3	CIS 135	3	AOS 203	3	AOS 225	3
BUSI 101	3	ENGL 101	3	AOS 224	3	AOS 226	3
CIS 105	3	Humanities/Arts Elective*	3	CIS 108	1	COMM 101 **or** 203	3
MATH 100	3	WEB 102	3	ENGL 106	3	Social/Behavioral Science Elective	3
	3	Wellness	1	MGMT 201 **or** 204	3		
				ENGL 106	3		

ADMINISTRATIVE OFFICE MANAGEMENT, Certificate - 1371

Engineering, Trades & Computer Technologies Department
CIP Code: 52.0401

The Administrative Office Management certificate prepares students with little or no office management skills or who are currently employed and need additional training to perform clerical, administrative, management, and information systems support in a variety of office-related environments. Students are able to gain exposure to emerging technologies and business solutions through hands-on application and conducting research. Graduates may continue their education by pursuing the Administrative Office Management AAS degree. Students may complete this program entirely online through virtual learning.

Career Opportunities
Graduates find employment in business offices, private industry, public service, state and federal government, and specialized environments such as legal, medical, financial, insurance, law enforcement, engineering, and management as administrative office specialists. **(SOC Code: 43-6014 Secretaries)**

Competency Profile
This curriculum is designed to prepare students to:
- Show proficiency in keyboarding and machine transcription
- Apply advanced software skills to produce business documents
- Manage records manually and electronically
- Perform basic accounting functions
- Create effective presentations

PROGRAM REQUIREMENTS (TOTAL CREDITS = 31)

General Education		Major Requirements		Other Required Courses	
ENGL 110 Foundations in Professional Writing	3	AOS 101 Document Processing	3	CIS 105 Introduction to Software for Business	3
		AOS 110 Microsoft Word	3	CIS 108 Introduction to Power Point	1
		AOS 111 Grammar & Punctuation Essentials	3	MATH 100 College Math for Business	3
		AOS 112 Desktop Publishing	3		7
		AOS 203 Records Management	3		
		AOS 225 Office Procedures	3		
		AOS 226 Machine Transcription	3		
			21		

Note: A grade of C or higher is required for all courses in this program.

RECOMMENDED COURSE SEQUENCE

Part-time students can complete this program by taking one or more courses each semester.

Summer		Fall Semester I		Spring Semester I	
CIS 105	3	AOS 101	3	AOS 110	3
		AOS 111	3	AOS 225	3
		AOS 112	3	AOS 226	3
		AOS 203	3	CIS 108	1
		MATH 100	3	ENGL 110	3

ARCHITECTURE, Associate in Applied Science Degree - 4476

Engineering, Trades & Computer Technologies Department

The Architecture AAS degree prepares students for both employment in an architecture, engineering, or construction (AEC) professional's office and to transfer to a four-year institution to obtain a Bachelor's degree. This program introduces students to the art and science of architecture and explores aesthetics, architectural design, the creation of presentation drawings, and the development of architectural working drawings utilizing Computer Aided Drafting (CAD) and Building Information Modeling (BIM). Technical issues relating to materials, building codes, building systems, as well as an introduction to sustainable architecture, are covered.

Students should be aware that the minimum educational requirement to become a Registered Architect in the Commonwealth of Pennsylvania is a Bachelor of Architecture degree. Students wishing to pursue this licensure in the Commonwealth of Pennsylvania must continue their education, upon graduating from HACC's Architecture AAS program, and obtain a professional degree in Architecture from an accredited program to meet Pennsylvania's requirement. Since the requirements of senior institutions vary widely, it is essential that students choose their intended transfer institution as soon as possible and carefully follow the program requirements outlined in that institution's catalog. In addition to the educational requirement to become a Registered Architect, there is also an experience or internship requirement, which occurs primarily in an architectural office. Many architecture schools are now integrating internships into their curricula. HACC's Architecture AAS program provides transfer students with the skills they need to qualify for internships in architectural firms. The complete program is only available at the Harrisburg Campus.

Career Opportunities

Graduates secure positions as CAD/BIM operators preparing construction documents for a wide variety of building types. Employment opportunities exist in architecture, design-build, construction and interior design firms, including positions such as drafters, modelers, code researchers, detailers, construction supervisors, facility planners, and interior designers.

Competency Profile

This curriculum is designed to prepare students to:

- Interpret construction drawings and specifications
- Conceptualize the technical requirements of an architectural project and prepare preliminary construction documents using CAD and BIM software
- Explain construction materials, systems, and methods used in architectural construction
- Assist in building code research and analysis
- Explain the principles of sustainable architecture
- Recognize architecture as both a cultural phenomenon and an artistic and technological achievement involving social, economic, environmental, material, and aesthetic elements
- Identify basic design principles through visual analysis
- Develop a philosophy and process for preparing architectural designs
- Produce and present design solutions using a variety of 2D and 3D presentation methods
- Prepare presentation graphics using a variety of software tools

PROGRAM REQUIREMENTS (TOTAL CREDITS = 60)

General Education		**Major Requirements**		**Other Required Courses**	
ENGL 101 English Composition I	3	ARCH 101 Architectural Design	3	Program Electives*	9
COMM 101 Effective Speaking **(or)**	3	ARCH 102 Architectural Design II	3		
COMM 203 Interpersonal Communication	(3)	ARCH 110 Construction Print Reading	3		
Humanities & Arts Elective - HUM 115, 117 **or** 118	3	ARCH 112 Architectural Working Drawings I	3		
Mathematics or Science Elective - MATH 103 **or** 121	3 **or** 4	ARCH 130 Construction Materials & Methods	3		
Social & Behavioral Science Elective	3	ARCH 135 Codes, Specifications and Safety	3		
First-Year Seminar Elective - ARCH 111	3	ARCH 211 Architectural Graphics II	3		
Wellness	1	ARCH 212 Architectural Working Drawings II	4		
	19	ARCH 233 Renovation/Detailing	4		
		ARCH 253 Sustainable Architecture	3		
			32		

**Students are to select from the following courses: ARCH 201, 202, 214, 251, 261, 291, 295; BCT 211; PHYS 201.*

RECOMMENDED SEQUENCE FOR FULL-TIME STUDENTS

Part time students can complete this program by taking one or more courses each semester.

Fall Semester I		Spring Semester I		Fall Semester II		Spring Semester II	
ARCH 101	3	ARCH 102	3	ARCH 212	4	ARCH 233	4
ARCH 110	3	ARCH 112	3	ARCH 253	3	COMM 101 or 203	3
ARCH 111	3	ARCH 130	3	HUM 115, 117 or 118	3	Program Electives*	6
ARCH 135	3	MATH 103 or 121	3 or 4	Program Elective*	3	Wellness	1
ENGL 101	3			Social/Behavioral Science Elective	3		

ARCHITECTURE, Diploma - 0656

Engineering, Trades & Computer Technologies Department
CIP Code: 15.1303

The Architecture diploma program prepares students for entry-level employment in architectural firms and related settings. This curriculum explores construction documents, materials and methods of construction, building codes and the use of Computer-Aided-Drafting (CAD) and Building Information Modeling (BIM) software to create architectural drawings and models. All the courses in this diploma articulate into the Architecture AAS degree at HACC. The diploma may be completed at the Harrisburg Campus.

Career Opportunities
Graduates may secure positions as CAD/BIM operators - assisting with the preparation of construction documents for a wide variety of building types. Employment opportunities exist in architectural, design-build, construction and interior design firms.
(SOC Code: 17-3011 Architectural and Civil Drafters)

Competency Profile
This curriculum is designed to prepare students to:
- Interpret construction drawings
- Describe construction materials and methods
- Interpret building codes
- Utilize CAD and BIM software to create architectural drawings and models

PROGRAM REQUIREMENTS (TOTAL CREDITS = 16)

General Education	Major Requirements		Other Required Courses
	ARCH 110 Construction Print Reading	3	
	ARCH 111 Architectural Graphics I	3	
	ARCH 112 Architectural Working Drawings I	3	
	ARCH 135 Codes, Specifications and Safety	3	
	ARCH 212 Architectural Working Drawings II	4	
		16	

RECOMMENDED SEQUENCE FOR FULL-TIME STUDENTS

Part time students can complete this program by taking one or more courses each semester.

Fall Semester I		Spring Semester I	
ARCH 110	3	ARCH 112	3
ARCH 111	3	ARCH 212	4
ARCH 135	3		

ART, Associate in Arts Degree – 2130

ART

Communication, Humanities and the Arts Department

The Art associate degree serves as a foundation for students who plan to transfer to four-year institutions for further work in fine arts, graphic and interactive design, or in the specialty areas of ceramics, drawing, jewelry, painting, printmaking, sculpture, and art history. Upon successful completion of the program, students will have acquired the appropriate number and type of art pieces needed to create a portfolio, if required, for admission to most four-year institutions. HACC's Art programs are accredited by the National Association of Schools of Art and Design (NASAD), which is a specialized accrediting agency for schools of art and design that is recognized by the United States Department of Education. NASAD's major responsibility is the accreditation of education programs in art and design including the establishment of curricular standards and guidelines for specific degrees and credentials. Institutional membership is gained only through the peer review process of accreditation. Since the requirements of senior institutions vary widely, it is essential to choose an intended transfer institution as soon as possible and carefully follow the program described in that college's catalog. This program can be completed at the Harrisburg and York campuses.

Transfer Opportunities
This transfer curriculum is provided as a guide for students planning to transfer to a baccalaureate degree granting institution.

Competency Profile
This curriculum is designed to prepare students to:

- Create two- and three-dimensional work effectively using the elements and principles of art and design
- Use color theory effectively
- Draw from observation including life studies
- Demonstrate skills in a variety of techniques and materials
- Demonstrate knowledge of how cultural, political, social, and gender issues have affected the creation of art within a historical context
- Use art and design terminology effectively during critiques and discussions of visual images and objects
- Develop creative processes and research methods
- Use current technology as applied to the arts

PROGRAM REQUIREMENTS (TOTAL CREDITS = 60)

General Education		**Major Requirements**		**Other Required Courses**	
ENGL 101 English Composition I	3	ART 105 Fundamentals of Two – Dimensional Design	3	Transfer Electives**	6
ENGL 102 English Composition II	3	ART 107 Fundamentals of Three – Dimensional Design	3		
COMM 101 Effective Speaking	3	ART 108 Fundamentals of Computer Art **(or)**	3		
Humanities & Arts Elective - ART 121	3	ART 176 Digital Photo Imaging **(or)**	(3)		
Humanities & Arts Elective **or** Social & Behavioral Science Elective	3	ART 115 Beginning Digital Photography	(3)		
Mathematics Elective	3	ART 122 Drawing II	3		
Science w/ a Laboratory Elective	3	ART 131 Painting I	3		
Social & Behavioral Science Elective	3	ART 151 Ceramics I **(or)**	3		
First-Year Seminar Elective	1	ART 171 Jewelry and Metal Design	(3)		
Wellness	1	ART 181 Art Through the Ages I	3		
	26	ART 182 Art through the Ages II	3		
		ART 207 Portfolio	1		
		Art Transfer Elective*	3		
			28		

**Students are to select their Art transfer elective from ART 100-299 courses.*
***Students are to select transfer electives from any course from 100-299, based upon their intended transfer school requirements.*

Fall Semester		**Spring Semester**		**Fall Semester**		**Spring Semester**	
ART 105	3	ART 107	3	ART 131	3	ART 176, 108, 115	3
ART 121	3	ART 122	3	ART 207	1	Humanities/Arts or Social/Behavioral Science Elective	3
ART 181	3	ART 151 or 171	3	COMM 101	3	Mathematic Elective	3
ENGL 101	3	ART 182	3	Art Transfer Elective*	3	Transfer Electives**	6
FYS Elective	1	ENGL 102	3	Science w/ a Lab Elective	3		
Social/Behavioral Science Elective	3			Wellness	1		

GRAPHIC AND INTERACTIVE DESIGN, Associate in Applied Science Degree - 2841

Communication, Humanities and the Arts Department

The Graphic and Interactive Design AAS program teaches students how to develop concepts, create visuals, and typography and be proficient in a wide range of industry-standard equipment and graphic/web software. Students assemble a digital and web portfolio for job interviews that serve to demonstrate their skills in digital imaging, layout, design, web, and interactive media. Students have the opportunity to take an internship or capstone course – designed to provide them with real-world experience. In addition, courses in oral and written communication, as well as in the social and natural/physical science areas, help to supplement their studies by providing students with critical and creative thinking skills along with an appreciation for the arts. HACC's Art programs are accredited by the National Association of Schools of Art and Design (NASAD), which is a specialized accrediting agency for schools of art and design that is recognized by the United States Department of Education. NASAD's major responsibility is the accreditation of education programs in art and design including the establishment of curricular standards and guidelines for specific degrees and credentials. Institutional membership is gained only through the peer review process of accreditation. HACC is committed to high academic standards that reflect current trends in the field in order to prepare students for a career in graphic and interactive design. These standards are intended to assure high-quality experiences in small classes with access to new technologies and superior media and library support. This program can only be completed at the Harrisburg Campus.

Selective Program: Entry into the advanced courses that are required to complete the Graphic and Interactive Design AAS program requires completion of the foundation *(ART 105, 121, 125 and 176)* and the Graphic Design *(ART 109, 130, 143 and 144)* courses and the submission of a presentation/mini-portfolio review. Entry into the advanced courses requires successful completion of the presentation/mini-portfolio review and is not guaranteed with the selection of the Graphic and Interactive Design AAS program as the desired major. Students should meet with their Academic Advisor for more information about enrolling into the advanced courses.

Career Opportunities
Job opportunities can be found in advertising agencies, design firms, magazines, web and multimedia production companies, retail stores, printers, government agencies, and corporate in-house art departments.

Competency Profile
This curriculum is designed to prepare students to:

- Demonstrate mastery of skills involved in the graphic and interactive design field
- Create an effective visual communication
- Operate computers and graphic software used in design, web and interactive media
- Present a professional portfolio
- Write and speak effectively

PROGRAM REQUIREMENTS (TOTAL CREDITS = 62)

General Education		Major Requirements		Other Required Courses
ENGL 101 English Composition I	3	ART 105 Fundamentals of Two-Dimensional Design***	3	
COMM 101 Effective Speaking	3	ART 109 Computer Graphics***	3	
Humanities & Arts Elective - ART 121*	3	ART 114 Interactive Media & Design***	3	
Mathematics **or** Science Elective	3	ART 130 Design Presentation***	1	
Social & Behavioral Science Elective**	3	ART 140 Web Design***	3	
First-Year Seminar Elective – ART 125***	3	ART 143 Typography***	3	
Wellness	1	ART 144 Graphic Design I***	3	
	19	ART 145 Graphic Design II***	3	
		ART 146 Graphic Design III***	3	
		ART 147 Graphic & Interactive Design Portfolio Development***	3	
		ART 148 Graphic & Interactive Design Internship*** **(or)**	3	
		ART 150 Graphic & Interactive Design Capstone***	(3)	
		ART 149 Design Practice***	3	
		ART 176 Digital Photo Imaging***	3	
		ART 183 Modern Art	3	
		ART 190 History of Graphic Design	3	
			43	

**ART 121 must be taken before or concurrently with ART 125.*
*** Students select courses from the following: ANTH 101, 205; COMM 253; GEOG 201, 230; HIST 102; PSYC 229; SOCI 201, 202, 203 or 205.*
**** A grade of C or higher is required for graduation in these courses.*

RECOMMENDED SEQUENCE FOR FULL-TIME STUDENTS

After the completion of foundation and graphic design courses (ART 105, 121, 125, 176; ART 109, 130, 143, 144), all advanced Graphic and Interactive Design courses (ART 114, 140, 145, 146, 147, 149, 148 or 150) must be taken in the sequence shown below.

Fall Semester I		**Spring Semester I**	
ART 105***	3	ART 109**	3
ART 121*	3	ART 130***	1
ART 125*	3	ART 143**	3
ART 176***	3	ART 144**	3
ENGL 101	3	ART 190	3
		COMM 101	3

Fall Semester II (GID Advanced Courses)		**Spring Semester II (GID Advanced Courses)**		**Summer**	
ART 140***	3	ART 114***	3	ART 148 **or** 150***	3
ART 145***	3	ART 146***	3		
ART 149***	3	ART 147***	3		
ART 183	3	Math/Science Elective	3		
Social/Behavioral Science Elective	3	Wellness	1		

Note: *Asterisks reference below apply to the courses listed in the recommended sequencing above.*
**Foundation Graphic Design courses: ART 105, 121, 125, 176.*
***Graphic Design certificate (GD) courses: ART 109, 130, 143, 144.*
****Graphic and Interactive Design (GID) courses: ART 114, 140, 145, 146, 147, 149, 148 or 150.*

GRAPHIC DESIGN, Certificate – 2200 ART

Communication, Humanities and the Arts Department
CIP Code: 50.0409

The Graphic Design certificate trains students to use industry-standard equipment and graphic software. Students assemble artwork that serves to demonstrate their skills in digital imaging and layout design to enter entry-level jobs. Upon successful completion of a portfolio review, students may transfer into the Graphic and Interactive Design AAS program. HACC's Art programs are accredited by the National Association of Schools of Art and Design (NASAD), which is a specialized accrediting agency for schools of art and design, recognized by the United States Department of Education. NASAD's major responsibility is the accreditation of education programs in art and design including the establishment of curricular standards and guidelines for specific degrees and credentials. Institutional membership is gained only through the peer review process of accreditation. HACC is committed to high academic standards that reflect current trends in the field to prepare students for a career in graphic design. These standards are intended to assure high-quality experiences in small classes with access to new technologies and superior media and library support. This program can be completed at the Harrisburg and Lancaster campuses.

Career Opportunities
Job opportunities may be found in magazines, production companies, retail stores, printers, and government agencies. ***(SOC Code: 27-1024 Graphic Designers)***

Competency Profile
This curriculum is designed to prepare students to:
- Demonstrate skills involved in the graphic design field
- Create an effective visual communication
- Operate computers and graphic software used in design
- Present a collection of their graphic design work

PROGRAM REQUIREMENTS (TOTAL CREDITS = 31)

General Education		Major Requirements		Other Required Courses
COMM 101 Effective Speaking	3	ART 105 Fundamentals of Two-Dimensional Design*	3	
ENGL 101 English Composition I	3	ART 109 Computer Graphics*	3	
	6	ART 121 Drawing I**	3	
		ART 125 Visual Thinking**	3	
		ART 130 Design Presentation*	1	
		ART 143 Typography*	3	
		ART 144 Graphic Design I*	3	
		ART 176 Digital Photo Imaging*	3	
		ART 190 History of Graphic Design	3	
			25	

**A grade of C, or higher, is required in these courses for graduation.*
***ART 121 must be taken before or concurrently with ART 125.*

RECOMMENDED SEQUENCE FOR FULL-TIME STUDENTS

Part-time students can complete this program by taking one or more courses each semester.

Fall Semester I		Spring Semester I	
ART 105*	3	ART 109	3
ART 121*	3	ART 130	1
ART 125*	3	ART 143	3
ART 176*	3	ART 144	3
ENGL 101	3	ART 190	3
		COMM 101	3

Note: *Asterisks reference below apply to the courses listed in the recommended sequencing above.*
**Graphic Design foundation courses.*

PHOTOGRAPHY, Associate in Fine Arts Degree – 2850 ART

Communication, Humanities and the Arts Department

The Photography Associate in Fine Arts degree prepares students for entry-level employment in both artistic and commercial photography. This hands-on curriculum teaches students the fundamental skills and techniques involved in traditional photography with an added emphasis on the digital arena. Students have the opportunity to create and prepare their photographic works in state-of-the-art digital and traditional photographic labs and a studio, as well as attend lectures and critiques. Upon successful completion of the program, students will have acquired the appropriate photography and art portfolio necessary for admission by four-year institutions. While this program prepares students for entry-level employment, it may also serve to transfer to many four-year institutions and professional photography schools. HACC's Art programs are accredited by the National Association of Schools of Art and Design (NASAD), which is a specialized accrediting agency for schools of art and design that is recognized by the United States Department of Education. NASAD's major responsibility is the accreditation of education programs in art and design including the establishment of curricular standards and guidelines for specific degrees and credentials. Institutional membership is gained only through the peer review process of accreditation. This program is offered part-time in the evenings and weekends and both part-time and full-time during the day. The complete program is only available at the Harrisburg Campus.

Career or Transfer Opportunities

Training is provided in both artistic and commercial photographic applications for entry-level job opportunities, as well as for transferring to a four-year institution, or professional art schools. In addition, this program may be taken for personal growth or for advancement by those already employed in some phase of photography or graphic arts. Students should recognize that this field often requires an apprenticeship after graduation (photographic "assisting") before higher level jobs may be secured.

Competency Profile

This curriculum is designed to prepare students to:

- Utilize the basic craft and aesthetic principles of photography
- Apply acquired skills to both art and commercial photography
- Acquire knowledge of the history and aesthetics of photography and art

PROGRAM REQUIREMENTS (TOTAL CREDITS = 62)

General Education		Major Requirements		Other Required Courses	
ENGL 101 English Composition I	3	ART 105 Fundamentals of Two-Dimensional Design	3	Transfer Elective**	3
ENGL 102 English Composition II **(or)**	3	ART 115 Beginning Digital Photography	3		
ENGL 104 Technical Writing **(or)**	(3)	ART 117 Photoshop for Photographers	3		
ENGL 106 Business Writing	(3)	ART 182 Art Through the Ages II	3		
COMM 101 Effective Speaking	3	ART 183 Modern Art	3		
Humanities & Arts Elective - ART 121	3	ART 186 History and Aesthetics of Photography	3		
Mathematics **or** Science Elective	3	ART 201 Color Photography	3		
Social & Behavioral Science Elective	3	ART 205 Color Digital Photography	3		
First-Year Seminar Elective	1	ART 206 Studio Photography	3		
Wellness	1	ART 208 Advanced Digital Photography	3		
	20	ART 209 Photography Seminar	3		
		ART 100-299 Art Electives*	6		
			39		

**Recommend: ART 116 and 202.*

***Students are to select courses that meet the requirements of their intended transfer institution or their individual career focus.*

RECOMMENDED SEQUENCE FOR FULL-TIME STUDENTS

Part time students can complete this program by taking one or more courses each semester.

Fall Semester		Spring Semester		Fall Semester		Spring Semester	
ART 115	3	ART 105	3	ART 201	3	ART 205	3
ART 117	3	ART Elective*	3	ART 209	3	ART 206	3
ART 121	3	ART 183	3	Art Elective*	3	ART 208	3
ART 182	3	ART 186	3	Math/Science Elective	3	COMM 101	3
ENGL 101	3	ENGL 102 **or** 104 **or** 106	3	Transfer Elective**	3	Social/Behavioral Science Elective	3
FYS Elective	1			Wellness	1		

PHOTOGRAPHY, Certificate – 2400 ART

Communication, Humanities and the Arts Department
CIP Code: 50.0605

The Photography certificate prepares students for entry-level employment in photography as they are taught the fundamental skills and techniques involved in traditional photography with added emphasis on the digital arena. This hands-on program is offered part-time in the evenings and weekends and both part-time and full-time during the day. The complete program is only available at the Harrisburg Campus.

Career Opportunities
Training is provided in both the aesthetic and technical principles of photography for entry-level job opportunities of artistic and commercial photographic application. In addition, this program may be taken for personal growth or for advancement by those already employed in some phase of photography or graphic arts. Students should understand that this field often requires an apprenticeship (photographic "assisting") of several years after graduation before higher level jobs are secured.
(SOC Code: 27-4021 Photographers)

Competency Profile
This curriculum is designed to prepare students to:
- Utilize the basic craft and aesthetic principles of photography
- Apply acquired skills to both art and commercial photography

PROGRAM REQUIREMENTS (TOTAL CREDITS = 30)

General Education	Major Requirements		Other Required Courses
	ART 115 Beginning Digital Photography	3	
	ART 116 Silver Gelatin Photography	3	
	ART 117 Photoshop for Photographers	3	
	ART 186 History & Aesthetics of Photography	3	
	ART 201 Color Photography	3	
	ART 202 Materials & Processes of Photography	3	
	ART 205 Color Digital Photography	3	
	ART 206 Studio Photography	3	
	ART 208 Advanced Digital Photography	3	
	ART 209 Photography Seminar	3	
		30	

RECOMMENDED SEQUENCE FOR FULL-TIME STUDENTS

Part time students can complete this program by taking one or more courses each semester.

Summer		Fall Semester I		Spring Semester I	
ART 115	3	ART 117	3	ART 116	3
		ART 201	3	ART 186	3
		ART 202	3	ART 205	3
		ART 209	3	ART 206	3
				ART 208	3

AUCTIONEERING, Diploma - 0100

Business Studies Department
CIP Code: 52.1901

Students prepare to become self-employed as auctioneers or are employed at an auction site. This program is approved by the Pennsylvania State Board of Auctioneer Examiners as meeting the educational course requirements necessary to sit for the Auctioneer License Examination. The Auctioneering program is only offered online through virtual learning. ***Note:*** *There is a mandatory 60-hour practicum with a PA licensed auctioneer that may include participation in auctioneering activities at a physical site.*

Career Opportunities
Upon completion of the specialty auctioneering courses and passing the Pennsylvania State Auctioneer License Examination the graduate becomes a Licensed Auctioneer. (SOC Code: 41-9099 Sales and Related Workers, All Others)

Competency Profile
This curriculum is designed to prepare students to:

- Develop an auction "chant"
- Procure merchandise for an auction
- Appraise and prepare merchandise for auction
- Define and discuss legal issues related to auctioneering
- Organize and prepare an auction
- Conduct an auction
- Recognize all state and national ethical standards for auctions and auctioneers
- Use business methods, such as finance and accounting, management and marketing

PROGRAM REQUIREMENTS (TOTAL CREDITS = 20)

General Education	Major Requirements		Other Required Courses
	AUCT 101 Audience Communications & Bid Calling	3	
	AUCT 102 Procurement & Appraisal of Personal Property	3	
	AUCT 103 Procurement & Appraisal of Real Estate	3	
	AUCT 104 Auctioneering Law	3	
	AUCT 200 Prepare & Conduct the Auction	5	
	ENTR 221 Entrepreneurial Planning	3	
		20	

RECOMMENDED SEQUENCE FOR STUDENTS

Fall Semester I

AUCT 101	3
AUCT 102	3
AUCT 103	3
AUCT 104	3
AUCT 200	5
ENTR 221	3

AUTOMOTIVE TECHNOLOGY - GENERAL MOTORS ASEP, Associate in Applied Science Degree - 4570

Engineering, Trades & Computer Technologies Department

The General Motors' Automotive Service Educational Program (ASEP) prepares students as state-of-the-art technicians for GM dealerships. Constantly changing technology in new automobiles demands highly skilled and trained service technicians. Students utilize current General Motors products and components along with the latest diagnostic equipment and servicing procedures. ASEP graduates receive GM training credit up to 85% of current requirements. Students are able to complete the PA State Safety Inspector and Emission Inspector certifications. In addition, courses in oral and written communication, as well as in the social and natural/physical science areas, help to supplement their studies by providing students with critical and creative thinking skills that may enhance their career opportunities. This program is accredited by the Automotive Service Excellence (ASE) Education Foundation in eight categories of automotive repair. This program can only be completed at the Harrisburg Campus.

Selective Program: Entry into this program is not guaranteed with admission to the College. Specific admissions criteria must be met, such as a passing grade on the mechanical aptitude test, and the possession of a valid PA Driver's license. Please contact the Faculty Program Supervisor to schedule an appointment to review all of the entrance requirements.

Career Opportunities
GM-ASEP training, along with practical work experience and guidance, enables graduates to become factory-certified GM technicians. Other career opportunities such as service advisor, warranty administrator, shop foreperson, or service manager can also be pursued.

Competency Profile
This curriculum is designed to prepare students to:
- Work as a factory-certified GM technician in a General Motors dealership or an A/C Delco repair facility
- Perform all services and repairs on General Motors vehicles
- Complete the ASE examinations
- Complete the Pennsylvania State Emissions Inspector and Safety Inspection License examinations

PROGRAM REQUIREMENTS (TOTAL CREDITS = 65.5)

General Education		Major Requirements		Other Required Courses	
ENGL 110 Foundations of Professional Writing	3	AGM 103 GM Automotive Powerplants	3	WELD 111 Welding Applications	3
COMM 101 Effective Speaking	3	AGM 105 GM Automatic Electrical Fundamentals/Electronics I	3	AUTO 110 PennDOT Safety & Emissions Inspection Certification	1.5
Humanities & Arts Elective - HUM 101	3	AGM 107 GM Automotive Fuel and Emission Control Systems	3		4.5
Math **or** Science Elective - PHSC 113	3	AGM 151 GM Automotive Braking Systems	3		
Social & Behavioral Science Elective - SOCI 201	3	AGM 153 GM Automotive Steering and Suspension Systems	3		
First-Year Seminar Elective – AGM 101	3	AGM 157 GM Automotive Ignition Control Systems	3		
Wellness	1	AGM 159 GM Automotive Heating/Air-Conditioning Systems	3		
	19	AGM 191 GM Cooperative Work Experience I	1		
		AGM 192 GM Cooperative Work Experience II	1		
		AGM 203 GM Manual Transmissions/Drivelines	3		
		AGM 205 GM Automotive Electrical Fundamentals/Electronics II	3		
		AGM 207 GM Powertrain Management Systems	3		
		AGM 251 GM Dealership Operations	2		
		AGM 253 GM Automatic Transmissions/Transaxles	3		
		AGM 255 GM Advanced Automotive Electronics	3		
		AGM 291A GM Cooperative Work Experience III	1		
		AGM 292A GM Cooperative Work Experience IV	1		
			42		

RECOMMENDED SEQUENCE FOR FULL-TIME STUDENTS

Part-time students can complete this program by taking one or more courses each semester.

Fall Semester I		Spring Semester I		Summer		Fall Semester II		Spring Semester II	
AGM 101	3	AGM 103	3	AGM 157	3	AGM 203	3	AGM 251	2
AGM 105	3	AGM 107	3	SOCI 201	3	AGM 207	3	AGM 253	3
AGM 151	3	AGM 159	3	WELD 111	3	AGM 255	3	AGM 292A	1
AGM 153	3	AGM 192	1	Wellness	1	AGM 291A	1	ENGL 110	3
AGM 191	1	AGM 205	3			COMM 101	3	HUM 101	3
		AUTO 110	1.5						
		PHSC 113	3						

AUTOMOTIVE TECHNOLOGY, Associate in Applied Science Degree - 4480

Engineering, Trades & Computer Technologies Department

The Automotive Technology AAS program serves the needs of high school and career and technology school graduates as well as persons already employed in the industry. Students work with current vehicles and diagnostic equipment from a variety of manufacturers. Manufacturer training credit, through Subaru and Mercedes-Benz, is available to students employed at those dealerships while completing this program. Students must complete a 480-hour cooperative work experience at an approved automotive repair facility to complete this program and are able to complete the PA State Safety Inspector and Emission Inspector certifications. In addition, courses in oral and written communication, as well as in the social and natural/physical science areas, help to supplement their studies by providing students with critical and creative thinking skills that may enhance their career opportunities. Graduates of career and technology school auto-mechanics programs or applicants with substantial work experience may receive up to nine credits towards completion of this program after submitting appropriate documentation. This program is accredited by the Automotive Service Excellence (ASE) Education Foundation in eight categories of automotive repair. The program can only be completed at the Harrisburg Campus.

Selective Program: Entry into this program is not guaranteed with admission to the College. Specific admissions criteria must be met, such as a passing grade on the mechanical aptitude test, and the possession of a valid PA Driver's license. Please contact the Faculty Program Supervisor to schedule an appointment to review all of the entrance requirements.

Career Opportunities

Graduates of the program are prepared for employment as service technicians. In addition, graduates obtain the skills needed to move into service advising and management positions. Other possible career paths may include parts management, fixed operations management, and technical trainer. Graduates employed at a Subaru or Mercedes-Benz dealership are eligible for manufacturer training credit.

Competency Profile

This curriculum is designed to prepare students to:

- Complete the Pennsylvania State Emissions Inspector and Safety Inspection License examinations
- Work as service technicians in automotive repair facilities or dealerships
- Work in management positions within the automotive service industry or operate their own repair facility

PROGRAM REQUIREMENTS (TOTAL CREDITS = 63.5)

General Education		Major Requirements		Other Required Courses	
ENGL 110 Foundations in Professional Writing	3	AUTO 103 Automotive Powerplants	3	WELD 111 Welding Applications	3
COMM 101 Effective Speaking	3	AUTO 105 Fundamental of Electrical Electronics I	3		
Humanities & Arts Elective*	3	AUTO 107 Fuel and Emission Control Systems	3		
Mathematics or Science Elective (Rec: PHSC 113)	3	AUTO 110 Safety & Emissions Inspection Certification	1.5		
Social and Behavioral Science Elective (Rec: SOCI 201)	3	AUTO 151 Braking Systems	3		
First-Year Seminar Elective – AUTO 101	3	AUTO 153 Suspension Systems	3		
Wellness	1	AUTO 157 Engine Performance Testing	3		
	19	AUTO 159 Automotive Heating/Air-Conditioning Systems	3		
		AUTO 191 Cooperative Work Experience**	2		
		AUTO 203 Manual Transmissions/Drivelines	3		
		AUTO 205 Intermediate Automotive Electrical/Electronics	3		
		AUTO 207 Powertrain Management Systems	3		
		AUTO 251 Service Department Management	2		
		AUTO 253 Automatic Transmissions/Transaxles	3		
		AUTO 255 Advanced Electrical/ Electronics	3		
			41.5		

**Students select from the following courses: ART 181, 182; ENGL 206; HUM 101, 115, 201; MUS 104; PHIL 200; FMTH 101 or THTR 101; or a foreign language course.*

***AUTO 191 can be taken any semester after the completion of AUTO 101, 103, 105, 107, 110, 151 and 153.*

RECOMMENDED SEQUENCE FOR FULL-TIME STUDENTS

Part-time students can complete this program by taking one or more courses each semester.

Fall Semester I		**Spring Semester I**		**Summer**		**Fall Semester II**		**Spring Semester II**	
				AUTO					
AUTO 101	3	AUTO 103	3	191**	2	AUTO 157	3	AUTO 207	3
AUTO 105	3	AUTO 107	3			AUTO 203	3	AUTO 251	2
AUTO 151	3	AUTO 110	1.5			AUTO 255	3	AUTO 253	3
AUTO 153	3	AUTO 159	3			Humanities/Arts Elective*	3	COMM 101	3
								Social/Behavioral Science	
ENGL 110	3	AUTO 205	3			WELD 111	3	Elective	3
		Math/Science							
		Elective	3			Wellness	1		

AUTOMOTIVE TECHNOLOGY, Certificate - 4200

Engineering, Trades & Computer Technologies Department
CIP Code: 47.0604

The Automotive Technology Certificate program is designed to serve the educational goals of high school and career and technology school graduates, as well as persons already employed, or new students seeking employment in the industry. This certificate is a fast track to the skills needed to gain entry-level employment and advance careers. During this one-year program students complete a 480-hour cooperative work experience at an approved automotive repair facility and complete the PA State Safety Inspector and Emission Inspector certifications. Graduates of career and technology school auto-mechanics programs, or applicants with substantial work experience, may receive up to nine credits towards completion of this certificate upon submitting appropriate documentation. This program is accredited in eight categories of automotive repair by the Automotive Service Excellence (ASE) Education Foundation This program can only be completed at the Harrisburg campus.

Selective Program: Entry into this program is not guaranteed with admission to the College. Specific admissions criteria must be met, such as a passing grade on a mechanical aptitude test and the possession of a valid PA Driver's license. Please contact the Faculty Program Supervisor to schedule an appointment to review all of the entrance requirements.

Career Opportunities
Graduates enhance their promotion and advancement opportunities by stacking the Advanced Automotive Specialty Skills Diploma on this certificate. Certificate completers may also choose to enroll in the Automotive Technology AAS degree program.
Graduates of the program are prepared for employment as service technicians in the automotive industry.
(SOC Code: 49.3023 Automotive Service Technicians and Mechanics)

Competency Profile
This curriculum is designed to prepare students to:
- Complete the Pennsylvania State Emissions Inspector and Safety Inspection License Certifications
- Work as entry-level service technicians in automotive repair facilities or dealerships

PROGRAM REQUIREMENTS (TOTAL CREDITS = 30.5)

General Education	Major Requirements		Other Required Courses	
	AUTO 101 Automotive Fundamentals	3	WELD 111 Welding Applications	3
	AUTO 103 Automotive Powerplants	3		
	AUTO 105 Fundamentals of Electrical/Electronics	3		
	AUTO 107 Fuel and Emission Control Systems	3		
	AUTO 110 PennDOT Safety & Emissions Inspection Certification	1.5		
	AUTO 151 Braking Systems	3		
	AUTO 153 Suspension Systems	3		
	AUTO 157 Engine Performance Testing	3		
	AUTO 159 Automotive Heating and Air Conditioning Systems	3		
	AUTO 191 Cooperative Work Experience*	2		
		27.5		

**Enrollment after completion of AUTO 101, 103, 105, 151, and 153.*

RECOMMENDED SEQUENCE FOR FULL-TIME STUDENTS

Part-time students can complete this program by taking one or more courses each semester.

Fall Semester I		Spring Semester I		Summer	
AUTO 101	3	AUTO 103	3	* AUTO 191	2
AUTO 105	3	AUTO 110	1.5	WELD 111	3
AUTO 107	3	AUTO 157	3		
AUTO 151	3	AUTO 159	3		
AUTO 153	3				

AUTOMOTIVE SERVICE ADVISOR, Certificate - 4206

Engineering, Trades & Computer Technologies Department
CIP Code: 47.0604

The Automotive Service Advisor certificate blends a comprehensive automotive technical background with valuable customer service and business training. This certificate is designed to provide students with the technical and soft skills needed to be competitive in areas such as Parts, Service, Management, and/or Customer Relations. Students are required to complete specific automotive training courses. Included in these specific courses is the opportunity to complete the PA Safety Inspector and PA Emissions Inspector programs. Along with these automotive core topics, students are required to attend business, shop management, professional selling, and public speaking courses to provide them with valuable customer service and management skills needed in today's competitive business environment. This program can only be completed at the Harrisburg Campus.

Selective Program: Entrance into this program is selective and requires that all students achieve a passing score on a mechanical aptitude test, interview and completion of the college placement testing. Please contact the Faculty Program Supervisor to schedule an appointment to review all of the entrance requirements.

Career Opportunities
Graduates of the program are prepared for employment as service technicians in the automotive industry. ***(SOC Code: 49.3023 Automotive Service Technicians and Mechanics)***

Competency Profile
This curriculum is designed to prepare students to:
- Complete the Pennsylvania State Emissions Inspector and Safety Inspection License examinations
- Work as a service advisor in automotive repair facilities or dealerships

PROGRAM REQUIREMENTS (TOTAL CREDITS = 30.5)

General Education	Major Requirements		Other Required Courses	
	AUTO 101 Automotive Fundamentals	3	BUSI 101 Introduction to Business	3
	AUTO 105 Fundamentals of Electrical/Electronics	3	COMM 101 Effective Speaking	3
	AUTO 107 Fuel and Emission Systems	3	MATH 100 College Math for Business	3
	AUTO 110 PennDOT Safety & Emissions Inspection Certification	1.5		
	AUTO 151 Braking Systems	3	MGMT 204 Organizational Behavior **or**	3
	AUTO 153 Suspension Systems	3	MKTG 212 Professional Selling	(3)
	AUTO 251 Service Department Management	2		12
		18.5		

RECOMMENDED SEQUENCE FOR FULL-TIME STUDENTS

Part-time students can complete this program by taking one or more courses each semester.

Fall Semester I		Spring Semester I		Summer	
AUTO 101	3	AUTO 107	3	COMM 101	3
AUTO 105	3	AUTO 110	1.5		
AUTO 151	3	AUTO 251	2		
AUTO 153	3	MKTG 212 **or** MGMT 204	3		
BUSI 101	3	MATH 100	3		

ADVANCED AUTOMOTIVE SPECIALTY SKILLS, Diploma - 0660

Engineering, Trades & Computer Technologies Department
CIP Code: 47.0604

The Advanced Automotive Specialty Skills diploma is designed to allow graduates of HACC's Automotive Technology certificate to further their learning and skill development in the areas of powertrains and control systems. This diploma stacks on top of the Automotive Technology Certificate and presents students with upper level automotive courses in transmissions, drivelines, powertrain controls and electronic systems. Graduates of this diploma program are then well-prepared to work on today's high technology vehicles. This program is accredited by the Automotive Service Excellence (ASE) Foundation in eight categories of automotive repair. The program can be completed at the Harrisburg Campus.

Career Opportunities
Graduates are prepared for employment as service technicians and may also enhance their advancement opportunities by enrolling in HACC's Automotive Technology AAS degree program. ***(SOC Code: 49.3023 Automotive Service Technicians and Mechanics)***

Competency Profile
This curriculum is designed to prepare students to:

- Complete the Pennsylvania State Emissions Inspector and Safety Inspection License examinations
- Work as service technicians in automotive repair facilities or dealerships

PROGRAM REQUIREMENTS (TOTAL CREDITS = 17)

General Education	Major Requirements		Other Required Courses
	AUTO 157 Engine Performance Testing	3	
	AUTO 203 Manual Transmission/Drivelines	3	
	AUTO 207 Powertrain Management Systems	3	
	AUTO 251 Service Department Management	2	
	AUTO 253 Automatic Transmission/Transaxles	3	
	AUTO 255 Advanced Electrical/Electronics	3	
		17	

RECOMMENDED SEQUENCE FOR FULL-TIME STUDENTS

Part-time students can complete this program by taking one or more courses each semester.

Fall Semester I		Spring Semester I	
AUTO 157	3	AUTO 207	3
AUTO 203	3	AUTO 251	2
AUTO 255	3	AUTO 253	3

BAKING AND PASTRY ARTS, Certificate - 1321

Business Studies Department
CIP Code: 12.0501

The Baking and Pastry Arts certificate prepares students to become professional baking and pastry chefs. Students prepare and produce cakes, pies, and other baked goods, working with doughs, icings, and other ingredients used in pastry making. In addition to specific training for baking and pastry making, students study the fundamentals of sanitation, culinary math, business management, nutrition, food purchasing and receiving, supervision, and the hospitality industry. Students have the opportunity to gain hands-on experience working in a commercial operation 12-hours a week where they are introduced to various bakeshop production and retail rotations. In addition, the internship course provides students with the opportunity to obtain employment experience working in an approved bakery worksite for a total of 280-hours in a semester. This certificate is accredited by the Accrediting Commission of the American Culinary Federation Education Foundation (ACFEF). Graduates with an ACF membership are awarded Certified Pastry Culinarian (CPC). This program can only be completed at the Harrisburg Campus.

Career Opportunities
Graduates of the program find employment as retail and wholesale bakers, pastry chefs, or assistants. ***(SOC Code: 51-3011 Bakers)***

Competency Profile
This curriculum is designed to prepare students to:

- Use mathematical techniques to make accurate adjustments in bakeshop formulas and percentages
- Apply industry sanitation and safety procedures
- Determine and apply the characteristics, properties, and functions of the major baking and pastry ingredients
- Follow the correct procedures and successfully prepare quick breads, cookies, brownies, pies and tarts, and yeast doughs including lean, enriched, and laminated
- Follow the correct procedures and successfully prepare custards and curds, meringues, cakes and frostings, mousses and bavarians, chocolate confections, sugar candies, frozen desserts, and decorating procedures with icings, fondant, gum paste, and marzipan
- Exhibit management skills in professionalism, employee relations, food purchasing, inventory, and cost analysis
- Analyze nutritional values in recipes and adjust ingredients based on specific dietary concerns

PROGRAM REQUIREMENTS (TOTAL CREDITS = 33)

General Education	Major Requirements		Other Required Courses	
	BAKE 101 Baking I*	4	Program Elective**	2
	BAKE 111 Pastry Arts I*	4		
	BAKE 201 Advanced Baking & Pastry Arts*	4		
	BAKE 291 Baking/Pastry Arts Internship	3		
	CULI 102 Culinary Math	2		
	CULI 107 Nutrition for Food Service	3		
	CULI 113 Sanitation & Safety	2		
	CULI 122 Food Purchasing	3		
	CULI 251 Hospitality Supervision	3		
	HTMT 101 Introduction to the Hospitality Industry	3		
		31		

**Indicates that these courses require students to obtain a grade of C or higher.*
***Select one course from the following courses: BUSI 101, 209; BAKE 205 (Recommended); CULI 230; ENTR 101; MKTG 201, 205, 235; MGMT 201, 221.*

RECOMMENDED SEQUENCE FOR FULL-TIME STUDENTS

Part time students can complete this program by taking one or more courses each semester.

Fall Semester I		Spring Semester I		Summer	
BAKE 101*	4	BAKE 111*	4	BAKE 201*	4
CULI 102	2	CULI 122	3	BAKE 291	3
CULI 107	3	CULI 251	3		
CULI 113	2	Program Elective**	2		
HTMT 101	3				

BIOLOGY, Associate in Science Degree - 3096

Science Department

The Biology AS degree prepares students who wish to transfer to a four-year institution that offers a bachelor's degree program in biology, pre-professional health careers, ecology, genetics, microbiology, or botany. Since the requirements of senior institutions vary widely, it is essential that students choose an intended transfer institution as soon as possible and carefully follow the program described in that college's catalog. This program can be completed at the Harrisburg, Lancaster, and York campuses.

Career or Transfer Opportunities
This transfer curriculum is provided as a guide for students planning to transfer to a baccalaureate degree granting institution.

Competency Profile
This curriculum is designed to prepare graduates of the program to:

- Acquire a broad-based fundamental knowledge of evolutionary theory and biological principles spanning the hierarchy and interrelatedness of biological systems--chemical, molecular, cellular, organismal, and population/community
- Demonstrate oral and written communication skills needed for success in the field of science
- Critically analyze peer-reviewed literature to address a biological question through the use of scientific databases
- Perform laboratory and field exercises and experiments safely through proper use of scientific equipment and techniques
- Effectively utilize the scientific method from hypothesis generation through the collection, analysis, and presentation of data

PROGRAM REQUIREMENTS (TOTAL CREDITS = 62)

General Education		Major Requirements		Other Required Courses	
ENGL 101 English Composition I	3	BIOL 102 General Biology II	4	Transfer Electives****	6
ENGL 102 English Composition II	3	CHEM 102 Organic Chemistry & Qualitative Analysis	4	MATH 116** College Algebra for Calculus	4
COMM 101 Effective Speaking	3	CHEM 203 Organic Chemistry I	4		10
Humanities & Arts Elective*	3	CHEM 204 Organic Chemistry II	4		
Social & Behavioral Science Elective	3	Biology Electives***	8		
Mathematics Elective - MATH 104**	3		24		
Math **or** Science Elective – CHEM 101	4				
Science with a Lab Elective - BIOL 101	4				
Wellness	1				
First-Year-Seminar Elective (Rec: SCI 100)	1				
	28				

**Students are to select from the following courses: ART 181 or 182; ENGL 206; HUM 101, 115 or 201; MUS 104; PHIL 200; FMTH 101 or THTR 101; or a foreign language course.*
*** May be replaced with a higher-level Math offering.*
****Students select two courses from the following: BIOL 206 or 250; BIOL 212, 215 or 221.*
*****Students are to select courses that transfer to their intended four-year institution.*

RECOMMENDED SEQUENCE FOR FULL-TIME STUDENTS

Part-time students can complete this program by taking one or more courses each semester.

Fall Semester I		Spring Semester I		Fall Semester II		Spring Semester II	
BIOL 101	4	BIOL 102	4	Biology Elective***	4	Biology Elective***	4
CHEM 101	4	CHEM 102	4	CHEM 203	4	CHEM 204	4
COMM 101	3	ENGL 102	3	MATH 116**	4	Humanities/Arts Elective*	3
ENGL 101	3	MATH 104**	3	Transfer Elective****	3	Social/Behavioral Science Elective	3
FYS Elective	1	Wellness	1			Transfer Elective****	3

BUILDING CONSTRUCTION MANAGEMENT, Associate in Applied Science Degree - 4510

Engineering, Trades & Computer Technologies Department

The Building Construction Management AAS program prepares students for entry-level positions in the construction/contracting field as quantity take-off technicians and estimators, schedulers, supervisors, construction inspectors, project engineers, shop drawing reviewers, construction administrators as well as others. This curriculum is also supported by general education courses in the communications, humanities, sciences, and mathematics areas. All graduates acquire general knowledge of the overall construction process. The complete program is only available online through virtual learning.

Career or Transfer Opportunities

Graduates of the program are prepared for positions in the construction/contracting field as project managers or supervisors, construction schedulers, construction inspectors, construction estimators and contractors, project engineers, and quantity take-off technicians. Graduates may pursue a bachelor's degree in Technical Leadership through HACC's articulation agreement with Bloomsburg University. Students may also transfer to Construction Management bachelor's degree programs at four-year schools.

Competency Profile

This curriculum is designed to prepare students to:

- Demonstrate effective communication, both orally and in writing
- Demonstrate the ability to estimate quantities and costs for the bidding process in a construction project
- Demonstrate the ability to schedule a basic construction project
- Demonstrate the ability to use current technology related to the construction process
- Interpret construction documents (contracts, specifications, and drawings) used in managing a construction project
- Apply basic principles of construction accounting
- Discuss basic surveying techniques used in building layout
- Discuss basic principles of ethics in the construction industry
- Identify the fundamentals of contracts, codes, and regulations that govern a construction project
- Recognize basic construction methods, materials and equipment
- Recognize basic safety hazards on a construction site and standard prevention measures
- Recognize the basic principles of structural design
- Recognize the basic principles of mechanical, electrical and piping systems
- Discuss the application of principles of sustainability to construction

PROGRAM REQUIREMENTS (TOTAL CREDITS = 61)

General Education		Major Requirements		Other Required Courses	
ENGL 101 English Composition I	3	ARCH 110 Construction Print Reading	3	CIS 105 Intro to Software for Business	3
COMM 101 Effective Speaking **(or)**	3	ARCH 130 Construction Materials & Methods	3	MGMT 227 Project Management	3
COMM 203 Interpersonal Communication	(3)	ARCH 135 Codes, Specifications & Safety	3	PHSC 113 Intro to Physical Science	3
Humanities & Arts Elective - HUM 115, 117 or 118	3	ARCH 214 Site Planning	3		9
Mathematics or Science Elective - MATH 103	3	ARCH 251 Environmental Control Systems for Bldgs.	3		
Social & Behavioral Science Elective - ECON 201	3	ARCH 253 Sustainable Architecture	3		
First-Year Seminar Elective - ARCH 111	3	BCT 211 Structural Concepts for Construction	3		
Wellness	1	BCT 212 Construction Contracts & Related Law	3		
	19	BCT 215 Construction Estimating	3		
		BCT 216 Construction Planning & Scheduling	3		
		BCT 217 Construction Project Administration	3		
			33		

RECOMMENDED SEQUENCE FOR FULL-TIME STUDENTS

Part time students can complete this program by taking one or more courses each semester.

Fall Semester I		Spring Semester I		Fall Semester II		Spring Semester II	
ARCH 110	3	ARCH 130	3	ARCH 135	3	BCT 215	3
ARCH 111	3	ARCH 251	3	ARCH 214	3	BCT 216	3
CIS 105	3	BCT 217	3	ARCH 253	3	ECON 201	3
ENGL 101	3	COMM 101 **or** 203	3	BCT 211	3	HUM 115, 117 **or** 118	3
MGMT 227	3	MATH 103	3	BCT 212	3	PHSC 113	3
						Wellness	1

BUILDING CONSTRUCTION MANAGEMENT, Certificate - 4250

Engineering, Trades & Computer Technologies Department
CIP Code: 15.1001

The Building Construction Management certificate prepares students for entry-level positions in the construction/contracting field as quantity take-off technicians and estimators, schedulers, and construction inspectors. All graduates acquire a general knowledge of the overall construction process. The complete program is only available online through virtual learning.

Career Opportunities
Graduates of the certificate are prepared for positions in the construction/contracting field as project managers, construction schedulers, construction inspectors, construction estimators, and quantity take-off technicians. ***(SOC Code: 47-1011 Supervisors-Construction Trades and Extraction Workers)***

Competency Profile
This curriculum is designed to prepare students to:

- Demonstrate the ability to estimate quantities and costs for the bidding process in a construction project
- Demonstrate the ability to schedule a basic construction project
- Demonstrate the ability to use current technology related to the construction process
- Interpret construction documents (contracts, specifications, and drawings) used in managing a construction project
- Apply basic principles of construction accounting
- Discuss basic principles of ethics in the construction industry
- Identify the fundamentals of contracts, codes, and regulations that govern a construction project
- Recognize basic construction methods, materials, and equipment
- Recognize basic safety hazards on a construction site and standard prevention measures

PROGRAM REQUIREMENTS (TOTAL CREDITS = 30)

General Education	Major Requirements		Other Required Courses	
	ARCH 110 Construction Print Reading	3	CIS 105 Intro to Software for Business	3
	ARCH 111 Architectural Graphics I	3	MGMT 227 Project Management	3
	ARCH 130 Construction Materials and Methods	3		6
	ARCH 135 Codes, Specifications & Safety	3		
	BCT 212 Construction Contracts and Related Laws	3		
	BCT 215 Construction Estimating	3		
	BCT 216 Construction Planning and Scheduling	3		
	BCT 217 Construction Project Administration	3		
		24		

RECOMMENDED SEQUENCE FOR FULL-TIME STUDENTS

Part time students can complete this program by taking one or more courses each semester.

Fall Semester I		Spring Semester I	
ARCH 110	3	ARCH 130	3
ARCH 111	3	BCT 215	3
ARCH 135	3	BCT 216	3
BCT 212	3	BCT 217	3
CIS 105	3	MGMT 227	3

BUSINESS ADMINISTRATION, Associate in Science Degree - 1026

Business Studies Department

The Business Administration AS degree is a general transfer program for the student who plans to pursue a bachelor's degree in accounting, entrepreneurship, economics, finance, human resource management, information systems, management, marketing, organizational leadership, supply-chain management, or a related field. Since the requirements of bachelor degree institutions vary widely, it is essential to choose an intended transfer institution as soon as possible and carefully follow the program prescribed in that college's catalog. Students who complete HACC's Business Administration AS degree are to be admitted at the Junior-level to any institution participating in Pennsylvania's statewide college credit transfer system. The Business Administration AS degree is accredited by the Accreditation Council for Business Schools and Programs (ACBSP). Since 1992, ACBSP is the only nationally recognized organization that grants regional accreditation to two- and four-year colleges and universities. This program can be completed entirely online through virtual learning. Students may also complete this program at the Harrisburg and Lancaster campuses provided they complete some of their coursework online through virtual learning.

Transfer Opportunities
This transfer curriculum is provided as a guide for students planning to transfer to a baccalaureate degree granting institution.

Competency Profile
This curriculum is designed to prepare students to:

- Prepare and deliver oral and written presentations on business concepts in various disciplines, consistent with professional standards
- Utilize quantitative and qualitative methods of collecting, processing, and analyzing information and data to make informed business and career decisions
- Identify legal and ethical forces that impact organizational decision-making
- Make organizational decisions by applying and integrating knowledge of each functional area including; legal, economic, accounting, marketing and management.
- Successfully interact in group-settings
- Identify how diversity impacts the functioning of the local, national and global business environment
- Use appropriate business software and technologies
- Use various resources, including library resources and databases, to access and extract information appropriate for business

PROGRAM REQUIREMENTS (TOTAL CREDITS = 61)

General Education		**Major Requirements**		**Other Required Courses**	
ENGL 101 English Composition I	3	ACCT 150 Principles of Financial Accounting I	2	CIS 105 Introduction to Software for Business	3
ENGL 102 English Composition II **(or)**	3	ACCT 151 Principles of Financial Accounting II	2	Transfer Electives**	9
ENGL 106 Business Writing	(3)	ACCT 160 Principles of Managerial Accounting I	2		12
COMM 101 Effective Speaking	3	ACCT 161 Principles of Managerial Accounting II	2		
Humanities & Arts Elective	3	BUSI 201 Business Law I **(or)**	3		
Social & Behavioral Science Elective - ECON 201	3	BUSI 209 Legal Environment of Business	(3)		
Mathematics Elective - MATH 103 **or** 110*	3 **or** 4	ECON 202 Microeconomics	3		
Math **or** Science Elective - MATH 202	4	MGMT 201 Principles of Management	3		
Science w/ a Lab Elective	3	MKTG 201 Principles of Marketing	3		
First-Year-Seminar Elective - BUSI 101	3		20		
Wellness	1				
	29				

**MATH 103 is the prerequisite for MATH 110; Students may test out of MATH 103 or include it as a transfer elective. Students, who transfer to colleges that do not require MATH 110, may complete their degree with MATH 103.*

***Students are to select transfer electives that are appropriate for their intended transfer institution.*

RECOMMENDED SEQUENCE FOR FULL-TIME STUDENTS

Part time students can complete this program by taking one or more courses each semester.

Fall Semester I		**Spring Semester I**		**Fall Semester II**		**Spring Semester II**	
CIS 105	3	BUSI 201 **or** 209	3	ACCT 150	2	ACCT 160	2
COMM 101	3	ENGL 102 **or** 106	3	ACCT 151	2	ACCT 161	2
BUSI 101	3	ECON 201	3	ECON 202	3	Humanities/Art Elective	3
ENGL 101	3	MGMT 201	3	MKTG 201	3	MATH 103 or 110*	3 **or** 4
Wellness	1	Transfer Elective**	3	MATH 202	4	Science w/ Lab Elective	3
				Transfer Elective**	3	Transfer Elective**	3

BUSINESS, Associate in Applied Science Degree - 1516

Business Studies Department

The Business AAS degree is designed to prepare students for both entry-level positions and upward career mobility in a variety of business settings. The program offers students the opportunity to customize their major to their future professional goals by specializing in one of four major areas of concentration: **Accounting, Management, Marketing, or General Business.** Learning from across a variety of disciplines within the business field, graduates will be uniquely prepared for success in the 21st century workplace. This program is accredited by The Accreditation Council for Business School and Programs (ACBSP). Since 1992, ACBSP is the only nationally recognized organization that grants regional accreditation to two- and four-year colleges and universities. This program can be completed entirely online through virtual learning. Students may also complete the program at the Harrisburg and Lancaster campuses provided they take some of their coursework online through virtual learning.

Career Opportunities

Graduates prepare for entry-level positions and upward career mobility in organizations with career paths in the graduate's area of study. Graduates of the **Accounting Concentration** may find employment in accounting firms, banks, private industry, and government service. The **Management Concentration** prepares students for career paths that eventually lead to positions such as assistant manager, general manager, office manager, purchasing agent, sales manager, operations manager, or service manager. Graduates of the **Marketing Concentration** gain the skills and knowledge needed for entry-level positions in sales, advertising, retailing, wholesaling, physical distribution, market research, marketing management, insurance, real estate, and related fields. Finally, graduates of the **General Business Concentration** gain broad business skills that prepare them for entry-level positions in retailing, manufacturing, healthcare, hospitality management, real estate, agribusiness, and entrepreneurial opportunities.

Competency Profile

This curriculum is designed to prepare students to:

- Prepare and deliver oral and written presentations on business concepts in various disciplines, consistent with professional standards
- Utilize quantitative and qualitative methods of collecting, processing, and analyzing information and data to make informed business and career decisions
- Identify legal and ethical forces that impact organizational decision-making
- Make organizational decisions by applying and integrating knowledge of each functional area including; legal, economic, accounting, marketing and management.
- Successfully interact in group-settings
- Identify how diversity impacts the functioning of the local, national and global business environment
- Use appropriate business software and technologies
- Use various resources, including library resources and databases, to access and extract information appropriate for business

PROGRAM REQUIREMENTS (TOTAL CREDITS = 62)

General Education		Major Requirements		Other Required Courses	
ENGL 101 English Composition I	3	ACCT 150 Principles of Financial Accounting I	2	CIS 105 Intro to Software for Business	3
ENGL 106 Business Writing	3	ACCT 160 Principles of Managerial Accounting I	2		
COMM 101 Effective Speaking	3	BUSI 209 Legal Environment of Business	3		
Humanities & Arts Elective*	3	ECON 201 Principles of Economics I: Macro	3		
Social & Behavioral Science Elective**	3	MGMT 201 Principles of Management	3		
Math **or** Science Elective***	3 **or** 4	MKTG 201 Principles of Marketing	3		
First Year Seminar – BUSI 101	3		16		
Wellness	1				
	22				

**It is recommended that students select FMTH 103 to meet this requirement.*

***Students are to select from the following courses: ANTH 101, 205; COMM 253; GEOG 201, 230; HIST 102; PSYC 229; or SOCI 201, 202, 203, 205.*

****Students are to select from the following: MATH 100, 103, 110, 119 or 202.*

Accounting Concentration		General Business Concentration		Management Concentration	
ACCT 151 Principles of Financial Accounting II	2	BUSI 290 Business Capstone **(or)**	3	BUSI 290 Business Capstone **(or)**	3

ACCT 161 Principles of Managerial Accounting II	2	BUSI 291 Business Internship	(3)	BUSI 291 Business Internship	(3)
ACCT 201 Intermediate Accounting I	4	CIS 135 Intermediate Spreadsheet Applications	3	CIS 135 Intermediate Spreadsheet Applications	3
ACCT 203 Income Tax Accounting	4	Program Electives****	15	MGMT 203 Human Resources Management	3
ACCT 204 Managerial Cost Accounting	3		21	MGMT 204 Organizational Behavior	3
ACCT 215 Accounting Software Applications	3			MGMT 227 Principles of Project Management	3
ACCT 275 Capstone in Accounting **(or)**	3			Program Electives*****	6
BUSI 291 Business Internship	(3)				21
	21				

Marketing Concentration

BUSI 290 Business Capstone **(or)**	3
BUSI 291 Business Internship	(3)
CIS 135 Intermediate Spreadsheet Application	3
MKTG 212 Professional Selling	3
MKTG 218 Advertising	3
MKTG 235 Digital Media Marketing	3
Program Electives******	6
	21

*****Students select 15-credits of program electives from: ACCT, BAKE, BUSI, ECON, ENTR, FIN, MGMT, MKTG, RE and WEB.*
******Students select 6-credits of program electives from: BUSI 230; ENTR 221; MGMT 226.*
*******Students select 6-credits of program electives from: BUSI 230; COMM 221; MKTG 205, 216; MGMT 204.*

RECOMMENDED SEQUENCE FOR FULL-TIME STUDENTS

Part-time students can complete this program by taking one or more courses each semester.

Accounting Concentration

Fall Semester I		Spring Semester I		Fall Semester II		Spring Semester II	
ACCT 150	2	ACCT 151	2	ACCT 201	4	ACCT 203	4
ACCT 160	2	ACCT 161	2	ACCT 215	3	ACCT 204	3
BUSI 101	3	CIS 105	3	BUSI 209	3	ACCT 275 **or** BUSI 291	3
ENGL 101	3	COMM 101	3	MGMT 201	3	ECON 201	3
Humanities/Arts Elective*	3	ENGL 106	3	MKTG 201	3	Wellness	1
Social/Behavioral Science Elective**	3	Math/Science Elective***	3 **or** 4				

General Business Concentration

Fall Semester I		Spring Semester I		Fall Semester II		Spring Semester II	
BUSI 101	3	ACCT 150	2	BUSI 209	3	BUSI 290 **or** 291	3
COMM 101	3	ACCT 160	2	CIS 135	3	ECON 201	3
ENGL 101	3	CIS 105	3	MKTG 201	3	Program Electives****	9
MGMT 201	3	ENGL 106	3	Program Electives****	6	Wellness	1
Social/Behavioral Science Elective**	3	Humanities/Arts Elective*	3				
		Math/Science Elective***	3 **or** 4				

Management Concentration

Fall Semester I		Spring Semester I		Fall Semester II		Spring Semester II	
BUSI 101	3	ACCT 150	2	BUSI 209	3	BUSI 290 **or** 291	3
CIS 105	3	ACCT 160	2	CIS 135	3	ECON 201	3
COMM 101	3	ENGL 106	3	MGMT 203	3	MGMT 226	3
ENGL 101	3	Humanities/Arts Elective*	3	MGMT 227	3	Program Electives*****	6
Social/Behavioral Science Elective**	3	MGMT 201	3	MKTG 201	3	Wellness	1
		Math/Science Elective***	3 **or** 4				

Marketing Concentration

Fall Semester I		Spring Semester I		Fall Semester II		Spring Semester II	
BUSI 101	3	ACCT 150	2	BUSI 209	3	BUSI 290 **or** 291	3
COMM 101	3	ACCT 160	2	CIS 135	3	ECON 201	3
ENGL 101	3	CIS 105	3	Humanities/Arts Elective*	3	MKTG 212	3
MKTG 201	3	ENGL 106	3	MGMT 201	3	Program Electives******	6
Social/Behavioral Science Elective**	3	MKTG 218	3	MKTG 235	3	Wellness	1
		Math/Science Elective***	3 **or** 4				

CARDIOVASCULAR TECHNOLOGY- CARDIAC SONOGRAPHY, Associate in Science Degree - 3530

Health Careers Department

The Cardiovascular Technology: Cardiac Sonography AS program prepares students to enter the healthcare profession as a Diagnostic Cardiac Sonographer. A Diagnostic Sonographer utilizes high frequency sound waves to produce, record, and evaluate ultrasound images of the heart, great vessels and surrounding anatomy. The Diagnostic Cardiac Sonographer must be proficient in various different ultrasound modalities including M-mode, 2-Dimensional, Doppler and Color Doppler imaging. This occupation requires specialized technical skills, critical thinking and problem-solving ability as well as medical knowledge including anatomy, physiology, and pathophysiology to render quality care. Individuals must be able to correlate related patient data, apply physics principles in order to obtain optimal images for rendering a diagnosis, and develop differential diagnoses based on patient history and examination findings. The curriculum uses didactic, laboratory, and clinical instruction to achieve its goal of preparing students to care for cardiac patients. This program is accredited by the Commission on Accreditation of Allied Health Education Programs. The complete program is only available at the Lancaster Campus.

Selective Program: Entry into this program is not guaranteed with admission to the College; this is a selective and competitive admission program; specific admissions criteria must be met. Please go to the Health Careers website (www.hacc.edu/healthcareers), or contact us by email at start@hacc.edu for specific program entry requirements.

Career Opportunities
Graduates are employed as diagnostic cardiac sonographers by health care facilities and other specialized facilities requiring their specific expertise in the field of cardiovascular technology.

Competency Profile
This curriculum is designed to prepare students to:

- Prepare competent entry-level cardiovascular technologists in the cognitive (knowledge), psychomotor (skills), and affective (behavior) learning domains for adult echocardiography
- Be knowledgeable in anatomy, pathology, physiology and technical methods required for entry-level cardiac sonographers
- Possess problem-solving, critical thinking, and analytical abilities
- Possess the professional and ethical characteristics of a healthcare provider
- Possess effective communication skills
- Demonstrate an understanding of the importance of professional growth, continuing education and professional certification
- Possess the knowledge and skills required of an entry-level adult cardiac sonographer

PROGRAM REQUIREMENTS (TOTAL CREDITS = 63)

General Education		Major Requirements		Other Required Courses
ENGL 101 English Composition I	3	CVT 101 Introduction to Cardiovascular Tech	3	
ENGL 102 English Composition II	3	CVT 102 Cardiovascular Technology Laboratory	1	
COMM 101 Effective Speaking **(or)**	3	CVT 103 Cardiovascular Technology Clinical Experience	2	
COMM 203 Interpersonal Communication	(3)	CVT 219 Intro to Ultrasound Imaging Systems	1	
Humanities & Arts Elective*	3	CVT 220 Intro to Cardiac Sonography	3	
Mathematics Elective - MATH 111	3	CVT 221 Cardiac Pathophysiology & Echo Concepts I	4	
Mathematics or Science Elective - BIOL 122	4	CVT 222 Cardiac Sonography Phys & Instrumentation	3	
Science w/ a Laboratory Elective - BIOL 121	4	CVT 223 Cardiac Pathophysiology & Echo Concepts II	4	
Social & Behavioral Science Elective	3	CVT 224 Cardiac Sonography Clinical I	4	
First-Year Seminar Elective - CVT 100	3	CVT 226 Cardiac Hemodynamics	1	
Wellness	1	CVT 228 Cardiac Sonography Clinical II	5	
	30	CVT 230 Introduction to Pediatric Echocardiography	2	
			33	

**Students are to select courses from the following: ART 181, 182; ENGL 206; FMTH 101 or THTR 101; HUM 101, 115, 201; MUS 104; PHIL 200; SPAN 104; or a foreign language course.*
Note: A grade of C or higher is required in all CVT and BIOL 121 and 122 courses.

RECOMMENDED SEQUENCE FOR FULL-TIME STUDENTS

Part-time students can complete this program by taking one or more courses each semester.

Spring Semester I		Summer I		Fall Semester I		Spring Semester II		Summer II		Fall Semester II	
BIOL 121	4	BIOL 122	4	CVT 221	4	CVT 219	1	CVT 224	4	CVT 228	5
CVT 100	3	CVT 103	2	CVT 222	3	CVT 220	3	CVT 226	1	CVT 230	2
CVT 101	3			ENGL 101	3	CVT 223	4			Humanities/Arts Elective*	3
CVT 102	1			Social/Behavioral Science Elective	3	COMM 101 **or** 203	3			Wellness	1
MATH 111	3					ENGL 102	3				

CARDIOVASCULAR TECHNOLOGY- INVASIVE CARDIOVASCULAR TECHNOLOGY, Associate in Science Degree - 3510

Health Careers Department

The Invasive Cardiovascular Technology AS program prepares students to enter the healthcare profession as Invasive Cardiovascular Technologists. An Invasive Cardiovascular Technologist is a highly specialized and knowledgeable healthcare professional who is educated and trained to perform invasive diagnostic and therapeutic procedures under the direction of the physician to evaluate, diagnose, and treat patients with cardiac disease. The Invasive Cardiovascular Technologist requires specialized technical skills, critical thinking and problem-solving ability as well as medical knowledge including anatomy, physiology, and pathophysiology to render quality patient care; must be able to correlate related patient data, apply physics principles in order to obtain optimal images for rendering a diagnosis, and develop differential diagnoses based on patient history and examination findings. The curriculum uses didactic, laboratory, and clinical instruction to achieve its goal of preparing students to care for cardiac patients. The program is accredited by the Commission on Accreditation of Allied Health Education Programs. This program requires the student to complete a Pennsylvania Child Abuse History Clearance and/or State Police Criminal Record Check prior to enrollment, prior to the start of a clinical experience, prior to testing and/or obtaining employment. The student should consider this factor before enrolling in this program. If the student has any questions regarding this, he or she should contact the Program Director. The complete program is only available at the Lancaster Campus.

Selective Program: Entry into this program is not guaranteed with admission to the College; this is a selective and competitive admission program; specific admissions criteria must be met. Please go to the Health Careers website (www.hacc.edu/healthcareers), or contact us by email at start@hacc.edu for specific program entry requirements.

Career Opportunities
Graduates will be qualified to seek employment as Invasive Cardiovascular Technologies in both diagnostic and interventional facilities, specifically in a Cardiac Catheterization laboratory in a hospital.

Competency Profile
This curriculum is designed to prepare students to:

- Prepare competent entry level cardiovascular technologists in the cognitive (knowledge), psychomotor (skills), and affective (behavior) learning domains for invasive cardiovascular technology
- Be knowledgeable in anatomy, pathology, physiology and technical methods required for entry-level invasive cardiovascular specialists
- Possess problem-solving, critical thinking, and analytical abilities
- Possess the professional and ethical characteristics of a healthcare provider
- Possess effective communication skills
- Demonstrate an understanding of the importance of professional growth, continuing education and professional certification
- Possess the knowledge and skills required of an entry-level invasive cardiovascular specialist

PROGRAM REQUIREMENTS (TOTAL CREDITS = 66)

General Education		Major Requirements		Other Required Courses
ENGL 101 English Composition I	3	CVT 101 Intro to Cardiovascular Tech	3	
ENGL 102 English Composition II	3	CVT 102 Cardiovascular Technology Laboratory	1	
COMM 101 Effective Speaking **(or)**	3	CVT 103 Cardiovascular Technology Clinical Experience	2	
COMM 203 Interpersonal Communication	(3)	CVT 200 Cardiac Pathophysiology	4	
Humanities & Arts Elective*	3	CVT 210 Intro to Invasive Cardiovascular Technology	3	
Mathematics Elective - MATH 111	3	CVT 211 Radiation Safety/ Invasive Instrumentation	2	
Mathematics or Science Elective - BIOL 122	4	CVT 212 Invasive Cardiovascular Procedures	3	
Science w/ a Laboratory Elective - BIOL 121	4	CVT 213 Invasive Instrumentation Lab	2	
Social & Behavioral Science Elective	3	CVT 214 Interventional Cardiac Procedures	4	
First-Year Seminar Elective - CVT 100	3	CVT 215 Invasive Clinical Practicum I	4	
Wellness	1	CVT 216 Congenital Heart Disease	1	`
	30	CVT 217 Invasive Practicum Clinical II	5	
		CVT 218 Cardiovascular Pharmacology	2	
			36	

**Students are to select courses from the following: ART 181, 182; ENGL 206; FMTH 101 or THTR 101; HUM 101, 115, 201; MUS 104; PHIL 200; SPAN 104; or a foreign language course.*
Note: A grade of C or higher is required for BIOL 121, 122 and all of the CVT courses.

RECOMMENDED SEQUENCE FOR FULL-TIME STUDENTS

Part-time students can complete this program by taking one or more courses each semester.

Spring Semester I		**Summer I**		**Fall Semester I**	
BIOL 121	4	BIOL 122	4	CVT 200	4
CVT 101	3	CVT 103	2	CVT 218	2
CVT 102	1			ENGL 101	3
CVT 100	3			Social/Behavioral Science Elective	3
MATH 111	3			Wellness	1

Spring Semester II		**Summer II**		**Fall Semester II**	
CVT 210	3	CVT 214	4	COMM 101 **or** 203	3
CVT 211	2	CVT 215	4	CVT 216	1
CVT 212	3			CVT 217	5
CVT 213	2			Humanities/Arts Elective*	3
ENGL 102	3				

CHEMISTRY, Associate in Science Degree - 3026

Science Department

The Chemistry AS program provides students with the necessary foundation in mathematics, science, and liberal arts to transfer and succeed in a baccalaureate degree program in Chemistry. This program also permits students to complete the prerequisite courses for application to institutions offering degrees/programs in biochemistry, chemical engineering, environmental science, molecular-life science, or teaching. Because the requirements of transfer institutions and their degree programs may vary widely, it is recommended that students carefully review the program requirements of their chosen transfer institution and align their HACC course sequence with the program outlined in that institution's catalog. Students who complete HACC's Chemistry AS degree will be admitted at the Junior-level in Chemistry to any institution participating in Pennsylvania's statewide college credit transfer system. This program can be completed at the Harrisburg and Lancaster campuses.

Career or Transfer Opportunities

This transfer curriculum is provided as a guide for students planning to transfer to a baccalaureate degree granting institution. Courses in chemistry and related subjects are offered for students who expect to transfer to four-year college or university programs in chemistry, biochemistry, chemical engineering, environmental science, molecular-life science, or teaching.

Competency Profile

This curriculum is designed to prepare graduates of the program to:

- Transfer with the skills required for success in a Baccalaureate degree program in Chemistry
- Discuss and apply scientific principles and concepts
- Demonstrate an appreciation of scientific accomplishments and how they affect technology, politics, and society
- Apply the scientific method to solve scientific problems
- Demonstrate computer literacy in data manipulation and analysis
- Perform technician work in a typical laboratory while following appropriate safety procedures
- Demonstrate communication of results both orally and through written reports

PROGRAM REQUIREMENTS (TOTAL CREDITS = 61)

General Education		Major Requirements		Other Required Courses	
ENGL 101 English Composition I	3	CHEM 102 General Inorganic/Qual. Analysis	4	Transfer Electives**	12
ENGL 102 English Composition II **(or)**	3	CHEM 203 Organic Chemistry I	4		
ENGL 104 Technical Writing	(3)	CHEM 204 Organic Chemistry II	4		
COMM 101 Effective Speaking	3	PHYS 211 Physics for Engineers & Scientists I	4		
Humanities & Arts Elective*	3	PHYS 212 Physics for Engineers & Scientists II	4		
Mathematics Elective - MATH 121	4		20		
Mathematics or Science Elective - MATH 122	4				
Science w/ a Laboratory Elective - CHEM 101	4				
Social & Behavioral Science Elective	3				
First-Year-Seminar Elective (Rec: SCI 100)	1				
Wellness	1				
	29				

**Students are to select courses from the following: ART 181 or 182; ENGL 206; FMTH 101 or THTR 101; HUM 101, 115 or 201; MUS 104; PHIL 200; or a foreign language course.*

***Students are to select transfer electives from the following courses: CPS 113; 115; 121 or 135; BIOL 102; 206; 212; 215; 221 or 250; any 100 level or higher.*

RECOMMENDED SEQUENCE FOR FULL-TIME STUDENTS

Part-time students can complete this program by taking one or more courses each semester.

Fall Semester I		Spring Semester I		Fall Semester II		Spring Semester II	
COMM 101	3	CHEM 102	4	CHEM 203	4	CHEM 204	4
CHEM 101	4	ENGL 102 **or** 104	3	PHYS 211	4	PHYS 212	4
ENGL 101	3	Humanities/Arts Elective*	3	Transfer Electives**	6	Transfer Electives**	6
FYS Elective	1	MATH 122	4			Wellness	1
MATH 121	4	Social/Behavioral Science Elective	3				

COMMUNICATION, Associate in Science Degree – 2036

Communication, Humanities and the Arts Department

The Communication AS degree is designed to prepare students for transfer into a bachelor's degree program in one of three focus areas: **Human Communication, Public Relations**, or **Journalism.** Students are taught to think, act, and communicate effectively, ethically, critically, and creatively thereby, enriching their personal and professional lives within a diverse environment. Students select a specific area of concentration upon admission and then work closely with their transfer institution in coordinating their course selections. Those students who choose to complete the associate's degree program have the basic skills necessary to enter the workforce in a variety of fields related to communication. The **Human Communication concentration** can be completed entirely online through virtual learning and at the Harrisburg, Lancaster, and York campuses provided students take some of their coursework online through virtual learning. The **Public Relations concentration** can be completed entirely at the Harrisburg and York campuses and online through virtual learning, and at the Lancaster Campus provided students take some of their coursework online through virtual learning. The **Journalism concentration** is only available at the Harrisburg Campus.

Career or Transfer Opportunities

Upon completion of a baccalaureate degree, students completing the **Human Communication concentration** may obtain entry-level positions in customer service, advertising sales, audience and market research, government, industry, and business. The **Public Relations concentration** prepares graduates for work in organizations, institutions, and companies where they are able to contribute to the planning, development, and execution of an array of communication venues (pamphlets, press releases, newsletters) for an organization. Graduates of the **Journalism concentration** may find opportunities as Writers, Reporters, Editors, Videographers and Photographers at newspapers, magazines, television, radio, and on-line publications.

Competency Profile

This curriculum is designed to prepare students to:

- Employ the communication skills necessary to engage in diverse personal, professional, civic, and social relationships
- Express their ideas in oral and written messages that are coherent, persuasive, ethical and appropriate for specific audiences
- Analyze significant issues in the history, theory, and criticism of human and mass communication
- Use appropriate technology to the creation and dissemination of messages
- Apply appropriate technology to the creation and dissemination of messages

PROGRAM REQUIREMENTS (TOTAL CREDITS = 60)

General Education		Major Requirements		Other Required Courses	
ENGL 101 English Composition I	3	COMM 120 Mass Media and Society	3	Transfer Electives*	14
ENGL 102 English Composition II **(or)**	3	COMM 201 Theories of Communication	3		
ENGL 104 Technical Writing **(or)**	(3)	COMM 253 Intercultural Communication	3		
ENGL 106 Business Writing	(3)		9		
COMM 101 Effective Speaking	3				
Humanities & Arts Elective	3				
Mathematics Elective	3				
Mathematics or Science Elective	3				
Science w/ a Laboratory Elective	3				
Social & Behavioral Science Elective	3				
First-Year-Seminar Elective - COMM 110	3				
Wellness	1				
	28				

**Students are to select courses that are appropriate for their intended transfer institution.*

Students select one of the following options to complete the Communication Transfer degree requirements.

Human Communication Option (HCOM)		Journalism Option (JOUR)		Public Relations Option (PREL)	
COMM 203 Interpersonal Communication	3	COMM 221 Media Writing	3	COMM 211 Public Relations	3
COMM 251 Small Group Communication	3	COMM 222 News Writing & Reporting	3	COMM 221 Media Writing	3
COMM 252 Business & Professional Communication	3	COMM 241 Visual Communication	3	COMM 261 Public Relations Writing	3
	9		9		9

RECOMMENDED SEQUENCE FOR FULL-TIME STUDENTS

Human Communication Concentration

Fall Semester I		Spring Semester I		Fall Semester II		Spring Semester II	
COMM 110	3	COMM 101	3	COMM 201	3	COMM 253	3
ENGL 101	3	COMM 120	3	COMM 203	3	Science w/ a Lab	3
Humanities/Arts Elective	3	COMM 252	3	COMM 251	3	Transfer Electives*	8
Transfer Elective*	3	ENGL 102 **or** 104, **or** 106	3	Math/Science Elective	3	Wellness	1
Social/Behavioral Science Elective	3	Mathematics Elective	3	Transfer Elective*	3		

Journalism Concentration

Fall Semester I		Spring Semester I		Fall Semester II		Spring Semester II	
COMM 110	3	COMM 101	3	COMM 201	3	COMM 253	3
ENGL 101	3	COMM 120	3	COMM 222	3	Science w/ a Lab	3
Humanities/Arts Elective	3	COMM 221	3	COMM 241	3	Transfer Electives*	8
Transfer Elective*	3	ENGL 102 **or** 104, **or** 106	3	Math/Science Elective	3	Wellness	1
Social/Behavioral Science Elective	3	Mathematics Elective	3	Transfer Elective*	3		

Public Relations Concentration

Fall Semester I		Spring Semester I		Fall Semester II		Spring Semester II	
COMM 110	3	COMM 101	3	COMM 201	3	COMM 253	3
ENGL 101	3	COMM 120	3	COMM 221	3	Science w/ a Lab	3
Humanities/Arts Elective	3	COMM 211	3	COMM 261	3	Transfer Electives*	8
Transfer Elective*	3	ENGL 102 **or** 104, **or** 106	3	Math/Science Elective	3	Wellness	1
Social/Behavioral Science Elective	3	Mathematics Elective	3	Transfer Elective*	3		

COMPUTER INFORMATION SECURITY, Associate in Science Degree - 1030

Engineering, Trades & Computer Technologies Department

The Computer Information Security AS program prepares students to continue their studies towards a baccalaureate degree in computer information security at a four-year institution. This curriculum places emphasis on mathematics, computer programming, network infrastructure and operating systems and its secure application in industry. Since the requirements of senior institutions vary widely, it is essential to choose an intended transfer institution as soon as possible and carefully follow the program described in that college's catalog. Students may complete this program entirely online through virtual learning.

Career or Transfer Opportunities
This transfer curriculum is provided as a guide for students planning to transfer to a baccalaureate degree granting institution. Computer information security specialists find employment as Security Information Service Operators, Information Security Specialists, Information Security Administrators, Information Security Advisors, Information Security Consultants, Information Security Analysts, Information Security Auditors, Information Security Manager, and Information Security Architects.

Competency Profile:
This curriculum is designed to prepare students to:

- Develop information security policies and procedures
- Apply technology devices to meet business requirements secure information system components
- Design secure network architectures
- Implement technological solutions, both hardware and software, as it pertains to information security
- Maintain an awareness of industry requirements and laws
- Respond to information system intrusions and support investigative processes
- Manage information security resources
- Provide information security training and awareness programs

PROGRAM REQUIREMENTS (TOTAL CREDITS = 65)

General Education		Major Requirements		Other Required Courses	
ENGL 101 English Composition I	3	CIS 105 Introduction to Software for Business	3	Program Electives**	6
ENGL 102 English Composition II **(or)**	3	CIS 140 Intermediate Database Management	3	MATH 116*** – College Algebra for Calculus	(4)
ENGL 104 Technical Writing	(3)	CIS 222 Introduction to Windows Servers	3		
COMM 101 Effective Speaking	3	CIS 224 Introduction to System Analysis & Design	4		
Humanities & Arts Elective*	3	CIS 241 Database Administration I	3		
Mathematics Elective - MATH 103, 119 or 121	3 **or** 4	CIS 264 Fundamentals of Linux Administration	3		
Mathematics **or** Science Elective - MATH 202	4	CISE 200 Information Security Fundamentals	3		
Science w/ a Laboratory Elective	3	CNT 120 Network Communication Technology I	3		
Social & Behavioral Science Elective	3	CNT 125 Network Communication Technology II	4		
First-Year Seminar Elective	1	CPS 121 Computer Science I – Intro to Computer Programming JAVA	3		
Wellness	1		32		
	27				

**Students are to select from the following courses: ART 181, 182; ENGL 206; FMTH 101 or THTR 101; HUM 115, 201; MUS 104; PHIL 200; or any foreign language course.*
***Select from the following courses: CIS 243, 245, 270; CISE 211; CNT 220, 240, 250, 260, 291; CPS 161, 162, 230; ELEC 125, 126; MATH 104, 119, 121, 125; WEB 143.*
****This course is one selection available for students to select with MATH 103, 119 or 121. MATH 116 does not meet the Mathematics Elective Core Knowledge Area at this time.*

RECOMMENDED SEQUENCE FOR FULL-TIME STUDENTS

Part-time students can complete this program by taking one or more courses each semester.

Fall Semester I		Spring Semester I		Fall Semester II		Spring Semester II	
CIS 105	3	CIS 140	3	CIS 222	3	CIS 224	4
CNT 120	3	CNT 125	4	CIS 241	3	CIS 264	3
ENGL 101	3	CPS 121	3	COMM 101	3	CISE 200	3
FYS Elective	1	ENGL 102 **or** 104	3	Program Elective**	3	Program Elective**	3
Humanities/Arts Elective*	3	MATH 202	4	Science w/ a Lab Elective	3	Social/Behavioral Science Elective	3
MATH 103, 116***, 119 **or** 121	3 **or** 4			Wellness	1		

COMPUTER INFORMATION SYSTEMS, Associate in Applied Science Degree - 1796

Engineering, Trades & Computer Technologies Department

The Computer Information Systems AAS degree provides students with the essential knowledge and skills in computer software, hardware, and network communication needed for entry into the computer information technology job market. Students are able to focus their studies by choosing one of two concentrations: **Support Specialist**, which concentrates on technical support with software, hardware, and security and **Database Analyst**, which emphasizes database management and administration. Graduates of both concentrations apply their cumulative knowledge and skills through a capstone experience, which results in the completion of an individual electronic portfolio. This program can be completed entirely online through virtual learning.

Career Opportunities

Graduates may obtain entry-level positions within many different businesses, government agencies, computer consulting firms, health care, and educational institutions. Depending on the degree concentration the student has chosen, below are the specific occupations associated with each of the two concentrations:

- **Support Specialist:** computer operator, help-desk analyst, and technical support specialist
- **Database Analyst:** database analyst, database administrator, and data modeler

Competency Profile

These degree concentrations are designed to prepare students to:

- Work individually and as team members on computer projects
- Write and speak effectively

The Support Specialist:

- Manage and troubleshoot computer software, hardware, and networks
- Operate a help-desk support system

The Database Analyst:

- Manage database management systems
- Develop a database system through an entire life-cycle

PROGRAM REQUIREMENTS (TOTAL CREDITS = 61)

General Education		Major Requirements		Other Required Courses	
ENGL 101 English Composition I	3	CIS 105 Introduction to Software for Business	3	Computer-Related Elective**	3
COMM 101 Effective Speaking **(or)**	3	CIS 110 Introduction to Computer Information Systems	3		
COMM 203 Interpersonal Communication	(3)	CIS 135 Intermediate Spreadsheet Application	3		
Humanities & Arts Elective*	3	CIS 140 Intermediate Database Management	3		
Social & Behavioral Science Elective	3	CNT 120 Network Communication Technology I	3		
First-Year-Seminar Elective	1		15		
Wellness	1				
	14				

**Students are to select from the following courses: ART 181, 182; ENGL 206; HUM 101, 115, 201; MUS 104; PHIL 200; FMTH 101 or THTR 101; or a foreign language course.*

***Students are to select from the following subject areas: CIS, CISE, CNT, GIS, and WEB.*

Support Specialist Concentration		Database Analyst Concentration	
CIS 128 Client Administration	3	CIS 224 Systems Analysis and Design	4
CIS 222 Introduction to Windows Servers	3	CIS 239 Database Report Development	3
CIS 227 Technical Support	3	CIS 241 Database Administration I	3
CIS 266 CIS Capstone	3	CIS 243 Database Administration II	3
CISE 200 Information Security Fundamentals	3	CIS 245 Database Programming	3
ELEC 125 Introduction to PC Technology	3	CIS 257 Data Warehouse	3
ELEC 126 Installing & Troubleshooting PCs	4	CIS 266 CIS Capstone	3
Mathematics or Science Elective	3	Mathematics or Science Elective (MATH 202)	4
WEB 102 Web Exploration & Design	3	Database-Related Elective****	3
Computer-Programming Elective***	3		29
	31		

**** Select one of the following computer-programming electives: CIS 238; CPS 121; WEB 125 or 143; and WEB course 240-259.*

*****Select any database-related elective from the following: CIS 222, 247, 249, 258, 264; or WEB 143.*

Note: Grades of C, or higher, are required for all computer-related courses (CIS, CISE, CNT, CPS, ELEC, GIS, and WEB) and in all degree concentrations for graduation (MATH). Students must complete CIS 105 with a grade of C, or higher, prior to enrolling into certain courses within the major. They may test out of CIS 105 through a Credit by Examination.

RECOMMENDED SEQUENCE FOR FULL-TIME STUDENTS

Part-time students can complete this program by taking one or more courses each semester.

Support Specialist Concentration

Fall Semester I		Spring Semester I		Summer		Fall Semester II		Spring Semester II	
CIS 105	3	CIS 128	3	CIS 222	3	CISE 200	3	CIS 227	3
CIS 110	3	CIS 135	3			ELEC 126	4	CIS 266	3
CNT 120	3	CIS 140	3			Programming Elective***	3	Computer Elective**	3
COMM 101 **or** 203	3	ELEC 125	3			Social/Behavioral Science Elective	3	Humanities/Arts Elective*	3
ENGL 101	3	WEB 102	3			Wellness	1	Math/Science Elective	3
FYS Elective	1								

Database Analyst Concentration

Fall Semester I		Spring Semester I		Summer		Fall Semester II		Spring Semester II	
CIS 105	3	CIS 135	3	CIS 241	3	CIS 239	3	CIS 224	4
CIS 110	3	CIS 140	3			CIS 243	3	CIS 245	3
CNT 120	3	Humanities/Arts Elective*	3			CIS 257	3	CIS 266	3
COMM 101 **or** 203	3	MATH 202	4			Computer Elective**	3	Social/Behavioral Science Elective	3
ENGL 101	3					Database Elective****	3	Wellness	1
FYS Elective	1								

COMPUTER INFORMATION SYSTEMS, Certificate - 1312

Engineering, Trades & Computer Technologies Department
CIP Code: 11.1006

The Computer Information Systems certificate provides students with the essential knowledge and skills in computer software, hardware, and network communication needed for entry into the computer information technology job market. Additionally, the certificate is appropriate for individuals, who are currently in the workforce and are interested in updating their technical skills. Students are able to focus their studies by choosing one of two concentrations: **Support Specialist**, which concentrates on technical support with software, hardware, and security and the **Database Analyst**, which emphasizes database management and administration. Graduates of both options apply their cumulative knowledge and skills through a capstone experience, which results in the completion of an individual electronic portfolio. This program can be completed entirely online through virtual learning.

Career Opportunities
Graduates may obtain entry-level positions within many different businesses, government agencies, computer consulting firms, health care, and educational institutions. Depending on the degree concentration the student has chosen, below are the specific occupations associated with each of the two concentrations:

- **Support Specialist:** *computer operator, help-desk analyst, and technical support specialist*
- **Database Analyst:** *database analyst, database administrator, and data modeler*

(SOC Code: 15-1150 Computer User Support Specialists)

Competency Profile
These degree concentrations are designed to prepare students to:
The Support Specialist:

- Manage and troubleshoot computer software, hardware, and networks
- Operate a help-desk support system

The Database Analyst:

- Manage database management systems
- Develop a database system through an entire life-cycle

PROGRAM REQUIREMENTS (TOTAL CREDITS = 31)

General Education

Major Requirements

CIS 105 Introduction to Software for Business	3
CIS 110 Introduction to Computer Information Systems	3
CNT 120 Network Communication Technology I	3
	9

Other Required Courses

Support Specialist Concentration		**Database Analyst Concentration**	
CIS 128 Client Administration	3	CIS 135 Intermediate Spreadsheet Application	3
CIS 135 Intermediate Spreadsheet Applications **or**	3	CIS 140 Intermediate Database Management	3
CIS 140 Intermediate Database Management	(3)	CIS 224 Intro Systems Analysis and Design	4
CIS 222 Intro to Windows Servers	3	CIS 241 Database Administration I	3
CIS 227 Technical Support	3	CIS 245 Database Programming	3
CISE 200 Information Security Fundamentals	3	CIS 257 Data Warehouse	3
ELEC 125 Introduction to PC Technology	3	Database-Related Elective*	3
ELEC 126 Installing & Troubleshooting PCs	4		22
	22		

**Students are to select from the following courses: CIS 222, 239, 243, 258 264; WEB 143.*
Note: Grades of C, or higher, are required for all computer-related courses (CIS, CISE, CNT, CPS, ELEC, GIS, and WEB) and in all certificate concentrations for graduation.

RECOMMENDED SEQUENCE FOR FULL-TIME STUDENTS

Support Specialist Concentration

Summer		**Fall Semester I**		**Spring Semester I**	
CIS 105	3	CIS 110	3	CIS 135 **or** 140	3
CNT 120	3	CIS 128	3	CIS 227	3
		CIS 222	3	CISE 200	3
		ELEC 125	3	ELEC 126	4

Database Analyst Concentration

Summer		**Fall Semester I**		**Spring Semester II**	
CIS 105	3	CIS 110	3	CIS 224	4
CNT 120	3	CIS 135	3	CIS 241	3
		CIS 140	3	CIS 245	3
		Database Elective*	3	CIS 257	3

COMPUTER INFORMATION SYSTEMS- Software Specialist Diploma - 0220

Engineering, Trades & Computer Technologies Department
CIP Code: 11.0601

The Computer Information Systems – Software Specialist diploma prepares students for careers as computer information systems software specialists. The coursework focuses on developing proficiency in word processing, spreadsheet creation to solve problems, computerized presentations, and development of database applications. These skills enable a student to work effectively with software tools in a business/organizational environment. The courses also prepare the student to take the Microsoft Officer User Specialist (MOS) examinations to be certified by Microsoft as expert users of the software. This program can be completed entirely online through virtual learning.

Career Opportunities
Graduates of the program will be able to work effectively with software tools in a business/organizational environment.
(SOC Code: 43-9021 Data Entry Keyers)

Competency Profile
This curriculum is designed to prepare students to:
- Demonstrate mastery of various software packages on computers
- Be able to decide which application tools is best suited to achieve the desired result
- Demonstrate the ability to integrate various applications and link them
- Understand the use of software as a communication tool in a business environment

PROGRAM REQUIREMENTS (TOTAL CREDITS = 16)

General Education	Major Requirements		Other Required Courses
	CIS 105 Introduction to Software for Business	3	
	CIS 108 Introduction to Power Point	1	
	CIS 110 Introduction to Computer Systems	3	
	CIS 128 Client Administration	3	
	CIS 135 Intermediate Spreadsheet Applications	3	
	CIS 140 Intermediate Database Management	3	
		16	

RECOMMENDED SEQUENCE FOR FULL-TIME STUDENTS

Part-time students can complete this program by taking one or more courses each semester.

Fall Semester I

CIS 105	3
CIS 108	1
CIS 110	3
CIS 128	3
CIS 135	3
CIS 140	3

COMPUTER NETWORKING TECHNOLOGY, Associate in Applied Science Degree - 4590

Engineering, Trades & Computer Technologies Department

The Computer Networking AAS program prepares students for employment in the field of information technology in roles such as network technician, network administrator, systems administrator and customer support. They are trained to design, install, configure, troubleshoot and maintain networks. The program includes the study of data communications, telecommunications, Windows and Linux Server administration, information security fundamentals, PC repair, TCP/IP, cabling, terminations, network connections, cable testers, network analyzers, NIC's, hubs, bridges, switches, and routers. Elective courses allow the students to learn specialized topics such as Cisco Routing and Switching, Voice over IP (VoIP), Wireless Networking Administration and Virtualization and Cloud Computing. Coursework in oral and written communication skills is also included in order to provide these essential skills needed to excel in today's workplace environment. The program is vendor neutral and coordinates with national standards from the Computing Technology Industry Association (CompTIA). Students may complete this program at the Harrisburg Campus provided some of their coursework is taken online through virtual learning.

Career Opportunities

Computer networking encompasses a broad range of jobs and job titles for CNT graduates including network support technicians, network administrators, network planning analysts, systems analysts, network coordinators, telecommunications specialists, information technology specialists, consultants, market representatives, and related information technologist positions.

Competency Profile

This curriculum is designed to prepare students to:

- List and describe TCP/IP layers, layer interactions, protocols, and applications
- Install, connect, and configure network hardware and software to meet common requirements
- Design and implement an internetwork including IP addressing, subnetting, routing, switching, Virtual Local Area Networks (VLANs), and network design documentation
- Describe the technologies associated with network communications including signaling, noise, error detection and correction, flow control techniques, data compression, and encoding technology
- Describe technical aspects of Ethernet operation including access technologies, bandwidths, standards, VLANs, and electronic connecting devices
- List and describe common Wide Area Network (WAN) technologies, topologies, and associated protocols and devices
- Demonstrate proper troubleshooting methods while implementing networks
- Design, install, test, troubleshoot, and certify communications wiring systems
- Install, test, and troubleshoot PC hardware and windows desktop operating systems
- Demonstrate professional interaction with end users in a technical support environment utilizing troubleshooting, escalation channels, help desk software, and communications skills
- Install, maintain, administer, and support Linux server operating systems
- Install, maintain, administer, and support Windows server operating systems including Active Directory
- List and describe common legal, ethical, and business requirements for securing information
- Utilize security tools and common best practices to design a secure network architecture

PROGRAM REQUIREMENTS (TOTAL CREDITS = 60)

General Education		**Major Requirements**		**Other Required Courses**	
ENGL 101 English Composition I **(or)**	3	CIS 222 Introduction to Windows Servers	3	Program Specific Electives***	9
ENGL 110 Foundations of Professional Writing	(3)	CIS 227 Technical Support	3		
COMM 101 Effective Speaking **(or)**	3	CIS 264 Fundamentals of Linux Administration	3		
COMM 203 Interpersonal Communication	(3)	CISE 200 Information Security Fundamentals	3		
Humanities & Arts Elective*	3	CNT 120 Network Communication Technology I	3		
Mathematics **or** Science Elective**	3	CNT 125 Network Communication Technology II	4		
Social & Behavioral Science Elective	3	CNT 140 The Physical Network	3		
First-Year Seminar Elective	1	CNT 220 Internetworking	5		
Wellness	1	ELEC 125 Introduction to PC Technology	3		
	17	ELEC 126 Installing & Troubleshooting PCs	4		
			34		

**Students are to select from the following courses: ART 181 or 182; ENGL 206; FMTH 101 or THTR 101; HUM 101, 115 or 201; MUS 104; PHIL 200; or a foreign language course.*

***Students are to select one MATH course from the list of approved Mathematic Core Knowledge Area electives to fulfill this requirement.*

**** Select program specific electives from the following: CIS 223; CISE 211; CNT 240, 250, 260, 291, or any CNT200-level course.*

Note: *Grades of C or higher are required for all computer-related courses (CIS, CISE, CNT, and ELEC)*

RECOMMENDED SEQUENCE FOR FULL-TIME STUDENTS

Part time students can complete this program by taking one or more courses each semester.

Fall Semester I		**Spring Semester I**		**Fall Semester II**		**Spring Semester II**	
CNT 120	3	CIS 264	3	CIS 222	3	CIS 227	3
COMM 101 **or** 203	3	CNT 125	4	CNT 220	5	CISE 200	3
ELEC 125	3	CNT 140	~~3~~	Program Elective***	3	Mathematics **or** Science Elective**	3
ENGL 101 **or** 110	3	ELEC 126	4	Social/Behavioral Science Elective	3	Program Electives***	6
Humanities/Arts Elective*	3			Wellness	1		
FYS Elective	1						

COMPUTER NETWORKING TECHNOLOGY, Certificate - 4230

Engineering & Technology Department
CIP Code: 11.0901

The Computer Networking certificate prepares students to work in the field of information technology in roles such as network technician, network administrator, systems administrator and customer support. They are trained to design, install, configure, troubleshoot and maintain networks. This program is also valuable to students who are currently employed within the field and wish to update their computer networking knowledge and skills for advancement. The program includes the study of data communications, telecommunications, Windows and Linux Server administration, information security fundamentals, PC repair, TCP/IP, cabling, terminations, network connections, cable testers, network analyzers, NIC's, hubs, bridges, switches, and routers. Elective courses allow the students to learn specialized topics such as Cisco Routing and Switching, Voice over IP (VoIP), Wireless Networking Administration and Virtualization and Cloud Computing. The program is vendor neutral and coordinates with national standards from the Computing Technology Industry Association (CompTIA). The program may be completed at the Harrisburg Campus provided students take some of their coursework online through virtual learning.

Career Opportunities
Computer networking encompasses a broad range of jobs and job titles for CNT graduates including network support technicians, network planning analysts, network coordinators, telecommunications specialists, information technology specialists, consultants, market representatives, and related information technologist positions.
(SOC Code: 15-1150 Computer Support Specialists)

Competency Profile
This curriculum is designed to prepare students to:

- List and describe TCP/IP layers, layer interactions, protocols and applications
- Install, connect, and configure network hardware and software to meet common requirements
- Design and Implement an internetwork including IP addressing, subnetting, routing, switching, Virtual Local Area Networks (VLANs), and network design documentation
- Describe the technologies associated with network communications, including signaling, noise, error detection and correction, flow control techniques, data compression, and encoding technology
- Describe technical aspects of Ethernet operation including access technologies, bandwidths, standards, VLANs and electronic connecting devices
- List and describe common Wide Area Network (WAN) technologies, topologies and associated protocols and devices
- Demonstrate proper troubleshooting methods while implementing networks
- Design, install, test, troubleshoot and certify communications wiring systems
- Install, test and troubleshoot PC hardware and windows desktop operating systems
- Demonstrate professional interaction with end users in a technical support environment utilizing troubleshooting, escalation channels, help desk software and communications skills
- Install, maintain, administer and support Linux server operating systems
- Install, maintain, administer and support Windows server operating systems including Active Directory
- List and describe common legal, ethical, and business requirements for securing information
- Utilize security tools and common best practices to design a secure network architecture

PROGRAM REQUIREMENTS (TOTAL CREDITS = 34)

General Education	Major Requirements		Other Required Courses	
	CIS 222 Intro to Windows Servers	3	Program Electives*	3
	CIS 227 Technical Support	3		
	CIS 264 Fundamentals of Linux Administration	3		
	CNT 120 Network Communication Technology I	3		
	CNT 125 Network Communication Technology II	4		
	CNT 140 The Physical Network	3		
	CNT 220 Internetworking	5		
	ELEC 125 Introduction to PC Technology	3		
	ELEC 126 Installing & Troubleshooting PCs	4		
		31		

**Students are to select electives from the following: CISE 200, CNT 250 or CNT 260.*

RECOMMENDED SEQUENCE FOR FULL-TIME STUDENTS

Part time students can complete this program by taking one or more courses each semester.

Summer I		**Fall Semester I**		**Spring Semester I**	
CNT 120	3	CIS 264	3	CIS 222	3
ELEC 125	3	CNT 125	4	CIS 227	3
		CNT 140	3	CNT 220	5
		ELEC 126	4	Program Electives*	3

CRIMINAL JUSTICE, Associate in Arts Degree - 6050

Social Science Department

The Criminal Justice AA degree is designed for students intending to pursue careers in law enforcement, correctional rehabilitation, juvenile and adult probation and parole, private security and investigations, forensic science, military police, and criminology. This program may require the student to submit to Act 33 Child Abuse and/or Act 34 Pennsylvania State Police Criminal Background Checks prior to enrollment in an internship course. Since the requirements of senior institutions vary widely, it is essential to choose an intended transfer institution as soon as possible and carefully follow the program described in that college's catalog. The complete program (both concentrations) is available at the Harrisburg Campus. The **General Transfer Concentration** can be completed at the Gettysburg, Lancaster and York campuses.

Career or Transfer Opportunities
Career opportunities are dependent upon the curriculum option chosen. Many graduates are engaged in careers as criminal investigators, patrol officers, drug agents, prosecuting attorneys, private criminal and civil attorneys, probation and parole officers, correctional counselors, security managers, private investigators, undercover investigators, crime-scene technicians, forensic scientists, crime-lab experts, and other positions in municipal, state, federal, and private agencies.

Competency Profile
This curriculum is designed to prepare students to:

- Demonstrate an awareness of professional ethics including ethical and legal entrance requirements to the criminal justice
- Translate observations into writing
- Use technology as a form, or method, to conduct research
- Describe components of the criminal justice system including corrections, courts, law enforcement, and the private sector
- Examine diversity issues as they impact criminal justice
- Demonstrate an awareness of the dynamics of organizational behavior
- Manage and build teams
- Analyze problems and develop solutions

PROGRAM REQUIREMENTS (TOTAL CREDITS = 61)

General Education		Major Requirements		Other Requirements
ENGL 101 English Composition I	3	CJ 101 Introduction to Criminal Justice	3	
ENGL 102 English Composition II **(or)**	3	CJ 108 Criminology	3	
ENGL 104 Technical Writing **(or)**	(3)	CJ 211 Juvenile Justice	3	
ENGL 106 Business Writing	(3)	CJ 212 Criminal Law and Procedure	3	
COMM 101 Effective Speaking	3	Law Enforcement or General Transfer Options	23	
Humanities & Arts Elective*	3		35	
Humanities & Arts Elective **(or)** Social & Behavioral Science Elective	3			
Mathematics Elective	3			
Science with a Laboratory Elective	3			
Social & Behavioral Science Elective	3			
First-Year Seminar Elective	1			
Wellness	1			
	26			

**Students are to select from the following courses: ART 181 or 182; ENGL 206; FMTH 101 or THTR 101; HUM 101, 115 or 201; MUS 104; PHIL 200; or a foreign language.*

Students select 23 credits from the follow concentrations:

Law Enforcement Concentration		General Transfer Concentration	
CJ 104 Police Operations	3	CJ 104 Police Operations	3
CJ 201 Criminal Investigation	3	CJ 106 Introduction to Corrections	3
CJ 203 Criminal Evidence	3	Program Elective**	3
CJ 206 Criminalistics	4	Transfer Electives	14
CJ 208 Intermediate Criminalistics	4		23
CJ 215 CJ Organization & Administration	3		
CJ 243 International & Domestic Terrorism	3		
	23		

***Students may select any CJ course.*

RECOMMENDED SEQUENCE FOR FULL-TIME STUDENTS

Part time students can complete this program by taking one or more courses each semester.

Law Enforcement Concentration

Fall Semester I		Spring Semester I		Fall Semester II		Spring Semester II	
CJ 101	3	CJ 104	3	COMM 101	3	CJ 203	3
CJ 108	3	CJ 201	3	CJ 206	4	CJ 208	4
ENGL 101	3	ENGL 102, 104 **or** 106	3	CJ 212	3	CJ 211	3
FYS Elective	1	Humanities/Arts Elective	3	Humanities & Arts **or** Social/Behavioral Science Elective	3	CJ 215	3
Mathematics Elective	3	Social/Behavioral Science Elective	3	Science w/ a Lab Elective	3	CJ 243	3
Wellness	1						

General Transfer Concentration

Fall Semester I		Spring Semester I		Fall Semester II		Spring Semester II	
CJ 101	3	CJ 104	3	COMM 101	3	CJ 106	3
CJ 108	3	ENGL 102. 104 **or** 106	3	CJ 212	3	CJ 211	3
ENGL 101	3	Humanities/Arts Elective	3	Humanities/Arts Elective **or** Social/Science Behavioral Elective	3	Transfer Electives	1
							1
FYS Elective	1	Social/Behavioral Science Elective	3	Science w/ a Lab Elective	3		
Mathematics Elective	3	Transfer Elective	3	Program Elective**	3		
Wellness	1						

CULINARY ARTS, Associate in Applied Science Degree - 1586

Business Studies Department

The Culinary Arts AAS program is designed to lead directly to employment as it provides students with instruction in food preparation, production and service in the classroom and in on-campus labs. Students gain supervised industry experience at multiple on- and off-campus commercial food and beverage operations that are both open to the public and involves both production and service rotations. This degree is accredited by the American Culinary Federation Education Foundation (ACFEF). Graduates with an ACF membership are awarded Certified Culinarian (C.C.). This program can only be completed at the Harrisburg Campus. All classes are available during the daytime. Some evening classes are available on a rotating basis.

Career Opportunities
Graduates obtain positions as chef, sous chef, and food production supervisor in restaurants, catering companies, hotels, resorts, or food service contract companies.

Competency Profile
This curriculum is designed to prepare students to:
- Apply industry sanitation and safety procedures
- Demonstrate foundational cooking techniques and knife skills
- Compose a complete meal including culinary and bakery items using standardized recipes
- Exhibit management skills in professionalism, employee relations, food and beverage service, menu design, food purchasing, inventory, and cost control
- Create working recipes based on developed flavor profiles, food costs, and nutritional values
- Demonstrate leadership and industry experience needed to be successful in a food and beverage operation

PROGRAM REQUIREMENTS (TOTAL CREDITS = 65)

General Education		Major Requirements		Other Required Courses	
ENGL 110 Foundations of Professional Writing	3	CULI 100 World of Wine	1	CIS 105 Intro to Software for Business	3
COMM 101 Effective Speaking **(or)**	3	CULI 102 Culinary Math	2		
COMM 203 Interpersonal Communication	(3)	CULI 107 Nutrition for Food Service	3		
Humanities & Arts Elective	3	CULI 110 Menu Design & Marketing	3		
Mathematics or Science Elective	3	CULI 113 Sanitation & Safety	2		
Social & Behavioral Sciences Elective	3	CULI 122 Food Purchasing	3		
First-Year-Seminar Elective – HTMT 101	3	CULI 125 Dining Room Management	3		
Wellness	1	CULI 133 Culinary Arts I*	5		
	19	CULI 143 Culinary Arts II*	5		
		CULI 153 Culinary Arts III*	5		
		CULI 205 Restaurant Operations I*	2		
		CULI 230 Cost Control: Food, Beverage & Labor	3		
		CULI 251 Hospitality Supervision	3		
		CULI 291 Culinary Arts Practicum	3		
			43		

**Indicates those courses that require a grade of C or higher*

RECOMMENDED SEQUENCE FOR FULL-TIME STUDENTS

Part-time students can complete this program by taking one or more courses each semester.

Fall Semester I		Spring Semester I		Summer I	
CULI 102	2	CULI 143*	5	CULI 153*	5
CULI 113	2	CULI 125	3		
CULI 133*	5	CULI 205*	2		
HTMT 101	3	ENGL 110	3		
		Wellness	1		
Fall Semester II		**Spring Semester II**		**Summer II**	
CIS 105	3	CULI 110	3	COMM 101 **or** 203	3
CULI 100	1	CULI 122	3	Math/Science Elective	3
CULI 107	3	CULI 251	3		
CULI 230	3	CULI 291	3		
Social/Behavioral Science Elective	3	Humanities/Arts Elective	3		

CULINARY ARTS CATERING, Certificate - 1261

Business Studies Department
CIP Code: 12.0503

The Culinary Arts Catering certificate is designed to lead directly to employment as it provides students with instruction in food preparation, catering principles, management skills, and service in the classroom and in on-campus labs. Students gain supervised industry experience at multiple-off campus commercial food and beverage operations that are open to the public that involve both production and service rotations. The Culinary Arts certificate is accredited by the Accrediting Commission of the American Culinary Federation Education Foundation (ACFEF). Graduates with an ACF membership are awarded Certified Culinarian (C.C.). This program can only be completed at the Harrisburg Campus. All classes are available during the daytime. Some evening classes are available on a rotating basis.

Career Opportunities
Job opportunities include positions as caterers, cooks in restaurants, institutions and cafeterias; bakers; and food preparation workers and servers. ***(SOC Code: 35-2014 Cooks, Restaurant)***

Competency Profile
This curriculum is designed to prepare students to:

- Apply industry sanitation and safety procedures
- Demonstrate foundational cooking techniques and knife skills
- Compose a complete meal including culinary and bakery items using standardized recipes
- Exhibit management skills in professionalism, employee relations, food and beverage service, catering principles, menu design, food purchasing, and inventory
- Create working recipes based on developed flavor profiles, food costs, and nutritional values

PROGRAM REQUIREMENTS (TOTAL CREDITS = 38)

General Education	Major Requirements		Other Required Courses	
	CULI 100 World of Wine	1	Program Elective**	2
	CULI 102 Culinary Math	2		
	CULI 106 Professional Bartending	1		
	CULI 107 Nutrition for Food Service	3		
	CULI 113 Sanitation & Safety	2		
	CULI 122 Food Purchasing	3		
	CULI 123 Catering: Principles, Garnish, Hors d'oeuvre	3		
	CULI 133 Culinary Arts I*	5		
	CULI 143 Culinary Arts II*	5		
	CULI 153 Culinary Arts III*	5		
	CULI 251 Hospitality Supervision	3		
	HTMT 101 Introduction to the Hospitality Industry	3		
		36		

**Students must receive a grade of C or higher in these courses.*
***Students are to select one course from the following: BUSI 101, 209; CULI 205 (recommended), 230; ENTR 101; MKTG 201, 205, 235; MGMT 201, 221.*

RECOMMENDED SEQUENCE FOR FULL-TIME STUDENTS

Part-time students can complete this program by taking one or more courses each semester.

Summer I		Fall Semester I		Spring Semester I		Summer II	
CULI 113	2	CULI 102	2	CULI 122	3	CULI 100	1
		CULI 107	3	CULI 143*	5	CULI 106	1
		CULI 123	3	CULI 251	3	CULI 153*	5
		CULI 133*	5	Program Elective**	2		
		HTMT 101	3				

DENTAL ASSISTING, Certificate - 3200

Health Careers Department
CIP Code: 51.0601

The Dental Assisting curriculum prepares individuals to assist the dentist in the delivery of dental treatments and to function as an integral member of the dental team while performing chairside and other related office and laboratory procedures. It is also designed to prepare students for employment as a dental assistant and to take the Dental Assisting National Board examination in order to achieve the Certified Dental Assistant (CDA) designation. Students are able to recognize the legal provisions that are pertinent to Pennsylvania Dental Law which regulate the functions a dental auxiliary may perform. Only those procedures legally permitted are taught to clinical competence. All other procedures are taught to laboratory competence. Students are able to spend a total of 320-hours working in a variety of dental office settings where they can be exposed to all aspects of the dental practice. To be eligible for the national examination, individuals must graduate from an accredited institution and have a current registration in CPR. The clinical program is only available at the Harrisburg Campus.

Selective Program: Entry into this program is not guaranteed with admission to the College; specific admissions criteria must be met. Please see the Health Careers website (www.hacc.edu/healthcareers), email at start@hacc.edu.

Career Opportunities
Graduates of the program find employment as chairside assistants in a variety of dental offices: examples include, general practice, orthodontics, periodontics, oral and maxillofacial surgery, pediatrics, and endodontics. Graduates may also secure positions in dental insurance, as a dental supply representative, and as a laboratory technician. ***(SOC Code: 31-9091 Dental Assistants)***

Competency Profile
This curriculum is designed to prepare students to:

- Accurately collect diagnostic and treatment data and record the information into a dental chart/record
- Effectively perform infection control and hazard control protocols
- Communicate professionally and effectively with patients, employers and colleagues
- Perform basic chairside skills needed in a general or specialty dental office
- Perform basic supportive, laboratory, and administrative procedures required for various dental environments
- Correctly expose, process, and mount radiographs
- Perform procedures within the legal and ethical frameworks of the dental assisting profession

PROGRAM REQUIREMENTS (TOTAL CREDITS = 39)

General Education		**Major Requirements**		**Other Required Courses**	
COMM 101 Effective Speaking	3	DA 170 Dental Assisting Pre-Clinic	4	BIOL 111 Intro to Human Biology **(or)**	3
		DA 171 Dental Assistant I	4	BIOL 121 Anatomy & Physiology I	(4)
		DA 172 Dental Materials	4		
		DA 173 Dental Radiology I	4		
		DA 175 Oral Anatomy	3		
		DA 177 Dental Sciences	3		
		DA 178 Dental Clinical Experience	4		
		DA 179 Clinical Dental Assisting	2		
		DA 180 Dental Office Practice	3		
		DA 181 Preventive Dentistry	2		
			33		

Note: A grade of C or higher is required for BIOL 111 or 121; COMM 101; and all of the DA courses.

RECOMMENDED SEQUENCE FOR FULL-TIME STUDENTS

Part-time students can complete this program by taking one or more courses each semester.

Fall Semester I		**Spring Semester I**	
BIOL 111 **or** 121	3 **or** 4	COMM 101	3
DA 170	4	DA 172	4
DA 171	4	DA 177	3
DA 173	4	DA 178	4
DA 175	3	DA 179	2
DA 181	2	DA 180	3

Graduates of this certificate can then enroll into the 320A – Expanded Function Dental Auxiliary (EFDA) program and complete additional coursework for a Certificate of Completion: DA 252 – Expanded Functions I (4 credits), DA 253 – Expanded Functions II (2-credits)

DENTAL HYGIENE, Associate in Science Degree - 3416

Health Careers Department

The Dental Hygiene AS program educates students, as members of the dental health team, to provide preventive dental services and oral health education to clients. The dental hygienist is qualified by education and licensure to provide patient assessment, including but not limited to, review of health history, recording of vital signs, head, neck, and radiographic examination, oral cancer screening, and dental and periodontal charting. Treatment planning, patient education, the administration of local anesthesia, the removal of deposits and stains from the teeth, and the application of chemotherapeutic agents and placement of dental sealants are also integral parts of dental hygiene education. The program is accredited by the Commission on Dental Accreditation (CoDA). The Commission is a specialized body recognized by the United States Department of Education. The clinical program is only available at the Harrisburg Campus. However, prerequisite courses to the clinical program may be taken at all of HACC's campuses, as well as through Virtual Learning. Pennsylvania Dental Law #216 states that the State Board of Dentistry may refuse to license a person whom has been convicted of a crime or misdemeanor involving moral turpitude or a felony. This program can only be completed at the Harrisburg Campus provided students take some of their coursework online through virtual learning.

Selective Program: Entry into this program is not guaranteed with admission to the College; this is a selective and competitive admission program; specific admissions criteria must be met. Please go to the Health Careers website (www.hacc.edu/healthcareers), or contact us by email at start@hacc.edu for specific program entry requirements***. Students must be aware that even though the program begins in Fall, they begin classes for this major during the Summer te***

Career Opportunities

Graduates are prepared for employment as dental hygienists to provide preventive dental services and oral health education in private offices and public health clinics.

Competency Profile

This curriculum is designed to prepare students to:

- Utilize the dental hygiene process of care (assessment, planning, implementation, and evaluation) in the provision of comprehensive treatment to all clients without discrimination
- Demonstrate accountability in dental hygiene practice
- Apply the roles of dental hygiene to various practice settings - demonstrating competence, ethical behaviors, and professionalism
- Participate as an integral member of the dental health team providing expertise in the area of preventive health care
- Perform to the level of competency specified by the faculty, the state board of dental examiners, employers, and those oral health services legally approved for a dental hygienist in the Commonwealth of Pennsylvania, and other states and territories
- Value a commitment to professional organizations and life-long learning

PROGRAM REQUIREMENTS (TOTAL CREDITS = 80)

General Education		**Major Requirements**		**Other Required Courses**	
ENGL 101 English Composition I	3	DH 110 Dental Radiology I	3	BIOL 122 Anatomy & Physiology II	4
ENGL 102 English Composition II	3	DH 111 Dental Radiology II	1	NUTR 104 Nutrition	3
COMM 101 Effective Speaking	3	DH 113 Clinical Experience II	2	PSYC 101 General Psychology	3
Humanities & Arts Elective	3	DH 116 Medical/Dental Emergencies & Theory	3		10
Mathematics Elective - MATH 103	3	DH 120 Dental Anatomy	2		
Math **or** Science Elective - BIOL 221	4	DH 150 Dental Materials	3		
Science w/ a Laboratory Elective - BIOL 121	4	DH 170 Techniques in Pain Control	2		
Social/Behavioral Sciences - SOCI 201	3	DH 180 Head & Neck Anatomy & Histology	3		
First-Year Seminar - DH 101	6	DH 190 Periodontics	3		
Wellness	1	DH 211 Dental Hygiene Theory III	3		
	33	DH 212 Clinical Experience III	2		
		DH 223 Dental Hygiene Theory IV	2		
		DH 224 Clinical Experience IV	2		
		DH 230 Oral Pathology	2		
		DH 235 Community Dental Health Education	2		
		DH 240 Pharmacology	2		
			37		

Note: A grade of C or higher is required for all BIOL and DH courses; ENGL 101 and 102; NUTR 104; COMM 101; PSYC 101; SOCI 201.

RECOMMENDED SEQUENCE FOR FULL-TIME STUDENTS

Part time students can complete this program by taking one or more courses each semester.

Summer I		**Fall Semester I**		**Spring Semester I**	
BIOL 121	4	BIOL 122	4	COMM 101	3
BIOL 221	4	DH 101	6	DH 111	1
ENGL 101	3	DH 110	3	DH 113	2
		DH 120	2	DH 116	3
		DH 180	3	DH 150	3
				DH 190	3

Summer II		**Fall Semester II**		**Spring Semester II**	
DH 170	2	DH 211	3	DH 223	2
DH 240	2	DH 212	2	DH 224	2
MATH 103	3	DH 230	2	DH 235	2
Wellness	1	NUTR 104	3	ENGL 102	3
		SOCI 201	3	Humanities/Arts Elective	3
				PSYC 101	3

DIAGNOSTIC MEDICAL SONOGRAPHY, Associate in Applied Science Degree - 3426

Health Careers Department

The Diagnostic Medical Sonography AAS program prepares students as entry-level Diagnostic Medical Sonographers in the Abdominal Sonography-Extended and Obstetrics and Gynecology Sonography areas of study. Students are educationally prepared and clinically competent as a prerequisite to enter professional practice. Graduates of this program are able to provide patient care services using ultrasound and related diagnostic procedures. This program is offered in cooperation with affiliated hospitals and medical imaging centers; the College provides classroom and lab instruction, while the hospitals and imaging centers provide the clinical instruction. The program is accredited by the Commission on Accreditation of Allied Health Education Programs (CAAHEP), 9355-113th St. N, #7709, Seminole, FL 33775, (727) 210-2350, www.caahep.org, upon the recommendation of the Joint Review Committee on Education in Diagnostic Medical Sonography (JRC-DMS), 6021 University Boulevard, Suite #500, Ellicott City, MD 21043, (443) 973-3251, www.jrcdms.org. This program can only be completed at the Harrisburg Campus. Clinical rotations at imaging sites may be located within an 85-mile radius from the Harrisburg Campus.

Selective Program: Entry into this program is not guaranteed with admission to the College; this is a selective and competitive admission program; specific admissions criteria must be met. ***Students must be aware that even though the program begins in the Fall semester, coursework can be completed during the preceding Summer semester.*** Please go to the Health Careers website (www.hacc.edu/healthcareers), or email at start@hacc.edu for specific program entry requirements

The following requirements must be completed (at the student's expense) after being selected for, but prior to starting the clinical portion of the program and after the first year in the program. Requirements include physical examination and immunizations, background checks, drug and alcohol screens and CPR certification. The student should consider these factors before enrolling. If the student has any questions regarding this, he or she should contact the program director.

Career Opportunities
Graduates find employment as sonographers in hospital ultrasound departments and independent medical imaging centers.

Competency Profile
This curriculum is designed to prepare students to:

- Perform as competent entry level diagnostic medical sonographers in the cognitive (knowledge), psychomotor (skills) and affective (behavior) learning domains for the Abdominal Sonography-Extended and Obstetrics and Gynecology Sonography learning concentrations
- Utilize oral and written communication
- Demonstrate knowledge and application of ergonomic techniques, infection control, and patient care
- Demonstrate knowledge of the roles and responsibilities of health care professions to effectively communicate and collaborate with a diverse population in the health care environment
- Demonstrate knowledge and understanding of anatomy, relational anatomy, anatomic variants, sonographic appearance, physiology, pathology and pathophysiology of the abdomen, superficial structures, gravid and nongravid pelvis
- Demonstrate knowledge and application of image production, optimization and biological effects.
- Perform sonographic examinations of the abdomen, superficial structures, gravid and non-gravid pelvis with both transabdominal and endocavity transducers and Doppler/M mode display modes according to practice parameters established by national professional organizations and the protocols of the clinical affiliates
- Recognize, identify and document the sonographic appearance of normal and abnormal structures and processes of the abdomen, superficial structures, gravid and nongravid pelvis

PROGRAM REQUIREMENTS (TOTAL CREDITS = 69)

General Education		Major Requirements		Other Required Courses	
ENGL 101 English Composition I	3	DMS 105 Introduction to Health Care	4	BIOL 111 Introduction to Human Biology	3
COMM 101 Effective Speaking (**or**)	3	DMS 110 Introduction to DMS	4	PHYS 161 Physics for Imaging	3
COMM 203 Interpersonal Communication	(3)	DMS 115 Clinical Experience I	2		6
Humanities & Arts Electives	3	DMS 120 DMS Lab I	1		
Math **or** Science Elective - MATH 103	3	DMS 125 Clinical Experience II	3		
Social & Behavioral Science Elective	3	DMS 130 Abdominal Sonography	4		
First-Year Seminar Elective	1	DMS 140 DMS Lab II	1		
Wellness	1	DMS 150 OB/GYN Sonography I	3		
	17	DMS 170 Acoustical Principles I	4		
		DMS 180 High Resolution Sonography	1		
		DMS 210 Vascular Sonography	1		
		DMS 215 Clinical Experience III	4		
		DMS 220 DMS Lab III	1		
		DMS 225 Clinical Experience IV	4		
		DMS 240 DMS Lab IV	1		
		DMS 250 OB/GYN Sonography II	3		
		DMS 270 Acoustical Principles II	2		
		DMS 274 DMS Topics	3		
			46		

Note: A grade of C or higher is required for all BIOL; DMS; MATH; and PHYS courses; ENGL 101 and COMM 101 or 203.

RECOMMENDED SEQUENCE FOR FULL-TIME STUDENTS

Part time students can complete this program by taking one or more courses each semester.

Summer I		Fall Semester I		Spring Semester I		Summer II		Fall Semester II		Spring Semester II	
BIOL 111	3	COMM 101 **or** 203	3	DMS 115	2	DMS 125	3	DMS 215	4	DMS 225	4
ENGL 101	3	DMS 105	4	DMS 120	1	DMS 140	1	DMS 220	1	DMS 240	1
MATH 103	3	DMS 110	4	DMS 130	4	DMS 180	1	DMS 250	3	DMS 274	3
		FYS Elective	1	DMS 150	3	DMS 210	1	DMS 270	2	Social/Behavioral Science Elective	3
		PHYS 161	3	DMS 170	4			Humanities/Arts Elective	3	Wellness	1

EARLY CHILDHOOD - ELEMENTARY EDUCATION, Associate in Arts Degree - 5070

Social Science Department

The Early Childhood-Elementary Education AA program prepares students to transfer to four-year colleges/universities in order to obtain teaching certification in PreK-4th Grade. This curriculum provides students the opportunity to spend a minimum of 66-hours of field experience working in a variety of childcare and educational settings.

The following must be completed (at the student's expense) prior to enrolling in EDUC 110: FBI Clearance, ACT 151: PA Child Abuse History Clearance, ACT 34: Request for Criminal Record Check - PA State Police and TB testing. The student should consider these factors before enrolling. If the student has any questions regarding this, he or she should contact the program director.

Additionally, students intending to transfer must have a 3.0 GPA in order to enter the professional-level course work, leading to teacher certification, at baccalaureate degree-granting institutions. Additional requirements are needed to transfer, it is recommended that students speak to their advisor to learn more about this information. Since the requirements of four-year colleges/universities vary widely, it is essential to choose an intended transfer institution as soon as possible and carefully follow the program described in that college's catalog. The complete program is available at the Harrisburg, Lancaster and York campuses.

Transfer Opportunities
This transfer curriculum is provided as a guide for students planning to transfer to a baccalaureate degree granting institution for teaching certification. Program-to-Program articulation agreements are in place with the State System of Higher Education Schools, which allows students to transfer 30-credits of general education courses. This curriculum also supports opportunities for students to take electives that aid in their pursuit of the Early Childhood-Elementary/Special Education Dual certificate.

Competency Profile
In conjunction with National Association for the Education of Young Children's (NAEYC) Standards, this curriculum is designed to prepare students to:

- Apply the theories of child development in order to promote healthy and challenging learning environments
- Observe and assess children's development and document their learning in order to develop appropriate curriculum and promote positive outcomes for each child
- Use content knowledge to build meaningful curriculum
- Use effective strategies to implement developmentally-appropriate teaching and learning
- Support and involve families and communities in their children's development and learning
- Uphold national standards for professionalism and ethics as well as participate in continuous professional growth
- Use legal and ethical standards to locate professional literature in print and/or electronic format in order to make research-based decisions that inform teaching practices
- Prepare and maintain an electronic portfolio that documents personal growth as well as scholastic and professional achievement throughout the course of the teacher preparation program from entry point class to job search

PROGRAM REQUIREMENTS (TOTAL CREDITS = 62)

General Education		Major Requirements		Other Required Courses	
ENGL 101 English Composition I	3	EDUC 210 Exceptional Learners	3	MATH 114 Principles of Math for Elementary Teachers II	3
ENGL 102 English Composition II	3	EDUC 265 Integrating Technology & STEM in PK – 4th Grades	3	Education Electives**	9
COMM 101 Effective Speaking	3	EDUC 270 Foundations of Early Literacy	3	Transfer Electives***	9
Humanities & Arts Elective*	3	PSYC 212 Child Growth & Development (or)	3		21
Humanities & Arts Elective **or** Social & Behavioral Science Elective	3	EDUC 185 Development & Behavior in Children	(3)		
Mathematics Elective - MATH 113	3		12		
Science w/ a Laboratory Elective	3				
Social & Behavioral Science Elective - PSYC 101	3				
First-Year Seminar Elective - EDUC 110	4				
Wellness	1				
	29				

Note: *A grade of C or higher is required for all courses in this program.*
**Students select from the following courses: ENGL 201, 202, 203, 204 or 207.*
***Students select either EDUC 120, 180, 261 or 111, 190 and 209 based upon the requirements of their transfer institution and the Early Childhood-Elementary Education or the Early Childhood-Elementary Education/Special Education Dual Certificate Program choice.*

****Transfer electives must be in consultation with an advisor, based upon the requirements of the transfer institution and the Early Childhood-Elementary Education or the Early Childhood-Elementary Education/Special Education Dual Certificate.*

RECOMMENDED SEQUENCE FOR FULL-TIME STUDENTS

Part-time students can complete this program by taking one or more courses each semester.

Fall Semester I		**Spring Semester I**		**Fall Semester II**		**Spring Semester II**	
COMM 101	3	EDUC 185 **or** PSYC 212	3	EDUC 270	3	EDUC 210	3
EDUC 110	4	EDUC 265	3	Education Electives**	6	Humanities/Arts Elective*	3
ENGL 101	3	Education Elective**	3	Science w/ a Lab	3	MATH 114	3
PSYC 101	3	ENGL 102	3	Transfer Elective***	3	Transfer Electives***	6
MATH 113	3	Humanities/Arts **or** Social/Behavioral Science	3	Wellness	1		

EARLY CARE AND EDUCATION, Associate in Applied Science Degree - 5506

Social Science Department

Graduates of the Early Care and Education AAS program are prepared to enter the workforce to care for and educate children ages birth – nine years within a variety of inclusive care and education programs. The following must be completed (at the student's expense) prior to enrolling in EDUC 110 or EDUC 111. They are also requirements for continuation in the program and field placements. Clearances will need to be updated every year per school district requirements. Requirements include three clearances (FBI Clearance, ACT 151: PA Child Abuse History Clearance, ACT 34: Request for Criminal Record Check - PA State Police) and TB testing. The student should consider these factors before enrolling. If the student has any questions regarding this, he or she should contact the program director. Students looking to obtain a Pennsylvania teaching certificate must first obtain a baccalaureate degree in order to become eligible to pursue that certification. This program can be completed at the Harrisburg, Lancaster and York campuses.

Career Opportunities
Graduates are prepared to enter the childcare workforce on Level V of the Office of Child Development and Early Learning (OCDEL) career lattice.

Competency Profile
In conjunction with National Association for the Education of Young Children's (NAEYC) standards, this curriculum is designed to prepare students to:

- Use the theories and principles of child development in order to promote healthy and challenging learning environments
- Observe and assess children's development and document their learning in order to develop appropriate curriculum and promote positive outcomes for each child
- Use content knowledge to build meaningful curriculum
- Use effective strategies to implement developmentally-appropriate teaching and learning
- Support and involve families and communities in their children's development and learning
- Practice the national standards for professionalism and ethics as well as participate in continuous professional growth
- Use legal and ethical standards to locate professional literature in print and/or electronic format in order to make research-based decisions that inform teaching practices
- Prepare and maintain an electronic portfolio that documents personal growth as well as scholastic and professional achievement throughout the course of the teaching preparation program from entry-point class to job search
- Appreciate accomplishments in the arts and sciences

PROGRAM REQUIREMENTS (TOTAL CREDITS = 60)

General Education		Major Requirements		Other Required Courses
ENGL 101 English Composition I	3	EDUC 120 Observation & Assessment of Young Children	3	
COMM 101 Effective Speaking	3	EDUC 135 Health, Safety & Nutrition	3	
Humanities & Arts Elective	3	EDUC 140 Integrating the Arts & Play as Educative Process	3	
Mathematics **or** Science Elective	3	EDUC 145 Infant & Toddler Care & Education	3	
Social & Behavioral Science Elective - PSYC 101	3	EDUC 180 Diversity & Partnerships in Family, Schools & Community	3	
First-Year-Seminar Elective - EDUC 111	4	EDUC 185 Development & Behavior in Children	3	
Wellness	1	EDUC 211 Early Intervention: Exceptional Children	3	
	20	EDUC 221 Math & Science: Birth Through Kindergarten	3	
		EDUC 235 STEM for the Young Learner	3	
		EDUC 260 Social Studies for the Young Learner	3	
		EDUC 261 Integrating Curriculum in Early Childhood Classrooms	3	
		EDUC 271 Early Literacy: Birth Through Kindergarten	3	
		EDUC 291 Early Care & Education Practicum	4	
			40	

RECOMMENDED SEQUENCE FOR FULL-TIME STUDENTS

Part-time students can complete this program by taking one or more courses each semester.

Fall Semester I		Spring Semester I		Fall Semester II		Spring Semester II	
EDUC 111	4	EDUC 120	3	EDUC 135	3	EDUC 180	3
EDUC 185	3	EDUC 140	3	EDUC 145	3	EDUC 235	3
ENGL 101	3	EDUC 211	3	EDUC 261	3	EDUC 291	4
PSYC 101	3	EDUC 221	3	EDUC 271	3	Humanities/Arts Elective	3
Wellness	1	EDUC 260	3	COMM 101	3	Math/Science Elective	3

EARLY CHILDHOOD CARE AND EDUCATION, Certificate - 5170

Social Science Department
CIP Code: 13.1210

The Early Childhood Care and Education certificate prepares graduates to enter the workforce at the career lattice level IV as determined by the Office of Child Development and Early Learning (OCDEL) This lattice encourages practitioners to obtain credentials and degrees, as well as plan their educational pathway. This curriculum provides students the opportunity to spend approximately 46-hours of field experience working in a variety of childcare settings. This certificate also provides those students interested in obtaining the Infant and Toddler credential may select specific courses within the open electives that will aid them in obtaining this goal.

The following must be completed (at the student's expense) prior to enrolling in EDUC 111. FBI Clearance, ACT 151: PA Child Abuse History Clearance, ACT 34: Request for Criminal Record Check - PA State Police and TB testing. The student should consider these factors before enrolling. If the student has any questions regarding this, he or she should contact the program director. This program can be completed at the Harrisburg, Lancaster and York campuses.

Career Opportunities
As defined by the OCDEL career lattice at Level IV, graduates can obtain employment in Child Care/School Age Care Programs as Aides/Family Child Care Providers, Assistant Teachers, or Assistant Group Supervisors; in Early Head Start/Head Start Programs as Assistant Teachers/Aides, or Teacher/Home Visitors; in Public School Districts as Assistant Teachers (Para-professional); or in Private Academic Schools as Aides. ***(SOC Code: 25-2011 Preschool Teachers)***

Competency Profile
In conjunction with National Association for the Education of Young Children's (NAEYC) Standards, this curriculum is designed to prepare students to:

- Apply the theories of child development in order to promote healthy and challenging learning environments
- Observe and assess children's development and document their learning in order to assist in the delivery of appropriate curriculum and promote positive outcomes for each child
- Use content knowledge to recognize meaningful curriculum
- Use effective strategies to implement developmentally-appropriate teaching and learning
- Assist the lead teacher in supporting and involving families and communities in their child's development and learning
- Uphold national standards for professionalism and ethics as well as participate in continuous professional growth

PROGRAM REQUIREMENTS (TOTAL CREDITS = 31)

General Education	Major Requirements		Other Required Courses
	EDUC 111 Fundamentals of Early Childhood Care & Education	4	
	EDUC 120 Observation & Assessment of the Young Child	3	
	EDUC 135 Health, Safety & Nutrition in ECE	3	
	EDUC 140 Integrating the Arts & Play as Educative Process	3	
	EDUC 145 Infant & Toddler Care & Education	3	
	EDUC 185 Development & Behavior in Children	3	
	EDUC 211 Early Childhood Inclusion	3	
	EDUC 221 Math & Science: Birth Through Kindergarten	3	
	*Open Electives	6	
		31	

**Choose from the following courses: EDUC 113, 117, 175, 235, 260, 271, 275, 295, and 296.*

RECOMMENDED SEQUENCE FOR FULL-TIME STUDENTS

Part-time students can complete this program by taking one or more courses each semester.

Fall Semester I		Spring Semester I	
EDUC 111	4	EDUC 120	3
EDUC 135	3	EDUC 145	3
EDUC 140	3	EDUC 211	3
EDUC 185	3	EDUC 221	3
Open Elective*	3	Open Elective*	3

ELECTRICAL TECHNOLOGY, Associate in Applied Science Degree - 4750

Engineering, Trades & Computer Technologies Department

The Electrical Technology AAS Degree prepares students with the knowledge and skills needed for employment and advancement in the electrical field. Emphasis is placed on residential and commercial construction and maintenance applications. Curriculum coursework covers basic electrical theory, residential and commercial wiring, safety, the National Electrical Code, and blueprint reading. Students gain hands-on experience through laboratory exercises in the operation of electrical systems through fusion-splicing, mock wiring of commercial and residential systems. This program can be completed at the Harrisburg Campus. Students can attend full time or part time.

Career Opportunities
Graduates find employment as general electricians, residential service technicians, commercial service technicians, electrical-equipment repair technicians, electrical system installers, maintenance technicians, work-team supervisors, electrical estimators, electrical system designers, and renewable energy technicians.

Competency Profile
This curriculum is designed to prepare students to:

- Demonstrate a variety of technical skills in the electrical field
- Recognize and practice safe and healthy work procedures
- Perform basic electrical mathematical calculations
- Properly and safely handle electrical tools and materials
- Read and interpret blueprints necessary for specified installations
- Interpret the National Electric Code and use it in specific applications
- Demonstrate procedures used in residential, commercial, and industrial electrical construction
- Wire complex motor and control circuits
- Install, maintain, and repair automated electrical systems
- Solve complex problems of circuit design and analysis
- Troubleshoot equipment and demonstrate proper repair procedures

PROGRAM REQUIREMENTS (TOTAL CREDITS = 60)

General Education		Major Requirements		Other Required Courses	
ENGL 110 Foundations of Professional Writing	3	ELOC 153 Fundamentals of Electricity	4	Program Electives**	13
COMM 101 Effective Speaking **(or)**	3	ELOC 157 Electrical Wiring I	4		
COMM 203 Interpersonal Communication	(3)	ELOC 163 Electrical Wiring II	4		
Humanities & Arts Elective	3	ELOC 169 Low Voltage Cabling	3		
Mathematics or Science Elective	3	ELOC 171 Electrical Service	2		
Social & Behavioral Sciences Elective*	3	ELOC 172 National Electrical Code	2		
First-Year Seminar Elective	1	ELOC 175 Electrical System Troubleshooting	3		
Wellness	1	GTEC 101 Safety: OSHA-30 & NFPA-70E	3		
	17	GTEC 105 Customer Service	1		
		IA 201 Motors and Controls	4		
			30		

**Students select from the following: ANTH 101, 205; COMM 253; GEOG 201, 230; HIST 102; PSYC 229; SOCI 201, 202, 203 or 205.*
***Students select two courses from the following disciplines: ELOC, GTEC, HVAC, IA, WELD or INTN 291.*

RECOMMENDED SEQUENCE FOR FULL-TIME STUDENTS

Part time students can complete this program by taking one or more courses each semester.

Fall Semester I		Spring Semester I		Fall Semester II		Spring Semester II	
ELOC 153	4	ELOC 157	4	COMM 101**or** 203	3	ELOC 175	3
ELOC 172	2	ELOC 163	4	ELOC 171	2	IA 201	4
ENGL110	3	ELOC 169	3	Humanities/Arts Elective	3	Math/Science Elective	3
FYS Elective	1	Program Electives**	5	Program Electives**	8	Social/Behavioral Science Elective*	3
GTEC 101	3					Wellness	1
GTEC 105	1						

ELECTRICAL TECHNOLOGY, Certificate - 4370

Engineering, Trades & Computer Technologies Department
CIP Code: 46.0302

The Electrical Technology certificate provides students with the fundamental knowledge and skills needed within the electrical field. Residential, commercial construction, and maintenance applications and presented. Curricular coursework covers basic electrical theory, residential and commercial wiring, safety, the National Electrical Code, and blueprint reading. Students are exposed to the fundamentals of electrical systems through hands-on laboratory exercises that involve mock wiring of commercial and residential systems. This program can only be completed at the Harrisburg Campus. Students can attend full-time or part-time.

Career Opportunities
Graduates find employment as general electricians, electrician apprentices, residential electricians, electrical service technicians, electric linemen, electric installers, and industrial maintenance technicians. ***(SOC Code: 47-2111 Electricians)***

Competency Profile
This curriculum is designed to prepare students to:

- Demonstrate a variety of technical skills in the electrical field
- Recognize and practice safe and healthy work procedures
- Perform basic electrical mathematical calculations
- Properly and safely handle electrical tools and materials
- Read and interpret blueprints necessary for specified installations
- Interpret the National Electric Code and use it in specific applications
- Demonstrate fundamental procedures of an electrical system used in residential, commercial, and industrial construction
- Solve complex problems of circuit design and analysis

PROGRAM REQUIREMENTS (TOTAL CREDITS = 30)

General Education	Major Requirements		Other Required Courses
	ELOC 153 Fundamentals of Electricity	4	
	ELOC 157 Electrical Wiring I	4	
	ELOC 163 Electrical Wiring II	4	
	ELOC 169 Low Voltage Wiring	3	
	ELOC 171 Electrical Service	2	
	ELOC 172 National Electrical Code	2	
	ELOC 175 Electrical System Troubleshooting	3	
	GTEC 101 Safety: OSHA-30 & NFPA-70E	3	
	GTEC 105 Customer Service	1	
	IA 201 Motors and Controls	4	
		30	

RECOMMENDED SEQUENCE FOR FULL-TIME STUDENTS

Part time students can complete this program by taking one or more courses each semester.

Fall Semester I		Spring Semester I	
ELOC 153	4	ELOC 163	4
ELOC 157	4	ELOC 169	3
ELOC 172	2	ELOC 171	2
GTEC 101	3	ELOC 175	3
GTEC 105	1	IA 201	4

ELECTRONIC ENGINEERING TECHNOLOGY, Associate in Science Degree - 4580

Engineering, Trades & Computer Technologies Department

The Electronic Engineering Technology AS Program prepares students to enter the job market in entry-level positions working with a variety of electronic systems in digital electronics, automation and power. Graduates are expected to qualify as electronics technicians and aides to Engineers. Students are able to complete the construction of a variety of electronic circuits involving semiconductors, programming, AC signals and various circuit designs. The complete program is only available on the Harrisburg Campus.

Career Opportunities

Graduates of the program enter the electrical or electronic job market as high-level service technicians. They assist the engineering staff in the design, construction, and testing of prototype equipment manufactured in today's advanced technologies.

Competency Profile

This curriculum is designed to prepare students to:

- Assist in the design and development of new devices
- Install, operate, service, and maintain complex electrical and electronic equipment
- Prepare reports, specifications, and manuals under the direction of scientists and engineers
- Identify global and ethical engineering issues

PROGRAM REQUIREMENTS (TOTAL CREDITS = 60)

General Education		Major Requirements		Other Required Courses	
ENGL 101 English Composition I	3	CAD 154 Computer-Aided Drafting & Design	3	CPS 121 Intro to Computer Programming – JAVA	3
ENGL 104 Technical Writing	3	ELEC 100 Fundamentals of Electricity and Electronics	1		
COMM 101 Effective Speaking	3	ELEC 106 Fundamentals of Electronics	3		
Humanities & Arts Elective	3	ELEC 111 AC/DC Circuits I	4		
Mathematics Elective - MATH 103 **or** 116	3 **or (4)**	ELEC 203 Electronic Circuit Design	4		
Mathematics **or** Science Elective - MATH 104	3	ELEC 211 AC/DC Circuits II	4		
Science w/ a Laboratory Elective (Rec: PHYS 201)	3	ELEC 213 Digital Electronics	4		
Social & Behavioral Science Elective	3	ELEC 220 Microprocessors & Embedded Sys	4		
First-Year Seminar Elective - ENGR 102	2	ENGR 208 Microcontrollers & PLCs	3		
Wellness	1		30		
	27				

RECOMMENDED SEQUENCE FOR FULL-TIME STUDENTS

Part-time students can complete this program by taking one or more courses each semester.

Fall Semester I		Spring Semester I		Fall Semester II		Spring Semester II	
CAD 154	3	ELEC 111	4	CPS 121	3	COMM 101	3
ELEC 100	1	ENGL 104	3	ELEC 106	3	ELEC 203	4
ENGL 101	3	ENGR 208	3	ELEC 211	4	ELEC 220	4
ENGR 102	2	MATH 104	3	ELEC 213	4	Science w/ a Lab	3
Humanities/Arts Elective	3	Social/Behavioral Science Elective	3	Wellness	1		
MATH 103 **or** 116	3 **or** 4						

SUGGESTED ADDITIONAL SEQUENCE FOR STUDENTS TRANSFERRING TO A BSEET PROGRAM

Fall Semester III for transfer students		Spring Semester III for transfer students	
CHEM 101 (Inorganic Chemistry)	4	Transfer Electives*	6
Transfer Elective*	3	MATH 121 (Calculus I)	4
MATH 119 (Pre-Calculus, 12 Week Session)	4	PHYS 202 (General Physics II)	4
PHYS 201 (General Physics I)	4	Wellness (PSU Only)	1
Wellness (PSU Only)	1	Total Credits	15
Total Credits	16		

Students are to select courses for their intended transfer institution.

ENGINEERING, Associate in Science Degree - 4120

Engineering, Trades & Computer Technologies Department

The Engineering AS program prepares students to continue their study towards a baccalaureate degree in engineering at a four-year institution. This curriculum places emphasis on mathematics and its application in the sciences; only students of high academic potential who have demonstrated excellence in mathematics should consider this major. Since the requirements of senior institutions vary widely, it is essential to choose an intended transfer institution as soon as possible and carefully follow the program described in that college's catalog. The complete program is only available at the Harrisburg Campus.

Transfer Opportunities

This transfer curriculum is provided as a guide for students planning to transfer to a baccalaureate degree granting institution. Engineers are employed in research and development, design, manufacturing, consulting, teaching, and administration in such areas as aerospace, agriculture, ceramics, chemicals, electrical and mechanical devices, metallurgy, and mining.

Competency Profile

This curriculum is designed to prepare students to:

- Identify personal transfer plans
- Effectively operate a solid modeling system
- Examine engineering disciplines
- Analyze static structures using calculus
- Solve engineering problems
- Analyze dynamic problems using calculus
- Identify global and ethical engineering issues

PROGRAM REQUIREMENTS (TOTAL CREDITS = 60)

General Education		Major Requirements		Other Required Courses	
ENGL 101 English Composition I	3	CAD 154 Computer-Aided Drafting & Design	3	Transfer Electives	9
ENGL 104 Technical Writing	3	ENGR 213 Statics	3		
COMM 101 Effective Speaking	3	ENGR 214 Dynamics	3		
Humanities & Arts Elective	3	MATH 221 Calculus III **(or)**	4		
Mathematics Elective - MATH 121	4	MATH 222 Differential Equations	(4)		
Mathematics **or** Science Elective - MATH 122	4	PHYS 211 Physics for Engineers & Scientists I	4		
Science w/ a Laboratory Elective - CHEM 101	4	PHYS 212 Physics for Engineers & Scientists II	4		
Social & Behavioral Science Elective	3		21		
First-Year Seminar Elective - ENGR 102	2				
Wellness	1				
	30				

RECOMMENDED SEQUENCE FOR FULL-TIME STUDENTS

Part-time students can complete this program by taking one or more courses each semester.

Fall Semester I		Spring Semester I		Fall Semester II		Spring Semester II	
CAD 154	3	COMM 101	3	ENGR 213	3	ENGR 214	3
CHEM 101	4	ENGL 104	3	MATH 221 **or** 222	4	Humanities/Arts Elective	3
ENGL 101	3	MATH 122	4	PHYS 211	4	PHYS 212	4
ENGR 102	2	Transfer Elective	3	Transfer Elective	3	Transfer Elective	3
MATH 121	4	Social/Behavioral Science Elective	3	Wellness	1		

ENGLISH, Associate in Arts Degree - 2076

Communication, Humanities and the Arts Department

The English AA program is designed for students who plan to seek a four-year degree specializing in English or English Education. This program provides students with courses in literary criticism and literature - the core of many four-year English majors. It is also structured to provide students with the opportunity to select 6-credits of specific electives from within the English discipline, as well as 15-credits in Transfer Electives. These electives are designed to allow students the ability to select coursework that complements their study of literature and augment their understanding of literary context, as well as help to fulfill any requirements needed from their chosen transfer institution. Because institutional requirements vary, however, students should choose an intended transfer institution as soon as possible and carefully follow the program described in that institution's college catalog. This program can be completed at all of HACC's campuses, as well as online through virtual learning.

Transfer Opportunities
This transfer curriculum is provided as a guide for students planning to transfer to a baccalaureate degree granting institution in English or English Education.

Competency Profile
This curriculum is designed to prepare students to:

- Analyze literary texts across a variety of time periods and genres
- Write arguments that demonstrate advanced thought, diction, and style
- Locate, evaluate, document, and use scholarly resources in the literature discipline
- Analyze, interpret, and critique literature within the context of cultures across the globe
- Apply literary theory to the interpretation of literary texts

PROGRAM REQUIREMENTS (TOTAL CREDITS = 62)

General Education		**Major Requirements**		**Other Required Courses**	
ENGL 101 English Composition I	3	ENGL 201 British Literature I **(or)**	3	ENGL Electives*	6
ENGL 102 English Composition II	3	ENGL 202 British Literature II	(3)	Transfer Electives	15
COMM 101 Effective Speaking	3	ENGL 203 American Literature I **(or)**	3		21
Humanities & Arts Elective	3	ENGL 204 American Literature II	(3)		
Humanities & Arts Elective **(or)**	3	ENGL 205 World Literature I **(or)**	3		
Social & Behavioral Science Elective	(3)	ENGL 206 World Literature II	(3)		
Mathematics Elective	3	ENGL 207 Introduction to Literature	3		
Science w/ a Laboratory Elective	3	ENGL 208 Introduction to Literary Theory	3		
Social/Behavioral Science Elective	3		15		
First-Year Seminar Elective	1				
Wellness	1				
	26				

**Select English electives, excluding ENGL 101, 102 and 110.*

RECOMMENDED SEQUENCE FOR FULL-TIME STUDENTS

Part-time students can complete this program by taking one or more courses each semester.

Fall Semester I		**Spring Semester I**		**Fall Semester II**		**Spring Semester II**	
COMM 101	3	ENGL 102	3	ENGL 201 **or** 202	3	ENGL 205 **or** 206	3
ENGL 101	3	ENGL Elective*	3	ENGL 203 **or** 204	3	ENGL 208	3
ENGL 207	3	Humanities/Arts **or** Social/Behavioral Science Elective	3	ENGL Elective*	3	Transfer Electives	9
FYS Elective	1	Science w/ a Lab Elective	3	Social/Behavioral Science Elective	3		
Humanities/Arts Elective	3	Transfer Elective	3	Transfer Elective	3		
Mathematics Elective	3			Wellness	1		

ENTREPRENEURSHIP, Diploma - 0276

Business Studies Department

The Entrepreneurship diploma program is designed to prepare students to understand the role that entrepreneurship plays in a diverse world from personal self-assessment through the creation and presentation of a feasibility study. Students acquire the knowledge and skills to become an entrepreneur in a start-up business, existing business, government or a non-profit organization. Skills developed in marketing, management and finance lead to the creation of a sound business plan. This diploma offers students the opportunity to choose one program elective in a focused area. The diploma may only be completed online through virtual learning.

Career Opportunities
Entrepreneurial graduates enter the workforce are prepared to execute a start-up plan or expand their own business or enter into a government enterprise or non-profit organization.

Competency Profile
This curriculum is designed to prepare students to:

- Identify various ways that entrepreneurship can provide opportunities for navigating the business environment in the 21st century
- Recognize problems as opportunities that lead to innovative solutions
- Investigate business practices and opportunities, which promote sustainability in the global community
- Identify societal changes and their impact on business through the lens of inclusion and diversity in entrepreneurial endeavors
- Evaluate basic financial information for business decision making
- Create a comprehensive business plan

PROGRAM REQUIREMENTS (TOTAL CREDITS =16)

General Education	Major Requirements		Other Required Courses	
	ACCT 150 Principles of Financial Accounting	2	Program Specific Elective*	3
	ACCT 160 Principles of Managerial Accounting	2		
	ENTR 101 Entrepreneurial Thinking	3		
	ENTR 221 Entrepreneurial Planning	3		
	MKTG 235 Digital Media Marketing	3		
		13		

**Students are to select their program specific elective course from the following: BUSI 209; MGMT 203, 204, 227; MKTG 212, 218.*

RECOMMENDED SEQUENCE FOR FULL-TIME STUDENTS

Part-time students can complete this program by taking one or more courses each semester.

Fall Semester I	
ACCT 150	2
ACCT 160	2
ENTR 101	3
ENTR 221	3
MKTG 235	3
Program Elective*	3

ENVIRONMENTAL SCIENCE Associate in Science Degree - 3046

Science Department

The Environmental Science AS program provides students with a firm foundation in mathematics, science and liberal arts needed for transfer to and succeed in a baccalaureate degree program in environmental science, policy, resource management, sustainability, conservation, waste management and natural sciences. Students can focus on sub-disciplines such as education, biology, ecology, chemistry, geology, earth science, engineering, or public health, depending upon the transfer institution of their choice. This curriculum offers Biology and Geoscience concentrations for students to select. Since the requirements of senior institutions vary widely, it is essential to choose an intended transfer institution as soon as possible and carefully follow the program described in that college's catalog. Students who complete HACC's Environmental Science AS degree are admitted at the Junior-level in a related Environmental Science degree at any institution participating in Pennsylvania's statewide college credit transfer system. This program can only be completed at the Harrisburg Campus provided students take some of their coursework online through virtual learning.

Career or Transfer Opportunities

This transfer curriculum is provided to students to be used as a guide for planning to transfer to a baccalaureate degree granting institution. Students may continue their education in preparation for careers as diverse as sustainability, sustainable resource management, land use or watershed planning, pollution prevention, waste management, environmental monitoring and clean up, air quality, environmental education, water resources and waste water, conservation, public and environmental health, wetlands protection, ecology, natural resource management, regulatory affairs and compliance, parks and recreation management, or within research and development, inspection, testing and quality control. Employers can include federal, state and local government, corporations, consulting firms and nonprofit organizations.

Competency Profile

Upon successful completion of the program, the student will be able to:

- Effectively communicate scientific information both orally and through written reports and presentations
- Apply the scientific method via data collection and analysis to evaluate scientific problems
- Evaluate scientific principles and sustainability as they relate to the discipline
- Demonstrate the proper use of basic scientific equipment
- Utilize environmental science scholarly resources including the library and web-based resources
- Identify the sources and consequences of major constituents of air, water, and land pollution
- Analyze a variety of timely environmental issues in light of their ecological, social, economic, ethical, or cultural implications
- Successfully transfer to a Baccalaureate degree program in Environmental Science or related degree program with a biology emphasis

PROGRAM REQUIREMENTS (TOTAL CREDITS = 62)

General Education		**Major Requirements**		**Other Required Courses**
ENGL 101 English Composition I	3	BIOL 102 General Biology II	4	
ENGL 102 English Composition II **(or)**	3	BIOL 203 Environmental Science with Laboratory	4	
ENGL 104 Technical Writing	(3)	GEOL 201 Environmental Geology	4	
COMM 101 Effective Speaking	3	GIS 141 Introduction to Geospatial Technology	3	
Humanities & Arts Elective	3		15	
Mathematics Elective - MATH 103, 104, 119 **or** 121	3			
Mathematics or Science Elective - MATH 202	4			
Science w/ a Laboratory Elective - BIOL 101	4			
Social & Behavioral Science Elective	3			
First-Year-Seminar Elective (Rec: SCI 100)	1			
Wellness	1			
	28			

Biology Concentration		**Geoscience Concentration**	
CHEM 101 General Inorganic Chemistry	4	GEOG 101 Physical Geography	3
CHEM 102 General Inorganic Chem & Qualitative Analysis	4	GEOG 201 World Geography (or)	3
Biology Concentration Electives*	11	GEOG 230 Human Geography	(3)
	19	GEOL 101 Physical Geology	4
		Geoscience Concentration Electives**	11
			21

**Students are to select from the following: BIOL 206, 212, 215, 221; ENVS 220.*

***Students are to select from the following: BIOL 206; CHEM 101, 102; ENVS 220; PHYS 201.*

RECOMMENDED SEQUENCE FOR FULL-TIME STUDENTS

Part-time students can complete this program by taking one or more courses each semester.

Biology Concentration

Fall Semester I		Spring Semester I		Fall Semester II		Spring Semester II	
BIOL 101	4	BIOL 102	4	Biology Concentration Elective*	4	Biology Concentration Elective*	4
BIOL 203	4	Biology Concentration Elective*	3 **or** 4	CHEM 101	4	CHEM 102	4
ENGL 101	3	ENGL 102 **or** 104	3	COMM 101	3	Humanities/Arts Elective	3
FYS Elective	1	GEOL 201	4	GIS 141	3	MATH 202	4
MATH 103, 104, 119 **or** 121	3			Social/Behavioral Science Elective	3		
				Wellness	1		

Geoscience Concentration

Fall Semester I		Spring Semester I		Fall Semester II		Spring Semester II	
BIOL 203	4	ENGL 102 **or** 104	3	BIOL 101	4	BIOL 102	4
ENGL 101	3	GEOL 201	4	COMM 101	3	GEOL 101	4
FYS Elective	1	GEOG 201 **or** 230	3	GIS 141	3	Geoscience Concentrative Elective**	4
GEOG 101	3	Geoscience Concentration Elective**	3 **or** 4	Geoscience Concentration Elective**	4	MATH 202	4
Humanities/Arts Elective	3	Wellness	1	Social/Behavioral Science Elective	3		
MATH 103, 104, 119 **or** 121	3						

EXERCISE SCIENCE, Associate in Science Degree - 3121

Science Department

The Exercise Science AS degree prepares students to transfer to a baccalaureate degree program in exercise science or similar curricula such as health, exercise physiology, kinesiology and pre-professional health studies.
Graduates of such baccalaureate programs find employment in health and fitness center program management, corporate health and wellness programs, exercise rehabilitation programs, strength and conditioning coaching and related fields. The curriculum includes general education requirements, a basic science and math foundation, and exercise science discipline-related courses such as: anatomy and physiology, exercise physiology, biomechanics, health and nutrition.
Since the requirements of four-year colleges/universities vary widely, it is essential that students choose an intended transfer institution as soon as possible and carefully follow the program described in that college's catalog. Students can complete the entire Exercise Science program at the Harrisburg Campus provided some of their coursework is taken online through virtual learning.

Transfer Opportunities
This transfer curriculum is provided as a guide for students planning to transfer to a baccalaureate degree granting institution. Graduates of the program can obtain positions in fitness centers, exercise program instruction and management, personal training (ACSM, ACE, NSCA), corporate health and wellness programs, exercise rehabilitation programs, youth and adult recreation programs, and other related fields.

Competency Profile:
This curriculum is designed to prepare the students to:
- Demonstrate proficiency in communicating concepts regarding lifestyle modifications to improve and enhance personal fitness, health, and wellness
- Demonstrate an understanding of the human body's anatomical and physiological systems as they relate to exercise physiology, kinesiology, and disease
- Determine an area of concentration within the subdisciplines of exercise science in preparation for transfer to a four-year institution
- Locate and critically evaluate relevant scholarly research articles
- Apply theories of motivation and behavior change to develop strategies for improving exercise adoption and adherence

PROGRAM REQUIREMENTS (TOTAL CREDITS = 60)

General Education		Major Requirements		Other Required Courses	
ENGL 101 English Composition I	3	BIOL 122 Anatomy & Physiology II	4	Program Specific Electives**	11
ENGL 102 English Composition II	3	CHEM 101 General Inorganic Chemistry I	4		
COMM 101 Effective Speaking	3	EXSC 102 Introduction to the Exercise Sciences	3		
Humanities & Arts Elective*	3	EXSC 202 Functional Anatomy & Physiology	3		
Mathematics Elective	3	HLTH 101 Healthful Living	3		
Mathematics **or** Science Elective	3	NUTR 104 Nutrition	3		
Science w/ a Laboratory Elective - BIOL 121	4		20		
Social & Behavioral Science Elective	3				
First-Year Seminar Elective	1				
Wellness - PE 201	3				
	29				

**Students are to select from the following: ART 181 or 182; ENGL 206; FMTH 101 or THTR 101; HUM 101, 115, 201; MUS 104; PHIL 200; or a foreign language course.*
***Students are to select program electives from the following: AH 105; CHEM 102; EXSC 203; MATH 103, 202; PE 169, 178, 179, 180, 181, 182, 183, 184; PHYS 201, 202; PSYC 241.*

RECOMMENDED SEQUENCE FOR FULL-TIME STUDENTS

Part-time students can complete this program by taking one or more courses each semester.

Fall Semester I		Spring Semester I		Fall Semester II		Spring Semester II	
BIOL 121	4	BIOL 122	4	CHEM 101	4	Math/Science Elective	3
ENGL 101	3	ENGL 102	3	COMM 101	3	Program Electives**	8
EXSC 102	3	EXSC 202	3	Humanities/Arts Elective*	3	Social/Behavioral Science Elective	3
FYS Elective	1	HLTH 101	3	NUTR 104	3		
Mathematics Elective	3	PE 201	3	Program Electives**	3		

FILM AND THEATRE, Associate in Fine Arts Degree - 2500

Communication, Humanities and the Arts Department

The Film and Theatre Associate in Fine Arts degree prepares students for entry-level employment within film and theatre production companies. This hands-on curriculum teaches students fundamental knowledge and techniques essential to acting and working in the many technical areas that relate to the film and theatre industries. With an emphasis on resume building skills, and a conservatory approach, students choose either an acting or technical focus. Students pursuing the **Acting** focus gain skills in acting techniques, character development, voice and movement, as well as improvisation. Those selecting the **Technical** focus obtain skills in lighting, editing, camera operation, production design, as well as script writing and analysis. All students participate in practicum and capstone experience courses that culminate in either the presentation of a performance piece or a professional portfolio. While this program is designed to prepare students for entry-level employment, it may also serve to transfer to many four-year institutions and professional film and theatre schools. This program can only be completed at the Harrisburg Campus.

Career or Transfer Opportunities
Training is provided in both acting and technical production for entry-level job opportunities within film and theatre production companies, as well as for transferring to four-year institutions, or professional film and theatre schools. In addition, this program may be taken for personal growth or for advancement by those already employed in some aspect of the film and theatre industries.

Competency Profile
This curriculum is designed to prepare the student to:
- Distinguish between the various roles and functions that performers, directors, designers and technicians play within the Film and Theater Arts
- Recognize the necessity for collaboration and artistic compromise across all roles and functions with in Film and Theatre
- Execute the various tasks involved in creating a film and/or staged production
- Create a theatre performance resume or technical portfolio
- Write and speak effectively about the nature of Film and Theatre

PROGRAM REQUIREMENTS (TOTAL CREDITS = 60)

General Education		Major Requirements		Other Requirements
ENGL 101 English Composition I	3	FMTH 103 Introduction to Acting	3	
ENGL 102 English Composition II **(or)**	3	FMTH 132 Scenic Design for Film & Theatre	3	
ENGL 104 Technical Writing **(or)**	(3)	FMTH 134 Costuming for Film & Theatre	3	
ENGL 106 Business Writing	(3)	FMTH 148 Practicum B	1	
COMM 101 Effective Speaking **(or)**	3	FMTH 149 Practicum C	1	
COMM 203 Interpersonal Communication	(3)	FMTH 205 Acting for the Camera	3	
Humanities & Arts Elective - FMTH 101	3		**14**	
Mathematics **or** Science Elective	3			
Social & Behavioral Science Elective	3			
First-Year Seminar – FMTH 147	1			
Wellness	1			
	20			

Students select from one of two focus options:

Acting Focus Option	28 Credits	Technical Focus Option	28 Credits
FMTH 104 Acting II	3	FMTH 107 Introduction to Film Production	3
FMTH 111 The History of Film	3	FMTH 109 The Art of the Cinema	3
FMTH 120 Voice for Actors I	1	FMTH 135 Lighting for Film & Theatre	3
FMTH 121 Voice for Actors II	3	FMTH 207 Film Production II	3
FMTH 125 Movement for Actors I	1	FMTH 220 Writing for Stage & Screen	3
FMTH 126 Movement for Actors II	2	FMTH 233 Special FX Makeup for Film & TV **(or)**	3
FMTH 133 Theatre Makeup	3	FMTH 234 FX Airbrushing for Film & TV	(3)
FMTH 203 Acting III	3	FMTH 252 Technical Capstone	3
FMTH 204 Acting IV **(or)**	3	FMTH 291 Internship	3
FMTH 206 Improvisation	(3)	MUSB 227 Studio Performance Production Operations	4
FMTH 212 Modern American Theatre	3		
FMTH 250 Acting Capstone	3		

RECOMMENDED SEQUENCE FOR FULL-TIME STUDENTS

Part-time students can complete this program by taking one or more courses each semester.

Acting Focus Option

Fall Semester I		Spring Semester I		Fall Semester II		Spring Semester II	
ENGL 101	3	ENGL 102 **or** 104 **or** 106	3	COMM 101 **or** 203	3	FMTH 204 **or** 206	3
FMTH 101	3	FMTH 104	3	FMTH 133	3	FMTH 212	3
FMTH 103	3	FMTH 121	3	FMTH 134	3	FMTH 250	3
FMTH 111	3	FMTH 126	2	FMTH 149	1	Math/Science Elective	3
FMTH 120	1	FMTH 132	3	FMTH 203	3	Social/Behavioral Science Elective	3
FMTH 125	1	FMTH 148	1	FMTH 205	3		
FMTH 147	1	Wellness	1				

Technical Focus Option

Fall Semester I		Spring Semester I		Fall Semester II		Spring Semester II	
ENGL 101	3	COMM 101 **or** 203	3	FMTH 134	3	FMTH 233 **or** 234	3
FMTH 101	3	ENGL 102 **or** 104 **or** 106	3	FMTH 135	3	FMTH 252	3
FMTH 103	3	FMTH 132	3	FMTH 149	1	FMTH 291	3
FMTH 107	3	FMTH 148	1	FMTH 205	3	Math/Science Elective	3
FMTH 109	3	MUSB 227	4	FMTH 207	3	Social/Behavioral Science Elective	3
FMTH 147	1	Wellness	1	FMTH 220	3		

FIRE SCIENCE TECHNOLOGY, Associate in Applied Science Degree - 6636

Engineering, Trades & Computer Technologies Department

The Fire Science Technology AAS degree is designed to provide individuals with the technical and professional knowledge required to make decisions regarding fire protection for both the public and private sectors. This curriculum also provides a solid foundation for continuous higher learning in fire protection, administration, and management. This curriculum follows the U.S. Fire Administration/National Fire Academy's Fire and Emergency Services Higher Education (FESHE) Model for Professional Development. This program can only be completed at the Harrisburg Campus.

Career Opportunities

Graduates find work in volunteer and paid community fire services and in other governmental, insurance, business, and industrial settings. Job titles include fire fighters, fire safety specialists, industrial safety specialists and underwriters, plan reviewer and code enforcement officers.

Competency Profile

This curriculum is designed to prepare students to:

- Identify the requirements of various fire protection environments and operate the equipment related to those environments
- Recognize the prevention and suppression of hazards by means of building inspections and hazard descriptions; the application of safety codes; and the use of proper procedures for hauling and storing hazardous materials
- Explain the operations of fire extinguishing and warning systems
- Conduct fire investigations
- Manage a fire protection organization through effective use of manpower and equipment

PROGRAM REQUIREMENTS (TOTAL CREDITS = 61)

General Education		Major Requirements		Other Required Courses	
ENGL 110 Foundations in Professional Writing	3	FIRE 102 Fire Prevention	3	CHEM 100 Principles of Chemistry **(or)**	3
COMM 101 Effective Speaking **(or)** COMM 203 Interpersonal Communication	3 (3)	FIRE 103 Principles of Fire & Emergency Services Safety and Survival	3	PHSC 113 Intro to Physical Science	(3)
Humanities & Arts Elective	3	FIRE 105 Building Construction for Fire Protection	3	CIS 105 Intro to Software for Business	3
Mathematics or Science Elective	3	FIRE 106 Fire Behavior and Combustion	3	Free Elective	3
Social & Behavioral Science Elective*	3	FIRE 201 Fire Protection Hydraulics & Water Supply	3		9
First-Year-Seminar Elective – FIRE 101	3	FIRE 202 Hazardous Materials Chemistry	3		
Wellness	1	FIRE 203 Fire Protection Systems	3		
	19	FIRE 204 Fire Investigation I	3		
		FIRE 207 Educational Methodology	3		
		FIRE 209 Fire & Emergency Services Administration	3		
		FIRE 210 Strategy and Tactics	3		
			33		

**Select from the following courses: ANTH 101 or 205; COMM 253; GEOG 201 or 230; HIST 102; PSYC 229; or SOCI 201, 202, 203 or 205.*

RECOMMENDED SEQUENCE FOR FULL-TIME STUDENTS

Part-time students can complete this program by taking one or more courses each semester.

Fall Semester I		Spring Semester I		Fall Semester II		Spring Semester II	
CIS 105	3	COMM 101 **or** 203	3	FIRE 201	3	FIRE 204	3
ENGL 110	3	CHEM 100 **or** PHSC 113	3	FIRE 202	3	FIRE 207	3
FIRE 101	3	FIRE 102	3	FIRE 209	3	FIRE 210	3
FIRE 103	3	FIRE 105	3	Humanities/Arts Elective	3	Math/Science Elective	3
FIRE 106	3	FIRE 203	3	Free Elective	3	Social/Behavioral Science Elective*	3
						Wellness	1

FIRE SCIENCE TECHNOLOGY, Certificate - 6260

Engineering, Trades & Computer Technologies Department
CIP Code: 43.0203

The Fire Science Technology certificate is designed to provide individuals with the technical and professional knowledge required to make decisions regarding fire protection for both the public and private sectors. This curriculum also provides a solid foundation for continuous higher learning in fire protection, administration, and management. This curriculum follows the U.S. Fire Administration/National Fire Academy's Fire and Emergency Services Higher Education Model for Professional Development. The complete program is available at the Harrisburg Campus.

Career Opportunities
Graduates find work in volunteer and paid community fire services and in other governmental, insurance, business, and industrial settings. Job titles include fire fighters, fire safety specialists, industrial safety specialists, underwriters, plan reviewers and code enforcement officers. ***(SOC Code: 33-2011 Fire Fighters)***

Competency Profile
This curriculum is designed to prepare students to:
- Identify the requirements of various fire protection environments and operate the equipment related to those environments
- Recognize the prevention and suppression of hazards by means of building inspections, hazard descriptions and the application of safety codes
- Explain the operations of fire extinguishing and warning systems
- Conduct fire investigations
- Manage a fire protection organization through effective use of manpower and equipment

PROGRAM REQUIREMENTS (TOTAL CREDITS = 30)

General Education		Major Requirements		Other Required Courses
ENGL 110 Foundations in Professional Writing	3	FIRE 101 Principles of Emergency Services	3	
		FIRE 102 Fire Prevention	3	
		FIRE 103 Principles of Fire & Emergency Services Safety & Survival	3	
		FIRE 105 Building Construction for Fire Protection	3	
		FIRE 106 Fire Behavior and Combustion	3	
		FIRE 203 Fire Protection Systems	3	
		FIRE 204 Fire Investigation I	3	
		FIRE 209 Fire & Emergency Services Administration	3	
		FIRE 210 Strategy and Tactics	3	
			27	

RECOMMENDED SEQUENCE FOR FULL-TIME STUDENTS

Part-time students can complete this program by taking one or more courses each semester.

Fall Semester I		Spring Semester I	
ENGL 110	3	FIRE 106	3
FIRE 101	3	FIRE 203	3
FIRE 102	3	FIRE 204	3
FIRE 103	3	FIRE 209	3
FIRE 105	3	FIRE 210	3

Note: *The recommended sequencing reflects offerings that are scheduled in 7-week terms within each of the Fall and Spring semester blocks.*

GENERAL STUDIES, Associate in Applied Science Degree - 7606

Academic Affairs & Enrollment Management

The General Studies AAS curriculum is designed for students who want to enter the workforce with a two-year degree. Students interested in interdisciplinary study, specially designed programs of study not available in regular programs, or who are undecided on their career plans, often enroll in the General Studies curriculum. The program provides a degree of flexibility that is not available in other programs, but requires a more careful planning process to ensure that career needs are met.

Students must select courses in the Humanities and Arts, Social and Behavioral Sciences, Mathematics, Natural and Physical Sciences, Computer Literacy, and Wellness, in addition to the College's requirement in written and oral communication. Students are able to select over 30-credits of coursework tailored to their needs and interests. Program electives may be selected from any College course number 100 or above. No "0"level courses are accepted for graduation.

Those who enroll in the General Studies curriculum should select their courses in consultation with a counselor to ensure that courses meet their career goals. Students who wish to graduate in this curriculum are encouraged to enter the curriculum as soon as possible and no later than prior to the scheduling of the last fifteen credits of study at the college.

The program may be pursued full-time or part-time during the day or in the evening. The complete program is available at all of HACC's campus locations, as well as online through virtual learning.

Career or Transfer Opportunities
Graduates have acquired both the foundational knowledge and skills found within six major areas of general education (Communication; Quantitative, Information and Technology Literacy; Cultural Awareness; and Critical Thinking) as well as in the coursework selected to meet their individual career or transfer requirements.

Competency Profile
This curriculum is designed to prepare students to:

- Appropriately and correctly use numerical data appropriate to the task
- Create and express ideas in speaking and writing in a clear, organized manner appropriate for the intended audience
- Problem solve, create and evaluate through the following general education goals: information literacy, technology literacy, cultural awareness, communication and quantitative literacy
- Effectively use and apply technology appropriate to the task
- Access, evaluate and cite sources to meet information needs
- Investigate issues related to global interdependence and reflect upon their impact as global citizens

PROGRAM REQUIREMENTS (TOTAL CREDITS = 60)

General Education		**Major Requirements**		**Other Required Courses**
ENGL 101 English Composition I	3	CIS 105 Introduction to Software for Business **or** higher**	3	
COMM 101 Effective Speaking **(or)**	3	MATH 100 **or** higher	3	
COMM 203 Interpersonal Communication	(3)	Open Electives (All 100-299)	37	
Humanities & Arts Elective*	3		43	
Mathematics or Science Elective	3			
Social & Behavioral Sciences Elective	3			
First-Year-Seminar Elective	1			
Wellness	1			
	17			

**Students are to select from the following courses: ART 181, 182; ENGL 206; FMTH 101 or THTR 101; HUM 101, 115 or 201; MUS 104; PHIL 200; or a foreign language course.*

***Students are to see their advisor for course selection options.*

RECOMMENDED SEQUENCE FOR FULL-TIME STUDENTS

Part-time students can complete this program by taking one or more courses each semester.

Fall Semester I		Spring Semester I		Fall Semester II		Spring Semester II	
COMM 101 **or** 203	3	Humanities/Arts Elective*	3	CIS 105 **or** higher**	3	Open Electives	13
ENGL 101	3	Math/Science Elective	3	MATH 100 **or** higher	3	Social/Behavioral Science Elective	3
FYS Elective	1	Open Electives	9	Open Electives	9		
Open Electives	6						
Wellness	1						

GEOSPATIAL TECHNOLOGY, Associate in Science Degree - 4760

Engineering, Trades & Computer Technologies Department

The Geospatial Technology AS program provides students with the foundational knowledge, skills and practical hands-on experience needed to pursue a career in geospatial technology. Geospatial technology is an industry requiring technicians to be skilled in data acquisition, management, interpretation, integration, analysis, representation, and graphical display, all of which are part of the curriculum. In addition, the high-technology nature of geospatial technology demands personnel who are able to work in cross-functional teams in a rapidly evolving employment setting. Students are able to gain "real-world" experience in the internship course. This course allows students the opportunity to face the issues, challenges and projects that are encountered by geospatial technologists on a daily basis. The coursework is aligned with the Geospatial Technology Competency Model (GTCM) developed by the US Department of Labor and the GeoTech Center. The complete program is only available online through virtual learning.

Career Opportunities

Graduates of the Geospatial Technology AS program find employment as geographic information technicians, analysts, specialists, or other disciplines related to the acquisition, use and processing of geographic and time-based data. Although this degree can lead directly to employment, there are transfer opportunities available for students seeking to pursue their studies at the baccalaureate level. Graduates may pursue a bachelor's degree in Technical Management through HACC's articulation agreement with Bloomsburg University.

Competency Profile

This curriculum is designed to prepare students to:

- Apply Geographic Information System (GIS) and remote sensing theory, data acquisition, data processing, and applications
- Use GIS software packages and geospatial data processing tools
- Perform engineering, geological, and environmental applications of geospatial technologies
- Develop analytical skills, including inductive and deductive reasoning
- Communicate effectively in a geospatial environment
- Use those strengthened written and oral communication skills and interpersonal characteristics for effective business opportunities and personal growth
- Apply fundamental concepts of business applications and decision-making related to geospatial technology
- Provide the student with a general educational background to facilitate analysis and interpretation of technical information
- Enter the geospatial technology field prepared to face the issues, challenges, and projects commonly encountered within the industry

PROGRAM REQUIREMENTS (TOTAL CREDITS = 60)

General Education		Major Requirements		Other Required Courses	
ENGL 101 English Composition I	3	GIS 141 Introduction to Geospatial Technology	3	CIS 140 Intermediate Database Management	3
ENGL 104 Technical Writing	3	GIS 204 Cartographic Design	3	Open Electives*	12
COMM 101 Effective Speaking	3	GIS 205 Data Acquisition & Remote Sensing	4		15
Humanities & Arts Elective	3	GIS 221 Web Geographic Information Systems (GIS)	3		
Mathematics Elective - MATH 103	3	GIS 275 Spatial Analysis	4		
Mathematics or Science Elective - MATH 202	4		17		
Science with a Laboratory Elective - GEOL 201	4				
Social & Behavioral Science Elective - GEOG 230	3				
First-Year Seminar Elective - GIS 201	1				
Wellness	1				
	28				

** Students are recommended to take GIS 291 to fulfill one of the 12-credits of Open Elective requirement.*

RECOMMENDED SEQUENCE FOR FULL-TIME STUDENTS

Part time students can complete this program by taking one or more courses each semester.

Fall Semester I		Spring Semester I		Fall Semester II		Spring Semester II	
ENGL 101	3	CIS 140	3	GEOG 230	3	GEOL 201	4
GIS 141	3	COMM 101	3	GIS 221	3	GIS 275	4
GIS 201	1	ENGL 104	3	GIS 204	3	Open Electives*	6
Humanities/Arts Elective	3	GIS 205	4	Open Elective*	3		
MATH 103	3	MATH 202	4	Wellness	1		
Open Elective*	3						

GEOSPATIAL TECHNOLOGY, Diploma - 0580

Engineering, Trades & Computer Technologies Department
CIP Code: 45.0702

HACC's Geospatial Technology diploma program provides foundation preparation for a student planning a career in geospatial technology, or supplemental preparation of a person already employed in a career related to geospatial technology. Geospatial technology is an industry requiring technicians to be skilled in data acquisition, management, interpretation, integration, analysis, representation, and visualization. In addition, the high-technology nature of geospatial technology demands personnel who are able to work in cross-functional teams in a rapidly evolving employment setting. The complete program is only available online through virtual learning.

Career Opportunities
Graduates find employment as geographic information specialists or other disciplines related to the acquisition, use and processing of geographic and time-based data. ***(SOC Code: 17-1021 Cartographers and Photogrammetrists)***

Competency Profile
This curriculum is designed to prepare students to:

- Apply geospatial technology theory to data acquisition, data processing and spatial analysis workflows
- Use GIS software packages and geospatial data processing tools
- Apply geospatial technology theory, data methods and analysis to applications in engineering, geology and environmental science

PROGRAM REQUIREMENTS (TOTAL CREDITS = 17)

General Education	Major Requirements		Other Required Courses
	GIS 141 Intro to Geographic Information Systems	3	
	GIS 204 Cartographic Design	3	
	GIS 205 Data Acquisition and Remote Sensing	4	
	GIS 221 Web Geographic Information Systems (GIS)	3	
	GIS 275 Spatial Analysis	4	
		17	

RECOMMENDED SEQUENCE FOR FULL-TIME STUDENTS

Part-time students can complete this program by taking one or more courses each semester.

Fall Semester I		Spring Semester I		Summer I	
GIS 141	3	GIS 205	4	GIS 221	3
GIS 204	3	GIS 275	4		

GERONTOLOGY, Associate in Applied Science Degree - 3476

Social Science Department

The Gerontology AAS degree is designed to expand the knowledge and employment opportunities of those exploring or working in the aging field. It includes the coursework of the Gerontology certificate and adds in-depth study of topics, such as gender and aging, global aging, caregiving and aging, and long-term care leadership and management. Coursework in business, nutrition, life-cycle development, psychology, sociology and communications aids students in appreciating general concepts related to aging and in preparedness. Students also have the opportunity to work with an older adult person and explore various careers in aging. The complete program is only available online through virtual learning.

Career or Transfer Opportunities
Graduates are prepared for entry-level positions in aging-related fields such as: long-term care and health care administration; activities/recreation social services; allied health marketing and business; volunteerism; community and human services; government; and professional organizations. Graduates also may pursue further academic study in Bachelor programs in gerontology, social work, health care management, liberal arts, and business.

A gerontology student majoring in the AAS degree are able to obtain the diploma and certificate degrees. All the courses within the 17-credit diploma may roll into the 30-credit certificate. Similarly, the courses within the 30-credit certificate may roll into the AAS program. At each degree completion, the student should apply to graduate from that degree. As a result, an AAS graduate who does this may finish with three gerontology degrees from HACC.

Competency Profile
This curriculum is designed to prepare students to:
- Demonstrate effective written and oral communication skills
- Utilize current technologies, tools, and applications
- Explore opportunities for further study and workforce development in gerontology fields
- Discuss the basic demographics of aging with emphasis on gender, race, culture, socioeconomic status, work, religion, and ethnicity
- Apply basic principles of gerontology to social and health issues such as health behavior and health promotion
- Summarize the physical, mental, social and psychological aspects of aging
- Obtain an in-depth understanding of legal and ethical issues related to aging and end of life issues
- Identify the changing landscape of long-term care as well as issues and trends that impact the administration and management of long-term care settings
- Explain gender by identifying the status, roles, and experiences of aging men and women in society
- Discuss major topics in gerontology worldwide as well as across cultures and nations
- Identify death and dying cultural attitudes and feelings as well as the psychological stages of the terminally ill
- Articulate effective communication skills and perspectives necessary to develop an empathetic relationship with an older adult person

PROGRAM REQUIREMENTS (TOTAL CREDITS = 61)

General Education		**Major Requirements**		**Other Required Courses**	
ENGL 101 English Composition I	3	GERT 100 Intro to Gerontology - Overview	1	NUTR 104 Nutrition	3
ENGL 102 English Composition II **(or)**	3	GERT 101 Intro to Gerontology – Social Services	1	PSYC 101 General Psychology	3
ENGL 104 Technical Writing **(or)**	(3)	GERT 102 Intro to Gerontology – Allied Health	1	PSYC 209 Lifespan Development	3
ENGL 106 Business Writing	(3)	GERT 103 Intro to Gerontology – Psychosocial Issues	1	Open Elective	3
COMM 101 Effective Speaking **(or)**	3	GERT 104 Intro to Gerontology – Service Learning	1		12
COMM 203 Interpersonal Communication	(3)	GERT 105 Careers in Gerontology	1		
Humanities & Arts Elective	3	GERT 200 Legal, Ethics and Aging	3		
Mathematics or Science Elective	3	GERT 201 The Social Aspects of Aging	3		
Social & Behavioral Science Elective – SOCI 201	3	GERT 211 Women and Aging	3		
First-Year-Seminar Elective - BUSI 101	3	GERT 215 Aging Around the World	3		
Wellness	1	GERT 220 Caregiving and Aging	3		
	22	GERT 225 Long-Term Care Leadership & Management	3		
		GERT 232 Death and Dying	3		
			27		

RECOMMENDED SEQUENCE FOR FULL-TIME STUDENTS

Part-time students can complete this program by taking one or more courses each semester.

Fall Semester I		Spring Semester I		Fall Semester II		Spring Semester II	
ENGL 101	3	ENGL 102 **or** 104 **or** 106	3	COMM 101 **or** 203	3	GERT 215	3
BUSI 101	3	GERT 104	1	GERT 201	3	GERT 220	3
GERT 100	1	GERT 105	1	GERT 211	3	Math/Science Elective	3
GERT 101	1	GERT 200	3	GERT 225	3	PSYC 209	3
GERT 102	1	GERT 232	3	NUTR 104	3	Social/Behavioral Science Elective	3
GERT 103	1	Humanities/Arts Elective	3				
PSYC 101	3	SOCI 201	3				
		Wellness	1				

GERONTOLOGY, Certificate - 3300

Social Science Department
CIP Code: 19.0702

The Gerontology certificate builds on the coursework of the Gerontology diploma and adds to it in-depth study of topics that include legal and ethical issues, psychological and emotional aspects of aging, and death and dying. This program provides basic knowledge of general concepts and practices in gerontology that can be applied in a number of fields: allied health; social services; activities/recreation; marketing and business; volunteerism; community and human services; government; and professional organizations. The complete program is only available online through virtual learning.

Career Opportunities
This certificate is designed to expand the knowledge and opportunities for employment for those exploring or working in the aging field. Graduates may find career opportunities as activities professionals and work toward national certification. They may also work in allied health, social services, or health care administration, as well as in marketing and business. Graduates may also pursue further academic study in nursing, social work, management, liberal arts, and business. ***(SOC Code: 21-1093 Social and Human Services Assistant)***

A student majoring in the Gerontology certificate may also be able to obtain the diploma in gerontology. All the courses in the 17-credit diploma may roll into the 30-credit certificate. Similarly, all of the courses within the 30-credit certificate may roll into the 61-credit AAS degree in gerontology. At each degree completion, the student should apply to graduate from that degree. As a result, an AAS graduate who does this may finish with three gerontology degrees from HACC.

Competency Profile
This curriculum is designed to prepare students to:

- Demonstrate effective written and oral communication skills
- Utilize current technologies, tools and applications
- Explore opportunities for further study and workforce development in gerontology fields
- Discuss the basic demographics of aging
- Apply basic principles of gerontology to social and health issues
- Recognize differences between normal aging and disease-related aging
- Summarize the physical, mental, social and psychological aspects of aging
- Articulate skills and perspectives necessary to develop an empathetic relationship with an elderly person
- Identify the need for teamwork to provide optimal care for the aging population
- Obtain an in-depth understanding of legal and ethical issues related to aging and end of life issues
- Explain the psychological and emotional processes associated with individuals as they are aging

PROGRAM REQUIREMENTS (TOTAL CREDITS = 30)

General Education		Major Requirements		Other Required Courses	
ENGL 101 English Composition I	3	GERT 100 Gerontology Overview	1	PSYC 101 General Psychology	3
		GERT 101 Intro to Gerontology - Social Services	1	SOCI 201 Introduction to Sociology	3
		GERT 102 Intro to Gerontology - Allied Health	1	Gerontology Electives	6
		GERT 103 Intro to Gerontology - Psychosocial Issues	1		12
		GERT 104 Intro to Gerontology - Service Learning	1		
		GERT 105 Careers in Gerontology	1		
		GERT 200 Legal and Ethical Aspects of Aging	3		
		GERT 201 Social Aspects of Aging	3		
		GERT 232 Death and Dying	3		
			15		

RECOMMENDED SEQUENCE FOR FULL-TIME STUDENTS

Part-time students can complete this program by taking one or more courses each semester.

Fall Semester I		Spring Semester I	
ENGL 101	3	GERT 104	1
GERT 100	1	GERT 201	3
GERT 101	1	GERT 232	3
GERT 102	1	SOCI 201	3
GERT 103	1	GERT Electives	6
GERT 105	1		
GERT 200	3		
PSYC 101	3		

GERONTOLOGY, Diploma - 0231

Social Science Department
CIP Code: 19.0702

The Gerontology diploma is designed to develop awareness and competence for those individuals in allied health, social services, activities/recreation, business, and administrative fields who work with the aging population. The course content includes basic principles and issues in gerontology, allied health, social services, mental health, and wellness as well as 20-hours of service learning volunteering. The complete program is only available online through virtual learning.

Career Opportunities
This diploma is designed to expand the knowledge and opportunities for employment for those exploring or working in the aging field. Graduates find entry-level employment in settings such as nursing homes, personal care/assisted living communities, home health care, senior centers and hospice care. **(SOC Code: 21-1093 Social and Human Services Assistants)**

All the courses within the 17-credit diploma roll into the 30-credit Gerontology certificate. Similarly, all the courses in the 30-credit certificate roll into the 61-credit Gerontology AAS. At each degree completion, the student should apply to graduate from that degree. As a result, an AAS graduate who does this may finish with three gerontology degrees from HACC.
Competency Profile
This curriculum is designed to prepare students to:

- Demonstrate effective written and oral communication skills
- Utilize current technologies, tools and applications
- Discuss the basic demographics of aging
- Apply basic principles of gerontology to social and health issues
- Recognize differences between normal aging and disease-related aging
- Summarize physical, mental, social and psychological aspects of aging
- Articulate skills and perspectives necessary to develop an empathetic relationship with an older person
- Identify the need for teamwork to provide optimal care for the aging population

PROGRAM REQUIREMENTS (TOTAL CREDITS = 17)

General Education		Major Requirements		Other Required Courses	
ENGL 101 English Composition I	3	GERT 100 Gerontology Overview	1	PSYC 101 General Psychology	3
		GERT 101 Social Services	1	SOCI 201 Introduction to Sociology	3
		GERT 102 Allied Health	1		6
		GERT 103 Psychosocial Issues	1		
		GERT 104 Service Learning	1		
		Gerontology Elective	3		
			8		

RECOMMENDED SEQUENCE FOR FULL-TIME STUDENTS

Fall Semester I

ENGL 101	3
GERT 100	1
GERT 101	1
GERT 102	1
GERT 103	1
GERT 104	1
Gerontology Elective	3
PSYC 101	3
SOCI 201	3

HEALTHCARE MANAGEMENT, Associate in Applied Science Degree - 3606

Business Studies Department

The Healthcare Management AAS degree prepares students for entry-level management positions within the healthcare industry including practitioner offices, holistic health practices, long-term care facilities, and wellness centers. Students are able to apply principles in the dynamic and growing healthcare industry. The complete program is only available online through virtual learning.

Career Opportunities
Graduates prepare for entry-level positions in healthcare organizations with career paths leading to medical practice and medical office management positions. The program also prepares currently employed healthcare clinicians for management positions in the healthcare industry.

Competency Profile
This curriculum is designed to prepare students to:

- Communicate effectively and professionally in healthcare management situations through writing, speaking, and electronic media
- Use quantitative and qualitative tools and methodologies to support healthcare management decision making
- Describe economic, environmental, political, ethical, legal, and regulatory contexts of healthcare management policies
- Evaluate healthcare management issues including financial, legal, operational, and administrative procedures
- Use team building skills in the accomplishment of group goals and objectives
- Work effectively, respectfully, ethically, and professionally with people of diverse ethnic, cultural, gender, and other backgrounds and with people who have different organizational roles, social affiliations, and personalities
- Solve problems related to healthcare management using critical thinking skills
- Utilize research methods to collect and analyze information regarding healthcare management concepts

PROGRAM REQUIREMENTS (TOTAL CREDITS = 60)

General Education		**Major Requirements**		**Other Required Courses**	
ENGL 101 English Composition I	3	ACCT 150 Principles of Financial Accounting I	2	BIOL 111 Intro to Human Biology **(or)**	3
ENGL 106 Business Writing	3	ACCT 160 Principles of Managerial Accounting I	2	BIOL 121 Anatomy & Physiology	(4)
COMM 101 Effective Speaking **(or)**	3	AH 105 Medical Terminology for Health Careers	3	CIS 105 Intro to Software for Business	3
COMM 203 Interpersonal Communication	(3)	AH 210 Health Care Law & Ethics	3	Program Specific Elective**	3
Humanities & Arts Elective	3	AH 213 Introduction to Medical Insurance	3		9
Mathematics **or** Science Elective*	3	AH 290 Healthcare Management Capstone	1		
Social & Behavioral Science Elective – SOCI 201	3	GERT 100 Intro to Gerontology – Overview	1		
First-Year-Seminar Elective – AH 140	3	GERT 101 Intro to Gerontology – Social Services	1		
Wellness	1	GERT 103 Intro to Gerontology – Psychosocial	1		
	22	MGMT 130 Intro to Healthcare Management	3		
		MGMT 201 Principles of Management	3		
		MGMT 204 Organizational Behavior	3		
		MKTG 201 Principles of Marketing	3		
			29		

** Students are to select from the following courses: MATH 100, 103, 110, 119 or 202.*
***Students are to select from the following subject areas: ACCT, AH, AOM, BIOL, BUSI, CVAS, CIS, DA, DH, DMS, ECON, MKTG, NURS, PBT, PSYC, RADT, RADI, RESP, SURG **or** WHP.*

RECOMMENDED SEQUENCE FOR FULL-TIME STUDENTS

Part-time students can complete this program by taking one or more courses each semester.

Fall Semester I		**Spring Semester I**		**Fall Semester II**		**Spring Semester II**	
AH 105	3	AH 213	3	ACCT 150	2	AH 210	3
AH 140	3	BIOL 111 **or** 121	3 **or** 4	ACCT 160	2	AH 290	1
CIS 105	3	ENGL 106	3	COMM 101 **or** 203	3	GERT 100	1
ENGL 101	3	Math/Science Elective*	3	Humanities/Arts Elective	3	GERT 101	1
MGMT 130	3	MGMT 201	3	MKTG 201	3	GERT 103	1
Wellness	1			SOCI 201	3	MGMT 204	3
						Program Elective**	3

HEALTH SCIENCE, Associate in Applied Science Degree - 3656

Health Careers Department

The Health Science AAS program is a degree-completion program designed specifically for actively credentialed, or licensed, health care professionals currently working in their fields. Students select courses from one of the four areas of concentration: **EFDA/Dental Assistant; Management/Marketing; Radiologic Imaging, and Social Services**. Students who possess, or are eligible to sit for, a primary certification from an approved medical imaging board are able to enroll in the Radiologic Imaging option of this program.

Each student's credential and employment verification letter must be received and reviewed. After evaluation, qualified applicants are awarded 30-credits towards the Health Science degree. **This is a selective admissions program. The EFDA/Dental Assistant and Radiologic Imaging concentrations** can be completed at the Harrisburg Campus provided students take some of their coursework online through virtual learning. **The Management/Marketing concentration** can be completed at the Harrisburg and Lancaster campuses provided students take some of their coursework online through virtual learning. **The Social Services concentration** can be completed at the Gettysburg, Harrisburg, Lancaster, and York campuses provided students take some of their coursework online through virtual learning.

Selective Program: Entry into this program is not guaranteed with admission to the College; specific admissions criteria must be met. Please see the Health Careers website (www.hacc.edu/healthcareers), or contact us by email at: start@hacc.edu for specific information on program entry requirements.

Career or Transfer Opportunities
Graduates are qualified to seek employment in the Dental Assistant, Management/Marketing, Radiology, and Social Services areas or to pursue further academic study. This program also prepares currently employed healthcare clinicians for upward mobility within their organizations.

Competency Profile
This curriculum is designed to prepare students to:
Expanded Function Dental Assistant (EFDA) Concentration
- Apply concepts of restorative terminology, tooth anatomy, and restorative dental materials to restorative procedures
- Demonstrate skills to meet the requirements established by the Pennsylvania State Board of Dentistry
- Demonstrate basic competency for placing and finishing amalgam and composite resin restorations on patients
- Demonstrates ethical conduct in restorative care and decision making
- Write and speak effectively

Management/Marketing Concentration
- Demonstrate competencies needed to gain employment in the physician practices, hospitals, or vendors in the medical areas
- Demonstrate proficiency in all aspects of medical management for the hospital and/or physician practice
- Demonstrate the concepts of marketing to target audiences
- Discuss human resource issues in the hospital or medical office
- Incorporate Healthcare Law and Ethics into the changing healthcare environment
- Write and speak effectively

Radiologic Imaging Concentration
- Demonstrate competencies needed to gain employment in the physician practices, hospitals, or with vendors in the medical areas
- Demonstrate knowledge of medical imaging modalities and their uses
- Demonstrate the concepts of patient care in medical imaging
- Use medical imaging equipment for diagnosis and/or treatment of patients
- Write and speak effectively

Social Services Concentration
- Recognize race and cultural relations as they relate to the health care area
- Demonstrate life cycle development in a variety of patient populations
- Write and speak effectively

PROGRAM REQUIREMENTS (TOTAL CREDITS = 62)

General Education		Major Requirements		Other Required Courses	
ENGL 101 English Composition I	3	AH 210 Health Care Law & Ethics	3	Allied Health Block Transfer**	30
COMM 101 Effective Speaking **(or)**	3	Concentrations***	12		
COMM 203 Interpersonal Communication	(3)		15		
Humanities & Arts Elective*	3				
Mathematics **or** Science Elective - MATH 100 **or** higher	3				
Social & Behavioral Science Elective	3				
First-Year Seminar Elective	1				
Wellness	1				
	17				

**Students are to select courses from the following: ART 181 or 182; ENGL 206; FMTH 101 or THTR 101; HUM 101, 115 or 201; MUS 104; PHIL 200; or a foreign language course. Highly recommend SPAN 104.*

***Credits are awarded to students who have a credential and are currently employed in the healthcare field.*

***Choose 12 credits from one of the four concentrations listed below:

Expanded Function Dental Assistant (EFDA) Concentration	12
DA 252 Expanded Functions I	4
DA 253 Expanded Functions II	2
NUTR 104 Nutrition	3
SOCI 201 Introduction to Sociology	3

DA courses are restricted to students who possess the Dental Assisting National Board (DANB) Certified Dental Assistant (CDA) credential.

Radiologic Imaging Concentration	12

Any RADT course 220 or above. These courses are restricted to Students who possess, or are eligible to sit for, a primary certification from an approved medical imaging board.

Management/Marketing Concentration	12
CIS 105 Introduction to Software for Business	3
Concentration Electives	9
Select electives from the following courses:	
AH 213 Introduction to Medical Insurance	(3)
MGMT 130 Introduction to Healthcare Management	(3)
MGMT 203 Human Resources Management **(or)** MGMT 204 Organizational Behavior	(3)
MGMT 226 Principles of Leadership	(3)
MKTG 201 Principles of Marketing	(3)

Social Services Concentration	12
CIS 100 Computer Fundamentals **(or)** CIS 105 Introduction to Software for Business	3 (3)
Concentration Electives	9
Select electives from the following courses:	
HUMS 108 Drug & Alcohol: Use & Abuse	(3)
GERT 100 Intro to Gerontology – Overview	(1)
GERT 101 Intro to Gerontology – Social Services	(1)
GERT 102 Intro to Gerontology – Allied Health	(1)
GERT 103 Intro to Gerontology – Psychosocial	(1)
PSYC 101 General Psychology	(3)
PSYC 213 Psychological Disorders and Treatment	(3)
SOCI 201 Introduction to Sociology	(3)
SOCI 205 Race & Cultural Relations	(3)

RECOMMENDED SEQUENCE FOR FULL-TIME STUDENTS

Part time students can complete this program by taking one or more courses each semester.

Fall Semester I		Spring Semester I		Fall Semester II		Spring Semester II	
COMM 101 **or** 203	3	AH 210	3	Concentration Courses***	6 **or** 7	Concentration Courses***	6 **or** 7
ENGL 101	3	MATH 100 **or** higher	3				
FYS Elective	1	Wellness	1				
Humanities/Arts Elective*	3						
Social/Behavioral Science Elective	3						

HEATING, VENTILATION AND AIR CONDITIONING/REFRIGERATION – HVAC/R, Associate in Applied Science Degree – 4780

Engineering, Trades & Computer Technologies Department

The Heating, Ventilation and Air Conditioning/Refrigeration (HVAC/R) AAS program is designed to provide students with the theory and hands-on skills necessary to identify, design, and install basic HVAC systems for both residential and commercial buildings. This curriculum is also supported by general education courses in the communications, sciences, and mathematics areas. The complete program is only available at the Harrisburg Campus. Students can attend full-time during the day or part-time during the evening.

Career Opportunities
Graduates have the knowledge and skills to move from entry-level, multi-skilled mechanic position into a supervisory position in industry, such as HVAC Installation Leader, HVAC Service Technician, HVAC Technical Support Service Technician; Supply or Distributor Counter/Parts Manager, or HVAC Equipment Sales.

Competency Profile
This curriculum is designed to prepare students to:
- Develop and apply basic skills of electricity, heating, refrigeration, and air conditioning technology
- Install, repair, and maintain heating, air conditioning, and refrigeration systems
- Cite federal laws relevant to refrigerant recovery and recycling
- Read HVAC blueprints
- Design HVAC systems to meet prescribed specifications
- Address customer-service issues
- Install and maintain building wide HVAC systems
- Design and install HVAC control systems in residential and commercial buildings

PROGRAM REQUIREMENTS (TOTAL CREDITS = 61)

General Education		Major Requirements		Other Required Courses	
ENGL 101 English Composition I **(or)**	3	HVAC 100 EPA Refrigerant Handling, Preparation, & Testing	1	GTEC 105 Customer Service	1
ENGL 110 Foundations of Professional Writing	(3)	HVAC 101 Basic Electrical Fundamentals	4	Program Specific Electives*	9
COMM 101 Effective Speaking **(or)**	3	HVAC 102 R410A-Safety & Handling	1		10
COMM 203 Interpersonal Communication	(3)	HVAC 103 Fundamentals of Air Conditioning I	4		
Humanities & Arts Elective	3	HVAC 105 Fundamentals of Air Conditioning II	4		
Mathematics **or** Science Elective	3	HVAC 106 Plumbing for the Trades	3		
Social & Behavioral Science Elective	3	HVAC 107 Fundamentals of Low & Medium Temp. Refrigeration	4		
First-Year Seminar Elective	1	HVAC 109 Heating Systems	4		
Wellness	1	HVAC 110 System Design	3		
	17	HVAC 200 HVAC Control Systems	3		
		HVAC 201 HVAC Building Systems	3		
			34		

**Select from the following disciplines: BUSI, CARP, CIS, ELEC, ELOC, GTEC, HBR, HVAC 291, IA, IMT, MGMT, and WELD.*

RECOMMENDED SEQUENCE FOR FULL-TIME STUDENTS

Part time students can complete this program by taking one or more courses each semester.

Fall Semester I		Spring Semester I		Fall Semester II		Spring Semester II	
ENGL 101 **or** 110	3	Humanities/Arts Elective	3	COMM 101 **or** 203	3	GTEC 105	1
FYS Elective	1	HVAC 100	1	HVAC 106	3	HVAC 200	3
HVAC 101	4	HVAC 102	1	HVAC 107	4	Math/Science Elective	3
HVAC 103	4	HVAC 105	4	HVAC 201	3	Program Elective*	3
Program Elective*	3	HVAC 109	4	Program Elective*	3	Social/Behavioral Science Elective	3
		HVAC 110	3			Wellness	1

HEATING, VENTILATION AND AIR CONDITIONING/REFRIGERATION – HVAC/R, Certificate - 4280

Engineering, Trades & Computer Technologies Department
CIP Code: 47.0201

The Heating, Ventilation and Air-Conditioning/Refrigeration (HVAC/R) certificate provides students with the necessary theory and hands-on skills needed to identify, design, and install heating, ventilation and air condition (HVAC) systems – at the entry level – for residential and commercial buildings. The complete program is available at the Harrisburg Campus and can attend full-time during the day, or part-time during the evening.

Career Opportunities
Graduates find employment as HVAC service technicians, equipment installers, or HVAC maintenance technicians.
(SOC Code: 49-9021 Heating, A/C and Refrigeration Mechanics and Installers)

Competency Profile
This curriculum is designed to prepare students to:

- Develop and apply basic skills of electricity, heating, refrigeration, and air conditioning technology
- Install, repair, and maintain heating, air conditioning, and refrigeration systems
- Cite federal laws relevant to refrigerant recovery and recycling
- Read HVAC blueprints
- Design HVAC systems to meet prescribed specifications
- Address customer-service issues

PROGRAM REQUIREMENTS (TOTAL CREDITS = 30)

General Education	Major Requirements		Other Required Courses	
	HVAC 100 EPA Refrigerant Handling,	1	GTEC 105 Customer Service	1
	HVAC 101 Basic Electrical Fundamentals	4	HVAC Program Elective*	1
	HVAC 102 R410-Safety & Handling	1		2
	HVAC 103 Fundamentals of Air Conditioning I	4		
	HVAC 105 Fundamentals of Air Conditioning II	4		
	HVAC 107 Fundamentals of Low & Medium Temperature Refrigeration	4		
	HVAC 109 Heating Systems	4		
	HVAC 110 Fundamentals of Air Conditioning & Heating System Design	3		
	HVAC 200 Control Systems	3		
		28		

**Students are to select from the following courses: ELEC 100 (1-credit); ELOC 157 (4-credits); HVAC 106 (3-credits); GTEC 101 (3-credits).*

RECOMMENDED SEQUENCE FOR FULL-TIME STUDENTS

Part time students can complete this program by taking one or more courses each semester.

Fall Semester I		Spring Semester I	
GTEC 105	1	HVAC 100	1
HVAC 101	4	HVAC 102	1
HVAC 103	4	HVAC 105	4
HVAC 109	4	HVAC 107	4
HVAC Program Elective*	1	HVAC 110	3
		HVAC 200	3

INTRODUCTION TO HVAC/REFRIGERATION, Diploma - 0280

Engineering, Trades & Computer Technologies Department
CIP Code: 47.0201

The Introduction to Heating, Ventilation and Air-Conditioning/Refrigeration (HVAC/R) diploma provides students with the basic hands-on training in electricity, refrigeration, air conditioning and heating systems. The complete program is only available at the Harrisburg Campus.

Career Opportunities
Graduates find employment as HVAC Service Technicians, Equipment Installers, or HVAC Maintenance Technicians.
(SOC Code: 49-9021 Heating, A/C and Refrigeration Mechanics and Installers)

Competency Profile
This curriculum is designed to prepare students to:
- Perform the basic skills of electricity, heating, refrigeration, and air conditioning technology
- Install, repair and maintain heating, air conditioning, and refrigeration systems
- Outline the federal laws relevant to refrigerant recovery and recycling

PROGRAM REQUIREMENTS (TOTAL CREDITS = 16)

General Education	Major Requirements		Other Required Courses	
	HVAC 100 EPA Refrigerant Handling, Preparation & Testing	1	GTEC 105 Customer Service	1
	HVAC 101 Basic Electrical Fundamentals	4		
	HVAC 102 R410-A Safety and Handling	1		
	HVAC 103 Fundamentals of Air Conditioning I	4		
	HVAC 104 Print Reading for HVAC	1		
	HVAC 109 Heating Systems	4		
		15		

RECOMMENDED SEQUENCE FOR FULL-TIME STUDENTS

Part-time students can complete this program by taking one or more courses each semester.

Fall Semester I	
GTEC 105	1
HVAC 100	1
HVAC 101	4
HVAC 102	1
HVAC 103	4
HVAC 104	1
HVAC 109	4

HOSPITALITY MANAGEMENT, Associate in Applied Science Degree - 1606

Business Studies Department

The Hospitality Management AAS degree is a field of study designed to prepare students with the knowledge, commitment, and skills needed for management, marketing, and operational positions in the growing hospitality industry that provides food and beverage, accommodations, and tourism services. As a field of study, the Hospitality Management degree is interdisciplinary. As such, it draws upon a wide range of broad business disciplines and specialized hospitality courses to provide students with the fundamental knowledge and skills required to fulfill the diverse demands placed upon individuals who pursue management positions within this industry. This program is accredited by the Accreditation Council for Business Schools and Programs (ACBSP). Since 1992, ACBSP is the only nationally recognized organization that grants regional accreditation to two- and four-year colleges and universities. This program can be completed entirely online through virtual learning.

Career Opportunities
Upon completion of this degree, graduates can earn entry-level managerial and/or supervisory positions in the following hospitality areas: food/beverage, catering, revenue management, meeting planning, front desk, rooms management, housekeeping, and hospitality sales.

Competency Profile
This curriculum is designed to prepare students to:

- Demonstrate verbal and written communication skills necessary to interact with customers and supervise employees
- Discuss the concept of professionalism and conflict resolution strategies needed to successfully serve the hospitality public.
- Express awareness of different cultures and how they affect customer perceptions and employee expectations
- Use quantitative and technological tools to evaluate and improve performance.
- Research and differentiate between the wide range of career opportunities in the hospitality field
- Articulate the impact of event planning on restaurant, hotel and tourism activities
- Explain the legal and ethical expectations of business in hospitality

PROGRAM REQUIREMENTS (TOTAL CREDITS = 61)

General Education		**Major Requirements**		**Other Required Courses**	
ENGL 101 English Composition I	3	CULI 113 Sanitation and Safety	2	ACCT 150 Principles of Financial Accounting I	2
ENGL 106 Business Writing	3	HTMT 214 Hotel/Lodging Operations I	3	ACCT 160 Principles of Managerial Accounting I	2
COMM 101 Effective Speaking **(or)**	3	HTMT 218 Food/Beverage Operations I	3	BUSI 209 Legal Environment of Business	3
COMM 203 Interpersonal Communication	(3)	HTMT 216 Hotel/Lodging Operations II **(or)**	3	BUSI 290 Business Capstone **(or)**	3
Humanities & Arts Elective*	3	HTMT 220 Food/Beverage Operations II	(3)	BUSI 291 Business Internship	(3)
Mathematics **or** Science Elective**	3	HTMT 270 Meeting and Events Management	3	CIS 105 Introduction to Software for Business	3
Social & Behavioral Science Elective***	3 **or** 4	MGMT 201 Principles of Management	3		13
First-Year-Seminar Elective – HTMT 101	3	MGMT 203 Human Resource Mgmt **(or)**	3		
Wellness	1	MGMT 204 Organizational Behavior (or)	(3)		
	22	MGMT 226 Principles of Leadership	(3)		
		MKTG 201 Principles of Marketing **(or)**	3		
		MKTG 212 Professional Selling	(3)		
		MKTG 235 Digital Media Marketing	3		
			26		

**It is recommended that students select a foreign language to meet this requirement.*
***Students are to select MATH 100, 103, 111, 119 or 202*
****Students are to select from the following: ANTH 101, 205; COMM 253; GEOG 201, 230; HIST 102; PSYC 229; or SOCI 201, 202, 203, 205.*

RECOMMENDED SEQUENCE FOR FULL-TIME STUDENTS

Part-time students can complete this program by taking one or more courses each semester.

Fall Semester I		Spring Semester I		Fall Semester II		Spring Semester II	
BUSI 209	3	COMM 101 **or** 203	3	ACCT 150	2	BUSI 290 **or** 291	3
CIS 105	3	ENGL 106	3	ACCT 160	2	HTMT 216 **or** 220	3
CULI 113	2	Math/Science Elective**	3	HTMT 214	3	HTMT 270	3
ENGL 101	3	MGMT 201	3	HTMT 218	3	Humanities/Arts Elective*	3
HTMT 101	3	MKTG 201 **or** 212	3	MGMT 203, 204 **or** 226	3	Social/Behavioral Science Electives***	3
Wellness	1			MKTG 235	3		

HUMAN SERVICES, Associate in Applied Science Degree - 5556

Social Science Department

The Human Services AAS program prepares students to work as human service professionals who provide direct-service delivery to clients in a variety of community-based social service agencies. The Human Services degree promotes a generalist perspective that ensures that students obtain the knowledge and skills necessary to function in most human service settings. Students are required to complete a Pennsylvania Child Abuse History Clearance, FBI Criminal Background Check, and a State Police Criminal Record Check prior to enrollment into the practicum course. If the student has any questions regarding this, he or she should contact the Program Director or Practicum Coordinator. This program can be completed entirely at the Harrisburg and Lancaster campuses, and at the Gettysburg and York campuses provided students take some of their coursework online through virtual learning.

Career Opportunities
Graduates of the program receive the training and education necessary for entry-level positions in a number of social and human service fields, such as family services, women's programs, and services for people with intellectual disabilities.

Competency Profile
This curriculum is designed to prepare students to:

- Establish and maintain effective working relationships with clients and their families to plan treatments and/or services
- Perform case management responsibilities in a variety of settings
- Explain the ethics and laws applicable to the human service field
- Recognize the characteristics of culturally diverse populations

PROGRAM REQUIREMENTS (TOTAL CREDITS = 60)

General Education		Major Requirements		Other Required Courses	
ENGL 101 English Composition I	3	HUMS 100 Introduction to Human Services	3	SOCI 201 Introduction to Sociology	3
COMM 203 Interpersonal Communication	3	HUMS 108 Drugs & Alcohol: Use & Abuse	3	SOCI 205 Racial & Cultural Relations	3
Humanities & Arts Elective	3	HUMS 120 Social Welfare Programs & Policies	3	Program Electives*	12
Mathematics **or** Science Elective - MATH 111	3	HUMS 121 Skills & Methods in HUMS I	3		18
Social & Behavioral Science Elective - PSYC 101	3	HUMS 122 Skills & Methods in HUMS II	3		
First-Year-Seminar Elective	1	HUMS 200 Group Work Practice	3		
Wellness	1	HUMS 206 Human Development in a Social Environment	3		
	17	HUMS 215 Field Work Practicum	4		
			25		

** Students must select four courses from the following list: BIOL 111; CJ 101; ENGL 104 or 106; GERT 211, 215, 220, 232; HUMS 109, 216, 217, 218; PSYC 213, 229; SOCI 202, 203.*

RECOMMENDED SEQUENCE FOR FULL-TIME STUDENTS

Part-time students can complete this program by taking one or more courses each semester.

Fall Semester I		Spring Semester I		Fall Semester II		Spring Semester II	
ENGL 101	3	COMM 203	3	HUMS 121	3	Humanities/Arts Elective	3
FYS Elective	1	HUMS 120	3	HUMS 122	3	HUMS 200	3
HUMS 100	3	HUMS 206	3	SOCI 205	3	HUMS 215	4
HUMS 108	3	PSYC 101	3	Program Electives*	6	Program Electives*	6
MATH 111	3	SOCI 201	3				
Wellness	1						

INDUSTRIAL TECHNOLOGY, Associate in Applied Science Degree - 4680

Engineering, Trades & Computer Technologies Department

The Industrial Technology AAS degree prepares students for job advancement or to transfer to a four-year institution to obtain a bachelor's degree in technology-dependent fields such as, automotive technology and service, building construction, electronics, heating, ventilating and air conditioning, electrical technology, automated systems maintenance and manufacturing, machine design, and welding to name a few. This program is designed to afford students with the flexibility to tailor their coursework to meet their individual occupational or transfer goals. The complete program is available at the Harrisburg and Gettysburg campuses.

Career Opportunities
Graduates are able to advance in technology-dependent fields related to their plan of study. In addition, graduates may advance their education and transfer coursework to a four-year institution offering technical programs.

Competency Profile
This curriculum is designed to prepare students to:

- Utilize computer software for business applications and recognize the importance of computers in today's technology
- Create and express ideas in speaking and writing in a clear, organized manner appropriate for with the intended audience
- Effectively use and apply technology appropriate to the task
- Investigate issues related to global interdependence and reflect upon their impact as global citizens
- Appropriately and correctly use numerical data specific to the task
- Problem solve, create and evaluate through the following general education goals: information literacy, technology literacy, cultural awareness, communication and quantitative literacy
- Access, evaluate and cite sources to meet information needs

PROGRAM REQUIREMENTS (TOTAL CREDITS = 61)

General Education		**Major Requirements**		**Other Required Courses**	
ENGL 101 English Composition I **(or)**	3	CIS 105 Intro to Software for Business	3	Program Electives**	30
ENGL 110 Foundations of Professional Writing	(3)	Mathematics Elective (100-299)	3		
COMM 101 Effective Speaking	3	MKTG and/or MGMT Electives	6		
Humanities & Arts Elective	3		12		
Mathematics **or** Science Elective	3				
Social & Behavioral Science Elective*	3				
First-Year Seminar Elective - BUSI 101	3				
Wellness	1				
	19				

**Students are to select electives from the following courses: ANTH 201 or 205; COMM 253; GEOG 201 or 230; HIST 102; PSYC 229; SOCI 201, 202, 203 or 205.*
***Students select their program electives from the following subject areas: AUTO, CAD, ELEC, ELOC, FIRE, GTEC, HVAC, IA, IMT, or WELD.*

RECOMMENDED SEQUENCE FOR FULL-TIME STUDENTS

Part time students can complete this program by taking one or more courses each semester.

Fall Semester I		**Spring Semester I**		**Fall Semester II**		**Spring Semester II**	
BUSI 101	3	COMM 101	3	Program Specific Electives**	15	Program Specific Electives**	15
CIS 105	3	MGMT **and/or** MKTG Electives	6				
ENGL 101 **or** 110	3	Mathematics Elective	3				
Humanities/Arts Elective	3	Social/Behavioral Science Elective*	3				
Math/Science Elective	3	Wellness	1				

LIBERAL ARTS, Associate in Arts Degree - 2091

Communication, Humanities and the Arts Department

The Liberal Arts, AA program is designed for students who plan to seek a four-year degree specializing in English or English literature, History, Humanities, Music, World Languages, Philosophy, or related major at a four-year institution. This program provides students with the opportunity to select from a variety of courses to fit their area of interest and/or explore topics within the liberal arts. Since the requirements of senior institutions vary widely, it is essential that students choose an intended transfer institution as soon as possible and carefully follow the program described in that institution's college catalog. This program can be completed at all of HACC's campus locations, as well as online through virtual learning.

Transfer Opportunities
This transfer curriculum is provided as a guide for students planning to transfer to a baccalaureate degree granting institution.

Competency Profile
This curriculum is designed to prepare students to:

- Define the fundamental concepts associated with the specific disciplines chosen by the student, which include but are not limited to, terminology, genres, and theories
- Analyze, interpret and apply information in the assertion of ideas and conclusions
- Analyze works from literature and humanities within the context of a global community
- Recognize the influence of social context, such as history, politics, and religions, on creative expressions, within any culture
- Apply discipline-approved technology and communication forms and methods to discuss and disseminate knowledge and ideas

PROGRAM REQUIREMENTS (TOTAL CREDITS = 60)

General Education		Major Requirements		Other Required Courses	
ENGL 101 English Composition I	3	CIS Elective*	3	Transfer Electives***	13
ENGL 102 English Composition II	3	Liberal Arts Transfer Electives**	18		
COMM 101 Effective Speaking	3		21		
Humanities & Arts Elective - HUM 101	3				
Humanities & Arts Elective **or**	3				
Social & Behavioral Science Elective	(3)				
Mathematics Elective	3				
Science w/ a Laboratory Elective	3				
Social/Behavioral Science Elective	3				
First-Year Seminar Elective	1				
Wellness	1				
	26				

**Choose any CIS course except CIS 100 (CIS 105 recommended)*
***Select courses in ARAB, ART (181 – 185); CHIN; ENGL (not 001-102 or 901); FRCH; GRMN; HIST; HUM; MUS; PHIL; SPAN*
****Students select courses appropriate for the transfer college; see HACC catalog for suggested options.*

RECOMMENDED SEQUENCE FOR FULL-TIME STUDENTS

Part-time students can complete this program by taking one or more courses each semester.

Fall Semester		Spring Semester		Fall Semester		Spring Semester	
COMM 101	3	CIS Elective*	3	Liberal Arts Transfer Electives**	9	Liberal Arts Transfer Elective**	6
ENGL 101	3	ENGL 102	3	Transfer Elective (s)***	4	Transfer Electives***	9
FYS Elective	1	Liberal Arts Transfer Elective** Humanities/Arts **or**	3	Wellness	1		
HUM 101	3	Social/Behavioral Science Elective	3				
Mathematics Elective	3	Science w/ a Lab Elective	3				
Social/Behavioral Science Elective	3						

LIBERAL STUDIES, Certificate - 7166

Communication, Humanities & the Arts Department

The Liberal Studies certificate is designed for students who wish to complete their freshman year of college before transferring to a four-year school. Students are able to complete standard general education courses, and establish a record of college-level academic success. This may put them in a better position to enter selective-admission four-year schools, or better-position themselves for academic scholarships. Students can also explore various majors while taking standard general education courses before transferring. This program is available at all of HACC's campus locations, as well as online through virtual learning.

Career or Transfer Opportunities
Students who complete the Liberal Studies certificate are recognized as having completed a general freshman year curriculum and can therefore, transfer to a four-year school at the sophomore level.

Competency Profile
This curriculum is designed to prepare students to:

- Conduct college-level mathematical computations and analyses
- Create and express ideas through writing in a clear, organized manner appropriate for the intended audience
- Construct and orally present information appropriate to one's audience
- Access, evaluate and cite sources to meet information needs
- Describe of the patterns and processes that shape the living and non-living natural world derived from experiment and observation
- Describe human behavior and interaction involving the educational, political, economic, geographical, historical, anthropological, psychological, or sociological factors that influence individual and social growth and development
- Demonstrate an understanding of fine arts, the performing arts, literature, foreign language, or philosophy

PROGRAM REQUIREMENTS (TOTAL CREDITS = 30)

General Education		Major Requirements		Other Required Courses	
ENGL 101 English Composition I	3			Transfer Electives	9
ENGL 102 English Composition II **(or)**	3				
ENGL 104 Technical Writing **(or)**	(3)				
ENGL 106 Business Writing	(3)				
COMM 101 Effective Speaking (or)	3				
COMM 203 Interpersonal Communication	(3)				
Humanities & the Arts Elective	3				
Mathematics Elective – MATH 103, 111, 119 **or** 202	3 **or** 4				
Science with a Laboratory Elective	3				
Social & Behavioral Science Elective	3				
	21				

RECOMMENDED SEQUENCE FOR FULL-TIME STUDENTS

Part-time students can complete this program by taking one or more courses each semester.

Fall Semester I		Spring Semester I	
ENGL 101	3	COMM 101 **or** 203	3
MATH 103, 111, 119 **or** 202	3 **or** 4	ENGL 102, 104 or 106	3
Science w/ Lab Elective	3	Humanities/Arts Elective	3
Social/Behavioral Science Elective	3	Transfer Electives	6
Transfer Elective	3		

MASSAGE THERAPY, Certificate – Noncredit

Office of Workforce Development and Continuing Education/Healthcare Education

Massage Therapy is a healing art as well as a science. It requires a balance of academic and technical knowledge, clinical skills, manual dexterity, sensitivity, and awareness. Massage Therapy is a manual therapy delivered to clients who are typically undressed and draped by a sheet throughout the treatment. One body region is undraped and massaged at a time. Students in training are required to act as the client 50% of the time. During the other 50% they act as the massage therapist. It requires a sincere desire to help others, along with a commitment to the time, energy, and focus necessary for the training process in order to become a solid practitioner. Working alone, or in consultation with other healthcare professionals (physical therapists, physicians, chiropractors), Massage Therapists perform assessments and manipulation of soft tissues of the body to affect a therapeutic response in the treatment and prevention of physical dysfunction. The result can be preventative or restorative, helping to maintain, rehabilitate, augment physical function and/or relieve pain. The following requirements must be completed (at the student's expense) after acceptance in the program and before the start of class: PA State Police Criminal Background Check and an FBI Check if the student has not resided in Pennsylvania for the past two consecutive years. Students should consider these factors prior to enrolling. Any questions regarding this information may be directed to the Massage Therapy Program Coordinator at (717) 221-1386. The complete program is 900-hours and is presented in a web-enhanced format (classroom meetings plus required online work). It is available at the Harrisburg Campus. Certificates are awarded upon successful completion of the program.

Career Opportunities
Graduates of this program are prepared to take a State Licensing exam (MBLEX) and apply to the State licensing board to enter the healthcare profession as Massage Therapists in settings that include private or group massage practices, health clubs or fitness centers, chiropractic or medical offices, nursing homes, health spas and resorts, cruise ships, sports medicine facilities, and physical therapy centers. Some Massage Therapists have portable equipment and work at their clients' offices or homes. ***(SOC Code: 31-9011 Massage Therapists)***

Competency Profile
This curriculum is designed to prepare students to:
• Have a working knowledge of the structure and function of the human body and how it is affected by massage
• Take a client health history and determine an appropriate course of massage therapy treatment
• Perform relaxation massage
• Perform therapeutic massage
• Communicate effectively with clients and other healthcare providers
• Behave in an ethical manner
• Take the State Licensing Exam for Therapeutic Massage

*Completion of this 900-hour certificate program, state licensing exam and employment in the massage therapy field may allow articulation of up to 30-credits towards an Associate Degree in HACC's Health Science AAS program.

PROGRAM REQUIREMENTS
Anatomy/Physiology/Kinesiology/Pathology Awareness/Communication/Ethics Swedish Massage Business Practices
Chair Massage Special Populations
Connective Tissue Therapy Spa/Aromatherapy
Neuromuscular Therapy Student Studio Sports Massage
Eastern Concepts

RECOMMENDED SEQUENCE FOR STUDENTS
This program must be completed in sequence as part of a full –time day or part-time evening program.

MATHEMATICS, Associate in Science Degree - 4076

Mathematics & Computer Science Department

The Mathematics AS degree prepares students to transfer to four-year institutions offering degrees in mathematics, operations research, and statistics. Since the requirements of senior institutions vary widely, it is essential to choose an intended transfer institution as soon as possible and carefully follow the program described in that college's catalog. The complete program is available at the Harrisburg, Lancaster and York campuses.

Transfer Opportunities
This transfer curriculum is provided as a guide for students planning to transfer to a baccalaureate degree granting institution.

Competency Profile
The curriculum is designed to prepare students to:

- Demonstrate the relationship between mathematical and visual representations
- Demonstrate the connections between mathematical concepts
- Solve problems by developing mathematical models, analyzing data, and creating or applying algorithms
- Effectively communicate mathematical ideas and their applications
- Demonstrate the ability to communicate, create, and collaborate effectively using technologies in multiple modalities

PROGRAM REQUIREMENTS (TOTAL CREDITS = 60)

General Education		Major Requirements		Other Required Courses	
ENGL 101 English Composition I	3	CPS 121 Computer Science I: Intro to Computer Programming JAVA	3	Transfer Electives	17
ENGL 102 English Composition II **(or)**	3	MATH 125 Discrete Mathematics	3		
ENGL 104 Technical Writing	(3)	MATH 221 Calculus III	4		
COMM 101 Effective Speaking	3	MATH 220 Linear Algebra **(or)**	4		
Humanities & Arts Elective*	3	MATH 222 Differential Equations	(4)		
Mathematics Elective - MATH 121	4		14		
Mathematics **or** Science Elective - MATH 122	4				
Science w/ a Laboratory - PHYS 211	4				
Social & Behavioral Science Elective	3				
First-Year Seminar Elective	1				
Wellness	1				
	29				

**Students select courses from the following: ART 181 or 182; ENGL 206; HUM 101, 115 or 201; MUS 104; PHIL 200; FMTH or THTR 101; or a foreign language course.*

RECOMMENDED SEQUENCE FOR FULL-TIME STUDENTS

Part-time students can complete this program by taking one or more courses each semester.

Fall Semester I		Spring Semester I		Fall Semester II		Spring Semester II	
COMM 101	3	CPS 121	3	MATH 125	3	MATH 220 **or** 222	4
ENGL 101	3	ENGL 102 **or** 104	3	MATH 221	4	PHYS 211	4
FYS Elective	1	Humanities & Arts Elective*	3	Social/Behavioral Science Elective	3	Transfer Electives	8
MATH 121	4	MATH 122	4	Transfer Elective	3		
Transfer Elective	3	Transfer Elective	3	Wellness	1		

MATHEMATICS - COMPUTER SCIENCE, Associate in Science Degree - 4030

Mathematics & Computer Science Department

The Mathematics-Computer Science AS program focuses on computer design, algorithm design, programming techniques, data structures, and a variety of programming languages. Since mathematical background is essential to success in this program, students must complete College Algebra or its equivalent to begin the program. Requirements of senior institutions vary widely, so it is essential to choose an intended transfer institution as soon as possible and carefully follow the program described in that college's catalog. Students completing this degree are admitted at the Junior-level to any institution participating in Pennsylvania's statewide college credit transfer system. The complete program is available at the Harrisburg and Lancaster campuses provided students take some of their coursework online through virtual learning.

Transfer Opportunities
This transfer curriculum is provided as a guide for students planning to transfer to a baccalaureate degree granting institution.

Competency Profile
The curriculum is designed to prepare students to:

- Analyze problem situations and create algorithms to solve those problems
- Use mathematical concepts and models to analyze data
- Select appropriate control structures, data structures, and abstract data types for implementing computer solutions
- Code computer programs that are effective, efficient, and accurate
- Work as part of a professional team to design, code, test, and debug mathematically based object-oriented computer software

PROGRAM REQUIREMENTS (TOTAL CREDITS = 62)

General Education		Major Requirements		Other Required Courses	
ENGL 101 English Composition I	3	CIS 110 Introduction to Computer Systems **(or)**	3	BIOL 102 General Biology II **(or)**	4
ENGL 102 English Composition II **(or)**	3	CNT 120 Network Communications Technology	(3)	CHEM 102 General Inorganic Chem & Qualitative Analysis **(or)**	(4)
ENGL 104 Technical Writing	(3)	CPS 121 Computer Science I: Intro to Computer Programming JAVA	3	PHYS 202 General Physics II **(or)**	(4)
COMM 101 Effective Speaking	3	CPS 161 Computer Science II: Algorithmic Design JAVA & C++	3	PHYS 212 Physics for Engineers & Scientists II	(4)
Humanities & Arts Elective*	3	CPS 162 Computer Science III: Data Structures C++	3	Transfer Elective**	3
Mathematics Elective - MATH 121	4	CPS 230 Object Oriented Programming JAVA	3		7
Mathematics or Science Elective - MATH 122	4	MATH 125 Discrete Mathematics	3		
Science w/ a Laboratory Elective - BIOL 101, CHEM 101, PHYS 201 **or** 211	4	MATH 202 Introduction to Statistics	4		
Social & Behavioral Sciences Elective	3	MATH 220 Linear Algebra	4		
First-Year Seminar Elective	1		26		
Wellness	1				
	29				

**Students select courses from the following: ART 181, 182; ENGL 206; FMTH 101 or THTR 101; HUM 101, 115, 201; MUS 104; PHIL 200; or a foreign language course.*
***Students are to select their Transfer Elective that are appropriate for their intended institution.*

RECOMMENDED SEQUENCE FOR FULL-TIME STUDENTS

Part-time students can complete this program by taking one or more courses each semester.

Fall Semester I		Spring Semester I		Fall Semester II		Spring Semester II	
CIS 110 **or** CNT 120	3	COMM 101	3	BIOL 101, CHEM 101, PHYS 201 **or** 211	4	BIOL 102 **or** CHEM 102 **or** PHYS 202 **or** PHYS 212	4
CPS 121	3	CPS 161	3	CPS 162	3	CPS 230	3
ENGL 101	3	ENGL 102 **or** 104	3	MATH 202	4	Humanities/Arts Elective*	3
FYS Elective	1	MATH 122	4	MATH 220	4	Social/Behavioral Science Elective	3
MATH 121	4	MATH 125	3	Wellness	1	Transfer Elective**	3

MECHANICAL ENGINEERING TECHNOLOGY, Associate in Science Degree - 4700

Engineering, Trades & Computer Technologies Department

The Mechanical Engineering Technology AS program prepares students to enter the job market as mechanical engineering technicians working with prototype technologies, mechanical systems, and manufacturing processes. Coursework allows students to operate state-of-the-art computer-aided-design (CAD) systems, computer-numerical-controls (CNC) and programmable logic controls (PLC) systems. The complete program is only available at the Harrisburg Campus.

Career Opportunities
Graduates are prepared as technicians for the mechanical engineering field. Graduates are also prepared as technicians employable in the manufacturing industry.

Competency Profile
This curriculum is designed to prepare students to:
- Write and speak effectively
- Effectively operate a solid modeling system
- Identify the student's career path
- Solve engineering problems
- Analyze static structures using trigonometry
- Prepare technical reports and manuals
- Analyze dynamic problems using trigonometry
- Identify properties of engineering materials and their common modes of failure
- Perform basic programming of CNC tools and fabricate components
- Program and operate PLC systems
- Identify global and ethical engineering issues

PROGRAM REQUIREMENTS (TOTAL CREDITS = 62)

General Education		Major Requirements		Other Required Courses
ENGL 101 English Composition I	3	CAD 154 Computer Aided Drafting & Design	3	
ENGL 104 Technical Writing	3	CAD 164 Advanced Computer Aided Drafting and Design	2	
COMM 101 Effective Speaking	3	CVTE 208 Strength of Materials	3	
Humanities & Arts Elective	3	ELEC 100 Fundamental of Electricity/Electronics	1	
Mathematics Elective - MATH 103	3	ENGR 208 Microcontrollers & PLCs	3	
Mathematics or Science Elective - MATH 104	3	GTEC 104 Engineering Materials and Processes	3	
Science w/ a Laboratory Elective	3	GTEC 201 Statics	3	
Social & Behavioral Sciences Elective	3	GTEC 202 Statistical Quality Control	3	
First-Year Seminar Elective - ENGR 102	2	GTEC 208 Strength Materials Lab	1	
Wellness	1	IA 205 Computer Numerical Control	3	
	27	MDES 201 Dynamics	3	
		MDES 204 Product Design	3	
		MDES 206 Fluid Flow	3	
		MDES 207 Machine Shop Theory and Practice	1	
			35	

RECOMMENDED SEQUENCE FOR FULL-TIME STUDENTS

Part time students can complete this program by taking one or more courses each semester.

Fall Semester I		Spring Semester I		Summer I		Fall Semester II		Spring Semester II	
CAD 154	3	ENGL 104	3	COMM 101	3	CVTE 208	3	CAD 164	2
ENGL 101	3	ELEC 100	1	Social/Behavioral Sciences Elective	3	GTEC 202	3	ENGR 208	3
ENGR 102	2	GTEC 104	3			IA 205	3	GTEC 208	1
Humanities/Arts Elective	3	GTEC 201	3			MDES 201	3	MDES 204	3
MATH 103	3	MATH 104	3			MDES 206	3	Science w/ a Lab Elective	3
		MDES 207	1						
		Wellness	1						

SUGGESTED ADDITIONAL SEQUENCE FOR STUDENTS TRANSFERRING TO A BSMET PROGRAM

Fall Semester III for transfer students	
CHEM 101 (Inorganic Chemistry)	4
Transfer Elective*	3
MATH 119 (Pre-Calculus, 12 Week Session)	4
PHYS 201 (General Physics I)	4
Wellness (PSU Only)	1
Total Credits	16

Spring Semester III for transfer students	
Transfer Electives*	6
MATH 121 (Calculus I)	4
PHYS 202 (General Physics II)	4
Wellness (PSU Only)	1
Total Credits	15

Students are to select courses that are suited for their intended transfer institution.

MECHANICAL TECHNOLOGY, Certificate - 4350

Engineering, Trades & Computer Technologies Department
CIP Code: 15.0805

The Mechanical Engineering Technology certificate teaches students solids-modeling, as well as two-dimensional and three-dimensional drafting techniques. The sophisticated, high technology of computer numerical controls (CNC) and programmable logic controls (PLC) systems for computer-assisted manufacturing is also included. The complete program is only available at the Harrisburg Campus.

Career Opportunities
Graduates are prepared for entry-level employment as drafters or technical assistants in government or industry.
(SOC Code: 17-3013 Mechanical Drafters)

Competency Profile
This curriculum is designed to prepare students to:

- Draft design details and production drawings for mechanical components using a computer-aided-drafting (CAD) system
- Serve as entry-level programmers for numerical control (NC)/computer numerical control (CNC) equipment
- Install and test mechanical equipment
- Serve as aides to engineers and scientists
- Serve as apprentice machinists

PROGRAM REQUIREMENTS (TOTAL CREDITS = 31)

General Education	Major Requirements		Other Required Courses	
	CAD 154 Computer Aided Drafting and Design	3	MATH 103 College Algebra	3
	ELEC 100 Fundamentals of Electricity and Electronics	1	MATH 104 Trigonometry	3
	ENGR 102 Engineering & Engineering – Tech Orientation	2	Program Specific Electives*	6
	ENGR 208 Microcontrollers & PLCs	3		12
	GTEC 104 Engineering Materials & Processes	3		
	GTEC 201 Statics	3		
	IA 205 Computer Numerical Control	3		
	MDES 207 Machine Shop Theory and Practice	1		
		19		

**Select from the options below: ACCT 101; CAD 115, 164; CPS 113, 115, 135; CHEM 101; CVTE 208; ELEC 100, 101, 108, 125, 126; ENGR 291; GTEC 202, 208; MDES 201, 204, 206; MDRF 101, 103; MATH 119, 121, 202; MGMT 201; PHYS 201, 202.*

RECOMMENDED SEQUENCE FOR FULL-TIME STUDENTS

Part time students can complete this program by taking one or more courses each semester.

Fall Semester I		Spring Semester I	
CAD 154	3	ENGR 208	3
ELEC 100	1	GTEC 104	3
ENGR 102	2	GTEC 201	3
MDES 207	1	IA 205	3
MATH 103	3	Program Electives*	6
MATH 104	3		

MECHATRONICS, Associate in Applied Science Degree - 4711

Engineering, Trades & Computer Technologies Department

The Mechatronics AAS degree program educates students through an integrated-systems approach that includes automation, process controls, and industrial robotics used throughout industry. Designed as a multidisciplinary program that incorporates theory and hands-on experience with a focus on advanced control systems and industrial robotics, Students gain the broad skill-set necessary to maintain, repair, and manage mechanical, electrical, electronic, fluid power, and automation control systems. Emphasis is placed on the integration of these systems and working successfully as part of a team. Graduates are prepared for positions in which maintenance, troubleshooting, repairing, and modifying the designs of automated systems and equipment is required. This program can only be completed at the Gettysburg Campus.

Career Opportunities
Graduates find employment as multi-skilled technicians in a wide variety of industrial, manufacturing, and commercial settings. Although this program is designed to lead directly to employment, opportunities exist for students to transfer their coursework to four-year institutions and complete a bachelor's degree.

Competency Profile
This curriculum is designed to prepare students to:

- Perform maintenance on electronic, electrical, pneumatic, hydraulic and mechanical systems
- Interpret and apply OSHA Safety Standards
- Use mechanic and measurement tools, power tools, and test equipment
- Read electrical, mechanical, and hydraulic / pneumatic prints
- Demonstrate practical knowledge of electrical and electronic fundamentals and motor controls
- Demonstrate practical knowledge in mechanical systems
- Demonstrate practical knowledge in fluid power systems
- Demonstrate practical knowledge in process control systems
- Troubleshoot and repair electronic, electrical, pneumatic, hydraulic, and mechanical systems
- Troubleshoot and repair electromechanical equipment and systems
- Troubleshoot AC and DC systems
- Program, wire, and troubleshoot contemporary programmable logic control (PLC) systems
- Design, program, wire, and troubleshoot IEC61131-3 programmable logic control (PLC) control systems including Human Machine Interface (HMIs)
- Effectively operate and develop basic programs for maintaining and troubleshooting industrial robots

PROGRAM REQUIREMENTS (TOTAL CREDITS = 60)

General Education		**Major Requirements**		**Other Required Courses**	
ENGL 110 Foundations in Professional Writing	3	GTEC 101 Safety: OHSA-30 & NFPA 70E	3	CIS 105 Intro to Software for Business	3
COMM 101 Effective Speaking **(or)**	3	IA 107 Shop Measurement and Calculations*	1	ELOC 153 Fundamentals of Electricity	4
COMM 203 Interpersonal Communication	(3)	IA 201 Motors and Controls I	4	ELEC 144 Electronics for Technicians **(or)**	3
Humanities & Arts Elective	3	IA 202 Motors & Controls II	4	WELD 111 Welding Applications **(or)**	(3)
Mathematics **or** Science Elective	3	IA 208 PLC's and Automation	3	CAD 154 Computer Aided-Drafting & Design	(3)
Social & Behavioral Science Elective	3	IA 210 Industrial Robotics I	3		10
First-Year Seminar Elective – IA 101	2	IA 211 Industrial Robotics II **(or)**	3		
Wellness	1	IA 213 PLCs and Automation II	(3)		
	18	IA 221 Sensor Technology	3		
		IMT 108 Power Transmission	4		
		IMT 110 Fluid Power	4		
			32		

** May be replaced with a higher-level MATH*

RECOMMENDED SEQUENCE FOR FULL-TIME STUDENTS

Part time students can complete this program by taking one or more courses each semester.

Fall Semester I		Spring Semester I		Fall Semester II		Spring Semester II	
ELOC 153	4	CIS 105	3	COMM 101 **or** 203	3	ELEC 144 **or** WELD 111 **or** CAD 154	3
GTEC 101	3	IA 201	4	IA 202	4	ENGL 110	3
IA 101	2	IA 208	2	IA 210	3	IA 211 **or** 213	3
IA 107*	1	IA 221	3	Mathematics/Science Elective	3	Humanities/Arts Elective	3
IMT 108	4	IMT 110	4	Wellness	1	Social/Behavior Science Elective	3

MECHATRONICS, Certificate - 4261

Engineering, Trades & Computer Technologies Department
CIP Code: 14.4201

Mechatronics is a multi-disciplinary program designed to provide students with the broad skill set required to maintain, repair, and manage the automated systems and machines used throughout industry. The certificate teaches students mechanical, electrical, electronic, fluid power, and control systems as they gain an understanding, through theory and hands-on experience, of how these systems integrate with one another. Graduates are prepared for positions in which maintaining, troubleshooting, repairing, and modifying the designs of automated systems and equipment is required. The complete program is only available at the Gettysburg Campus.

Career Opportunities
Graduates find employment as multi-skilled technicians in industrial, manufacturing, and commercial settings.
(SOC Code: 49-9041 Industrial Machinery Mechanics)

Competency Profile
This curriculum is designed to prepare students to:

- Perform maintenance on electronic, electrical, pneumatic, hydraulic and other mechanical equipment
- Interpret OSHA standards
- Use hand tools, power tools, and test equipment
- Demonstrate practical knowledge in electrical fundamentals, motor controls, and process control systems
- Demonstrate practical knowledge in mechanical systems
- Demonstrate practical knowledge in fluid power systems
- Read electrical and mechanical blueprints
- Troubleshoot basic AC systems
- Troubleshoot and repair electromechanical equipment systems

PROGRAM REQUIREMENTS (TOTAL CREDITS =31)

General Education	Major Requirements		Other Required Courses	
	ELOC 153 Fundamentals of Electricity	4	CIS 105 Introduction to Software for Business	3
	GTEC 101 Safety: OSHA 30 & NFPA 70E	3		
	IA 101 Introduction to Automation	2		
	IA 107 Shop Measurement & Calculations*	1		
	IA 201 Motors & Controls I	4		
	IA 208 PLC's and Automation	3		
	IA 221 Sensor Technology	3		
	IMT 108 Power Transmission	4		
	IMT 110 Fluid Power	4		
		28		

**May be replaced with a higher-level MATH offering.*

RECOMMENDED SEQUENCE FOR FULL-TIME STUDENTS

Fall Semester I		Spring Semester I	
ELOC 153	4	CIS 105	3
GTEC 101	3	IA 201	4
IA 101	2	IA 208	3
IA 107*	1	IA 221	3
IMT 108	4	IMT 110	4

MEDICAL ASSISTING, Certificate - 3210

Health Careers Department
CIP Code: 51.0801

Medical Assisting is a multi-skilled allied health profession with practitioners working primarily in ambulatory care settings such as medical offices and clinics. This program offers the student foundation skills in medical office administration and clinical patient care required for beginning practice in the field, as well as, grounding in the legal and ethical principles governing medical practice. The program is accredited by the American Medical Technologists. Students must take the American Medical Technologists Medical Assistant (AMT-RMA) exam in order to fulfill the requirements of this degree to graduate. However, failure to pass this exam will not prevent a student from receiving their certificate in Medical Assisting. This program can be completed at the Gettysburg and Harrisburg campuses provided students take some of their coursework online through virtual learning.

Selective Program: Entry into this program is not guaranteed with admission to the College; this is a selective and competitive admission program; specific admissions criteria must be met. Please go to the Health Careers website (www.hacc.edu/healthcareers), or contact us by email at start@hacc.edu for specific program entry requirements.

The following requirements must be completed (at the student's expense) after being selected for, but prior to starting the clinical portion of the program. Requirements include physical examination and immunizations, background checks, drug and alcohol screens and CPR certification. The student should consider these factors before enrolling. If the student has any questions regarding this, he or she should contact the program director.

Career Opportunities
Graduates find employment in various health care facilities as Medical Assistants. ***(SOC Code: 31-9092 Medical Assistants)***

Competency Profile
This curriculum is designed to prepare students to:

- Function effectively as members of the healthcare team
- Demonstrate the entry-level competencies prescribed by the American Medical Assistants Endowment
- Take the American Medical Technologists Medical Assistant credentialing exam administered by American Medical Technologist - Registered Medical Assistant (AMT-RMA)
- Demonstrate effective oral and written communication skills

PROGRAM REQUIREMENTS (TOTAL CREDITS = 37)

General Education	Major Requirements		Other Required Courses	
	AH 105 Medical Terminology for Health Careers	3	BIOL 111 Introduction to Human Biology	3
			(or)	
	AH 150 Introduction to Human Illness & Disease	3	BIOL 121 Anatomy and Physiology I	(4)
	AH 213 Introduction to Medical Insurance	3	CIS 105 Introduction to Software for Business	3
	MA 140 Introduction to Medical Assisting	3		6
	MA 141 Introduction to Medical Assisting: Laboratory	1		
	MA 142 Introduction to Medical Laboratory Techniques	2		
	MA 143 Intro to Medical Lab Techniques: Laboratory	1		
	MA 200 Pharmacology for Medical Assisting	3		
	MA 201 Pharmacology Laboratory	1		
	MA 212 Ambulatory Care Clinical Procedures	3		
	MA 215 Ambulatory Care Laboratory	1		
	MA 220 Medical Office Administration	3		
	MA 230 Medical Assisting Externship	4		
		31		

Note: *A grade of C or higher is required for all AH and MA courses. Students must take the Certified Medical Assisting (CMA-RMA exam. Failure to pass this exam will not prevent the student from obtaining their certificate in Medical Assisting.*

RECOMMENDED SEQUENCE FOR FULL-TIME STUDENTS

Part-time students can complete this program by taking one or more courses each semester.

Fall Semester I		**Spring Semester I**		**Summer I**	
AH 105	3	AH 150	3	MA 230	4
AH 213	3	CIS 105	3		
BIOL 111 **or** 121	3 **or** 4	MA 200	3		
MA 140	3	MA 201	1		
MA 141	1	MA 212	3		
MA 142	2	MA 215	1		
MA 143	1	MA 220	3		

MEDICAL LABORATORY TECHNICIAN, Associate in Science Degree - 3486

Health Careers Department

The Medical Laboratory Technician AS degree is designed to prepare a student for a career as a medical laboratory professional. The student acquires the technical expertise to perform a wide variety of laboratory tests that aid primary care providers in the diagnosis and treatment of disease. This program is fully accredited by the National Accrediting Agency for Clinical Laboratory Sciences (NAACLS). Students must complete following after admission into, but prior to starting, the clinical portion of this program: physical examination and required immunizations, background checks (Pennsylvania Child Abuse History Clearance, FBI fingerprint check, and the Pennsylvania State Police Criminal Record Check), and drug and alcohol screenings. The student should consider this factor before enrolling in this program. If the student has any questions regarding this, he or she should contact the Program Director at (717) 780-1953. This program can only be completed at the Harrisburg Campus provided students take some of the coursework online through virtual learning.

Selective Program: Entry into this program is not guaranteed with admission to the College; specific admissions criteria must be met. Please go to the Health Careers website (www.hacc.edu/healthcareers), or contact us by email at start@hacc.edu for information on specific program entry requirements. ***Students must be aware that even though the program begins in Fall, they begin classes for this major during the Summer terms.***

Career Opportunities
Graduates of this program obtain positions as Medical Laboratory Technicians in acute care facilities, physician office laboratories, clinics, independent laboratories, business, industry, and veterinary offices.

Competency Profile
This curriculum is designed to prepare students to:

- Work effectively with other hospital personnel
- Demonstrate the skills prescribed by laboratory professional organizations as MLT entry-level knowledge and skills expected of *a new graduate* upon successful completion of a formal educational program
- Successfully pass the national entry-level credentialing examination administered by certifying agencies of the profession
- Recognize how specialized training fits into the health care delivery system
- Write and speak effectively
- Appreciate accomplishments in the arts and sciences

PROGRAM REQUIREMENTS (TOTAL CREDITS = 67)

General Education		Major Requirements		Other Required Courses
ENGL 101 English Composition I	3	MLT 120 Hematology & Coagulation	4	
ENGL 102 English Composition II	3	MLT 122 Immunology & Molecular Biology	3	
COMM 101 Effective Speaking **(or)**	3	MLT 124 Immunohematology	4	
COMM 203 Interpersonal Communications	(3)	MLT 220 Clinical Microbiology I	4	
Humanities & Arts Elective	3	MLT 222 Clinical Chemistry	4	
Mathematics Elective	3	MLT 224 Urinalysis & Body Fluids	2	
Mathematics **or** Science Elective - CHEM 100, 101, 102 **or** 203	3 **or** 4	MLT 226 Clinical Experience I	5	
Science w/ a Laboratory - BIOL 111 **or** 121	3 **or** 4	MLT 228 Clinical Experience II	5	
Social & Behavioral Science Elective	3	MLT 230 Clinical Microbiology II	4	
First-Year-Seminar Elective - MLT 100	4	MLT 236 Clinical Laboratory Management	2	
Wellness	1	MLT 238 Clinical Capstone Project	1	
	29		38	

Note: *A grade of C or higher is required for ENGL 101, 102; BIOL 111, 121; COMM 100 or 203; CHEM 100, 101, 102, or 203; and all MLT courses.*

RECOMMENDED SEQUENCE FOR FULL-TIME STUDENTS

Part time students can complete this program by taking one or more courses each semester.

Summer I		Fall Semester I		Spring Semester I		Summer II		Fall Semester II		Spring Semester II	
BIOL 111 **or** 121	3 **or** 4	CHEM 100, 101, 102 **or** 203	3 **or** 4	MLT 120	4	MLT 124	4	Humanities/Arts Elective	3	COMM 101 **or** 203	3
ENGL 101	3	ENGL 102	3	MLT 220	4	MLT 224	2	MLT 226	5	MLT 228	5
		MLT 100	4	MLT 222	4	MLT 230	4	MLT 236	2	MLT 238	1
		MLT 122	3	Wellness	1			Mathematics Elective	3	Social/Behavioral Science Elective	3

MUNICIPAL POLICE ACADEMY PROGRAM - Noncredit

Office of Workforce Development and Continuing Education/Public Safety Education/Law Enforcement

As the need for education and training of municipal police officers increases, the Senator John J. Shumaker Public Safety Center at HACC – Central Pennsylvania's Community College continues to serve successfully as a certified police training center under the Municipal Police Officers' Education and Training Commission (MPOETC).

In-service cadets are those individuals employed by a municipal police department or another law enforcement agency. These individuals are enrolled by the employing agency. Pre-service cadets are those cadets who attend on their own and are responsible for tuition and other expenses. The college offers both a full-time and a part-time academy at the Senator Jeffrey E. Piccola Law Enforcement Complex on the Harrisburg campus.

Career Opportunities
Municipal police officers and county detectives are required to complete this 25-week police academy in order to attain certification, which is mandated by the MPOETC.

Competency Profile
This curriculum is designed to prepare students to:
• Enforce criminal and traffic laws
• Develop proficiency in investigative techniques, verbal, and writing skills
• Develop proficiency in use of firearms and defense tactics
• Meet established standards of physical fitness
• Develop proficiency in operation of police patrol vehicles
• Develop skills in human relations and community-oriented policing
• Develop skills in patrol procedures and operations
• Develop skills in crisis management
• Receive certification in First Aid/CPR/AED
• Receive certification in Standardized Field Sobriety Testing
**Upon successful completion of the Municipal Police Academy, the student may be eligible to receive credits towards HACC's Criminal Justice or Police Science Associate degrees.*

PROGRAM ENTRANCE REQUIREMENTS (Pre-service cadets)
• Must be a U.S. Citizen
• Required to be a minimum of 21 years of age by the first day of firearms training
• Possess a valid operator's license
• High school diploma/ G.E.D (transcript required) and/or college transcripts, if applicable
• An application fee is required at the time the application is submitted
• A fee is required to take the Nelson-Denny Reading Test (a test on reading comprehension and spelling), as well as to take the MPOETC Fitness Standard Test
• The MPOETC Fitness Test consists of a 300-meter timed run, one-minute push-ups, one-minute sit-ups, and 1 ½ mile run
• Provide proof of medical insurance
• Complete physical examination on MPOETC physical form
• Meet vision requirement – at least 20/70 in stronger eye, corrected to 20/20; at least 20/200 in weaker eye, corrected to 20/40
• Complete psychological examination (MMPI and a clinical interview with the psychologist) on MPOETC form
• Obtain a Criminal History Check through the PA State Police (online at https://epatch.state.pa.us/Home.jsp)
• Obtain an FBI Criminal History Check: (online at: https://www.fbi.gov/services/cjis/identity-history-summary-checks)
• Obtain a 10-year Department of Transportation driving record check (online at www.dmv.state.pa.us)
• If applicable, submit a copy of military discharge document (DD214)
• A letter of endorsement from a Chief of Police to be submitted to the MPOETC School Director
• Two letters of reference from non-relatives, as well as from present or former employers
• Successful completion of an oral interview
• Agree in writing to abide by the General Orders

RECOMMENDED SEQUENCE FOR STUDENTS
Students must successfully complete the entire 25-week, 919-hour, police academy.

MUSIC BUSINESS, Associate in Applied Science Degree - 1806

Business Studies Department

The Music Business AAS provides a broad music business curriculum that is focused on skill-development in multiple areas including music publishing and licensing, record-label marketing and touring, music product sales, concert promotion, recording studio production, electronic digital distribution and music-related technologies, such as MIDI. Music history, songwriting and music theory classes are offered, along with live performance development through private instruction and participation in ensembles and the HACC Music Club. Through HACC's music computer lab (Harrisburg campus), professional studio production at off-campus locations, and required internships, students experience learning in state-of-the-art facilities. The complete program is available at the Harrisburg Campus provided students take some of their coursework online through virtual learning.

Career Opportunities
Graduates of the program are prepared for careers in music business, music marketing, retailing, wholesaling, music publishing and licensing, concert promotion, arts promotion, audio and studio recording production and digital distribution technology in the music and entertainment field.

Competency Profile
This curriculum is designed to prepare students to:

- Prepare and deliver oral and written presentations on music business concepts
- Develop skills in applied critical thinking and decision making
- Integrate various research methods to collect and analyze music marketing data in order to design music marketing strategies
- Identify the skills, concepts, and methodologies necessary to manage the legal, financial, artistic, and ethical issues that face the contemporary music business professional
- Identify the basic functions and business interrelationships that occur among the numerous business entities that exist within the music business industry
- Perform and function as a team member
- Compare and contrast basic foundational knowledge of music languages and genres and their relationship to culture
- Investigate changes to the music business, music media, and music management and distribution environments
- Utilize appropriate software and music technologies in order to complete audio and recording production assignments
- Demonstrate functional mastery of necessary collaborative skills by completing a final music business internship

PROGRAM REQUIREMENTS (TOTAL CREDITS = 60)

General Education		Major Requirements		Other Required Courses	
ENGL 101 English Composition I	3	ACCT 150 Principles of Financial Accounting I	2	MATH 100 College Math for Business	3
ENGL 102 English Composition II **(or)**	3	ACCT 160 Principles of Managerial Accounting I	2	MKTG 201 Principles of Marketing	3
ENGL 106 Business Writing	(3)	MUS 119 Introduction to Music Theory **(or)**	3	Program Specific Elective**	3
COMM 101 Effective Speaking	3	MUS 120 Music Theory I	(3)		9
Humanities & Arts Elective*	3	MUSB 111 Music Business and the Internet	3		
Mathematics **or** Science Elective	3	MUSB 214 Music Business Studies	3		
Social & Behavioral Science Elective	3	MUSB 224 Music Industry & American Popular Music	3		
First-Year Seminar Elective - BUSI 101	3	MUSB 225 Entertainment & Music Promotion	3		
Wellness	1	MUSB 226 Music Computer Applications	3		
	22	MUSB 228 Audio Technology	4		
		MUSB 291 Industry Internship	3		
			29		

**Students are to select from the following courses: ART 181 or 182; ENGL 206; FMTH 101 or THTR 101; HUM 101, 115 or 201; MUS 104; PHIL 200; any foreign language course.*
***Select 3-credits from the following courses: FMTH 110; MUSB 227, 229; MUS 111, 112, 115, 116;*

RECOMMENDED SEQUENCE FOR FULL-TIME STUDENTS

Part time students can complete this program by taking one or more courses each semester.

Fall Semester I		Spring Semester I		Summer I		Fall Semester II		Spring Semester II	
BUSI 101	3	COMM 101	3	MUSB 291	3	MATH 100	3	ACCT 150	2
ENGL 101	3	ENGL 102 **or** 106	3			MUSB 225	3	ACCT 160	2
MUS 119 **or** 120	3	Humanities/Arts Elective*	3			MUSB 228	4	MKTG 201	3
MUSB 111	3	MUSB 224	3			Program Elective**	3	MUSB 226	3
MUSB 214	3	Wellness	1			Social/Behavioral Science Elective	3	Math/Science Elective	3

MUSIC AUDIO AND RECORDING TECHNOLOGY, Diploma - 0161

Business Studies Department
CIP Code: 10.0203

The Music Audio and Recording Technology diploma program gives students the opportunity to learn audio and recording technical skills necessary to participate in studio production and performance management, as well as in digital media production, distribution, and marketing. The complete program is only available at the Harrisburg Campus.

Career Opportunities
Students who complete the program can be employed by sound production companies or recording studios as technicians.
(SOC Code: 27-4014 Sound Engineering Technicians)

Competency Profile
This curriculum is designed to prepare students to:

- Cite examples of the expanding role the Internet and the World Wide Web has in all aspects of the music business
- Explain how the Internet/World Wide Web is a dynamic source of information in all areas of the music industry
- Demonstrate the basics of MIDI hardware and software and their respective applications to recording, editing, arranging, mixing, and printing of music
- Create new music in a digital audio format using audio loop technology and/or rendering MIDI files
- Create audio recordings in compliance with current industry standards
- Configure equipment for portable and installed sound systems, recording devices, and audio editing computers
- Differentiate various output standards including streaming, static web, digital media formats, audio for video, audio aspects of film, and many non-music media
- Interpret metering signals, digital over indications, and loudness perception to identify possible flaws in processed audio and attempt to avoid these flaws

PROGRAM REQUIREMENTS (TOTAL CREDITS = 17)

General Education	Major Requirements		Other Required Courses
	MUSB 111 Music Business and the Internet	3	
	MUSB 214 Music Business Studies **(or)**	3	
	MUSB 225 Entertainment & Music Promotion	(3)	
	MUSB 226 MIDI and Computer Applications	3	
	MUSB 227 Studio and Performance Production Operations	4	
	MUSB 228 Audio Technology	4	
		17	

RECOMMENDED COURSE SEQUENCE FOR ALL FULL-TIME STUDENTS

Fall Semester I	
MUSB 111	3
MUSB 214 **or** 225	3
MUSB 226	3
MUSB 227	4
MUSB 228	4

NANOFABRICATION MANUFACTURING TECHNOLOGY, Associate in Applied Science Degree - 4690

Engineering, Trades & Computer Technologies Department

The Nanofabrication Manufacturing Technology program is a collaborative program with Penn State University's Materials Research Institute, located in State College, PA. Students enrolled in this degree take their first few semesters at HACC in foundational course work - electronics, programming, physics and chemistry - to prepare them for the nanofabrication courses they will take at PSU. (*A minimum GPA of 3.0 is needed to enroll in the PSU portion.*) During the semester at PSU, students work in a clean room setting with state-of-the-art lab testing equipment and take courses covering the latest trends in nanofabrication technologies, production and manufacturing processes. This program is available at the Harrisburg Campus.

Career Opportunities
Graduates of the program enter the job market as clean-room technicians in the semiconductor manufacturing industry.

Competency Profile
This curriculum is designed to prepare students to:
- Assist a technical team in the clean-room environment
- Operate and maintain clean-room equipment
- Work in a micro- or nanofabrication environment
- Demonstrate proper safety when working in a chemical environment
- Demonstrate knowledge of clean-room procedures
- Identify global and ethical engineering issues

PROGRAM REQUIREMENTS (TOTAL CREDITS = 69)

General Education		Major Requirements		Other Required Courses	
ENGL 101 English Composition I	3	CAD 154 Computer Aided Drafting and Design	3	CHEM 100 Principles of Chemistry **(or)**	3
ENGL 104 Technical Writing	3	ELEC 100 Fundamentals of Electricity/Electronics	1	CHEM 101 General Chemistry I	(4)
COMM 101 Effective Speaking	3	ELEC 106 Fundamental of Electronics	3	CPS 121 Intro to Computer Science – JAVA	3
Humanities & Arts Elective	3	ELEC 111 AC/DC Circuits I	4	MATH 104 Trigonometry	3
Mathematics **or** Science Elective - MATH 103 **or** 116	3 **or** (4)	ENGR 208 Microcontrollers & PLCs	3	MATH 202 Introduction to Statistics	4
Social & Behavioral Science Elective	3	NFAB 211 Material, Safety & Equipment Overview	3	PHSC 113 Introduction to Physical Science	3
First-Year Seminar Elective - ENGR 102	2	NFAB 212 Basic Nanofabrication Procedures	3		16
Wellness	1	NFAB 213 Thin Films in Nanofabrication	3		
	21	NFAB 214 Lithography for Nanofabrication	3		
		NFAB 215 Materials Modification	3		
		NFAB 216 Characterization, Packaging & Testing	3		
			32		

RECOMMENDED SEQUENCE FOR FULL-TIME STUDENTS

Part-time students can complete this program by taking one or more courses each semester.

Fall Semester I		Spring Semester I		Summer		Fall Semester II		Spring Semester II (Capstone Semester @ EMPRL)	
CAD 154	3	CPS 121	3	COMM 101	3	CHEM 100 **or** 101	3 **or** 4	NFAB 211	3
ELEC 100	1	ELEC 111	4	Social/Behavioral Science Elective	3	ELEC 106	3	NFAB 212	3
ENGL 101	3	ENGL 104	3			MATH 202	4	NFAB 213	3
ENGR 102	2	ENGR 208	3			PHSC 113	3	NFAB 214	3
Humanities/Arts Elective	3	MATH 104	3			Wellness	1	NFAB 215	3
MATH 103 **or** 116	3 **or** 4							NFAB 216	3

NURSING, Associate in Science Degree - 3456

Nursing Department

The Nursing AS degree (ADN) prepares students to sit for the NCLEX® licensing exam. Successful completion of this exam is required by the PA State Board of Nursing to obtain licensure to practice as a Registered Nurse (RN). RNs work to promote health, prevent disease, and help patients cope with illness. In addition, they are advocates and health educators for patients, families, and communities. This program provides students with vital nursing care experience as they provide direct patient care; observe, assess, and record symptoms, reactions, and progress; assist physicians with treatments and examinations; administer medications, and assist in convalescence and rehabilitation. Students are taught to develop and manage nursing care plans, instruct patients and their families in proper care, and help individuals and groups take steps to improve or maintain their health. Possible exposure to bloodborne pathogens and potentially hazardous materials may occur. Competence in dosage calculation must be demonstrated throughout the Nursing program in order to advance. Mathematics is an essential safety skill. A dosage calculation course is offered for students who do not meet competence requirements. The student should consider these factors before enrolling in the program. The program is approved by the Pennsylvania State Board of Nursing and is accredited by the Accreditation Commission for Education in Nursing (ACEN). The complete Nursing program is available at the Gettysburg (four-semester and eight-semester), Harrisburg (four-semester, eight-semester and weekend), Lancaster (four-semester and eight-semester) and York (eight-semester daytime and eight-semester evening) campuses.

All students accepted into the clinical component of the program must undergo (at the student's expense) a Pennsylvania Child Abuse History Clearance, State Police Criminal Record Check, and an FBI fingerprint clearance. Pennsylvania law states that the State Board of Nursing may refuse to license a person who has been convicted of a criminal action(s). This program also requires all students accepted into the clinical component to submit a health examination form completed by a physician/nurse practitioner/physician's assistant with immunization history including verification through blood work, and submit to a drug and alcohol screen. The student should consider all of these factors before enrolling in this program. If the student has any questions regarding this, he or she should contact the Program Director at the campus of his/her choice.

Selective Program: Students must first apply to the College at http://www.hacc.edu/Admissions/Apply/index.cfm. Once admitted, entry into this program is not guaranteed with admission to the College; this is a selective and competitive admission program. Specific admissions criteria must be met. Please go to the Health Careers website (www.hacc.edu/healthcareers), or contact us by email at start@hacc.edu for specific program entry requirements

Career Opportunities
Graduates of the program are prepared for employment as registered nurses caring for patients in hospitals, extended care facilities, and health care delivery settings.

Competency Profile
The Associate Degree Nursing Program Outcomes are derived from the 4-core concepts and 9-key components of the Conceptual Framework.
This curriculum is designed to prepare students to:

[*Professionalism*] - Possess a sense of **professional identity,** a **spirit of inquiry** and a commitment to the profession of registered nursing.
- Demonstrate the ability to practice as a generalist, using clinical reasoning to provide **safe**, competent, **patient-centered care** to patients across the ***lifespan*** and ***healthcare continuum***.
- Provide ***evidence-based clinical nursing practice*** by using evidence to make sound clinical judgments and to deliver safe, competent excellent care.
- Consistently demonstrate accountability, ***ethical behavior***, and adhere to the standards of professional registered nursing practice.

[*Communication*] - Communicate effectively, in a therapeutic way with the patient, promoting human dignity, integrity, and **human flourishing** across the ***life span.***
- Demonstrate the ability to utilize **informatics**, computer-based information management systems and patient care technology to navigate the healthcare system in the provision of **patient-centered care**.
- Demonstrate the ability to respectfully communicate information verbally, nonverbally and in writing, while promoting an environment that supports interprofessional communication and **collaboration** in the provision of **patient-centered care**.

[*Critical Thinking*] - Demonstrate the ability to recall and comprehend information to problem solve using the ***nursing process***, ***evidence-based practice*** and concepts foundational to quality registered nursing practice.

- Utilize ***evidence-based practice*** to formulate nursing judgments that include the cognitive abilities to apply and analyze data that will direct patient outcomes.
- Demonstrate the ability to apply critical thinking to deliver ***clinically competent*** care regarding a clinical problem in accordance with the national patient **safety** initiative.

[*Caring*] - Engage in caring behaviors to provide a **safe**, compassionate, nurturing environment that promotes **human flourishing.**
- Provide ***holistic*** care, across the ***health continuum*** that reflects a respect of the values, cultures and lifestyles of diverse patients and families.
- Provide care that is compassionate, culturally sensitive and ***holistic***.

Adapted from Educational Competencies for Graduates of Associate Degree Nursing Programs, NLN, 2000.
Bold and italicized words are concepts that thread throughout the Harrisburg Area Community College Nursing Program Conceptual Framework.

PROGRAM REQUIREMENTS (TOTAL CREDITS = 67)

General Education		Major Requirements	
ENGL 101 English Composition I	3	NURS 140 Intro to Nursing Practice Concepts I	1
ENGL 102 English Composition II	3	NURS 141 Intro to Nursing Practice Concepts II	1
COMM 101 Effective Speaking	3	NURS 142 Health Assessment Concepts for Nursing Practice	3
Humanities & Arts Elective*	3	NURS 144 Fundamental Concepts for Nursing Practice	3
Mathematics Elective - MATH 103 **or** MATH 202	3 **or** 4	NURS 151 Holistic Health Concepts for Nursing Practice II	4.5
Mathematics **or** Science Elective - BIOL 122	4	NURS 240 Adult Health Concepts for Nursing Practice I	2
Science w/ a Laboratory - BIOL 121	4	NURS 241 Adult Health Concepts for Nursing Practice II	2.5
Social & Behavioral Science Elective - PSYC 101	3	NURS 242 Family Health Concepts for Nursing Practice I	2.5
First-Year-Seminar – NURS 143	1	NURS 243 Family Health Concepts for Nursing Practice II	2.5
Wellness - NURS 150	5	NURS 244 Advanced Behavioral Health Concepts for Nursing Practice	2.5
	32	NURS 250 Complex Health Concepts for Nursing Practice	2.5
		NURS 251 Leadership & Management Concepts for Nursing Practice	4
			31

Other Required Courses	
BIOL 221 Microbiology	4

**SPAN 104 is highly recommended.*
Note: *A grade of C or higher is required in all courses*

RECOMMENDED SEQUENCE FOR FULL-TIME STUDENTS

Summer I		Fall Semester I		Spring Semester I	
BIOL 121	4	BIOL 122	4	ENGL 102	3
ENGL 101	3	NURS 140	1	NURS 150	5
NURS 143	1	NURS 141	1	NURS 151	4.5
		NURS 142	3	PSYC 101	3
		NURS 144	3		

Summer II		Fall Semester II		Spring Semester II	
BIOL 221	4	COMM 101	3	Humanities/Arts Elective*	3
MATH 103 **or** 202	3 **or** 4	NURS 240	2	NURS 243	2.5
		NURS 241	2.5	NURS 250	2.5
		NURS 242	2.5	NURS 251	4
		NURS 244	2.5		

RECOMMENDED SEQUENCE FOR PART-TIME STUDENTS

Spring Semester I		Summer I		Fall Semester I		Spring Semester II		Summer II	
BIOL 121	4	BIOL 122	4	NURS 150	5	BIOL 221	4	COMM 101	3
NURS 140	1	NURS 141	1	PSYC 101	3	NURS 151	4.5	ENGL 101	3
NURS 142	3	NURS 144	3					NURS 240	2
NURS 143	1							NURS 242	2.5

Fall Semester II		Spring Semester III		Summer III	
MATH 103 **or** 202	3 **or** 4	ENGL 102	3	NURS 251	4
NURS 241	2.5	NURS 243	2.5	Humanities/Arts Elective*	3
NURS 244	2.5	NURS 250	2.5		

Option for Licensed Practical Nurses: Students who have graduated as Practical Nurses and have a Practical Nursing License in good standing from the PA State Board of Nursing can receive advanced standing in the Associate Degree Nursing Program when they continue their education at Harrisburg Area Community College. Students should contact their advisor about this option.

PARAMEDIC - Certificate - Non-Credit

Office of Workforce Development and Continuing Education/Public Safety Education/EMS

The Paramedic certificate prepares students to deliver emergency medical care to patients prior to their arrival in hospital emergency rooms. Students are trained in advanced life-support procedures performed by following orders of physicians sent by radio or by following standard medical protocols. This program consists of four courses in Advanced Life Support, which cover such topics as patient assessment and evaluation, pharmacology, pathophysiology associated with various body systems (e.g. cardiovascular, respiratory), OB/GYN and pediatrics, toxicology, blood disorders, field communications and rescue practices.

Students are able to participate in emergency hospital rotations in such specialty areas as anesthesia and obstetrics (OB), as well as in field externships. Students must have a current Pennsylvania or National Registry Advanced EMT (AEMT) certification. The program is accredited by the Commission on Accreditation of Allied Health Education Programs (CAAHEP) upon the recommendation of the Committee on Accreditation of Educational Programs for the Emergency Medical Services Professions (CoAEMSP). The complete program is available at the Harrisburg Campus.

Selective Program: Entry into this program is not guaranteed with admission to the College; this is a selective and competitive admission program; specific admissions criteria must be met. Please go to the Public Safety Center website, (https://www.hacc.edu/PublicSafetyCenter/EMS/emt-paramedic.cfm) or contact us by email at jagreen@hacc.edu for specific program entry requirements.

Career Opportunities
Graduates are employed as paramedics by hospitals and independent emergency service organizations. (SOC Code: 29-2041 Emergency Medical Technicians and Paramedics)

Competency Profile
This curriculum is designed to prepare students to:

- Administer standard emergency treatments
- Work effectively with other healthcare professionals
- Demonstrate the skills prescribed by the Commission on Accreditation of Allied Health Education Programs (CAAHEP) upon recommendation of the Committee on Accreditation of the Educational Programs for the Emergency Medical Services Personnel (CoAEMSP)
- Take the paramedic certification examination administered by the National Registry of Emergency Medical Technicians
- Recognize how specialized training fits into the healthcare delivery system

PROGRAM REQUIREMENTS (TOTAL 708 hours)
Students must successfully complete all required practical skills and maintain a cumulative grade of 75% in each section and achieve at least a 75% on each section exam in order to continue with the program.

Program/Course Sequence
1. EMSW 031 - Paramedic Advanced Life Support I 108 hours
2. EMSW 032 - Paramedic Advanced Life Support II 188 hours
3. EMSW 033 - Paramedic Advanced Life Support III 272 hours
4. EMSW 034 - Paramedic Advanced Life Support IV 140 hours

PARALEGAL STUDIES, Associate in Applied Science Degree - 5706

Business Studies Department

The Paralegal Studies AAS degree, which is approved by the American Bar Association (ABA), prepares students to work as paralegals assisting attorneys in law firms, corporate legal departments, insurance companies, title companies, federal, state or local courts and government agencies. **Paralegals may not provide legal services directly to the public, except as permitted by law.** This program can be completed at the Harrisburg and Lancaster campuses provided students take some of their coursework online through virtual learning.

Career Opportunities
Graduates are likely to be employed in a variety of law-related positions including in private and corporate practice, government agencies, insurance companies, titles companies, federal, state, or local courts, and law libraries. Transfer options are available for students wishing to pursue their bachelor degree.

Competency Profile
This curriculum is designed to prepare students to:
- Demonstrate a mastery of legal terminology, substantive and procedural law, and ethical rules
- Conduct legal research and prepare legal memoranda and briefs
- Draft correspondence and litigation documents (complaints, answers, motions, discovery documents)
- Draft a variety of legal documents including, but limited to, bankruptcy schedules, divorce complaints, property settlement agreements, support calculations, wills, inheritance tax returns, corporate filings, fictitious name filings, deeds, HUD-1 settlement sheets
- Identify and analyze the ethical issues that may arise for the paralegal
- Write and speak effectively
- Develop critical thinking and communication skills through the appreciate accomplishments in the arts and sciences

PROGRAM REQUIREMENTS (TOTAL CREDITS = 61)

General Education		Major Requirements		Other Required Courses	
ENGL 101 English Composition I	3	PLGL 102 Legal Research and Writing I***	3	Program Specific Electives****	18
ENGL 102 English Composition II	3	PLGL 104 Legal Research and Writing II	3	Open Elective	3
COMM 101 Effective Speaking	3	PLGL 105 Contracts	3		21
Humanities & Arts Elective	3	PLGL 201 Civil Litigation I***	3		
Mathematics **or** Science Elective*	3 **or** 4	PLGL 202 Civil Litigation II	3		
Social & Behavioral Science Elective**	3	PLGL 210 Paralegal Ethics and Professionalism	3		
First-Year-Seminar Elective - PLGL 101	3		18		
Wellness	1				
	22				

**Students are to select from the following: MATH 103, 104, 110, 111, 119 or 202.*
***Students are to select from the following: ANTH 101 or 205; COMM 253; GEOG 201 or 230; HIST 102; PSYC 229; or SOCI 201, 202, 203 or 205.*
****Indicates courses that require a grade of C or higher.*
*****Students select program electives from the following courses: CJ 203, 212; PLGL 203, 204, 206, 207, 209, 211 and 251.*

RECOMMENDED SEQUENCE FOR FULL-TIME STUDENTS

Part-time students can complete this program by taking one or more courses each semester.

Fall Semester I		Spring Semester I		Fall Semester II		Spring Semester II	
COMM 101	3	ENGL 102	3	Math/Science Elective*	3 **or** 4	Humanities/Arts Elective	3
ENGL 101	3	PLGL 102***	3	PLGL 104	3	Open Elective	3
PLGL 101	3	PLGL 201***	3	PLGL 202	3	PLGL 210	3
PLGL 105	3	Program Electives****	6	Program Electives****	6	Program Electives****	6
Social/Behavioral Science Elective**	3	Wellness	1				

Paralegal Studies AAS Course Transfer Policy

In addition to the requirements of HACC's transfer policy, credits may be transferred in and applied to paralegal specialty courses only if they meet all of the following requirements:

- Credits must have been earned at a college or university accredited by one of the following regional accrediting agencies: Middle States, New England, North Central, Northwest, Southern, or Western.
- Credit will be awarded only for course work in which the student received credit with a letter grade of 'C' or better.
- The course content must be comparable to the course offered in HACC's Paralegal Studies Program.
- Students must take at least nine (9) semester credit hours of required Paralegal Studies legal specialty courses through synchronous instruction.
- Continuing Education Credits are NOT accepted for transfer.

The Paralegal Program Director shall review the course syllabus or catalog description of the course which the student is attempting to transfer to ensure that the transferred course meets the requirements of this policy.

In the AAS program, no more than three of the seven required legal specialty courses and no more than three of the six elective legal specialty courses will be accepted for credit.

In all program options, credits for PLGL 104 (Legal Research & Writing II), PLGL 202 (Civil Litigation II), and PLGL 210 (Paralegal Ethics and Professionalism), may NOT be transferred into the program.

PARALEGAL STUDIES, Certificate - 5301

Business Studies Department
CIP Code: 22.0302

Students prepare to provide legal services, under attorney supervision, in law-related occupations, including private, corporate, and governmental law practice. The program is approved by the American Bar Association (ABA). The complete program is available at the Harrisburg and Lancaster campuses provided students take some of their coursework online through virtual learning. Due to course sequencing, a minimum of three semesters are required to complete the certificate program.

Paralegals may not provide legal services directly to the public, except as permitted by law.

Selective Program: Entry into this program is not guaranteed with admission to the College. HACC's Paralegal certificate is a post-baccalaureate certificate. Only students who can document completion of a baccalaureate degree will be admitted to the certificate program. Official transcripts should be submitted to HACC's Admission Office along with the application to the College.

Career Opportunities
Graduates are employed as paralegals in private, corporate and governmental law practices, title insurance companies, and as assistants in law libraries. ***(SOC Code: 23-2011 Paralegals and Legal Assistants)***

Competency Profile
This curriculum is designed to prepare students to:

- Conduct research and prepare legal memoranda and briefs
- Conduct computer-assisted legal research
- Prepare and draft litigation documents (complaints, answers, motions, discovery documents)
- Perform administrative tasks in a legal office
- Prepare and draft legal documents related to estates (wills, trusts), bankruptcy (petitions, schedules), domestic relations (support/property settlement agreements), real estate law (deeds, settlement sheets)

PROGRAM REQUIREMENTS (TOTAL CREDITS = 30)

General Education	Major Requirements		Other Required Courses	
	PLGL 101 Intro to Paralegal Studies	3	Program Specific Electives*	9
	PLGL 102 Legal Research & Writing I	3		
	PLGL 104 Legal Research & Writing II	3		
	PLGL 105 Contracts	3		
	PLGL 201 Civil Litigation I	3		
	PLGL 202 Civil Litigation II	3		
	PLGL 210 Paralegal Ethics & Professionalism	3		
		21		

**Select 9- credits from the following electives:*
CJ 203 Criminal Evidence
CJ 212 Criminal Law & Procedure
PLGL 203 Family Law
PLGL 204 Estate Planning & Administration
PLGL 206 Employment Law
PLGL 207 Bankruptcy Law
PLGL 209 Real Estate Law for Paralegals
PLGL 211 Administrative Law
PLGL 251 Paralegal Internship I

RECOMMENDED SEQUENCE FOR FULL-TIME STUDENTS

Part-time students can complete this program by taking one or more courses each semester.

Summer I		Fall Semester I		Spring Semester I	
PLGL 101	3	PLGL 102	3	PLGL 104	3
PLGL 105	3	PLGL 201	3	PLGL 202	3
		Program Electives*	6	PLGL 210	3
				Program Elective*	3

Paralegal Program Course Transfer Policy

In addition to the requirements of HACC's transfer policy, credits may be transferred in and applied to paralegal specialty courses only if they meet all of the following requirements:

- Credits must have been earned at a college or university accredited by one of the following regional accrediting agencies: Middle States, New England, North Central, Northwest, Southern, or Western.
- Credit will be awarded only for course work in which the student received credit with a letter grade of 'C' or better.
- The course content must be comparable to the course offered in HACC's Paralegal Studies Program.
- Students must take at least nine (9) semester credit hours of required Paralegal Studies legal specialty courses through synchronous instruction.
- Continuing Education Credits are NOT accepted for transfer.

The Paralegal Program Director shall review the course syllabus or catalog description of the course which the student is attempting to transfer to ensure that the transferred course meets the requirements of this policy.

In the Certificate program, no more than two of the seven required legal specialty courses and no more than two of the three elective legal specialty courses will be accepted for credit.

In all program options, credits for PLGL 104 (Legal Research & Writing II), PLGL 202 (Civil Litigation II), and PLGL 210 (Paralegal Ethics and Professionalism), may NOT be transferred into the program.

PERSONAL TRAINER, Certificate – Noncredit

Office of Workforce Development and Continuing Education/Healthcare Education

Personal Training is a career path in the fitness industry that requires a balance of academic and technical knowledge, clinical skills, manual dexterity, sensitivity and awareness. HACC's Personal Trainer certificate includes coursework that includes exercise design and instruction. Students have the opportunity to work with the public on exercise activities, strength training and stretching, as well as fitness assessments. Students are taught scope of practice, coaching skills, and professionalism. Taking the nationally certified credentialing exam for personal trainers is also included in this curriculum. Applicants may register online. This 316-hour blended program is completed within 20-weeks. Classes are offered twice a week along with 8-hours of study through Virtual Learning. The complete program is available at the Harrisburg Campus.

Career Opportunities
This program prepares individuals for employment as a Personal Trainer in health clubs, fitness or recreation centers, gyms, country clubs, hospitals, universities, yoga and Pilates studios, resorts, and clients' homes.

Competency Profile
Upon successful completion of the course, the student will be able to:
- Identify the key elements of how the body reacts and adapts to exercise
- Identify the role of vitamins and minerals in health and performance
- Demonstrate knowledge of basic human anatomy, physiology, biomechanics, and nutrition
- Develop communication and coaching skills
- Conduct and interpret fitness assessments for each component of physical fitness - energy balance in weight management, body composition and performance
- Discuss and design interventions for clients using relevant behavior modifications
- Develop appropriate exercise programs within their scope of practice
- Sit for a National Certification Exam like the American College of Sports Medicine (ACSM) Certified Personal Trainer (CPT) exam or National Science of Sports Medicine Exam (NASM) as examples

PROGRAM REQUIREMENTS
Students complete this program within 20-weeks with classes meeting twice a week and 8-hours of study through Virtual Learning.

Introduction to the profession of personal training	Nutrition and human performance
Introduction to human anatomy	Initial client screening procedures
The business of personal training	Comprehensive fitness program design
Human musculoskeletal anatomy	Resistance training programs
Kinesiology and biomechanical principles	Cardiorespiratory training program
Introduction to exercise instruction & coaching techniques	Flexibility training & Functional movement assessment
Exercise physiology	Advanced program options
Fitness assessment	Special populations
Theories of behavior modification	

PHYSICAL SCIENCE, Associate in Science Degree - 3076

Science Department

The Physical Science AS degree provides students with the firm foundation in mathematics, science, and liberal arts necessary to transfer to and succeed in a baccalaureate degree program in astronomy, geology, meteorology, physics, and physical science. This program offers two options for the Physical Science AS degree: **Geology** or a **General Physical Science**. The *Geology option* is for students intending to go on to degrees in the Geology or Environmental Science fields. The *General Physical Science option* is for students intending to go on to degrees in Physics, Astronomy, Meteorology, or Physical Science. With appropriate further education, graduates may find jobs in astronomical research and/or planetarium operations (astronomy), the petroleum industry, the mining industry, or within a government agency (geology). They may also find employment at the National Weather Service as a weather researcher, or broadcasting (meteorology); within research and development at a university or in private industry, at a national laboratory, inspection, testing, and quality control, or other production-related jobs (physics); or as an environmental consultant or lawyer. Since the requirements of senior institutions and their degree programs vary widely, it is recommended that students choose an intended transfer institution as soon as possible and carefully align their course sequence with the program described in that institution's catalog. The complete program can be completed at the Harrisburg Campus. Students may also complete the General Physical Track at the Lancaster Campus.

Transfer Opportunities

This transfer curriculum is provided as a guide for students planning to transfer to a baccalaureate degree granting institution. With appropriate further education, graduates may find jobs in astronomical research and/or planetarium operations (astronomy), the petroleum industry, the mining industry, or within a government agency (geology). They may also find employment at the National Weather Service as a weather researcher, or broadcasting (meteorology); within research and development at a university or in private industry, at a national laboratory, inspection, testing, and quality control, or other production-related jobs (physics); or as an environmental consultant or lawyer.

Competency Profile

This curriculum is designed to prepare graduates of the program to:

- Transfer to and succeed in a baccalaureate program
- Ability to apply scientific principles and concepts including the scientific method to a variety of problems and situation
- Knowledge of scientific methods accomplishments and how they affect technology, politics and society
- Demonstrate computer literacy in data manipulation, mining, and analysis
- Perform technical work in a typical laboratory while following appropriate safety procedures
- Effectively communicate results both orally and through written reports
- Demonstrate information literacy by appropriately vetting online information sources for truthfulness and scientific validity

PROGRAM REQUIREMENTS (TOTAL CREDITS = 62)

General Education		Major Requirements		Other Required Courses	
ENGL 101 English Composition I	3	CHEM 102 General Inorganic Chemistry/Qual. Analysis	4	Transfer Electives	6
ENGL 102 English Composition II **(or)** ENGL 104 Technical Writing	3 (3)	MATH 122 Calculus II	4		
COMM 101 Effective Speaking	3	PHYS 212 Physics for Scientists & Engineers II	4		
Humanities & Arts Elective*	3	General Physical Sciences** **(or)** Geology Options	15		
Mathematics Elective - MATH 121	4		27		
Mathematics **or** Science Elective - PHYS 211	4				
Science w/ a Laboratory Elective - CHEM 101	4				
Social & Behavioral Science Elective	3				
First-Year-Seminar Elective (Rec: SCI 100)	1				
Wellness	1				
	29				

**Students are to select courses from the following: ART 181 or 182; ENGL 206; FMTH 101 or THTR 101; HUM 101, 115 or 201; MUS 104; PHIL 200; or a foreign language course.*

*** Students are to select 15-credits from the courses listed in the General Physical Sciences Track.*

General Physical Sciences Option**	
CHEM 203 Organic Chemistry	4
CHEM 204 Organic Chemistry II	4
CPS 121 JAVA Programming	3
CPS 135 C Programming	3
CPS 161 Computer Science I	3
CPS 162 Computer Science II	3
GEOL 101 Physical Geology	4
GEOL 102 Historical Geology	4
GEOL 201 Environmental Geology	4
GIS 141 Introduction GIS	3
GIS 165 Geospatial Programming	3
GIS 205 Data Acquisition & Remote Sensing	4
MATH 220 Linear Algebra	4
MATH 221 Calculus III	4
	15

Geology Option	
GEOL 101 Physical Geology	4
GEOL 102 Historical Geology	4
GEOL 201 Environmental Geology	4
GIS 141 Introduction to Geospatial Technology	3
	15

RECOMMENDED SEQUENCE FOR FULL-TIME STUDENTS

Part-time students can complete this program by taking one or more courses each semester.

General Physical Science Option

Fall Semester I		**Spring Semester I**		**Fall Semester II**		**Spring Semester II**	
CHEM 101	4	CHEM 102	4	COMM 101	3	PHYS 212	4
ENGL 101	3	ENGL 102 **or** 104	3	PHYS 211	4	Physical Science Option Electives**	6
FYS Elective	1	Humanities/Arts Elective*	3	Physical Science Option Electives**	6	Social/Behavioral Science Elective	3
MATH 121	4	MATH 122	4	Transfer Elective	3	Wellness	1
Transfer Elective	3	Physical Science Option Elective**	3				

Geology Option

Fall Semester I		**Spring Semester I**		**Fall Semester II**		**Spring Semester II**	
CHEM 101	4	CHEM 102	4	COMM 101	3	GEOL 201	4
ENGL 101	3	ENGL 102 **or** 104	3	GEOL 102	4	PHYS 212	4
FYS Elective	1	GEOL 101	4	GIS 141	3	Social/Behavioral Science Elective	3
MATH 121	4	MATH 122	4	Humanities/Arts Elective*	3	Transfer Elective	3
Transfer Elective	3			PHYS 211	4	Wellness	1

POLICE SCIENCE, Associate in Applied Science Degree - 6806

Social Science Department

The Police Science AAS degree provides students with the opportunity to obtain practical experience in the HACC Criminalistics Laboratory, one of the best-equipped crime laboratories in Pennsylvania. Students receive hands-on training in bloodstain pattern analysis, firearms examination, shooting reconstruction, police photography, crime scene processing, fingerprint analysis, polygraph, forensic pathology, and microscopy. This program may require the student to submit to an Act 34 Pennsylvania State Police Criminal Background Check prior to enrollment, prior to the start of a field experience, prior to testing and/or obtaining employment. The student should consider this factor before enrolling in this program. If the student has any questions regarding this, he or she should contact the department chair. The complete program is only available at the Harrisburg Campus.

Career Opportunities
Graduates are employed locally and nationally as municipal or state police officers, agents for specialized law-enforcement agencies, private investigators, private security supervisors, and evidence technicians.

Competency Profile
This curriculum is designed to prepare students to:

- Discuss the history, philosophy, and organization of law enforcement and criminal justice systems
- Apply principles of police management and operations
- Demonstrate the proper methods of collection, documentation and preservation of evidence
- Identify the technologies commonly operated by police agencies
- Practice the management and techniques of patrol operations
- Distinguish between the various theories that identify the causes of criminal behavior
- Explain the history, theory, and application of criminal law

PROGRAM REQUIREMENTS (TOTAL CREDITS = 61)

General Education		Major Requirements		Other Required Courses	
ENGL 101 English Composition I	3	CJ 101 Introduction to Criminal Justice	3	Criminal Justice Electives	6
ENGL 102 English Composition II **(or)**	3	CJ 104 Police Operations	3		
ENGL 104 Technical Writing **(or)**	(3)	CJ 108 Criminology	3		
ENGL 106 Business Writing	(3)	CJ 109 Instrumentation and Technologies	3		
COMM 101 Effective Speaking	3	CJ 201 Criminal Investigation	3		
Humanities & Arts Elective	3	CJ 203 Criminal Evidence	3		
Mathematics or Science Elective	3	CJ 206 Criminalistics	4		
Social & Behavioral Science Elective	3	CJ 208 Intermediate Criminalistics	4		
First-Year-Seminar Elective	1	CJ 211 Juvenile Justice	3		
Wellness	1	CJ 212 Criminal Law and Procedure	3		
	20	CJ 240 Ethics and Diverse Cultures	3		
			35		

RECOMMENDED SEQUENCE FOR FULL-TIME STUDENTS

Part time students can complete this program by taking one or more courses each semester.

Fall Semester I		Spring Semester I		Fall Semester II		Spring Semester II	
COMM 101	3	CJ 104	3	CJ 109	3	CJ 208	4
CJ 101	3	CJ 201	3	CJ 206	4	CJ 240	3
CJ 108	3	CJ 203	3	CJ 211	3	Criminal Justice Electives	6
CJ 212	3	ENGL 102 **or** 104 **or** 106	3	Humanities/Arts Elective	3	Math/Science Elective	3
ENGL 101	3	Wellness	1	Social/Behavioral Science Elective	3		
FYS Elective	1						

POLITICAL SCIENCE, Associate in Arts Degree - 5026

Social Science Department

The Political Science AA program provides a solid foundation for students who plan to major in Political Science, Public Policy, Public Administration, or International Relations. This program allows students to focus on two areas of study: **Political Science** or **Public Policy**. The **Political Science option** is useful as an arts and science major for a variety of careers such as law, political science, public service, and foreign service. The **Public Policy option** focuses upon the development of skills that lead to careers in federal, state, local or international government. Students may also pursue careers in nonprofit agencies. Since the requirements of senior institutions vary widely, it is essential to choose a transfer institution as soon as possible and carefully follow the program described in that college's catalog. The complete program is available online through virtual learning, and at the Harrisburg, Lancaster and York campuses provided students take some of their coursework online through virtual learning.

Transfer Opportunities
This transfer curriculum is provided as a guide for students planning to transfer to a baccalaureate degree granting institution majoring in Political Science, Public Policy, Public Administration or International Studies.

Competency Profile
This curriculum is designed to prepare students to:

- Use oral and written communications - proper mechanics, clear wording and logical sequence - to convey knowledge of civics foundation necessary to effectively participate in politics
- Use appropriate technological tools to identify, locate, access, communicate and cite sources of information, including peer reviewed articles
- Critically evaluate information for legitimacy, validity and appropriateness, including partisanship and bias
- Integrate information into projects that involve critical analysis
- Explain terminology, institutions, processes, policy constructs and issues associated with political science/public policy
- Evaluate the current social issues and events and how they correlate to the legislative process and their relevance to society and individual citizens
- Participate in civil discussions with others of diverse viewpoints
- Listen to and evaluate various political views
- Identify Social Science methodologies
- Develop and apply problem solving skills to address issues that arise in one's community
- Identify one's own prejudices and biases to facilitate problem solving skills in one's community
- Actively engage in the community through service projects, internships, case studies, and/or civic participation, in order to identify problems/issues that exist

PROGRAM REQUIREMENTS (TOTAL CREDITS = 61)

General Education		**Major Requirements**		**Other Required Courses**	
ENGL 101 English Composition I	3	PSPL 110 Introduction to Public Policy	3	GIS 141 Intro to Geospatial Technology	3
				(or)	
ENGL 102 English Composition II	3	PSPL 202 State and Local Government	3	CIS 105 Intro to Software for Business	(3)
COMM 101 Effective Speaking	3	PSPL 205 International Politics	3		
Humanities & Arts Elective	3	PSPL 208 Comparative Government	3		
Humanities & Arts Elective **or** Social & Behavioral Science Elective	3	Political Science **(or)** Public Policy Options	20		
Mathematics Elective (Recommend: MATH 202)	3		32		
Social & Behavioral Science Elective – PSPL 101	3				
Science w/ a Laboratory Elective	3				
First-Year Seminar Elective	1				
Wellness	1				
	26				

Political Science Option		**Public Policy Option**	
Foreign Language Electives	8	ECON 201 Principles of Economics I: Macro	3
Transfer Electives	12	ECON 202 Principles of Economics II: Micro	3
	20	Transfer Electives	14
			20

RECOMMENDED SEQUENCE FOR FULL-TIME STUDENTS

Part-time students can complete this program by taking one or more courses each semester.

Political Science Option

Fall Semester I		Spring Semester I		Fall Semester II		Spring Semester II	
ENGL 101	3	ENGL 102	3	Foreign Language Elective	4	COMM 101	3
FYS Elective	1	GIS 141 **or** CIS 105	3	PSPL 205	3	Foreign Language Elective	4
Humanities/Arts Elective	3	Humanities/Arts **or** Social/Behavioral Science Electives	3	Transfer Electives	9	PSPL 208	3
PSPL 101	3	PSPL 202	3	Wellness	1	Science w/ Lab Elective	3
PSPL 110	3	Mathematics Elective	3			Transfer Elective	3

Public Policy Option

Fall Semester I		Spring Semester I		Fall Semester II		Spring Semester II	
ENGL 101	3	ENGL 102	3	ECON 201	3	COMM 101	3
FYS Elective	1	Humanities/Arts **or** Social/Behavioral Science Electives	3	PSPL 205	3	ECON 202	3
Humanities/Arts Elective	3	GIS 141 **or** CIS 105	3	Transfer Electives	8	PSPL 208	3
PSPL 101	3	PSPL 202	3	Wellness	1	Science w/ Lab Elective	3
PSPL 110	3	Mathematics Elective	3			Transfer Elective	3
Transfer Elective	3						

PRACTICAL NURSING, Certificate - 3270

Health & Public Service Department
CIP Code: 51.3901

The Practical Nursing Certificate Program prepares students to sit for the NCLEX-PN® licensing exam. Successful completion of this exam is required by the PA State Board of Nursing to obtain licensure to practice as a Licensed Practical Nurses. As integral members of a healthcare team, Practical Nurses meet the basic needs of clients, carry out therapeutic procedures, and observe/report symptoms in response to treatment. The program is approved by the Pennsylvania State Board of Nursing and accredited by the Accreditation Commission for Education in Nursing (ACEN). This program can be completed at the Harrisburg, Lancaster and York campuses.

Selective Program: Students must first apply to the College at http://www.hacc.edu/Admissions/Apply/index.cfm. Once admitted entry into this program is not guaranteed with admission to the College; this is a selective and competitive admission program; specific admissions criteria must be met. Please go to the Health Careers website (www.hacc.edu/healthcareers), or contact us by email at start@hacc.edu for specific program entry requirements.

All students accepted into the clinical component of the program must undergo (at the student's expense) a Pennsylvania Child Abuse History Clearance, State Police Criminal Record Check, and an FBI fingerprint clearance. Pennsylvania law states that the State Board of Nursing may refuse to license a person who has been convicted of a criminal action(s). This program also requires all students accepted into the clinical component to submit a health examination form completed by a physician/nurse practitioner/physician's assistant with immunization history including verification through blood work, and submit to a drug and alcohol screen. The student should consider these factors before enrolling. If the student has any questions regarding this, he or she should contact the Program Director at the campus of his/her choice.

Career Opportunities
Graduates of the program are employed as practical nurses caring for patients in hospitals, extended care facilities, and health care delivery settings. ***(SOC Code: 29-2061 Licensed Practical and Vocational Nurses)***

Competency Profile
This curriculum is designed to prepare students to [demonstrate]:
[Professionalism]
- Possess a sense of **professional identity,** a **spirit of inquiry** and a commitment to the profession of practical nursing:
- Demonstrate the ability to practice as a member of the health care team, whose practice reflects ***holistic*** **patient-centered care**, integrity and ***ethical behavior***.
- Provide ***evidence-based clinical nursing practice*** by using evidence to promote change and excellence.
- Consistently demonstrate accountability, ***ethical behavior***, and adhere to the standards of professional practice.

[Communication]
- Communicate effectively, in a therapeutic way with the patient, promoting human dignity, integrity, and **human flourishing** across the ***life span.***
- Demonstrate the ability to utilize **informatics**, as a communication and information gathering tool to support **patient-centered care**.
- Demonstrate the ability to respectfully communicate information verbally, nonverbally and in writing, while delivering **patient-centered care** in partnership with multidisciplinary members and to achieve continuity of care and positive patient outcomes.

[Critical Thinking]
- Demonstrate the ability to recall and comprehend information and problem solving using the ***nursing process*** and concepts foundational to quality nursing practice.
- Utilize critical thinking skills to make nursing judgments regarding a posed clinical problem that demonstrate the use of the ***nursing process***.
- Demonstrate the ability to apply nursing knowledge to implement interventions and to reach a nursing judgment regarding the patient response to interventions in accordance with the national patient **safety** initiative.

[Caring]
- Engage in caring behaviors to help achieve desired therapeutic outcomes and promote **human flourishing.**
- Contribute to the plan of care to promote comfort and optimal level of functioning along the **health care continuum**.
- Provide ***holistic*** care that reflects the client's values, cultures, and lifestyles.

PROGRAM REQUIREMENTS (TOTAL CREDITS = 53)

General Education		Major Requirements		Other Required Courses	
ENGL 101 English Composition I	3	BIOL 121 Anatomy & Physiology I	4	PSYC 101 General Psycholog	3
COMM 101 Effective Speaking	3	BIOL 221 Microbiology	4		
	6	PNUR 140 Intro to Practical Nursing Concepts I	1		
		PNUR 141 Intro to Practical Nursing Concepts II	1		
		PNUR 142 Data Collection Concepts for Practical Nursing	1		
		PNUR 143 Concepts for Informatics in Practical Nursing	1		
		PNUR 144 Fundamental Concepts for Practical Nursing	4		
		PNUR 145 Intro to Concepts of Gerontology for Practical Nursing	2		
		PNUR 150 Holistic Health Concepts for Practical Nursing I	5.5		
		PNUR 151 Holistic Health Concepts for Practical Nursing II	5		
		PNUR 152 Intro to Concepts of Leadership for Practical Nursing	4.5		
		PNUR 242 Family Health Concepts for Practical Nursing I	3		
		PNUR 243 Family Health Concepts for Practical Nursing II	3		
		PNUR 244 Advanced Behavior Health Concepts for Practical Nursing	3		
		PNUR 245 Intro to Concepts of Community Health for Practical Nursing	2		
			44		

Note: *A grade of C or higher is required in all courses.*

RECOMMENDED SEQUENCE FOR FULL-TIME STUDENTS

Part-time students can complete this program by taking one or more courses each semester.

Fall Semester I		Spring Semester I		Summer		Fall Semester II	
BIOL 121	4	BIOL 221	4	PNUR 242	3	PNUR 150	5.5
ENGL 101	3	COMM 101	3	PNUR 243	3	PNUR 151	5
PNUR 140	1	PNUR 141	1	PNUR 244	3	PNUR 152	4.5
PNUR 143	1	PNUR 142	1	PNUR 245	2		
PSYC 101	3	PNUR 144	4				
		PNUR 145	2				

PRE-HEALTH PROFESSIONS, Associate in Science Degree - 3150

Health Careers Department

The Pre-Health Professions AS degree is designed for students intending to pursue careers in health-related professions. The program provides the foundation necessary to prepare students for admission into a health science program at HACC (though completion of the program is not required for entry into the clinical portion of a health science program) or to transfer into a health science or health professions program at a four-year institution. Students are able to select from one of two concentrations: **General Allied Health or General Transfer. The General Allied Health concentration** provides students with the opportunity to focus their studies towards a specialized area within the healthcare field while completing the degree. **The General Transfer concentration** focuses on preparing students to enter into a bachelor's level program in a health-related field. Lastly, the curriculum provides students with a balance of mathematics, science, humanities, English, social sciences and computer skills relevant to employment in health care professions or health-related fields. This program can be completed at all of HACC's campus locations provided students take some of their coursework online through virtual learning.

Transfer Opportunities
Career opportunities are dependent upon the curriculum option chosen. Many graduates are engaged in careers as home health and personal care aides, medical secretaries and administrative assistants, social and human service assistants, medical records and health information technicians, nurse aids, nurse assistants, medical lab assistants, and laboratory technicians.

Competency Profile
This curriculum is designed to prepare the student to:
- Discuss and apply scientific principles and concepts
- Apply the scientific method to solve scientific problems
- Demonstrate the correct use of laboratory skills relevant to science and healthcare
- Be able to communicate information related to science and healthcare using appropriate terminology

PROGRAM REQUIREMENTS (TOTAL CREDITS = 60)

General Education		**General Transfer Concentration**		**General Allied Health Concentration**	
ENGL 101 English Composition I	3	AH 105 Medical Term. for Health Careers	3	CIS 105 Intro to Software for Business	3
ENGL 102 English Composition II	3	Mathematics Elective – MATH 103	3	Mathematics Elective – MATH 100 **or** higher	3
COMM 101 Effective Speaking	3	Mathematics **or** Science Elective – CHEM 101	4	Mathematics or Science Elective	3
Humanities & Arts Elective*	3	Science w/ a Laboratory Elective – BIOL 121	4	Science w/ a Laboratory Elective – BIOL 111 **or** 121	3 **or** (4)
	12	Social/Behavioral Science Elective – PSYC 101	3	Social/Behavioral Science Elective – PSYC 101	3
		First-Year Seminar Elective – AH 140	3	First-Year Seminar Elective – AH 140, CVT 100 **or** MLT 100	3
		Wellness	1	Wellness	1
		Transfer Electives**	12	General Allied Health Program Electives^^	29
		Program Electives***	15-16		

**Students are to select their electives from the following: ART 181 or 182; ENGL 206; HUM 101, 115 or 201; MUS 104; PHIL 200; FMTH 101 or THTR 101; or a foreign language.*
***Students in the General Transfer Concentration select their Transfer Electives appropriate for their intended school. Some transfer schools require a second Humanities & Arts elective. Students should check with their intended school for more information.*
****Students in the General Transfer Concentration should select their Program Electives from the following: BIOL 101, 102, 122, 215, 221; CHEM 102, 203, 204; MATH 104, 119, 121, 202; PHYS 201, 202.*
^^Students in the General Allied Health Concentration should select their program electives from the following: AH 105, 150, 210, 213; BIOL 111, 122, 221; CHEM 100, 203; CVT 100, 101, 102, 103; GERT 100, 101, 102, 103, 104, 220, 225, 232; another Humanities & Arts elective; MGMT 130; MLT 100; NUTR 104; PSYC 209, 213; RESP 100; SOCI 201; WHP 101, 102, 103.

RECOMMENDED SEQUENCE FOR FULL –TIME STUDENTS

Part time students can complete this program by taking one or more courses each semester.

General Transfer Concentration

Fall Semester I		**Spring Semester I**		**Fall Semester II**		**Spring Semester II**	
AH 140	3	AH 105	3	CHEM 101	4	Program Electives***	8
COMM 101	3	ENGL 102	3	Program Electives***	4	Transfer Elective**	3
ENGL 101	3	PSYC 101	3	Transfer Electives**	9	Wellness	1
MATH 103	3	Humanities/Arts Elective*	3				
BIOL 121	4	Program Elective***	3				

General Allied Health Concentration

Fall Semester I		**Spring Semester I**		**Fall Semester II**		**Spring Semester II**	
AH 140, CVT 100 or MLT 100	3	CIS105	3	Program Electives^^	12	Program Electives^^	14
COMM 101	3	ENGL 102	3	Math/Science Elective	3	Wellness	1
ENGL 101	3	PSYC 101	3				
MATH 100 **or** Higher	3	Humanities/Arts Elective*	3				
BIOL 111 **or** 121	3 **or** 4	Program Elective^^	3				

PROFESSIONAL BOOKKEEPING, Certificate - 1206

Business Studies Department
CIP Code: 52.0302

The Professional Bookkeeping certificate prepares students for positions as professional bookkeepers and facilitates their passing of the certification exams, which indicates their expertise in bookkeeping and in using technology tools, such as Quickbooks Online. Taking these exams are outside of the curriculum and may require additional preparation and the payment of fees to test facilitators. This certificate focuses on essential general business, accounting and technology skills needed in today's bookkeeping environment and places students on the fast-track to a rewarding career. This program can only be completed online through Virtual Learning.

Career Opportunities
Graduates of this program may find employment as full-charge bookkeepers in any one of a variety of industries and businesses including accounting firms and even not-for-profit organizations. ***(SOC Code 43-3031 Bookkeeping, Accounting and Auditing Clerks)***

Competency Profile
This curriculum is designed to prepare students to:

- Perform all functions of accounting for sole proprietorships, partnerships and corporations
- Implement an effective system of internal control
- Show proficiency in operating microcomputer-based accounting systems and developing solutions to accounting problems using computerized spreadsheets
- Use data analytics and software tools to provide business insights
- Analyze financial statements, recognize potential problems and suggest appropriate solutions
- Communicate financial information to management

PROGRAM REQUIREMENTS (TOTAL CREDITS = 31)

General Education	Major Requirements		Other Required Courses	
	ACCT 150 Principles of Financial Accounting I	2	BUSI 101 Introduction to Business	3
	ACCT 151 Principles of Financial Accounting II	2	CIS 105 Intro to Software for Business	3
	ACCT 160 Principles of Managerial Accounting I	2	ENTR 101 Introduction to Entrepreneurship	3
	ACCT 161 Principles of Managerial Accounting II	2	Program Elective*	3
	ACCT 203 Income Tax Accounting	4		12
	ACCT 208 Professional Bookkeeping	4		
	ACCT 215 Accounting Software Applications	3		
		19		

**Students select from MGMT or MKTG 100-299.*

RECOMMENDED SEQUENCE FOR FULL-TIME STUDENTS

Part-time students can complete this program by taking one or more courses each semester.

Fall Semester I		Spring Semester I	
ACCT 150	2	ACCT 151	2
ACCT 160	2	ACCT 161	2
BUSI 101	3	ACCT 203	4
CIS 105	3	ACCT 208	4
ENTR 101	3	ACCT 215	3
Program Elective*	3		

PSYCHOLOGY, Associate in Science Degree - 5156

Social Science Department

The Psychology AS transfer degree provides students with a solid foundation to transfer as a Psychology major to a wide range of Baccalaureate Institutions. Students receive a broad introduction to the field, an in-depth look into at least two subfields within Psychology, and a solid foundation in research design and analysis. Since some four-year institutions have specific preferences for course options, students are advised to identify their intended transfer institution as soon as possible and consult the associated transfer guide for that school. The complete program is available at the Harrisburg and Lancaster campuses, as well as online through virtual learning. Students may also complete this program at Gettysburg, Lebanon and York campuses provided that they take some of their coursework online through virtual learning.

Transfer Opportunities
This transfer curriculum is provided as a guide for students planning to transfer to a baccalaureate-degree-granting institution. Students who plan to work in therapeutic or academic settings should expect to continue on to earn at least a Master's degree.

Competency Profile
This curriculum is designed to prepare students to:

- Describe key concepts, principles and overarching themes in psychology
- Develop a working knowledge of psychology's content domains: Human Development, Individual and Socio-cultural Differences, Learning and Cognition and Biological Basis of Behavior and Mental Processes
- Use scientific reasoning to interpret psychological phenomena
- Interpret, design and conduct basic psychological research
- Apply ethical standards and sociocultural understanding to evaluate psychological science and practice
- Employ the statistical software, citation formats (APA) and communication norms utilized in psychology
- Locate, evaluate and utilize appropriate scientific sources of knowledge

PROGRAM REQUIREMENTS (TOTAL CREDITS = 61)

General Education		**Major Requirements**		**Other Required Courses**	
ENGL 101 English Composition I	3	PSYC 241 Research Design and Analysis I	4	BIOL 111 Intro Biological Science **(or)**	3
ENGL 102 English Composition II **(or)**	3	PSYC 242 Research Design and Analysis II	4	BIOL 101 General Biology I	(4)
ENGL 104 Technical Writing	(3)	*Select 6 credits from two of the following three categories:*	6	CIS 105 Intro to Software for Business	3
COMM 101 Effective Speaking	3	**Human Development (or)** **	14	PHIL 102 Logic **(or)**	3
Humanities & Arts Elective	3	PSYC 209 Lifespan Development **(or)**	(3)	PHIL 101 Intro to Philosophy **(or)**	(3)
Humanities & Arts **or** Science & Behavioral Science Elective - PSYC 101	3	PSYC 212 Child Growth & Development	(3)	PHIL 215 Philosophy of Science **(or)**	(3)
Mathematics Elective - MATH 103, 119 **or** 121	3	**Individual Processes (or)** **	(3)	PHIL 225 Ethics: Belief and Action	(3)
Mathematics **or** Science Elective	3	PSYC 213 Psychological Disorders & Treatment **(or)**		Transfer Electives***	9
Social & Behavioral Science Elective*	3	PSYC 221 Social Psychology **(or)**			18
Science with a Laboratory Elective	3	**Biological Basis of Behavior & Mental Process** **	(3)		
First-Year-Seminar Elective	1	PSYC 226 Biopsychology	(3)		
Wellness	1				
	29				

**Students select from the following: ANTH 101 or 205; COMM 253; GEOG 201 or 230; HIST 102; PSYC 229; SOCI 201, 202, 203 or 205.*
***Students are to select transfer elective courses that are appropriate for the intended transfer institution.*

RECOMMENDED SEQUENCE FOR FULL-TIME STUDENTS

Part-time students can complete this program by taking one or more courses each semester.

Fall Semester I		**Spring Semester I**		**Fall Semester II**		**Spring Semester II**	
CIS 105	3	BIOL 101 **or** 111	4 **or** 3	Math/Science Elective	3	Humanities/Arts Elective	3
ENGL 101	3	COMM 101	3	PHIL 101, 102, 215 **or** 225	3	PSYC 242	4
FYS Elective	1	ENGL 102 **or** 104	3	PSYC 241	4	Transfer Electives***	9
PSYC 101	3	MATH 103, 119 **or** 121	3	Social/Behavioral Science Elective*	3		
Science w/ Lab Elective	3	PSYC Elective**	3	PSYC Elective**	3		
Wellness	1						

RADIOLOGIC TECHNOLOGY, Associate in Science Degree - 3760

Health Careers Department

The Radiologic Technology AS program prepares students to enter the healthcare field as Radiologic Technologists, who perform general radiographic imaging. Coursework provides students with the knowledge and technical expertise to produce radiographic images of the human body, which are used by physicians to make a medical diagnosis. This program is offered in cooperation with affiliated physician offices, hospitals and medical imaging centers and provides students with both theoretical and practical instruction through in-class, virtual learning, and laboratory learning environments. Practical application is also provided through clinical instruction at these clinical affiliates. The program curriculum is structured so that courses are offered in both blended and face-to-face formats. Students are only required to attend in-class and lab-sessions at the campus one day per week. Graduates are eligible to take the national certifying examination given by the American Registry of Radiologic Technologists (ARRT). Previous conviction of a crime, including felony, gross misdemeanor, or misdemeanor, with the sole exceptions of speeding or parking violations, may result in denial to sit for the ARRT national registry examination. Therefore, any person interested in pursuing an education in Radiologic Technology who has any questions pertaining to his/her potential eligibility to qualify for taking the examination should seek guidance from the Department of Regulatory Services, ARRT, 1255 Northland Drive, St. Paul, Minnesota 55120, (651) 687-0048, before commencing coursework. This program is accredited by the Joint Review Committee on Education in Radiologic Technology (JRCERT), 20 North Wacker Drive, Suite #2850, Chicago, IL 60606-3182, (312) 704-5300, (http://www.jrcert.org). The complete program is only available at the Lancaster Campus.

Selective Program: Entry into this program is not guaranteed with admission to the College; this is a selective and competitive admission program; specific admissions criteria must be met. Please go to the Health Careers website (www.hacc.edu/healthcareers), or by email start@hacc.edu

Career Opportunities
Graduates find employment as radiologic technologists or radiographers in hospital radiology departments, physician offices and independent medical-imaging centers.

Competency Profile
This curriculum is designed to prepare students to:
- Be clinically competent radiographers
- Apply critical thinking skills
- Model professionalism
- Employ effective communication skills
- Model leadership qualities

PROGRAM REQUIREMENTS (TOTAL CREDITS =75)

General Education		Major Requirements		Other Required Courses
ENGL 101 English Composition I	3	RADT 100 Intro to Radiologic Proc	3	
ENGL 102 English Composition II	3	RADT 102 Introduction to Radiologic Tech	3	
COMM 203 Interpersonal Communication	3	RADT 105 Radiation Protection and Biology	2	
Humanities & Arts Elective - SPAN 104	3	RADT 106 Radiologic Tech Clinical Intro	3	
Mathematics Elective - MATH 103	3	RADT 107 Radiographic Procedures I	3	
Mathematics or Science Elective - BIOL 122	4	RADT 108 Radiation Characteristics & Production	3	
Science w/ a Laboratory Elective - BIOL 121	4	RADT 109 Radiologic Tech Clinical I	2	
Social & Behavioral Science Elective	3	RADT 111 Introduction to Radiation Sciences	3	
First-Year Seminar Elective	1	RADT 201 Radiographic Procedures II	3	
Wellness	1	RADT 202 Imaging Equipment	2	
	28	RADT 203 Radiologic Tech Clinical II	3	
		RADT 205 Radiographic Pathology	3	
		RADT 207 Radiologic Tech Clinical III	3	
		RADT 208 Imaging & Processing	3	
		RADT 209 Image Analysis	2	
		RADT 210 Intro to Computer Tomography	1	
		RADT 211 Radiologic Tech Clinical IV	3	
		RADT 212 Radiologic Technology Seminar	2	
			47	

***Note**: The following courses require a grade of C or higher: BIOL, COMM, ENGL, MATH, and RADT.*

RECOMMENDED SEQUENCE FOR FULL-TIME STUDENTS

Part-time students can complete this program by taking one or more courses each semester.

Fall Semester I		Spring Semester I		Summer I	
BIOL 121	4	BIOL 122	4	RADT 107	3
ENGL 101	3	COMM 203	3	RADT 108	3
FYS Elective	1	RADT 100	3	RADT 109	2
MATH 103	3	RADT 105	2		
RADT 102	3	RADT 106	3		
RADT 111	3				

Fall Semester II		Spring Semester II		Summer II	
RADT 201	3	ENGL 102	3	RADT 205	3
RADT 202	2	RADT 207	3	RADT 210	1
RADT 203	3	RADT 208	3	RADT 211	3
SPAN 104	3	RADT 209	2	RADT 212	2
Wellness	1	Social/Behavioral Science Elective	3		

RADIOLOGY INFORMATICS, Associate in Applied Science Degree - 3786

Health Careers Department

The Radiology Informatics AAS program prepares students to enter the field of medical imaging informatics as Picture Archiving and Communication Systems (PACS) Administrators and Radiology Informatics Professionals. Students are taught computer and radiology imaging basics, PACS interface and system analysis, project management and quality control, Digital Imaging and Communications in Medicine (DICOM) and Health Level 7 (HL7) messaging systems, and electronic health records (EHR), in addition to basic human biology. Students gain oral and written communication skills to aid them in working in the informatics team and healthcare environments. Students are able to design and implement a "PACS Plan" for an imaging department within a health care facility. Graduates are prepared to take all three levels of certification exams through the PACS Administrators Registry and Certification Association (PARCA). Additionally, graduates with a minimum of two years previous experience in healthcare imaging or imaging informatics, meet the educational and continuing education requirements for taking the American Board of Imaging Informatics Certification (ABII). Students are required to complete 40-hours of shadowing in an approved medical imaging department. Facilities may require students to complete a physical examination, a drug and alcohol screening, a Child Abuse History Clearance, the Federal Criminal Record Check and/or the State Police Criminal Record Check prior to the shadowing experience and/or employment. The complete program is available online.

Career Opportunities

Graduates are prepared to work in medical imaging and information technology settings that utilize digital imaging, PACS, and Radiology Information System (RIS) as a radiology informatics specialist/PACS administrator. Graduates are also prepared to work in PACS equipment retail, PACS sales, and radiology informatics/PACS support services.

Competency Profile

This curriculum is designed to prepare students to:

- Function as an entry-level imaging informatics (PACS) administrator
- Demonstrate critical thinking and problem-solving skills
- Demonstrate professional behavior while functioning as an informatics specialist
- Demonstrate effective communication skills
- Demonstrate effective project management skills
- Apply imaging informatics legal and ethical standards in the professional environment
- Comply within applicable imaging informatics professional standards
- Use appropriate safety practices within the clinical environment

PROGRAM REQUIREMENTS (TOTAL CREDITS = 69)

General Education		Major Requirements		Other Required Courses	
ENGL 101 English Composition I	3	RADI 100 DICOM	2	CIS 105 Intro to Software for Business	3
COMM 203 Interpersonal Communication	3	RADI 101 Health Level 7	3		
Humanities/Arts Elective - SPAN 104	3	RADI 102 RADI Regulations, Quality Control, & Security	3		
Mathematics **or** Science Elective – BIOL 111	3	RADI 104 Intro to Radiologic Technology for RADI	4		
Social & Behavioral Science Elective	3	RADI 110 Radiologic Basics for Informatics	4		
First-Year-Seminar Elective	1	RADI 125 RADI Hardware & Support	3		
Wellness	1	RADI 202 PACS Analysis	4		
	17	RADI 203 RADI Advanced Concepts EHR	2		
		RADI 204 Advanced Concepts CPACS	2.5		
		RADI 205 RADI Project Management	4		
		RADI 206 Advanced Concepts Business Analytics	2.5		
		RADI 210 RADI Internship I **(or)**	4		
		RADI 214 RADI Certification Exam Prep I (Technical)	(4)		
		RADI 211 RADI Internship II **(or)**	4		
		RADI 215 RADI Certification Exam Prep II (Clinical)	(4)		
			42		

Note: *A grade of C or higher is required for all RADI courses.*

RECOMMENDED SEQUENCE FOR FULL-TIME STUDENTS

Part time students can complete this program by taking one or more courses each semester.

Fall Semester I		Spring Semester I		Summer I		Fall Semester II		Spring Semester II	
CIS 105	3	ENGL 101	3	RADI 202	4	COMM 203	3	BIOL 111	3
FYS Elective	1	RADI 102	3	RADI 203	2	RADI 204	2.5	RADI 206	2.5
RADI 100	2	RADI 110	4	Wellness	1	RADI 205	4	RADI 211 **or** 215	4
RADI 101	3	RADI 125	3			RADI 210 **or** 214	4	Social/Behavioral Science Elective	3
RADI 104	4							SPAN 104	3

RADIOLOGY INFORMATICS, Certificate - 3296

Health Careers Department

The Radiology Informatics certificate is primarily designed to meet the educational goals for students, currently working in medical imaging, who wish to advance their careers in the area of Radiology Informatics. Students are taught computer, PACS interface and system analysis, project management and quality control, Digital Imaging and Communications in Medicine (DICOM) and Health Level 7 (HL7) messaging systems, and electronic health records (EHR). Students are able to design and implement a "PACS Plan" for an imaging department within a health care facility. The curriculum prepares them to function as Radiology Informatics professionals, as well as to pass the industry certification exams. This certificate can be completed entirely online through virtual learning.

Career Opportunities
Graduates are prepared for entry-level employment as picture archive and communications system (PACS) or radiology information system (RIS) administrators.

Competency Profile
This curriculum is designed to prepare students to:
- Function as an entry-level imaging informatics (PACS) administrator
- Demonstrate critical thinking and problem-solving skills
- Demonstrate professional behavior while functioning as an informatics specialist
- Demonstrate effective communication skills
- Demonstrate effective project management skills
- Apply imaging informatics legal and ethical standards in the professional environment.

PROGRAM REQUIREMENTS (TOTAL CREDITS = 31)

General Education	Major Requirements		Other Required Courses
	RADI 100 Digital Imaging & Communications in Medicine	2	
	RADI 101 Health Level 7	3	
	RADI 102 RADI Regulations, Quality Control, & Security	3	
	RADI 104 Intro to Radiologic Technology for RADI	4	
	RADI 110 Radiology Basics for Informatics	4	
	RADI 202 PACS Interface & Systems Analysis	4	
	RADI 203 RADI Advanced Concepts in EHR	2	
	RADI 204 Advanced Concepts Cardiology PACS	2.5	
	RADI 205 RADI Project Management	4	
	RADI 206 Advanced Concepts Business Analytics	2.5	
		31	

Note: *A grade of C or higher is required for all RADI courses.*

RECOMMENDED SEQUENCE FOR FULL-TIME STUDENTS

Part time students can complete this program by taking one or more courses each semester.

Fall Semester I		Spring Semester I	
RADI 100	2	RADI 202	4
RADI 101	3	RADI 203	2
RADI 102	3	RADI 204	2.5
RADI 104	4	RADI 205	4
RADI 110	4	RADI 206	2.5

RESPIRATORY THERAPIST, Associate in Science Degree - 3920

Health Careers Department

The Respiratory Therapist AS program prepares students to enter the workforce as registered respiratory therapists. The program is offered in cooperation with Life Care Hospital of Mechanicsburg, Penn State Health System - Milton S. Hershey Medical Center, Geisinger Holy Spirit Hospital, UPMC Pinnacle Health System, Summit Health, Wellspan York Hospital, FOX Subacute Hospital, and Pulmonary and Critical Care Associates. The Respiratory Therapist program is accredited by the Commission on Accreditation for Respiratory Care (www.coarc.com). Continuation in this program requires that the student receive a grade of C or higher in each course pursued. Graduation requirements include current Certification in American Heart Association BLS (CPR), American Heart Association Advanced Cardiac Life Support (ACLS) certification, American Heart Association Pediatric Advanced Life Support (PALS) certification, professional development credits, and satisfactory performance on comprehensive written, laboratory, simulation, and oral exit examinations. Membership in the American Association for Respiratory Care (AARC) is required by the start of the second semester of the Respiratory Therapist program (#3920). The following must be completed after a student has been selected for, but prior to their start in the clinical portion of the program and are also requirements for continuation: physical examination and required immunizations, background checks (Pennsylvania Child Abuse History Clearance, FBI fingerprint check, and PA State Police Criminal Record Check), and drug and alcohol screens. The student should consider these factors before enrolling in this program. If the student has any questions regarding this, he or she should contact the program director. This program can only be completed at the Harrisburg Campus. In addition to tuition and fees, students must purchase uniforms, supplies, liability insurance, testing, and clinical parking fees.

Selective Program: Entry into this program is not guaranteed with admission to the College; this is a selective and competitive admission program; specific admissions criteria must be met. Please go to the Health Careers website (www.hacc.edu/healthcareers) or email at start@hacc.edu for specific program entry requirements.

Career Opportunities
Graduates find employment as respiratory therapists in hospitals, nursing homes, rehabilitation centers, home healthcare companies, and as pharmaceutical sales representatives.

Competency Profile
This curriculum is designed to prepare students to:

- Demonstrate proficiency as respiratory therapists as described by the National Board for Respiratory Care
- Assist physicians in the diagnosis, management, and treatment of patients afflicted with cardiopulmonary disorders
- Function effectively as members of the healthcare team
- Comprehend, apply, and evaluate clinical information relevant to their role as registered respiratory therapists (Cognitive Domain)
- Demonstrate technical proficiency in all registered respiratory therapist skills. (Psychomotor Domain)
- Demonstrate personal behaviors consistent with professional and employer expectations for the registered respiratory therapist (Affective Domain)

PROGRAM REQUIREMENTS – Certified Respiratory Therapist (TOTAL CREDITS = 71)

General Education		Major Requirements		Other Required Courses
ENGL 101 English Composition I	3	RESP 100 Intro to Respiratory Care	2	
ENGL 102 English Composition II	3	RESP 120 Cardiopulmonary Anatomy & Physiology	4	
COMM 101 Effective Speaking	3	RESP 130 Hospital Orientation	2	
Humanities & Arts Elective	3	RESP 140 Oxygen Administration	4	
Mathematics Elective	3	RESP 150 Pharmacology	3	
Mathematics **or** Science Elective - CHEM 100	3	RESP 160 Patient Assessment	3	
Science w/ a Laboratory Elective - BIOL 111 **or** 121	3 **or** 4	RESP 170 Therapeutics	4	
Social & Behavioral Science Elective	3	RESP 175 Clinical Practice I	2	
First-Year Seminar Elective	1	RESP 200 Cardiopulmonary Diseases	3	
Wellness	1	RESP 205 Clinical Practice II	2	
	26	RESP 210 Critical Care	6	
		RESP 230 Cardiopulmonary Lab Procedures	2	
		RESP 235 Clinical Practice III	2	
		RESP 245 Clinical Practice IV	2	
		RESP 270 Neonatal/Pediatric Respiratory Care	4	
			45	

Note: *A grade of C or higher is required for ENGL 101, BIOL 111 or 121, CHEM 100 & all RESP courses.*

RECOMMENDED SEQUENCE FOR FULL-TIME STUDENTS

The program is offered during the day and students may enroll either full-time or part-time. General education courses are offered during the day and evening. Evening clinical rotations may be possible.

Fall Semester I		**Spring Semester I**		**Summer I**		**Fall Semester II**		**Spring Semester II**		**Summer II**	
BIOL 111 **or** 121	3 **or** 4	COMM 101	3	RESP 140	4	ENGL 102	3	Humanities/Arts Elective	3	RESP 245	2
CHEM 100	3	RESP 120	4	RESP 150	3	Mathematics Elective	3	RESP 210	6	RESP 270	4
ENGL 101	3	RESP 130	2	RESP 175	2	RESP 170	4	RESP 235	2		
FYS Elective	1	RESP 160	3			RESP 205	2	Social/Behavioral Science Elective	3		
RESP 100	2	RESP 200	3			RESP 230	2				
Wellness	1										

SOCIAL SCIENCES, Associate in Arts Degree - 5090

Social Science Department

The Social Sciences AA program is designed for students who plan to seek a four-year degree in anthropology, economics, geography, political science, history, public administration, sociology, or related field, at a four-year institution. Students are able to select their social science courses to fit their area of interest through the Social Science electives. Since the requirements of senior institutions vary widely, it is essential to choose an intended transfer institution as soon as possible and carefully follow the program described in that institution's college catalog. This program can be completed at all of HACC's campuses, as well as online through virtual learning.

Transfer Opportunities
This transfer curriculum is provided as a guide for students planning to transfer to a baccalaureate degree granting institution.

Competency Profile
This curriculum is designed to prepare students to:

- Transfer into a social science discipline at a four-year institution
- Define the fundamental concepts, which include but are not limited to, terminology, institutions, and issues associated with the disciplines studied by the student
- Describe the essential of methodologies, perspectives, approaches, processes, and sources customarily used in the field (s) of study
- Describe the major issues and/or future challenges to the current problems and concerns discussed in the fields of study along with possible responses, solutions, and/or remedies
- Describe how factors such as culture, institutions, environment, knowledge, beliefs, and/or ideology have affected human activity and outcomes at the local, national, and international levels
- Explain the technology, communication forms, and methods used in discussing and disseminating knowledge and ideas in the specific fields of study

PROGRAM REQUIREMENTS (TOTAL CREDITS = 60)

General Education		Major Requirements		Other Required Courses	
ENGL 101 English Composition I	3	Computer Elective**	3	Transfer Electives****	13
ENGL 102 English Composition II	3	Social Science Electives***	18		
COMM 101 Effective Speaking	3		21		
Humanities & Arts Elective	3				
Humanities & Arts Elective or Social & Behavioral Science Elective	3				
Mathematics Elective	3				
Science with a Laboratory Elective	3				
Social & Behavioral Science Elective*	3				
First-Year Seminar Elective	1				
Wellness	1				
	26				

** Select the following courses: ANTH 101, 205; GEOG 201, 230; HIST 102; PSPL 205; PSYC 229; SOCI 201, 202, 203, or 205.*
***Students are to select any CIS course, except CIS 100. CIS 105 is recommended.*
****Students select from the following subjects: ANTH; ECON; GEOG; HIST; PSPL; PSYC; SOCI.*
*****Students are to select courses that are appropriate for their intended transfer institution*

RECOMMENDED SEQUENCE FOR FULL-TIME STUDENTS

Part-time students can complete this program by taking one or more courses each semester.

Fall Semester I		Spring Semester I		Fall Semester II		Spring Semester II	
ENGL 101	3	COMM 101	3	Computer Elective**	3	Science w/ Lab Elective	3
FYS Elective	1	ENGL 102	3	Social Science Electives***	9	Social Science Elective***	3
Humanities/Arts Elective	3	Humanities/Arts **or** Social/Behavioral Science Elective	3	Transfer Elective****	3	Transfer Electives****	7
Mathematics Elective	3	Social Science Elective***	3			Wellness	1
Social/Behavioral Science Elective*	3	Transfer Elective****	3				
Social Science Elective***	3						

SOCIAL SERVICES, Associate in Arts Degree - 5060

Social Science Department

The Social Services AA degree prepares students for transfer to four-year colleges and universities offering baccalaureate degrees in social work, psychology, human services, or other social service professions. This degree also prepares students for work in the Human Services field. Students are required to complete a Pennsylvania Child Abuse History Clearance, FBI Criminal Background Check, and a State Police Criminal Record Check prior to enrollment into the practicum course. If the student has any questions regarding this, he or she should contact the Program Director or Practicum Coordinator. Because students are planning to transfer to other institutions, it is essential to choose an intended transfer institution as soon as possible and carefully follow the program described in that college's catalog, as four-year institutions vary widely. This program can be completed at the Harrisburg and Lancaster campuses and online through virtual learning. The program may also be completed at the Gettysburg and York campuses provided students take some of their coursework online through virtual learning.

Transfer Opportunities
This transfer curriculum is provided as a guide for students planning to transfer to a four-year institution. Transfer students may continue their education in a wide variety of social services fields such as mental health, intellectual disabilities, substance abuse, gerontology, women's services and family services. Graduates of the program receive the training and education for positions in a number of social service fields such as social and human services assistants.

Competency Profile
This curriculum is designed to prepare students to:
- Take advanced academic work at a four-year institution in one of the helping professions
- Recognize the characteristics of culturally diverse populations
- Establish and maintain effective working relationships with clients and their families to plan treatments and/or services
- Perform case management responsibilities in a variety of settings
- Explain the ethics and laws applicable to the human service field

PROGRAM REQUIREMENTS (TOTAL CREDITS = 63)

General Education		Major Requirements		Other Required Courses	
ENGL 101 English Composition I	3	HUMS 100 Introduction to Human Services	3	SOCI 201 Intro to Sociology **or** SOCI 205 Race & Cultural Relations	3 (3)
ENGL 102 English Composition II	3	HUMS 120 Social Welfare Programs and Policies	3		
COMM 101 Effective Speaking	3	HUMS 121 Skills and Methods in Human Services I	3	Additional Science w/ a Laboratory Elective***	3
Humanities & Arts Elective*	3	HUMS 122 Skills and Methods in Human Services II	3	Transfer Electives	9
Humanities & Arts Elective **or** Social & Behavioral Science Elective**	3	HUMS 200 Group Work Practice	3		15
Mathematics Elective (Recommend: MATH 202)	3	HUMS 206 Human Development in a Social Environment	3		
Science w/ a Laboratory Elective - BIOL 111	3	HUMS 215 Fieldwork Practicum	4		
Social & Behavioral Science Elective - PSYC 101	3		22		
First-Year Seminar Elective	1				
Wellness	1				
	26				

**Students must select a Philosophy course. PHIL 225 – Belief and Ethics is recommended.*
*** Students must select either a Literature course (ENGL 200-299) or one of the following foreign language courses: SPAN 101, 102; FRCH 101, 102; or GRMN 101, 102.*
****Students must select an additional laboratory science elective from the following courses: ASTR 103, 104; BIOL 101, 108; CHEM 101, 113; or PHYS 201.*
Note: A grade of C or higher is required for all HUMS, PSYC and SOCI courses.

RECOMMENDED SEQUENCE FOR FULL-TIME STUDENTS

Part-time students can complete this program by taking one or more courses each semester.

Fall Semester I		Spring Semester I		Fall Semester II		Spring Semester II	
BIOL 111	3	COMM 101	3	Humanities/Arts **or** Social/Behavioral Science Elective**	3	Humanities/Arts Elective*	3
ENGL 101	3	ENGL 102	3	HUMS 121	3	HUMS 200	3
FYS Elective	1	HUMS 120	3	HUMS 122	3	HUMS 215	4
HUMS 100	3	HUMS 206	3	Science w/ Lab Elective***	3	Transfer Electives	6
Mathematics Elective	3	SOCI 201 **or** 205	3	Transfer Elective	3	Wellness	1
PSYC 101	3						

STRUCTURAL ENGINEERING TECHNOLOGY, Associate in Science Degree - 4850

Engineering, Trades & Computer Technologies Department

The Structural Engineering Technology AS degree is designed for students who intend to pursue a career as an Engineering Technician in the field of Structural Engineering. Structural Engineering is a large specialty discipline within the broader engineering fields, particularly civil and mechanical. Structural Engineering involves the design and execution of large structural projects such as dams, docks, and bridges, tunnels, airport terminals, and railroad structures, in addition to building frames and foundations. Students participate in team-based projects that allow them to complete basic designs for commercial buildings and other structures. These projects cover such specifics as calculating design loads and stresses, drawing free-body diagrams, and sizing component such as beams, columns and joists. It is expected that most graduates with an Associate's degree are then qualified to function as an assistant to the Engineer. Some students may wish to continue their education towards obtaining a four-year Bachelor's degree in Engineering Technology to eventually become an Engineer. This program can only be completed at the Harrisburg Campus.

Career or Transfer Opportunities

Graduates of this program are prepared for employment as technicians, designers, specification writers, drafters, reviewers of shop and structural drawings, construction inspectors, and computer-aided drafting and design (CADD) operators within the Structural Engineering field.

Competency Profile

This curriculum is designed to prepare students to:

- Assist in the design and development of structures using computer-aided design and drafting (CADD) equipment
- Prepare, interpret, and read technical drawings
- Conceptualize ideas and communicate them to other project team members
- Analyze static structures using trigonometry
- Perform simple member designs
- Interpret and apply the appropriate codes, regulations, and standards that govern the practice of structural engineering
- Collect and interpret engineering data
- Prepare reports, specifications, and manuals under the direction of scientists and engineers
- Write and speak effectively
- Identify the student's career path
- Identify global and ethical engineering issues

PROGRAM REQUIREMENTS (TOTAL CREDITS = 61)

General Education		Major Requirements		Other Required Courses	
ENGL 101 English Composition I	3	CAD 154 Computer Aided Drafting	3	Program Electives*	12
ENGL 104 Technical Writing	3	CVTE 103 Surveying I	3		
COMM 101 Effective Speaking	3	CVTE 208 Strength of Materials	3		
Humanities & Arts Elective	3	GTEC 104 Engineering Materials & Processes	3		
Mathematics Elective - MATH 103	3	GTEC 201 Statics	3		
Mathematics **or** Science Elective - MATH 104	3	GTEC 208 Strength of Materials Lab	1		
Science w/ a Laboratory Elective	3	SET 201 Intro Structural Engineering Technology	3		
		SET 202 Structural Design Fundamentals &			
Social & Behavioral Science Elective	3	Concepts	3		
First-Year Seminar Elective - ENGR 102	2		22		
Wellness	1				
	27				

**Select program electives from the following courses: ACCT 101; ARCH 253; BCT 215; CAD 115, 164; CPS 113, 115, 135; CHEM 101; ELEC 100, 101, 108, 125, 126; ENGR 291; IA 205, 208; MDRF 101, 103; MATH 119, 121, 202; MGMT 201; MDES 201, 204, 206; PHYS 201, 202.*

RECOMMENDED SEQUENCE FOR FULL-TIME STUDENTS

Part-time students can complete this program by taking one or more courses each semester.

Fall Semester I		Spring Semester II		Summer		Fall Semester III		Spring Semester IV	
CAD 154	3	COMM 101	3	CVTE 103	3	CVTE 208	3	GTEC 208	1
ENGL 101	3	ENGL 104	3			Program Electives*	6	Program Electives*	6
ENGR 102	2	GTEC 104	3			SET 201	3	SET 202	3
MATH 103	3	GTEC 201	3			Social/Behavioral Science Elective	3	Science w/ a Lab Elective	3
MATH 104	3	Humanities/Arts Elective	3						
Wellness	1								

SUGGESTED ADDITIONAL SEQUENCE FOR STUDENTS TRANSFERRING TO A BSSET PROGRAM

Fall Semester III for transfer students	
CHEM 101 (Inorganic Chemistry)	4
Transfer Elective*	3
MATH 119 (Pre-Calculus, 12 Week Session)	4
PHYS 201 (General Physics I)	4
Wellness (PSU Only)	1
Total Credits	16

Spring Semester III for transfer students	
Transfer Electives*	6
MATH 121 (Calculus I)	4
PHYS 202 (General Physics II)	4
Wellness (PSU Only)	1
Total Credits	15

Students are to select courses that are suited for their intended transfer institution.

STRUCTURAL ENGINEERING TECHNOLOGY, Certificate - 4581

Engineering, Trades & Computer Technologies Department

The Structural Engineering Technology certificate is designed for students who intend to pursue an entry-level career position in the field of structural engineering. Structural Engineering is a large specialty discipline within the broader engineering fields, particularly civil and mechanical. Structural Engineering involves the design and execution of large structural projects such as dams, docks, and bridges, tunnels, airport terminals, and railroad structures, in addition to building frames and foundations. Students participate in team-based projects that allow them to complete basic designs for commercial buildings and other structures. This program can only be completed at the Harrisburg Campus.

Career Opportunities

Graduates of this program are prepared for entry-level employment as technicians, drafters, reviewers of shop and structural drawings, construction inspectors, and computer-aided drafting and design (CADD) operators in the structural engineering field.

Competency Profile

This curriculum is designed to prepare students to:

- Assist in the design and development of structures using computer-aided design and drafting (CADD) equipment
- Prepare, interpret, and read technical drawings
- Conceptualize ideas and communicate them to other project team members
- Analyze static structures using trigonometry
- Collect and interpret engineering data
- Identify the student's career path
- Identify global and ethical engineering issues

PROGRAM REQUIREMENTS (TOTAL CREDITS = 30)

General Education	Major Requirements		Other Required Courses	
	CAD 154 Computer Aided Drafting & Design	3	MATH 103 College Algebra	3
	CVTE 103 Surveying	3	MATH 104 Trigonometry	3
	ENGR 102 Engineering & Engineering-Tech Orientation	2	Program Electives*	7
	GTEC 104 Engineering Materials & Processes	3		13
	GTEC 201 Statics	3		
	SET 201 Intro Structural Engineering Technology	3		
		17		

**Select from the following courses: ACCT 101; ARCH 253; BCT 215; CAD 115, 164; CPS 113, 115, 135; CHEM 101; CVTE 208; ELEC 100, 101, 108, 125, 126; ENGR 291; IA 205, 208; MDRF 101, 103; MATH 119, 121, 202; MGMT 201; MDES 201, 206; PHYS 201, 202; SET 202.*

RECOMMENDED SEQUENCE FOR FULL-TIME STUDENTS

Part-time students can complete this program by taking one or more courses each semester.

Fall Semester I		Spring Semester I		Summer I	
CAD 154	3	GTEC 104	3	CVTE 103	3
ENGR 102	2	GTEC 201	3		
MATH 103	3	Program Electives*	7		
MATH 104	3				
SET 201	3				

SURGICAL TECHNOLOGY, Associate in Applied Science Degree - 3646

Health Careers Department

The Surgical Technology AAS curriculum prepares an individual to assist in caring for the surgical patient in the operating room and to function as a member of the surgical team. Students apply theoretical knowledge to the care of patients undergoing surgery and develop the skills necessary to prepare supplies, equipment, and instruments; maintain aseptic conditions; prepare patients for surgery; and assist surgeons during surgical interventions. The program provides supervised clinical experience that enables students to develop surgical skills required for entry into practice. Graduates of the program are eligible to sit for the National Board for Surgical Technology and Surgical Assisting (NBSTSA) National Examination for the Certified Surgical Technologist (CST). Graduates must pass this certification exam to obtain employment within the state of Pennsylvania. The program is accredited by the Commission on Accreditation of Allied Health Education Programs (CAAHEP) upon the recommendation of the Accreditation Review Committee on Education in Surgical Technology and Surgical Assisting (ARCSTSA). The complete program is only available at the Harrisburg Campus.

Selective Program: Entry into this program is not guaranteed with admission to the College; this is a selective and competitive admission program; specific admissions criteria must be met. Please go to the Health Careers website (www.hacc.edu/healthcareers), or contact us by email at start@hacc.edu for specific program entry requirements.

The following requirements must be completed (at the student's expense) after being selected for, but prior to starting the clinical portion of the program. Requirements include physical examination and immunizations, background checks, drug and alcohol screens and CPR certification. The student should consider these factors before enrolling. If the student has any questions regarding this, he or she should contact the program director.

Career Opportunities
Graduates of this program prepare for employment as surgical technologists in hospital operating rooms, and outpatient surgery centers.

Competency Profile
This curriculum is designed to prepare students to:

- Perform as an entry-level surgical technologist (ST) in the cognitive (knowledge), psychomotor (skills), and affective (behavior) learning domains
- Anticipate the needs of surgical patients by properly preparing the operating room suite, equipment, and instrumentation required for surgical interventions
- Function effectively as a member of the healthcare team
- Communicate effectively with all communities of interest in the delivery of safe patient care
- Value a commitment to life-long learning
- Take the Certified Surgical Technology exam administered by the NBSTSA

PROGRAM REQUIREMENTS (TOTAL CREDITS = 61)

General Education		**Major Requirements**		**Other Required Courses**	
ENGL 101 English Composition I	3	SURG 101 Concepts in Surgical Technology	3	BIOL 105 Medical Terminology	3
COMM 203 Interpersonal Communication	3	SURG 105 Pharmacology	1	BIOL 122 Anatomy & Physiology II	4
Humanities & Arts Elective*	3	SURG 110 Introduction to Surgical Technology	5	BIOL 221 Microbiology	4
Mathematics **or** Science Elective - BIOL 121	4	SURG 111 Surgical Procedures I	5	BIOL 230 Physiological Pathology	3
Social & Behavioral Science Elective - PSYC 101	3	SURG 112 Surgical Procedures II	5		14
First-Year Seminar Elective	1	SURG 210 Surgical Clinical Externship I	3		
Wellness	1	SURG 220 Surgical Clinical Externship II	4		
	18	SURG 230 Surgical Clinical Externship III	3		
			29		

**Students are to select courses from the following: ART 181 or 182; ENGL 206; FMTH 101 or THTR 101; HUM 101, 115 or 201; MUS 104; PHIL 200; or a foreign language course.*

RECOMMENDED SEQUENCE FOR FULL-TIME STUDENTS

Part-time students can complete this program by taking one or more courses each semester.

Fall Semester I		Spring Semester I		Summer I		Fall Semester II		Spring Semester II		Summer II	
BIOL 105	3	BIOL 122	4	SURG 105	1	BIOL 230	3	Humanities/Arts Electives*	3	SURG 230	3
BIOL 121	4	BIOL 221	4	SURG 110	5	COMM 203	3	SURG 112	5		
ENGL 101	3	SURG 101	3			SURG 111	5	SURG 220	4		
FYS Elective	1	Wellness	1			SURG 210	3				
PSYC 101	3										

WEB DEVELOPMENT AND DESIGN, Associate in Applied Science Degree - 1816

Engineering, Trades & Computer Technologies Department

The Web Development and Design AAS degree provides students with the skills and knowledge necessary to have a rewarding career designing and developing professional websites and applications. Students gain a foundation in website creation, web design, multimedia, application development, various web technologies and effective communication. Coursework allows students to select electives that specialize in either *web design* or *development. Web design electives* provide a combination of graphic editing, user experience and user interface design, as well as front-end development used to create visually appealing and usable websites. *Web development electives* entail programming to build data-driven websites and mobile applications. The program contains a capstone project, which provides students the opportunity to create a professional website for a client, as well as a portfolio of their work. The complete program is available online through virtual learning.

Career Opportunities

Graduates may obtain positions within a multitude of businesses, government agencies and web consulting firms as a Web Designer, Web Developer, Front-End Developer/Designer, Back-End Developer, Full-Stack Developer, Web Interactive Media Specialist, Web Producer, Web Content Writer, Web Application Developer, Programmer and other related positions.

Competency Profile

This curriculum is designed to prepare students to:

- Build professional websites that optimize the user experience for various uses and platforms, including one for a client
- Create web pages using HyperText Markup Language (HTML) and Cascading Style Sheets (CSS)
- Develop web applications using JavaScript code and technologies
- Manage web content with a Content Management System (CMS)
- Design websites that are visually attractive, accessible and engaging
- Create web graphics with various design applications, such as Adobe Photoshop and Adobe Illustrator
- Develop web and mobile applications that are dynamic, interactive and data driven
- Work individually and as team members on website projects
- Characterize web career opportunities, job types, requirements, skills and technologies
- Create a portfolio of their work
- Write and speak effectively

PROGRAM REQUIREMENTS (TOTAL CREDITS = 60)

General Education		**Major Requirements**		**Other Required Courses**	
ENGL 101 English Composition I **(or)**	3	WEB 101 Intro to Web Design & Development	3	Career Elective*	3
ENGL 110 Foundations of Professional Writing	(3)	WEB 110 Website Creation & Content Mgmt Sys	3	Free Elective**	1
COMM 101 Effective Speaking **(or)**	3	WEB 125 HTML & CSS	3	Technical Elective***	3
COMM 203 Interpersonal Communication	(3)	WEB 127 Advanced HTML & CSS	3	Web Electives****	9
Humanities & Arts Elective	3	WEB 130 Graphics & Multimedia Fundamentals	3		16
Mathematics **or** Science Elective	3	WEB 133 Design Fundamentals	3		
Social & Behavioral Sciences Elective	3	WEB 143 Development Fundamentals	3		
First-Year-Seminar Elective	1	WEB 240 JavaScript Programming	3		
Wellness	1	WEB 268 Web Program Capstone **(or)**	(3)		
	17	WEB 270 Cooperative Work Experience in Web	3		
			27		

**Students are to select Career Electives from the following: ART 176 or CIS 232-265; WEB 104-299.*

***Students are to select their Free Elective from the following: Any course 100-299. Students may opt to take either a 4-credit course or a 3-credit FYS Elective in place of this 1-credit Free Elective.*

****Students are to select their Technical Electives from the following: Any WEB; BUSI; CIS; CISE; CNT; CPS or MGMT; MKTG; ART 105, 108 or GIS 141.*

*****Students are to select their Web Electives from the following: WEB course 120-299.*

***Note:** Students must achieve a collective average GPA of 2.0, or higher, in the following WEB courses: WEB 101, 110. 125, 127, 130, 133, 143, 240, 268 and 270.*

RECOMMENDED SEQUENCE FOR FULL-TIME STUDENTS

Part time students can complete this program by taking one or more courses each semester.

Fall Semester I		**Spring Semester I**		**Fall Semester II**		**Spring Semester II**	
FYS Elective	1	Free Elective**	1	COMM 101 **or** 203	3	Career Elective*	3
WEB 101	3	Math/Science Elective	3	ENGL 101 **or** 110	3	Humanities/Arts Elective	3
WEB 110	3	WEB 127	3	Technical Elective***	3	Social/Behavioral Science Elective	3
WEB 125	3	WEB 133	3	Web Electives****	6	Web Elective****	3
WEB 130	3	WEB 240	3				
WEB 143	3	Wellness	1				

WEB DEVELOPMENT AND DESIGN, Certificate - 1450

Engineering, Trades & Computer Technologies Department
CIP Code: 11.0801

The Web Development and Design certificate provides students with the skills and knowledge necessary to have a rewarding career designing and developing professional websites and applications. Students gain a foundation in website creation, web design, multimedia, application development and various web technologies and are able to select some of their coursework from web and career-focused electives. The complete program is available entirely online through virtual learning.

Career Opportunities
Graduates may obtain positions within a multitude of businesses, government agencies and web consulting firms as a Web Designer, Web Developer, Front-End Developer/Designer, Back-End Developer, Full-Stack Developer, Web Interactive Media Specialist, Web Producer, Web Content Writer, Web Application Developer, Programmer and other related positions. In addition, completed coursework from this certificate may be articulated into HACC's Web Design and Development AAS, should a student wish to continue their studies. ***(SOC Code: 15-1150 Computer Support Specialists)***

Competency Profile
This curriculum is designed to prepare students to:

- Build websites that optimize the user experience for various uses and platforms
- Create web pages using HyperText Markup Language (HTML) and Cascading Style Sheets (CSS)
- Develop web applications using JavaScript code, frameworks and libraries
- Manage web content with a Content Management System (CMS)
- Design websites that are visually attractive, accessible and engaging
- Create web graphics with various design applications, such as Adobe Photoshop and Adobe Illustrator
- Develop web and mobile applications that are dynamic, interactive and data-driven

PROGRAM REQUIREMENTS (TOTAL CREDITS = 30)

General Education	Major Requirements		Other Required Courses	
	WEB 101 Intro to Web Design and Development	3	WEB Elective*	3
	WEB 110 Website Creation & CMS	3	Career Elective**	3
	WEB 125 HTML and CSS	3		6
	WEB 127 Advanced HTML and CSS	3		
	WEB 130 Graphics & Multimedia Fundamentals	3		
	WEB 133 Design Fundamentals	3		
	WEB 143 Development Fundamentals	3		
	WEB 240 JavaScript Programming	3		
		24		

**Students are to select their WEB electives from the following: Any WEB 120-299.*
***Students are to select their Career Electives from the following: ART 176 or CIS 232-265; WEB 104-299.*
***Note:** Students must achieve a collective average GPA of 2.0, or higher to graduate.*

RECOMMENDED SEQUENCE FOR FULL-TIME STUDENTS

Part-time students can complete this program by taking one or more courses each semester.

Fall Semester I		Spring Semester I	
WEB 101	3	WEB 127	3
WEB 110	3	WEB 133	3
WEB 125	3	WEB 240	3
WEB 130	3	WEB Elective*	3
WEB 143	3	Career Elective**	3

WELDING TECHNOLOGY, Certificate - 4161

Engineering, Trades & Computer Technologies Department
CIP Code: 48.0508

The Welding Technology certificate program prepares students with the knowledge and skills needed for employment in the welding industry. Emphasis is placed on developing advanced skills in print reading, Shielded Metal Arc Welding, Gas Metal Arc Welding, Flux Cored Arc Welding, Gas Tungsten Arc Welding, Oxy-Fuel Welding/Cutting/Brazing, Pipe Welding, inspection and testing of welds, and OSHA Safety. This curriculum provides students the opportunity to gain hands-on skills working in a welding shop where the skills taught in class may be applied in a variety of positions within the welding industry. The certificate program is offered at the Harrisburg Campus.

Career Opportunities:
Graduates are employed as Assembly Welders, Maintenance Mechanics/Welders, Qualified Welders, Fitter-Welders, Welder's Helpers, Repair Technicians, Machine Operators, Welding Sales and Service Representatives and Welding Inspectors. ***(SOC Code: 51-4121 Welders, Cutters, Solderers and Brazers)***

Competency Profile:
The program is designed to prepare students to:

- Read and interpret prints used for welding and metal fabrication
- Measure and cut metals used in welding
- Use Shielded Metal Arc Welding to join metal components in all positions
- Use Gas Metal Arc Welding to join metal components in all positions
- Use Flux Cored Arc Welding to join metal components in all positions
- Use Gas Tungsten Arc Welding to join metal components in all positions
- Use the Oxy-Fuel Process to Cut, Weld, and Braze metal components in all positions
- Test and inspect weldments with destructive and nondestructive examination

PROGRAM REQUIREMENTS (TOTAL CREDITS = 31)

General Education	Major Requirements		Other Required Courses	
	WELD 101 Print Reading Analysis for Welders	3	GTEC 101 Safety & Health in the Workplace	3
	WELD 102 Oxy-Fuel Welding & Cutting	3		
	WELD 103 Shielded Metal-Arc Welding	3		
	WELD 105 Shielded Metal-Arc Welding: Vertical & Overhead	3		
	WELD 111 Welding Applications	3		
	WELD 120 Gas Metal Arc Welding I	4		
	WELD 130 Gas Tungsten Arc Welding I	3		
	WELD 240 Pipe Welding	3		
	WELD 290 Welding Cooperative Work Experience	3		
		28		

RECOMMENDED SEQUENCE FOR FULL-TIME STUDENTS

Part-time students can complete this program by taking one or more courses each semester.

Fall Semester I		Spring Semester I		Summer	
WELD 101	3	GTEC 101	3	WELD 240	3
WELD 103	3	WELD 102	3	WELD 290	3
WELD 111	3	WELD 105	3		
WELD 120	4	WELD 130	3		

WELDING, Diploma - 0500

Engineering, Trades & Computer Technologies Department
CIP Code: 48.0508

The Welding Technology diploma program prepares students with the knowledge and skills needed for immediate job entry. Emphasis is placed on the basic techniques of blueprint reading, oxy fuel welding, shielded metal arc welding, gas metal arc welding, and gas tungsten arc welding. Students weld on carbon steel, aluminum, and stainless steel. The complete program is only offered at the Harrisburg Campus.

Career Opportunities
Graduates are employed as entry-level maintenance workers, basic assembly welders, and welders' helpers in industry.
(SOC Code: 51-4121 Welders, Cutters, Solderers and Brazers)

Competency Profile
This curriculum is designed to prepare students to:

- Interpret welding blueprints
- Weld carbon steel, aluminum and stainless steel in various positions with the oxy fuel welding process
- Weld carbon steel in various positions with the shielded metal arc welding process
- Weld carbon steel, aluminum and stainless steel in various positions with the gas metal arc welding process
- Weld carbon steel, aluminum and stainless steel in various positions with the gas tungsten arc welding process

PROGRAM REQUIREMENTS (TOTAL CREDITS = 16)

General Education	Major Requirements		Other Required Courses	
	WELD 101 Print Reading Analysis for Welders	3	GTEC 101 Safety: OSHA 30 & NFPA 70E	3
	WELD 103 Shielded Metal Arc Welding I	3		
	WELD 111 Welding Applications	3		
	WELD 120 Gas Metal Arc Welding I	4		
		13		

RECOMMENDED SEQUENCE FOR FULL-TIME STUDENTS

Fall Semester I

GTEC 101	3
WELD 101	3
WELD 103	3
WELD 111	3
WELD 120	4

WELLNESS AND HEALTH PROMOTION, Associate in Applied Science Degree - 3610

Science Department

The Wellness and Health Promotion AAS degree program prepares students for a rewarding career helping individuals, employers, communities, healthcare systems, and government agencies realize the power and potential of promoting healthy lifestyles, preventing disease, and supporting wellness for all individuals. This program allows students to select from two tracks: **Workplace Wellness** or **Community Health**. Students in both tracks gain a foundation of the various dimensions of wellness, health promotion, and health coaching. The curriculum provides students with the skills for promoting healthy choices, facilitating behavior change, assessing individuals, groups, and programs, and for designing and evaluating wellness-based programs. Students prepare for employment in the field by participating in a field and capstone experience, completing an electronic portfolio for professional use, and submitting a post-graduation plan. The *Workplace Wellness* track prepares graduates to design and implement wellness programs for both employers and employees using effective communication and program marketing skills. The *Community Health* track prepares graduates to be health advocates within health agencies and healthcare systems, as they connect individuals to available services and resources within their respective communities. Program graduates are prepared for and are highly encouraged to complete the *Health Coach Certification* from the *American Council on Exercise (ACE)* or a similar professional certification. Although this is not specifically designed as a transfer program, opportunities do exist for students to apply for admission to certain on-campus or online Bachelor's Programs once they have completed this degree, or more, along with specific prerequisites. The complete program is only available online through virtual learning.

Career or Transfer Opportunities
The Wellness and Health Promotion Program prepares students to work in this emerging field within the healthcare system, non-profits organizations, corporations, and government agencies as: Health Educators or Advocates, Wellness or Health Coaches, Workplace Wellness Coordinators. Community Health Workers or Specialists, Behavior Modification Specialists, Community Engagement Specialists, Health Promotion Specialists or Coordinators, or Prevention Specialists.

Competency Profile:
This curriculum is designed to prepare the students to:

- Use current technologies, tools, and applications for academic and career settings
- Critique scientific literature and health-related information
- Assess individuals, programs, populations, or communities for wellness program planning
- Demonstrate health coaching and motivational interviewing skills
- Facilitate behavior change for lifestyle modification
- Design, implement, and evaluate wellness and health promotion programming
- Demonstrate critical thinking, problem-solving, organizational, and prioritization skills
- Connect resources and services to individuals and communities that serve to optimize health and wellness
- Model professional conduct and recognize scope-of-practice
- Pass and receive a national Health Coach or other Health or Wellness related certification upon graduation

PROGRAM REQUIREMENTS (TOTAL CREDITS = 60)

General Education		**Major Requirements**		**Other Required Courses**	
ENGL 101 English Composition I	3	WHP 101 Intro to Wellness & Health Promotion	3	BIOL 111 Introduction to Human Biology **(or)**	3
ENGL 102 English Composition II **(or)**	3	WHP 102 Approaches to Weight Management	3	BIOL 121 Anatomy and Physiology	(4)
ENGL 104 Technical Writing **(or)**	(3)	WHP 103 Approaches to Stress Management	3	MGMT 227 Project Management	3
ENGL 106 Business Writing	(3)	WHP 201 Health Behavior Change & Interventions	3	PSYC 209 Lifespan Development	3
COMM 101 Effective Speaking* **(or)**	3	WHP 202 Foundations of Health Coaching	3	Program Specific Electives****	3
COMM 203 Interpersonal Communication*	(3)	WHP 205 Assessment, Programming & Evaluation	3		12
Humanities & Arts Elective**	3	WHP 206 Wellness & Health Promotion Capstone	3		
Mathematics **(or)** Science Elective - MATH 202	4	***Workplace Wellness Track **(or)**	6		
Social & Behavioral Science Elective – PSYC 101	3	***Community Health Track	(6)		
First-Year Seminar Elective	1		27		
Wellness	1				
	21				

**Students are to select the appropriate Communication course for the track selected. COMM 101 should be selected for students in the Workplace Wellness Track; COMM 203 is to be selected for students in the Community Health Track.*
***Students select from the following courses: ART 181, 182; ENGL 206; HUM 101, 115, 201; MUS 104; PHIL 200; THR 101; or a foreign language course.*

****Choose one of the following tracks:*

Workplace Wellness Track		**Community Health Track**	
MKTG 201 Principles of Marketing	3	HUMS 108 Drugs & Alcohol: Use & Abuse	3
WHP 204 Concepts of Workplace Wellness	3	WHP 203 Concepts of Community Health	3
	6		6

*****Choose any three of GERT 100, 101, 102, or 103; or PSYC 229.*
Note: A grade of C or higher is required in all WHP courses; MATH 202 and BIOL 111 or 121.

RECOMMENDED SEQUENCE FOR FULL-TIME STUDENTS

Part-time students can complete this program by taking one or more courses each semester.

Workplace Wellness Track

Fall Semester I		**Spring Semester I**		**Fall Semester II**		**Spring Semester II**	
BIOL 111 **or** 121	3 **or** 4	ENGL 102 **or** 104 **or** 106	3	COMM 101*	3	MGMT 227	3
ENGL 101	3	MATH 202	4	GERT **or** PSYC 229****	3	MKTG 201	3
FYS Elective	1	WHP 102	3	WHP 201	3	PSYC 209	3
Humanities/Arts Elective**	3	WHP 103	3	WHP 202	3	WHP 205	3
PSYC 101	3			WHP 204	3	WHP 206	3
WHP 101	3			Wellness	1		

Community Health Track

Fall Semester I		**Spring Semester I**		**Fall Semester II**		**Spring Semester II**	
BIOL 111 **or** 121	3 **or** 4	ENGL 102 **or** 104 **or** 106	3	COMM 203*	3	HUMS 108	3
ENGL 101	3	MATH 202	4	GERT **or** PSYC 229****	3	MGMT 227	3
FYS Elective	1	WHP 102	3	WHP 201	3	PSYC 209	3
Humanities/Arts Elective**	3	WHP 103	3	WHP 202	3	WHP 205	3
PSYC 101	3			WHP 203	3	WHP 206	3
WHP 101	3			Wellness	1		

Course Descriptions

Course description entries have the numbers separated by colons, following the title of a course, which indicates, respectively, the number of credits awarded to complete a course, the number of lecture hours per week, and the number of laboratory hours per week. The course description also includes any enrollment restrictions and any pre or co-requisites. Courses that meet Core Knowledge Area Electives, Wellness and/or First-Year-Seminar requirements are indicated at the end of each description with the following codes: First Year Seminar (FYS), Humanities & Arts (H&A), Natural and Physical Sciences (SCI/LAB), Social and Behavioral Sciences (S&BS), and Wellness (W). Not all classes are taught in all semesters or in all campus and learning modalities. Students should check the schedule of classes for specific course availability at www.hacc.edu/courseschedule.

Accounting

ACCT 150 - Principles of Financial Accounting I **2:2:0**

Introduces students to commonly accepted accounting principles as they pertain to external financial reporting. This course addresses financial statements and their components. The use of financial statement ratios to make decisions is also reviewed. Finally, accounting ethics and internal controls are discussed.

ACCT 151 - Principles of Financial Accounting II **2:2:0**

Introduces students to the accounting cycle and the process of converting transactions into accounting journal entries. This course presents details about accounting principles governing inventory. Long-term assets, liabilities and equity transactions are also reviewed. *Prerequisite: ACCT 150 with a grade of C or higher.*

ACCT 160 - Principles of Managerial Accounting I **2:2:0**

Discusses the tools that facilitate the communication of financial information to managers including cost/volume/profit analysis, budgeting and quantitative decision making. *Co-requisite: ACCT 150 with a grade of C or higher.*

ACCT 161 - Principles of Managerial Accounting II **2:2:0**

Provides a more in-depth discussion of topics that analyze financial information for managers. These topics include financial statement analysis, cash flow statement preparation, job order, process and activity-based costing. Variance analysis and responsibility accounting are also reviewed. *Prerequisite: ACCT 160 with a grade of C or higher. Co-requisite: ACCT 151 with a grade of C or higher.*

ACCT 201 - Intermediate Accounting **4:4:0**

Reviews the conceptual framework of accounting to foster further discussion of the income statement, statement of comprehensive income, statement of changes in stockholder's equity, balance sheet, and statement of cash flow. Also, the course covers revenue recognition and the measurement of inventory, operational assets, intangible assets, investments in debt and equity securities, leases, deferred taxes and earnings per share. *Prerequisite: ACCT 151 with a grade of C or higher.*

ACCT 203 - Income Tax Accounting **4:4:0**

Identifies and applies myriad sources of tax law to various individual income tax situations. This course emphasizes planning as well as reviews the taxation of corporations, partnerships, and retirement plans. Commonly filed tax forms are used to demonstrate compliance with tax law. *Co-requisite: ACCT 151 with a grade of C or higher or permission of the Department Chair.*

ACCT 204 - Managerial Cost Accounting **3:3:0**

Presents the concepts and applications of cost accounting from a procedural and managerial approach. Various methods of accumulating cost data for planning, controlling, and decision-making purposes are explored and applied. In addition, this course also addresses activity-based costing, responsibility accounting, budgeting, managing profitability, job-order and process costing, standard costs, and variance analysis. *Prerequisite: ACCT 161 with a grade of C or higher or permission of the Department Chair.*

ACCT 208 - Professional Bookkeeping **4:4:0**

Serves to reinforce the period end adjusting process including accruals, deferrals, and the use of an adjusted trial balance to prepare financial statements. This course covers the various methods used for depreciation, payroll, and inventory. The design and implementation of procedures to protect businesses against fraud are emphasized. All of these are applied using QuickBooks Online. Students are able to practice communicating their recommendations, in the form of written memos and reports, designed for both managers and clients. *Prerequisite: ACCT 151 with a grade of C or higher.*

ACCT 215 - Accounting Software Applications **3:3:0**

Provides extensive hands-on exposure to Microsoft (MS) Excel - an industry standard spreadsheet program. This course covers constructing a worksheet, entering and manipulating data, extracting useful information, and using MS Excel functions and formulas with emphasis on accounting as a financial analysis tool. Data analytics using Excel and other available software tools are discussed. The course also addresses setting up and completing accounting tasks using QuickBooks Online, as well as Internet topics. *Prerequisite: CIS 105 with a grade of C or higher. Co-requisite: ACCT 160 or permission of the Department Chair.*

ACCT 275 - Accounting Capstone **3:3:0**

Prepares students for entry-level employment in the accounting field. This capstone course allows students to apply all of the knowledge and skills acquired in prior accounting and business courses to solve real world problems through case studies. Students are exposed to real-world scenarios involving ethics and professional codes of conduct, reporting standards and practices, linkages between financial statements and decision making by business leaders, and the use of technology. Students also develop the presentation, communication and cooperation skills needed for entry level positions in accounting. In addition, this course examines potential career paths, including the professional requirements, available within this field. *Prerequisite: ACCT 201 with a grade of C or higher. Co-requisite: ACCT 203, 204 and 215.*

Automotive GM Technology

AGM 101 - GM Automotive Fundamentals **3:2:3**

Provides an introduction to General Motors (GM) automotive service practices and procedures. This course emphasizes the personal safety and proper use of shop equipment and tools. GM service information systems, scan tools, component identification, and precision measurement are introduced. A course fee is required. *Enrollment is restricted to students in the Automotive Service Education Program (GM) AAS program.* (FYS)

AGM 103 - GM Automotive Powerplants **3:2:3**

Provides students with an introduction to General Motors (GM) automotive engine servicing and assembly. This course focuses on service procedures for current GM gasoline-fueled engines such as disassembly, measurement, and assembly. Engine mechanical diagnosis and testing is also discussed. A course fee is required. *Enrollment is restricted to students in the Automotive Service Education Program (GM) AAS program. Pre or Co-requisite: AGM 101 with a grade of C or higher.*

AGM 105 - GM Automotive Electrical Fundamentals/Electronics I **3:2:3**

Introduces students to General Motors (GM) automotive electrical systems. This course covers fundamental electrical and electronic principles such as resistance, induction, and magnetism and emphasizes the use of test equipment and electrical meters as students work with starting and charging systems. General Motors wiring diagrams, electronic service information, and basic diagnostic testing are also included. A Digital Multi-Meter is provided as part of the course fee. A course fee is required. *Enrollment is restricted to students in the Automotive Service Education Program (GM) AAS program. Pre or Co-requisite: AGM 101 with a grade of C or higher.*

AGM 107 - GM Automotive Fuel and Emission Control Systems **3:2:3**

Provides students with an overview of low and high-pressure fuel system components, construction, and diagnosis on current General Motors (GM) vehicles. This course also discusses emission control system operation and diagnosis, basic engine performance testing, and emphasizes the use and interpretation of GM diagnostic equipment and tools. A course fee required. *Enrollment is restricted to students in the Automotive Technology (GM-ASEP) AAS program. Pre or Co-requisite: AGM 101 with a grade of C or higher. A valid PA Driver's License is required for enrollment into this course.*

AGM 151 - GM Automotive Braking Systems **3:2:3**

Introduces students to General Motors (GM) automotive braking components and their operation. This course presents hydraulic principles, brake system component operation, and GM anti-lock/stability control systems and emphasizes the service and replacement of Disc and Drum Brake components. A course fee is required. *Enrollment is restricted to students in the Automotive Technology (GM-ASEP) AAS program. Pre or Co-requisite: AGM 101 with a grade of C or higher. A valid PA Driver's License is required for enrollment into the course.*

AGM 153 - GM Automotive Steering and Suspension Systems **3:2:3**

Introduces students to wheels and tires, suspension, and steering systems used on General Motors (GM) vehicles. This course emphasizes the safe use of shop equipment to mount and balance tires, change suspension components, and perform wheel alignment. The diagnosis and testing of steering and suspension systems, including vibration analysis, is included. A course fee is required. *Enrollment is restricted to students in the Automotive Technology (GM-ASEP) AAS program. Pre or Co-requisite: AGM 101 with a grade of C or higher. A valid PA Driver's License is required for enrollment into the course.*

AGM 157 - GM Automotive Ignition Control Systems **3:2:3**

Provides students with an introduction to General Motors (GM) Spark and Compression Ignition Control systems. This course covers the design, operation, and diagnostic procedures, as engine performance testing using current GM tools, oscilloscopes, and other equipment is emphasized. Also, the computer control system operation and diagnosis are introduced. A course fee is required. *Enrollment is restricted to students in the Automotive Service Education Program (GM) AAS program. Prerequisite: AGM 105 and 107 with grades of C or higher.*

AGM 159 - GM Automotive Heating/Air Conditioning Systems **3:2:3**

Provides students with an introduction to basic heating and refrigeration principles as applied to automobile service and replacement. This course focuses on climate control system components, their operation, and diagnosis in current GM vehicles. The Automotive Service Excellence (ASE) Refrigerant Recovery and Recycling Program and Certification Test are completed during the course. A course fee is required. *Enrollment is restricted to students in the Automotive Service Education Program (GM) AAS program. Prerequisite: AGM 105 with a grade of C or higher.*

AGM 191 - GM Cooperative Work Experience I **1:0:10**

Provides students with a hands-on, paid work experience at an approved General Motors dealership, A/C Delco repair facility, or approved GM fleet repair facility. Students work with a mentor to master the skills presented and practiced during their first term ASEP courses. Students must provide their own basic hand tools and storage for this course. *Enrollment is restricted to students in the Automotive Service Education Program (GM) AAS program. Prerequisite: AGM 101, 105, 151 and 153 with grades of C or higher.*

AGM 192 - GM Cooperative Work Experience II **1:0:10**

Provides students with a hands-on, paid work experience at an approved General Motors dealership, A/C Delco repair facility, or approved GM fleet repair facility. Students will work with a mentor to master the skills presented and practiced during their second term ASEP courses. Students must provide their own basic hand tools and storage for this course. *Enrollment is restricted to students in the Automotive Service Education Program (GM) AAS program. Prerequisite: AGM 103, 107, 159 and 205 with grades of C or higher.*

AGM 203 - GM Automotive Manual Transmissions/Transaxles and Differentials **3:2:3**

Introduces students to driveline components and manually shifted transmissions and transaxles used on current GM vehicles. This course encompasses the theory and operation of driveline components such as transfer cases, axle assemblies, differentials and manually shifted transmissions. Hands-on assembly and reconditioning are also emphasized. Current GM driveline vibration detection and correction is introduced. *Enrollment is restricted to students in the Automotive Service Education Program (GM) AAS program. A course fee is required. Prerequisite: AGM 101 with a grade of C or higher.*

AGM 205 - GM Automotive Electrical Fundamentals/Electronics II **3:2:3**

Provides students with a review of electrical and electronic theory presented in AGM 105 and introduces advanced topics that include Supplemental Restraint Systems, wire and terminal repair, accessory operation and diagnosis, and in-car computer networking. The use of Digital Volt/Ohm Meters DVOMs, oscilloscopes, and General Motors (GM) scan tools for diagnosis is also discussed. A course fee is required. *Enrollment is restricted to students in the Automotive Service Education Program (GM) AAS program. Prerequisite: AGM 105 with a grade of C or higher.*

AGM 207 - GM Automotive Fuel Injection Systems **3:2:3**

Combines the concepts and skills taught in previous engine performance courses and shows how computerized controls are used to control engine output and emissions. Input sensors, low and high-side output drivers, adaptive strategies, and data streaming are all integrated in powertrain controls. Diagnosis, testing, and programming of Powertrain Management Systems is also emphasized. A course fee is required. *Enrollment is restricted to students in the Automotive Service Education Program (GM) AAS program. Co-requisite: AGM 157.*

AGM 251 - GM Dealership Operations **2:2:0**

Introduces students to the structure and operations of a General Motors Dealership with the roles and responsibilities of dealership employees are explored and defined. This course analyzes service department operations with a focus on continuous improvement. Students develop policies, prepare for interviews, and create a service department improvement action plan. A course fee is required. *Enrollment is restricted to students in the Automotive Technology AAS program. Prerequisite: AGM 101 with a grade of C or higher.*

AGM 253 - GM Automatic Transmissions/Transaxles **3:2:4**

Introduces students to automatic shifted transmissions and transaxles used on current GM vehicles. This course encompasses the theory and operation of hydraulic and electronic components utilized on current GM automatic shifted transmissions and transaxles. Hands-on assembly and reconditioning is emphasized, as well as current GM diagnostic and programming operations are presented. A course fee is required. *Enrollment is restricted to students in the Automotive Service Education Program (GM) AAS program. Prerequisite: AGM 205 with a grade of C or higher.*

AGM 255 - GM Advanced Automotive Electronics **3:2:3**

Provides a capstone experience for electrical and electronics for students in the Automotive Service Education program-GM (ASEP). This culminating experience emphasizes General Motors (GM) Safety Systems, Entertainment Systems, and Infotainment Systems. Advanced diagnostics of various in-car computer networks using lab scopes and meters is also included. A course fee is required. *Enrollment is restricted to students in the Automotive Service Education Program (GM) AAS program. Prerequisite: AGM 205 with a grade of C or higher.*

AGM 291A - GM Cooperative Work Experience III **1:0:10**

Provides students with a hands-on, paid work experience at an approved General Motors dealership, A/C Delco repair facility, or approved GM fleet repair facility. Students will work with a mentor to master the skills presented and practiced during their third term ASEP courses. Students must provide their own basic hand tools and storage for this course. *Enrollment is restricted to students in the Automotive Service Education Program (GM) AAS program. Prerequisite: AGM 157 with a grade of C or higher.*

AGM 292A - GM Cooperative Work Experience IV **1:0:10**

Provides students with a hands-on, paid work experience at an approved General Motors dealership, A/C Delco repair facility, or approved GM fleet repair facility. Students work with a mentor to master the skills presented and practiced during their fourth term ASEP courses. Students must provide their own basic hand tools and storage for this course. *Enrollment is restricted to students in the Automotive Service Education Program (GM) AAS program. Prerequisite: AGM 203, 207 and 255 with grades of C or higher.*

Allied Health

AH 105 - Medical Terminology for Health Careers **3:3:0**

Covers frequently used medical terms, abbreviations, and symbols as found within their usual contexts. The course content is presented through an integrative review of anatomy and physiology, common pathophysiological states, and related diagnostic tests and treatments.

AH 140 - Introduction to Allied Health **3:3:0**

Provides an introduction to health career professions. The course reviews the evolution and current status of health care delivery and introduces the student to the concepts of, cultural diversity, safety in the workplace, communication skills, aspects of management, securing employment and strategies for becoming a successful employee, professional role development, health care law and ethics, bloodborne pathogens, HIPAA, and quality assurance. (FYS)

AH 150 - Introduction to Human Illness and Disease **3:3:0**

Introduces the student to important concepts related to human disease. This course presents the etiology, symptoms, and treatments of the most common disorders and diseases of each body system along with a review of the anatomy and physiology pertinent to the concept related to the

disease. The relationship of aging to disease, along with their effects on each body system, is also discussed. *Co-requisite: AH 105 and BIOL 111 or 121 with grades of C or higher.*

AH 210 - Health Care Law and Ethics **3:3:0**

Fundamentals of law and the court system as well as the exploration of the basic ethical principles of bioethics. The course focuses on applying legal and ethical principles to health care situations and includes a discussion of current medical-legal issues and bioethical dilemmas being addressed in the U.S. Health care system.

AH 213 - Introduction to Medical Insurance **3:3:0**

Provides an overview of insurance programs at commercial, state, and federal levels along with third-party billing techniques, cost-containment strategies, claims developing and processing, and diagnosis and procedure coding systems. Additional topics include legal issues, resources, managed care contracting, fee schedules and electronic data systems. *Co-requisite: AH 105 with a grade of C or higher.*

AH 290 - Healthcare Management Capstone **1:1:0**

Builds upon student learning obtained in prior coursework within the Healthcare Management degree program. This course focuses on a case study, which allow students to use problem-solving skills throughout the project. Students review a case study and analyze the issues presented. They create a solution by developing an implementation strategy and assessment plan that addresses the issues identified - incorporating other areas into the plan that need examined. These strategies could include surveys, financial/budget planning, staffing, capital and non-capital equipment purchases, and customer service initiatives. The case study review is submitted in modules so that the student obtains feedback throughout the course. *Enrollment is restricted to students in the Healthcare Management AAS program. Prerequisites: AH 140, 210; CIS 105; ENGL 106; MGMT 130, 201, all with grades of C or higher or permission of Instructor.*

Anthropology

ANTH 101 - Introduction to Anthropology **3:3:0**

Provides a holistic approach to the study of humankind over time and space that includes both the biological and cultural aspects of human beings. This course addresses human evolution, physical anthropology, archaeology, paleoanthropology, primatology, and the significant role that language plays in the understanding of culture. This course also involves comparing and contrasting individual cultures. (S&BD)

ANTH 201 - Social Anthropology **3:3:0**

Broad, general introduction to social/cultural anthropology, the purpose of which is to acquaint the student with what anthropology is, what anthropologists do and why; to familiarize the student with the outlines of the history of anthropology; the concepts and tools of the discipline; its investigatory procedures, theoretical positions, subject matter, aims and achievements. (S&BS)

ANTH 205 - Cultures of the World **3:3:0**

Explores human cultural diversity throughout the world, focusing on the question of what it means to be human. This course surveys selected cultures that include bands, tribes, chiefdoms, and states and examines their similarities and differences within the context of economic, political, and social structures. (S&BS)

ANTH 210 - North American Indigenous Cultures **3:3:0**

Explores the richness and diversity of the indigenous North American cultures. This general survey course focuses on the traditions, beliefs, social structure, and ecology of indigenous people of North America and studies the history of the cultures from their initial arrival to North America, through first European contact, into contemporary 21st century. The forces of social change and acculturation are also examined with an emphasis placed upon the impact of European contact.

ANTH 215 - Physical Anthropology **3:3:0**

General introduction to physical and biological anthropology designed to provide the student with a broad knowledge of human evolutionary biology. The historical development of physical anthropology and the evolution of the human vertebrate form are examined. Special emphasis is placed on paleoanthropology, population genetics, demography, sociobiology, osteology, primatology and modern human variation.

ANTH 220 - Introduction to Archaeology **3:3:0**

Examines the development of archaeology as a science. This course emphasizes various methods of archaeological investigation, chronological placement, excavation procedures, and review of extinct cultures in the Old and New Worlds.

Administrative Office Management

AOS 101 - Document Processing **3:3:0**

Serves to reinforce keyboarding techniques with emphasis on building speed and accuracy. This course allows students to learn proper formatting of business documents as editing and proofreading are stressed. It is recommended that students be able to key straight copy at 30-wpm using proper technique. *Prerequisite: Eligibility for enrollment into ENGL 003 or higher, or completion of ENGL 002 or ESL 070 with a grade of C or higher.*

AOS 110 - Microsoft Word **3:3:0**

Covers the basics of creating, editing, and formatting a document using Microsoft Word software. The primary emphasis is on Word's features of advanced formatting and editing, macros, mail merge, online forms, and sorting options. *Prerequisite: AOS 101 with a grade of C or higher.*

AOS 111 - Grammar and Punctuation Essentials **3:3:0**

Enriches the students' written communication skills through mastery of spelling, grammar, mechanics, punctuation, and usage. This course applies those skills through the context of drafting, revising, proofreading, and listening. *Prerequisite: ENGL 051, 057 or ESL 070 with a grade of C or higher, or eligibility for enrollment into ENGL 101.*

AOS 112 - Desktop Publishing **3:3:0**

Introduces students to desktop publishing fundamentals. This hands-on focused course, provides students with the opportunity to produce mailable, publication-ready documents combining text, graphics, illustrations, and photographs. In preparing the documents, students are taught to apply design templates, graphic manipulation tools, and advanced layout and printing tools to the task. *Prerequisite: CIS 105 with a grade of C or higher.*

AOS 160 - Office Accounting **3:3:0**

Introduces the principles of accounting with emphasis on their relationship to the single proprietorship. This course covers specific topics for study, such as journal entries, posting, trial balance, adjustments, work sheets, closing entries, financial statements, special journals and

ledgers, petty cash, and payroll. *Prerequisites: ENGL 051, 057 or ESL 070 with a grade of C or higher; or eligibility for enrollment into ENGL 101.*

AOS 203 - Records and Imaging Management **3:3:0**

Provides the concepts needed to optimize the value of records, information, and image management. *Prerequisite: CIS 105 with a grade of C or higher.*

AOS 224 - Office Applications **3:3:0**

Simulates an office environment to reinforce and build software skills, improve Internet skills, and develop teamwork and critical-thinking skills. Class projects are constructed to replicate various tasks that arise within an office environment. The course also focuses on the integration of software programs and web-based applications. *Prerequisite: AOS 110 and CIS 105 with grades of C or higher.*

AOS 225 - Office Procedures **3:3:0**

Covers the procedures associated with performing common office tasks that are based on emerging and useful technologies. This course specifically addresses the handling of incoming and outgoing mail and other documents, arranging travel, planning meetings, integrating mobile technology, and researching information using the Internet. In addition, this course covers the use of proper electronic techniques and etiquette. *Prerequisite: AOS 101 with a grade of C or higher. Co-requisite: AOS 110.*

AOS 226 - Office Transcription **3:2:2**

Provides intensive instruction and practice in the listening and transcribing of recorded dictation using electronic media. This course covers the techniques for preparing meeting agendas and transcribing meeting minutes. A course fee is required. *Prerequisite: AOS 101 and 111 with grades of C or higher; or permission of the Instructor.*

Arabic

ARAB 101 - Elementary Arabic I **4:4:0**

Covers the fundamentals of Arabic grammar. This course addresses drill-in structure, pronunciation, and the development of vocabulary. Aural-oral and reading skills are also introduced. *Prerequisite: Eligibility for enrollment into ENGL 101.* (H&A)

ARAB 102 - Elementary Arabic II **4:4:0**

Continuation of ARAB 101 with increased emphasis on speaking and writing. *Prerequisite: ARAB 101 with a grade of C or higher.* (H&A)

Architecture

ARCH 101 - Architectural Design I **3:1:6**

Introduces basic theories of two- and three-dimensional space. This course explores the qualities of architectonic space including definition, scale, transition, light, emotive qualities, and organizing systems accompanied with the study of historical precedents. Graphic communication and model-making skills are also covered. A course fee is required.

ARCH 102 - Architectural Design II **3:1:6**

Studies visual composition in two and three dimensions. This course explores the concepts of visual movement, tension, balance, unifying systems, color theory, and the aesthetic expression of material and structure in architectonic form through various design problems. Continued emphasis is also placed on graphic communication and model-making skills. A course fee is required.

ARCH 110 - Construction Print Reading **3:3:0**

Introduces construction print reading fundamentals for residential and light commercial construction. The course includes an introduction to building materials and systems and their representation in construction drawings. Also included is an introduction to the field of building design and construction with a focus on terminology and the roles that design and construction professionals have in construction projects.

ARCH 111 - Architectural Graphics I **3:1:6**

Introduces students to architectural drawing. This course emphasizes the development of visual cognition skills and the techniques of architectural communication - sketching, orthographic projection, and the use of computer-aided-drafting (CAD) and Building Information Modeling (BIM). A course fee is required. (FYS)

ARCH 112 - Architectural Working Drawings I **3:1:6**

Encompasses the preparation of architectural working drawings for a wood frame structure. This course emphasizes sheet layout, material indication, line work, dimensioning, and notation. A course fee is required. *Prerequisite: GTEC 110 or ARCH 110, and ARCH 111 with grades of C or higher.*

ARCH 130 - Construction Materials and Methods **3:3:0**

Investigates building materials and methods of construction with a focus on structure and enclosure. This course also examines basic construction equipment, external factors that influence material selection and the use of specifications as related to construction materials and methods. *Prerequisite: GTEC 110 or ARCH 110 with a grade of C or higher.*

ARCH 135 - Codes, Specifications, & Safety **3:3:0**

Introduces students to codes and specifications with respect to their relevance and influence in the construction industry. This course focuses on the use and application of the International Building Code and the CSI Specification format in architectural and construction settings. Basic construction safety issues and the prevention of accidents is also covered. *Co-requisite: GTEC 110 or ARCH 110.*

ARCH 201 - Architectural Design III **4:2:6**

Allows the student to develop an individual design process through resolving simple architectural programs. This course explores aspects of behavioral, environmental, and perceptual theory in greater depth. Continued emphasis is placed on graphic communication and model-making skills. A course fee is required. *Prerequisite: ARCH 101, 102 and 111 with grades of C or higher.*

ARCH 202 - Architectural Design IV **4:2:6**

Focuses on resolving complex architectural programs within contextual issues. This course explores the integration of basic structural concepts and further emphasizes graphic communication and model-making skills. A course fee is required. *Prerequisite: ARCH 201 with a grade of C or higher.*

ARCH 211 - Architectural Graphics II **3:1:6**

Continues the topics covered in ARCH 111. This course explores a variety of digital tools for the creation of presentation drawings. Topics of study include file management, 2-D graphic composition, image enhancement, 3-D rendering techniques, and 3-D modeling exploration. Students become proficient in creating print and digital presentations. Students should be proficient in the fundamentals of drafting techniques and in the use of CAD software. A course fee is required. *Prerequisite: ARCH 111 or CAD 156; and ARCH 101 or ARCH 102 with grades of C or higher.*

ARCH 212 - Architectural Working Drawings II **4:2:6**

Allows students to use Building Information Modeling (BIM) software to prepare a set of architectural working drawings for a commercial project of steel or concrete. This course emphasizes the integration of building systems, code requirements and other issues covered in prior courses. A course fee is required. *Prerequisite: ARCH 110 and 111 with grades of C or higher.*

ARCH 214 - Site Planning **3:1:6**

Covers basic surveying and land development concepts. This course focuses on topographic studies, building placement, driveways and walkways, swales, zoning setbacks and easements, accessibility requirements, and parking layouts. Students have the opportunity to prepare site plans and related drawings used in architectural offices. A course fee is required. *Prerequisite: GTEC 110 or ARCH 110, and ARCH 111; or CVTE 107 and CAD 130 with grades of C or higher.*

ARCH 233 - Renovations and Architectural Detailing **4:2:6**

Covers the analysis and generation of architectural details through a study of the factors influencing architectural detailing. Students research various systems and manufacturers' products as well as document existing buildings, create drawings, and write outline specifications for a proposed renovation project. A course fee is required. *Prerequisite: ARCH 212 with a grade of C or higher.*

ARCH 241 - Architectural Sketching **3:0.5:4**

Develops the sketching abilities for students in the design field. This course focuses on freehand drawing as a way to broaden students' awareness of the built environment. In addition, students are able to build a visual vocabulary to help in their own design education.

ARCH 251 - Environmental Control Systems for Buildings **3:3:0**

Investigates the environmental systems that are commonly utilized in modern structures. The course focuses on understanding and applying the basic principles that inform the design of environmental systems, with topics including the influence of site and climate, psychometrics, thermal performance, lighting, mechanical equipment for heating, cooling, and ventilation, plumbing, and fire protection. *Prerequisite: GTEC 110 or ARCH 110 with a grade of C or higher.*

ARCH 253 - Sustainable Architecture **3:3:0**

Introduces students to sustainable architecture through the examination of criteria used to assess Green Buildings. This course examines both the design of Green Buildings and their significance to the construction industry. Integrated design is explored and the U.S. Green Building Council's LEED® Green Building Rating System is utilized as the framework for reducing the environmental impacts of buildings. Building performance is analyzed in terms of sustainable sites, water efficiency, energy and atmosphere, materials and resources, and indoor environmental quality via case studies, design exercises, and web research. *Prerequisite: ARCH 130 and (GTEC 110 or ARCH 110) with grades of C or higher.*

ARCH 261 - Portfolio Development for Architecture **1:1:1**

Provides students with an opportunity to develop a portfolio that utilizes work created in various ARCH courses throughout the architecture curriculum. This course teaches students how to document, assemble and refine portfolios based upon the admission requirements of transfer institutions. A course fee is required. *Enrollment is restricted to students in the Architecture AAS program. Prerequisite: ARCH 211 with a grade of C or higher.*

ARCH 291 - Architecture Cooperative Work Experience **3:0:15**

Provides students with the opportunity to work at an architecture firm, engineering firm, or other entity related to the design/construction field for a minimum of 15 hours per week. Students are able to apply their acquired knowledge and skills to “real world” situations under the supervision of a licensed architect, engineer, or related professional. *Enrollment is restricted to students in the Architecture AAS program. Prerequisite: ARCH 130 and 212 with grades of C or higher; Co-requisite: ARCH 233.*

ARCH 295 - Italy's History Through Architecture **3:3:0**

Encompasses a ten-day guided tour of architectural sites in the cities of Rome, Florence, and Venice. The course focuses on the significance of Italy’s architecture and its contribution to Western architecture. Students gain exposure to the social, political, economic, and technological history of Italy through examination of its architecture. Time is devoted to covering travel logistics so as to help students prepare for the trip. A course fee is required.

Art

ART 105 - Fundamentals of Two-Dimensional Design **3:2:3.4**

Covers the principles and elements of design and color theory as applied to problems within visual communication. This course uses a variety of media. A course fee is required.

ART 107 - Fundamentals of Three-Dimensional Design **3:2:3.4**

Introduces students to working with the elements and principles of three-dimensional design. This course provides students with hands-on experience as they learn the basic concepts of three-dimensional design using a variety of materials (metal, plaster, clay, PVC, wood, etc.) to produce a body of work. A course fee is required.

ART 108 - Fundamentals of Computer Art **3:2:3.4**

Provides a basic introduction to the fundamentals of computer art. This course allows students to freely create computer-generated images such as portraits and landscapes. Students are exposed to computer hardware and software packages, computer vocabulary and commands related to computer art. A course fee is required.

ART 109 - Computer Graphics **3:2:3.4**

Introduces methods for producing graphic design for print, web, and interactive technologies. This course familiarizes students with computer hardware and software packages as well as print, web, and interactive terminology. A course fee is required. *Prerequisite: ART 105, 121, 176 and 125 with grades of C or higher.*

ART 113 - Introduction to Printmaking **3:2:3.4**

Introduces students to printmaking and screen-printing techniques. Students explore the fundamental concepts and procedures in additive and reductive printmaking processes, including photo-emulsion and computer-generated stencils, to produce a body of work. A course fee is required. (Occasional offering). *Prerequisite: ART 121 with a grade of C or higher.*

ART 114 - Interactive Media and Design **3:2:3.4**

Increases students’ knowledge for web and interactive media. This course integrates web standards and utilizes media queries to develop responsive website designs. Web fonts and file management are also explored. Students are required to develop a final online portfolio. A course fee is required. *Enrollment is restricted to students in the Graphic and Interactive Design AAS program. Prerequisite: ART 140, 145 and 149 with grades of C or higher; Co-requisite: ART 146.*

ART 115 - Beginning Digital Photography **3:2:3.4**

Covers the basic techniques of digital photography, both in theory and in practice. The topics include: camera operations, basic editing and use of the digital darkroom, and the visual elements of photograph design. A course fee is required. *A digital single lens reflex camera is required for all photography majors.*

ART 116 - Silver Gelatin Photography **3:2:3.4**

Covers the basic techniques of silver gelatin black and white photography in both theory and in practice. The course topics include film developing, printing, creative darkroom techniques, and further exploration of the visual elements of photographic design. A course fee is required. *A fully adjustable SLR (non-digital single lens reflex) camera is required for all Photography majors.*

ART 117 - Photoshop for Photographers **3:2:3.4**

Introduces the tools and techniques of Adobe Photoshop to process, edit, and enhance digital photographs. This course reviews the basic camera operations used to achieve the best possible digital images in addition to covering, in detail, the Photoshop steps necessary to maximize both the technical and aesthetic qualities of images. A course fee is required.

ART 121 - Drawing I **3:2:3.4**

Introduces students to a range of drawing concepts and techniques that includes the effective use of line, mass, value, composition, and perspective. Working from observation, students apply these concepts and techniques through the study of still life, interior spaces, portraiture, and the nude human figure. A course fee is required. (H&A)

ART 122 - Drawing II **3:2:3.4**

Provides students with an opportunity to further develop their knowledge of observational drawing concepts and techniques. Emphasis is placed on the human figure and color theory. Students apply these concepts and techniques through the study of still life, interior spaces, portraiture, and the nude human figure. A course fee is required. *Prerequisite: ART 121 with a grade of C or higher.*

ART 123 - Illustration **3:2:3.4**

Introduces concepts and techniques used in the illustration of editorials, advertisements, articles, brochures, books, and other printed and digital communication media. Students learn to communicate visually through problem-solving projects. A course fee is required. *Prerequisite: ART 105 and 121 with grades of C or higher.*

ART 125 - Visual Thinking **3:2:3.4**

Introduces visual arts and design and emphasizes the components of visual thinking and reductive drawing. This course provides core exercises, methods, and tips that lead students through a wide variety of processes for generating innovative ideas and concepts. A course fee is required. *Pre or Co-requisite: ART 121 with a grade of C or higher; eligibility for enrollment into ENGL 101.* (FYS)

ART 130 - Design Presentation **1:1:2**

Covers the professional practice of graphic design. This course discusses trends in graphic design, professional ethics and expectations, career options, team participation, and professional communications. Students are given the ability to investigate career opportunities and are taught how to make informed decisions about career options. *Enrollment is restricted to students in the Graphic Design Certificate and the Graphic and Interactive Design AAS programs. Prerequisite: ART 105, 121, 125 and 176 with grades of C or higher. Pre/Co-requisite: ART 109, 143 and 144 with grades of C or higher.*

ART 131 - Painting I **3:2:3.4**

Introduces students to the basic techniques and concepts used in oil painting. Students apply skills through the study of still life, interior spaces, portraiture, and the human figure. A course fee is required. *Prerequisite: ART 121 with a grade of C or higher.* (H&A)

ART 132 - Painting II **3:2:3.4**

Provides students with an opportunity to further develop their knowledge of painting concepts and techniques. Students apply skills through the study of still life, interior spaces, portraiture, and the human figure. A course fee is required. *Prerequisite: ART 131 with a grade of C or higher.*

ART 133 - Introduction to Mac **1:1:1**

Introduces students to the use of the Mac computer, its operating system and software programs. Students are taught how to correctly utilize a Mac and maximize its use. Students complete tutorials and/or exercises that demonstrate their understanding of basic file creation and tool proficiency. A course fee is required.

ART 140 - Web Design **3:2:3.4**

Introduces functions of the World Wide Web and the fundamentals of creating mobile and desktop sites. Students utilize contemporary web technology and standards to develop creative and functional websites. This course emphasizes web fundamentals and application through using a web-design software package. A course fee is required. *Enrollment is restricted to students in the Graphic and Interactive Design AAS program. Prerequisite: ART 109, 143 and 144 with grades of C or higher; Co-requisite: ART 145 and 149.*

ART 143 – Typography **3:2:3.4**

Introduces the fundamentals and expressive use of typography in print, web, and interactive design. Students are taught the historic and compositional aspects of typography while applying knowledge to work with type appropriately. A course fee is required. *Prerequisite: ART 105, 121, 125, and 176 with grades of C or higher; Completion of MATH 006 with a grade of C or higher; or placement through the College Testing and Placement Program.*

ART 144 - Graphic Design I **3:2:3.4**

Introduces the skills needed in visual communication. Students are taught the fundamentals of design concept through the preparation of materials - from initial concept to production. A course fee is required. *Prerequisite: ART 105, 121, 125, and 176 with grades of C or higher; Completion of MATH 006 with a grade of C or higher; or placement through the College Testing and Placement Program.*

ART 145 - Graphic Design II **3:2:3.4**

Continues the topics covered in ART 144. This course studies advanced principles of advertising, layout, and design. A course fee is required. *Enrollment is restricted to students in the Graphic and Interactive Design AAS program. Prerequisite: ART 109, 143 and 144 with grades of C or higher; Co-requisite: ART 140 and 149.*

ART 146 - Graphic Design III **3:2:3.4**

Further explores the problem solving and advanced techniques used in the graphic and interactive design industry. This course emphasizes creating refined graphic design pieces for inclusion in the student's final portfolio. A course fee is required. *Enrollment is restricted to students in the Graphic and Interactive Design AAS program. Prerequisite: ART 140, 145, and 149 with grades of C or higher; Co-requisite: ART 114.*

ART 147 - Graphic and Interactive Design Portfolio Development **3:2:3.4**

Allows students to develop a professional portfolio based upon design work completed throughout the Graphic Design program. The merits of various portfolio styles and formats are explored and students are expected to refine and update all of their existing design work for inclusion in their final portfolio. A course fee is required. *Enrollment is restricted to students in the Graphic and Interactive Design AAS program. Prerequisite: ART 140, 145 and 149 with grades of C or higher. Pre/Co-requisite: ART 114 and 146 with grades of C or higher.*

ART 148 - Graphic and Interactive Design Internship **3:1:15**

Provides students with the opportunity to obtain valuable real-world experience by working in a graphic design environment for a total of 225 hours (15-hours per week) during a semester. Internship sites are carefully chosen for optimal career exposure. *Enrollment is restricted to students in the Graphic and Interactive Design AAS program. Prerequisite: ART 114, 146 and 147 with grades of C or higher.*

ART 148A - Graphic and Interactive Design Internship **2:1:10**

Provides students with the opportunity to obtain valuable real-world experience by working in a design, print, web and/or interactive media environment for a total of 150 hours (ten-hours a week) during a semester. Internship sites are carefully chosen for optimal career exposure. *Enrollment is restricted to students in the Graphic and Interactive Design AAS program. Prerequisite: ART 146, 147, and 149 with grades of C or higher.*

ART 148B - Graphic and Interactive Design Internship **1:1:5**

Provides students with the opportunity to obtain valuable real-world experience by working in a design, print, web and/or interactive media environment for a total of 75 hours (five hours a week) during a semester. Internship sites are carefully chosen for optimal career exposure. *Enrollment is restricted to students in the Graphic and Interactive Design AAS program. Prerequisite: ART 146, 147, and 149 with grades of C or higher.*

ART 149 - Design Practice **3:2:3.4**

Provides students with a practical knowledge of the business of graphic design for print or web/multimedia. This course focuses on acquiring an internship, freelance work, and becoming a productive and conversant designer. In addition, this course addresses intellectual property rights and working with third parties and clients. *Enrollment is restricted to students in the Graphic and Interactive Design AAS program. Prerequisite: ART 109, 143, and 144 with grades of C or higher; Co-requisite: ART 145 and 140.*

ART 150 - GID Capstone **3:1:4**

Provides students with the opportunity to obtain valuable work experience in a classroom environment working with real-world clients and projects. In addition to technical proficiency and creative development, students mature in business skills through their continued interaction within the graphic design industry. A course fee is required. *Enrollment is restricted to students in the Graphic and Interactive Design AAS program. Prerequisite: ART 140, 145 and 149 with grades of C or higher. Pre/Co-requisite: ART 114, 146 and 147 with grades of C or higher.*

ART 151 - Ceramics I **3:2:3.4**

Introduces students to basic hand-building and wheel throwing methods with an emphasis on process, history, and contemporary issues to clay. In addition, historical and global issues of ceramics are explored. A course fee is required.

ART 152 - Ceramics II **3:2:3.4**

Explores materials and processes for self-expression using advanced techniques of throwing, casting, and sculpting of ceramic forms. The student is responsible for creating a thematic body of work. A course fee is required. *Prerequisite: ART 151 with a grade of C or higher.*

ART 161 - Sculpture I **3:2:3.4**

Offers students hands-on experience in the development of spatial form in several media: clay, wood and metal. This studio course provides students with a beginner study of sculpture as they are able to produce a body of work that reflects individual imagination. A course fee is required. *Prerequisite: ART 107 with a grade of C or higher; Or permission of the Instructor.*

ART 171 - Jewelry and Metal Design I **3:2:3.4**

Provides students with an opportunity to develop skills in the design and production of jewelry, working in semi-precious and base metals. This studio course addresses piercing, metal forming, hot and cold joining, and casting techniques. A course fee is required.

ART 172 - Jewelry and Metal Design II **3:2:3.4**

Provides students with an advanced study of jewelry and metalworking techniques. This studio course addresses stone setting, chain making, anodizing, raising, mold making and casting, along with a review of techniques studied in ART 171. A course fee is required. *Prerequisite: ART 171 with a grade of C or higher.*

ART 176 - Digital Photo Imaging **3:2:3.4**

Explores the techniques and aesthetics of digital image capture and manipulation using digital photography, scanning, and computer imaging software as tools for creative expression. Students learn essential digital camera operations and skills necessary to navigate and work in the computer environment. Students use industry standard software to edit and enhance original digital photographs and images to express a personal vision. A course fee is required.

ART 181 - Art Through the Ages I (Cave to 1300) **3:3:0**

Studies art from prehistoric times through the Middle Ages. The course emphasizes the relationship between art and social, economic, religious, and geographical conditions. Western and non-Western cultures are examined. *Prerequisite: Eligibility for enrollment in ENGL 101 and completion of any reading courses required by the College Testing and Placement Program.* (H&A)

ART 182 - Art through the Ages II - (1300 to 20th Century) **3:3:0**

Studies art from the late Middle Ages to the 20th century. The course emphasizes the relationship between art and social, economic, religious, and technological developments. Western and non-Western cultures are examined and discussed. *Prerequisite: Eligibility for enrollment into ENGL 101 and completion of any reading courses required by the College Testing and Placement Program.* (H&A)

ART 183 - Modern Art **3:3:0**

Studies the development of modern styles in painting, sculpture, architecture, and the graphic arts from their origins in the nineteenth century to the twentieth century. Emphasis is placed on styles and philosophies developed by modern artists and the elements of visual art they used, adapted, or invented. *Prerequisite: Eligibility for enrollment into ENGL 101 and completion of any reading courses required by the College Testing and Placement Program.*

ART 184 - The Art of the Cinema **3:3:0**

Explores film as an art form. This course focuses on the integration of the key fundamentals of filmmaking, such as cinematography, mise en scene, editing, and sound. Film theory and criticism are also discussed as a framework for understanding film and its significance. Students are then able to synthesize these foundational components, through shared viewing experiences, in order to critically analyze film. *Prerequisite: Eligibility for enrollment into ENGL 101 and completion of any reading courses required by the College Testing and Placement Program.*

ART 185 - The History of the Cinema **3:3:0**

Survey course that investigates the development of the cinema from the late nineteenth century to the present. Emphasis is placed on movie genres, the people who have encouraged or created those genres, and how cultural patterns have affected the history of the cinema. *Prerequisite: Eligibility for enrollment into ENGL 101 and completion of any reading courses required by the College Testing and Placement Program.*

ART 186 - History and Aesthetics of Photography **3:3:0**

Explores the history of photography with emphasis on the aesthetic elements of traditional and contemporary work - including digital. The significance of technical developments, photographic processes, and photographic criticism is discussed. *Prerequisite: Eligibility for enrollment into ENGL 101 and completion of any reading courses required through the College Testing and Placement Program.*

ART 190 - History of Graphic Design **3:3:0**

A study of the history of graphic design from prehistoric visual communications to contemporary graphic design. This study also considers the impact of typography, technology, and modern art on graphic design, as well as the styles and contributions of individual graphic designers. *Prerequisite: Eligibility for enrollment into ENGL 101 and completion of any reading courses required by the College Testing and Placement Program.*

ART 191 - Glass **3:2:3.4**

Introduces students to the art, aesthetics, and methods of glass working. This course covers the theory and techniques of blowing, fusing, casting, and cold working. A course fee is required.

ART 192 - Art of Asia **3:3:0**

Surveys the history of art and architecture of South, Southeast, and East Asia. This course focuses upon the artistic tradition of India, China, and Japan. Through classroom discussions, visits to museums, and various assignments, students gain a broader understanding of the historical, social, and philosophical contexts surrounding the art's creation. Students are also able to discover aesthetic, cultural, and religious expressions on these ancient and vital civilizations. *Prerequisite: Eligibility for enrollment into ENGL 101 and completion of any reading courses required by the College Testing and Placement Program.*

ART 194 - Italian Renaissance Art and Architecture - STUDY ABROAD **3:3:0**

Enables students to travel to Italy and learn about the history of Italian Renaissance art and architecture through on-site evaluation of monuments and artworks. In addition to examining the unique cultural climate that spawned many notable achievements in this epoch, this course emphasizes the impact of Antiquity on artistic creation. Special topics are also addressed including the role of patronage and the changing status of the artist, cross-cultural influence, and social attitudes towards women and those constituting the "Other." *Prerequisite: Eligibility for enrollment*

into ENGL 101 and completion of any reading courses required by the College Testing and Placement Program.

ART 201 - Color Photography **3:2:3.4**

Encompasses the area of color photographic image making. This course examines color vision, color principles, and color photographic materials and processes. A portion of the course allows students to participate in a visual design workshop where areas of visual awareness and sensitivity are explored. Through lectures and weekly laboratory sessions, students are able to study and apply color theory, work with color transparencies, and practice in color chromogenic printing, which are used to emphasize theory and build portfolios. A course fee is required. *Prerequisite: ART 115 with a grade of C or higher.*

ART 202 - Materials and Processes of Photography **3:2:3.4**

Studies the theory and science of photography using practical applications. This course covers the theory of image formation, optics, sensitized materials, exposure, processing, tone reproduction, color, variability, visual perception, and digital photography. A course fee is required. *Prerequisite: ART 115 with a grade of C or higher.*

ART 205 - Color Digital Photography **3:2:3.4**

Continues the skills and techniques covered in ART 201 with an added emphasis in digital color photography, digital visual design, digital books, and digital printing. A course fee is required. *Prerequisite: ART 201.*

ART 206 - Studio Photography **3:2:3.4**

Covers the art of photographic lighting. This course examines the use of available light, quartz light, and digital electronic flash. Digital and traditional 35mm and larger film formats - up to view camera - are employed. A course fee is required. Prerequisite: *ART 115, 117 and 201 with grades of C or higher.*

ART 207 - Portfolio Development **1:1:1**

Provides students an opportunity to develop a professional portfolio that utilizes work created in various ART courses. This course teaches students how to document, assemble, and refine portfolios that are based upon admission requirements of transfer institutions. *Prerequisite: ART 105, 107, 122 and 131 with grades of C or higher.*

ART 208 - Advanced Digital Photography **3:2:3.4**

Provides an advanced study of digital photography for commercial and fine art applications. This course explores the techniques and aesthetics of digital image capture and manipulation using digital photography and computer-imaging software. Students evaluate their ideas and visual judgments as they discover the technical, aesthetic, and theoretical aspects of digital photography. A course fee is required. *Prerequisite: ART 115, 117 and 201.*

ART 209 - Photography Seminar **3:2:3.4**

Introduces contemporary topics, technologies, and the ethics of digital photography. This course provides students with marketing, self-promotional, interviewing, and resume skills, along with supplying them additional hands-on training in the refinement of their portfolios – necessary for the work place, transfer institutions, or exhibitions. A course fee is required. *Prerequisite: ART 115 with a grade of C or higher.*

ART 214 - Advanced Glass **3:2:3.4**

Provides an advanced study in the formation of molten glass through the use of various mold making techniques and hot glass approaches. This course affords students the opportunity to produce portfolio work that is based upon advanced techniques of both form and surface. A course fee is required. *Prerequisite: ART 191 with a grade of C or higher.*

ART 216A - Advanced Crafts: Glass **1:0:3**

An advanced glass course in which students explore specific techniques, processes, and concepts in depth. Students produce a body of work that reflects their research. A course fee is required. *Prerequisite: ART 191 and 214 with grades of C or higher; and, permission of the Instructor.*

ART 216B - Advanced Crafts: Ceramics **1:0:3**

An advanced ceramics course in which students explore specific techniques, processes, and concepts in depth. Students produce a body of work that reflects their research. A course fee is required. *Prerequisite: ART 151 and 152 with grades of C or higher; and, permission of the Instructor.*

ART 217A - Advanced Studio Problems I **1:0:3**

Covers advanced studio problems and production techniques. Students work with ceramic, glass, jewelry and/or wood under the direct supervision of a medium-specific instructor. *Signature of the Instructor is required.*

ART 217B - Advanced Studio Problems II **1:0:3**

Continues the skills and competencies addressed in ARTS 217A. Students further explore advanced studio problems and production techniques - working with ceramic, glass, jewelry, and/or wood - under the supervision of a medium-specific instructor. *Signature of the Instructor is required.*

ART 217C - Advanced Studio Problems III **1:0:3**

Continues the skills and competencies addressed in ARTS 217B. Students further explore advanced studio problems and production techniques – working with ceramic, glass, jewelry, and/or wood - under the supervision of a medium-specific instructor. *Signature of the Instructor is required.*

ART 220 - Color and Design **3:2:3.4**

Introduces basic elements and principles of color theory. Topics include terminology, interaction of color, color perception, chromatic relationships, color psychology, and harmony. Students work in a variety of tools, from paint mixtures to collage. A course fee is required. *Prerequisite: ART 105 with a grade of C or higher.*

Astronomy

ASTR 103 - Introduction to Planetary Astronomy **3:3:1**

Introduces the solar system with an emphasis on the sun, major and minor planets, the earth-moon system, asteroids, comets, meteors, the Kuiper Belt, and the Oort Cloud. This course covers the physical laws of motion and the properties of light, the origin of the Solar System, and formation of the planets. Laboratory exercises reinforce the concepts discussed in the lectures pertaining to the location and motion of objects in the sky. *Nominal use of math is required.* A course fee is required. (SCI/LAB)

ASTR 104 - Introduction to Stellar Astronomy **3:3:1**

Covers the physical features of stars (including the sun as a star), stellar distances and motion, evolution and star types, and the Milky Way Galaxy along with other galaxies. Topics include the

H-R Diagram, cosmology, galactic clusters, and the history of astronomy. The course includes discussion of recently discovered phenomena such as x-ray and gamma ray bursters, brown dwarfs, and extrasolar planets. Computer Planetarium and laboratory exercises allow students to gain familiarity with the science of astronomy. *Nominal use of math is required.* A course fee is required (SCI/LAB)

Auctioneering

AUCT 101 - Audience Communications and Bid Calling **3:3:0**

Covers the principles and techniques of developing effective interpersonal communication with individuals, groups and audiences. The basics of bid calling are taught, as well as the auctioneer's "chant". *Enrollment is restricted to students in the Auctioneering diploma.*

AUCT 102 - Procurement and Appraisal of Personal Property **3:3:0**

Covers the principles of obtaining merchandise for the auction and appraisal as it applies to antiques, modern household goods, farm equipment, heavy equipment, automobiles, livestock, coins, jewelry, art and collectibles. *Enrollment is restricted to students in the Auctioneering diploma.*

AUCT 103 - Procurement and Appraisal of Real Estate **3:3:0**

Covers the principles and/or practices associated with obtaining, appraising and marketing of real estate at auction. *Enrollment is restricted to students in the Auctioneering diploma.*

AUCT 104 - Auctioneering Law **3:3:0**

Examines the Pennsylvania Commonwealth Law Code, which regulates Auctioneers and auctioneering. The federal and state statutes, which govern the operations of all phases of auctioneering, are studied and the National and PA Auctioneer's Associations' Code of Ethics are introduced and discussed. *Enrollment is restricted to students in the Auctioneering diploma.*

AUCT 200 - Prepare and Conduct the Auction **5:3:4**

Addresses the procedures and practices necessary to prepare, conduct and conclude an auction. The course includes a 60-hour practicum with a PA licensed auctioneer as stipulated by the PA Board of Auctioneer Examiners. The 60-hour practicum can be completed on site and/or online. A course fee is required. *Enrollment is restricted to students in the Auctioneering diploma.*

Automotive Technology

AUTO 101 - Automotive Fundamentals **3:2:3**

Provides an introduction to automotive service practices and procedures, such as service information systems, component identification, and precision measurements. This course emphasizes the personal safety and proper use of shop equipment and tools. Enrollment is restricted to students in the Automotive Technology associate, certificate and diploma programs. A course fee is required. *Signature of the Faculty Program Supervisor is required for enrollment, as well as a passing score on a mechanical aptitude test and a valid PA Driver's license.* (FYS)

AUTO 103 - Automotive Powerplants **3:2:3**

Introduces students to automotive engine servicing and assembly. This course emphasizes service procedures for gasoline and diesel fueled engines such as disassembly, measurement, and assembly. Engine mechanical diagnosis and testing is also included. A course fee is required. *Enrollment is restricted to students in the Automotive Technology associate, certificate and diploma programs. Pre or Co-requisite: AUTO 101 with a grade of C or higher.*

AUTO 105 - Fundamentals of Electrical/Electronics I **3:2:3**

Introduces students to automotive electrical systems and includes fundamental electrical and electronic principles such as resistance, induction, and magnetism. This course emphasizes the use of test equipment and electrical meters as students work with starting and charging systems. Automotive wiring diagrams, electronic service information, and basic diagnostic testing are also included. A course fee is required. A Digital Multi-Meter is provided as part of the course fee. *Enrollment is restricted to students in the Automotive Technology associate, certificate and diploma programs. Pre or Co-requisite: AUTO 101 with a grade of C or higher.*

AUTO 107 - Fuel and Emission Control Systems **3:2:3**

Provides students with an overview of low and high-pressure fuel system components, construction, and diagnosis. This course also discusses emission-control-system operation and diagnosis, basic engine performance testing, and emphasizes the use and interpretation of various diagnostic equipment and tools. A course fee is required. *Enrollment is restricted to students in the Automotive Technology associate, certificate and diploma programs. Pre or Co-requisite: AUTO 101 with a grade of C or higher. A valid PA Driver's License is required for enrollment in the course.*

AUTO 110 - PennDOT Safety and Emission Inspector Certifications **1.5:1.5:0**

Provides PennDOT required instruction on regulations, vehicle inspection procedures and recording requirements, as well as on testing modules in order for students to obtain the PA Vehicle Safety Inspector and Emissions Inspector Certifications. This course covers program overview, inspection procedures and regulations, hands-on practice, and required certification tests (online and tactile). This course is open to anyone who is interested in obtaining these two certifications. *Participants must possess a valid driver's license, be 18-years of age or older, and be able to provide a valid credit card needed to establish an online account with PennDOT for testing and ID verification purposes.*

AUTO 151 - Braking Systems **3:2:3**

Provides students with an introduction to automotive braking components and their operation. This course presents hydraulic principles, brake system component operation, and anti-lock/stability control systems. Disc and Drum Brake component service and replacement is emphasized. A course fee is required. *Enrollment is restricted to students in the Automotive Technology associate, certificate and diploma programs. Pre or Co-requisite: AUTO 101 with a grade of C or higher. A valid PA Driver's License is required for enrollment into the course.*

AUTO 153 - Suspension Systems **3:2:3**

Provides students with an introduction to wheels and tires, suspension, and steering system components and service. This course emphasizes the safe use of shop equipment to mount and balance tires, to change suspension components, and to perform wheel alignments. Diagnosing and testing steering and suspension systems is also included. A course fee is required. *Enrollment is restricted to students in the Automotive Technology associate, certificate and diploma programs. Pre or Co-requisite: AUTO 101 with a grade of C or higher. A valid PA Driver's License is required for enrollment into the course.*

AUTO 157 - Engine Performance Testing **3:2:3**

Introduces students to light duty, vehicle spark, and compression-ignition-control-systems. This course covers the design, operation, and diagnostic procedures, as engine performance testing using current ignition diagnostic tools, oscilloscopes, and other equipment is emphasized and introduces students to the computer control system operation and diagnosis is introduced. A course fee is required. *Enrollment is restricted to students in the Automotive Technology associate, certificate and diploma programs. Prerequisite: AUTO 107 with a grade of C or higher.*

AUTO 159 - Automotive Heating/Air Conditioning Systems **3:2:3**

Provides students with an introduction to basic heating and refrigeration principles as applied to automobile service and replacement. This course focuses on the climate-control-system components and their operation, as well as diagnosing mechanical and electrical faults in automotive HVAC systems. The Automotive Service Excellence (ASE) Refrigerant Recovery and Recycling Program and Certification Test are completed during the course. A course fee is required. *Enrollment is restricted to students in the Automotive Technology associate, certificate and diploma programs. Prerequisite: AUTO 105 with a grade of C or higher.*

AUTO 191 - Cooperative Work Experience **2:0:35**

Provides students with a hands-on, paid work experience at an approved automotive service or repair facility. Students complete a total of 480 hours of work with a mentor to master the skills presented and practiced during their first year of Automotive Technology courses. Students must provide their own basic hand tools and storage for this course. *Enrollment is restricted to students in the Automotive Technology associate, certificate and diploma programs. Prerequisite: AUTO 101, 105, 107, 151 and 153 with grades of C or higher.*

AUTO 203 - Manual Transmissions/Transaxles and Differentials **3:2:3**

Introduces students to driveline components and manually shifted transmissions and transaxles used on light duty vehicles. This course encompasses the theory and operation of driveline components such as transfer cases, axle assemblies, differentials and manually shifted trans-missions. Hands-on assembly and reconditioning are also emphasized. A course fee is required. *Enrollment is restricted to students in the Automotive Technology associate, certificate and diploma programs. Prerequisite: AUTO 101 with a grade of C or higher.*

AUTO 205 - Intermediate Automotive Electrical/Electronics **3:2:3**

Provides students with a review of electrical and electronic theory as presented in AUTO 105 and introduces advanced topics that include Supplemental Restraint Systems, wire and terminal repair, accessory operation and diagnosis, and in-car computer networking. The use of Digital Volt/Ohm Meters (DVOMs), oscilloscopes, and scan tools for diagnosis is also discussed. A course fee is required. *Enrollment is restricted to students in the Automotive Technology associate, certificate and diploma programs. Prerequisite: AUTO 105 with a grade of C or higher.*

AUTO 207 - Computerize Powertrain Controls **3:2:3**

Combines the concepts and skills taught in previous engine performance courses and demonstrates how computerized controls are used to control engine output and emissions. This course illustrates how input sensors, low and high-side output drivers, adaptive strategies, and data streaming are all integrated in powertrain controls. Diagnosis, testing, and programming of Computerized Powertrain Controls is also emphasized. A course fee is required. *Enrollment is restricted to students in the Automotive Technology associate, certificate and diploma programs. Co-requisite: AUTO 157.*

AUTO 251 - Service Department Management **2:2:0**

Introduces students to the roles and operations of an automotive service department. This course emphasizes customer relations, management skills, parts department operations, and technician development. *Enrollment is restricted to students in the Automotive Technology associate, certificate and diploma programs. Prerequisite: AUTO 101 with a grade of C or higher.*

AUTO 253 - Automatic Transmissions/Transaxles **3:2:3**

Introduces students to automatic shifted transmissions and transaxles used on current light duty vehicles. This course encompasses the theory and operation of hydraulic and electronic

components utilized on automatic shifted transmissions and transaxles. Hands-on assembly and reconditioning is emphasized, as well as current diagnostic and electronic operations are presented. A course fee is required. *Enrollment is restricted to students in the Automotive Technology associate, certificate and diploma programs. Pre or Co-requisite: AUTO 205 with a grade of C or higher.*

AUTO 255 - Advanced Electrical/Electronics **3:2:3**

Encompasses the wide array of Safety, Driver-Assist, Entertainment, Security and Infotainment systems available on today's automobiles. This course emphasizes the components, communication and operation of these systems. Advanced diagnostics of various in-car computer networks using lab scopes and meters is also included. A course fee is required. *Enrollment is restricted to students in the Automotive Technology associate, certificate and diploma programs. Prerequisite: AUTO 205 with a grade of C or higher.*

Baking

BAKE 101 - Baking I **4:2:6**

Introduces students to techniques in the preparation of assorted quick breads and muffins, basic yeast doughs, enriched and laminated doughs, cookies, and brownies. This course combines theory, demonstration, and hands-on laboratory time as students evaluate and study product identification and functions while applying bakeshop sanitation. In addition, students are able to practice the proper use of equipment and bakeshop mise en place - emphasizing precise calculation of baker's mathematics and formulas. A gingerbread showpiece is constructed for grading. Students are responsible for purchasing an appropriate uniform and a designated small equipment kit. A course fee is required. *Enrollment is restricted to students in the Baking and Pastry Arts Certificate and in the Culinary Arts AAS and Certificate programs. Co-requisite: CULI 113.*

BAKE 111 - Pastry Arts I **4:2:6**

Introduces the techniques and presentations of traditional American and classic international desserts through theory, demonstration, and hands-on laboratory time. This course specifically addresses layered and tiered cakes, tortes, frostings, fillings, custards, and curds with an emphasis on pies and tarts, ice cream, and frozen desserts. The course also focuses on working with chocolate and basic cake decorating procedures. Desserts, both individual and retail, are plated for presentation. Students must have an approved uniform and a small designated equipment kit. A course fee is required. *Enrollment is restricted to students in the Baking and Pastry Arts Certificate and in the Culinary Arts AAS and Certificate programs. Prerequisite: BAKE 101 with a grade of C or higher, and CULI 113 with a grade of D or higher. Must have passed the National Restaurant Association Educational Foundation's SERVSAFE Certification.*

BAKE 201 - Advanced Baking and Pastry Arts **4:2:6**

Focuses on advanced breads and pastries. This course exposes the student to a continuation of various bread styles using advanced techniques and hands-on application for sourdough and artisan style breads. Specialty dietary baking products are also covered. Decorating techniques, such as gum paste and fondant are introduced for cakes and showpieces and chocolate candies and sugar confections are outlined. In addition, restaurant and plated desserts are covered with flavor profiling and plate composition. A theme specific bread showpiece, utilizing different decorative doughs, is a part of the grading. Construction, assembly, decoration, and cost analysis of a tiered theme cake is also a part of the grading. Students must have an approved uniform and a designated small equipment kit. A course fee is required. *Enrollment is restricted to students in the Baking and Pastry Arts Certificate and in the Culinary Arts AAS and Certificate programs. Prerequisite: BAKE 101 and 111 with grades of C or higher.*

BAKE 205 - Bakery Operations I **2:2:0**

Provides students with an opportunity to gain “real world” experience in the baking and pastry industry by working in a commercial bakery operation. This lecture course requires students to obtain employment and participate in a “hands – on” learning experience as they are introduced to various bakeshop stations and employment procedures. These areas include: basic preparation, bread baking, bulk production, pastries and plated desserts. The course is offered at HACC’s partnering culinary teaching facility, The Hotel Hershey. Students must meet with the Program Director for approval into the class. Students must have an approved uniform and designated pastry kit. *Enrollment is restricted to students in the Baking and Pastry Arts Certificate, Culinary Arts Catering Certificate, and Culinary Arts AAS programs. Prerequisite: BAKE 101 with a grade of C or higher and CULI 113.*

BAKE 291 - Baking and Pastry Arts Internship **3:0:20**

Provides students with the opportunity to obtain employment in an approved bakery worksite for the equivalent of 280 hours of on-the-job training. Weekly progress reports are required. The student compiles a portfolio of the internship experience for a grade. *Enrollment is restricted to students in the Baking and Pastry Arts Certificate and in the Culinary Arts AAS and Certificate programs. Prerequisite: BAKE 111 with a grade of C or higher.*

Building Construction Technology

BCT 211 - Structural Concepts for Construction **3:3:0**

Provides students with a qualitative examination of the fundamental structural concepts and principles associated with structural design. This course intends to help students develop structural literacy as they examine loads, connections, structural systems, and the structural characteristics and applications of wood, steel, and concrete. Historical and modern examples of structural forms are also explored. *Prerequisite: GTEC 110 or ARCH 110, and ARCH 130 with grades of C or higher.*

BCT 212 - Construction Contracts and Related Laws **3:3:0**

Covers the legal factors associated with the operation of a construction company. This course places an emphasis on a practical approach to the law as it relates to such topics as construction contracts, inter-professional relationships, payments, bonds, liens, labor practices, liquidated damages, arbitration and delays. Also covered are the legal aspects of drawings, specifications, and insurance.

BCT 215 - Construction Estimating **3:3:0**

Encompasses the conceptual, preliminary, detailed and quantity estimating practices that are currently used in the construction industry. This course also emphasizes the interrelationship of drawings, specifications, and construction contracts. Students prepare conceptual and final estimates for a small commercial construction project and are introduced to the use of computerized methods of construction estimating. *Prerequisite: CIS 105 and (ARCH 110 or GTEC 110) with grades of C or higher; Completion of MATH 091 with a grade of C or higher, or placement through the College Testing and Placement program; or permission of the Instructor. Co-requisite: ARCH 130 with a grade of C or higher.*

BCT 216 - Construction Planning and Scheduling **3:3:0**

Covers the planning and scheduling process of a construction project. This course emphasizes the importance of coordinating sub-contractors, materials, equipment, project funding and cash flow. Utilization of computers in the planning and scheduling process is extensively integrated. *Prerequisite: (ARCH 110 or GTEC 110) and CIS 105 with grades of C or higher; or permission of the Instructor. Co-requisite: ARCH 130 with a grade of C or higher.*

BCT 217 - Construction Project Administration **3:3:0**

Addresses the full construction process. This course discusses all phases – from project conception to its completion - of a construction project including the roles that the owner, architect, construction manager, general contractor, and subcontractor has throughout the project. Students are taught the procedures for effective project cost control and the systematic methods of handling changes, claims, and disputes for both general and subcontractors. Construction accounting is also covered. *Prerequisite: GTEC 110, ARCH 110, or CVTE 107 with a grade of C or higher. Co-requisite: ARCH 130; Or permission of the Instructor.*

BCT 221 - Surveying for Construction Management **3:1.5:4**

Covers basic surveying methods, use of instruments, recording and computing data, site layout, and earthwork for construction managers. *Prerequisite: GTEC 110 or ARCH 110 with a grade of C or higher.*

Biology

BIOL 100 - Basic Microbiology **1:1:0**

General review of microbiology with emphasis on pathological mechanisms of infectious disease and precautions necessary for the prevention of infectious disease in health care and extended care facilities.

BIOL 101 - General Biology I **4:3:3**

Emphasizes biological organization; basic biochemistry; biophysics of living systems; membrane dynamics; cellular structures and functions; cellular reproduction, photosynthesis; cellular respiration; chromosomal and molecular inheritance. This course is intended for science majors. A course fee is required. *Prerequisite: High school academic biology and chemistry; Pre or Co-requisite: ENGL 101 and reading ability at the ENGL 003 level or higher; High School Biology and Chemistry; or CHEM 100 and BIOL 108 or 111 or 115 with grades of C or higher.* (SCI/LAB)

BIOL 102 - General Biology II **4:3:3**

Continues the competencies taught in BIOL 101. This course emphasizes basic life functions of animal systems as it provides a detailed examination of organ systems, which, in the mammal, support homeostasis. In addition, this course presents the principles of heredity, reproduction and embryology; evolution as a process; and structure, function, and classification of major phyla of the animal kingdom. A course fee is required. *Prerequisite: BIOL 101 or the equivalent with a grade of C or higher.*

BIOL 103 - Environmental Science **3:3:0**

Introduces basic concepts of human ecology, such as population, natural resources, and pollution, as well as current issues of environmental concern. (SCI)

BIOL 103H - Honors Environmental Science **3:3:0**

Introduces basic concepts of human ecology such as population, natural resources, and pollution, as well as current issues of environmental concern. Using a seminar or discussion-based approach, this course encourages independent, creative and critical inquiry and prepares students for the practical application of information by emphasizing effective research strategies and technologies congruent with the field of study. *Prerequisite: Completion of all developmental reading and writing courses required as a result of the College Testing and Placement Program.* (SCI)

BIOL 105 - Medical Terminology **3:3:0**

The study of frequently used medical terms, abbreviations, and symbols as found within their usual contexts. Approached through an integrative review of anatomy and physiology, common pathophysiological states, and related diagnostic tests and treatments (including an introduction to the metric system).

BIOL 108 - Biology for Non-Science Majors **3:3:1**

Reviews contemporary and historical advances within biology. This course is designed for the non-science major and studies the evolution and diversity of life, the spectrum of animal and plant life, and ecology. A course fee is required. (SCI/LAB)

BIOL 108H - Honors Biology for Non-Science Majors **3:3:1**

Reviews contemporary and historical advances within biology. This course is designed for the non-science major and studies the evolution and diversity of life, the spectrum of animal and plant life, and ecology. Using a seminar or discussion-based approach, this course encourages independent, creative and critical inquiry and prepares students for the practical application of information by emphasizing effective research strategies and technologies congruent with the field of study. A course fee is required. *Prerequisite: Completion of ENGL 003, 007 or 057 with a grade of C or higher.* (SCI/LAB)

BIOL 111 - Introduction to Human Biology **3:3:1**

Explores basic biological principles by studying the structure and function of the human body with a focus on body systems. This course emphasizes homeostasis, the relationship of anatomy and physiology at all levels of biological organization, and the demonstration of life processes through the normal functioning of body systems. This is an introductory science course for non-science majors and preparatory for students in Health and Public service programs. A course fee is required. *Prerequisite: ENGL 003, 007 or 057 with a grade of C or higher.* (SCI/LAB)

BIOL 115 - Introduction to Cells and Molecules **3:3:1**

Introduces students to the molecular structure and function of the cell. This course specifically addresses the basis of scientific investigation, the chemistry of cells, the cell membrane structure and function, cellular organelles, cell metabolism, cell division, and the basic principles of genetics (both classical and molecular). This course is an introductory biology course for science majors and pre-allied health students and is recommended to be entered prior to completing BIOL 101, 121 or 221. A course fee is required.

BIOL 121 - Anatomy and Physiology I **4:3:3**

Emphasizes basic body organization; functional biochemistry; cytology, histology, common disorders, and clinical applications as it applies to the study of integumentary, skeletal, muscular, and nervous systems. This course is intended for students, who are interested in pursuing careers within the health sciences. A course fee is required. *Prerequisite: ENGL 003, 007 or 057 with a grade of C or higher.* (SCI/LAB)

BIOL 122 - Anatomy and Physiology II **4:3:3**

Continues the competencies taught in BIOL 121. This course includes a comprehensive study of the cardiovascular, endocrine, lymphatic, respiratory, digestive, urinary, and reproductive systems. A course fee is required. *Prerequisite: BIOL 121 with a grade of C or higher.* (SCI/LAB)

BIOL 130 - Field Biology **4:3:3**

Acquaints students with the biodiversity of south-central Pennsylvania's flora and fauna, their biology, and ecological relationships. Emphasis is placed on the identification of organisms, as well as collecting and preservation techniques. The value of biodiversity, as well as the human impacts on regional biodiversity, are explored. A course fee is required.

BIOL 203 - Environmental Science with Laboratory **4:3:3**

Covers the basic scientific principles employed in assessing and promoting environmental sustainability. The ecological effects of human population growth, energy production, food demands and production, water demands and pollution, waste management, air quality, habitat alteration, and land use are studied in relation to socio-economic issues and cultures in the United States and globally. Laboratories emphasize ecological and carbon footprints, habitat assessment, water resources, waste management, and energy resources. A course fee is required. *Prerequisite: High school academic chemistry, biology, or equivalent.* (SCI/LAB)

BIOL 206 - Ecology **4:3:3**

Familiarizes science majors with the concepts and applications of modern ecology. This course emphasizes ecological principles and case studies (including the natural history of aquatic and terrestrial life), individual ecology, and the distribution and abundance of organisms, population dynamics, and life-history strategies. Other additional topics covered include: competition, herbivory, predation and symbiotic relationships, disturbance and succession, community structure and function, ecosystem energetics, and biogeochemical cycling. A course fee is required. *Prerequisite: BIOL 101 or 103 or 108 or 130 with a grade of C or higher.*

BIOL 210 - The Ecology of Barrier Islands **3:2:3**

Provides a comprehensive study of Barrier Island ecosystems. This course includes field studies and lectures that cover the topics of geography, geology, topography, stratigraphy, climate, oceanography, marine biology, tidal zone dynamics, ecology, and the interaction of man with this ecosystem. Field study activities include several hikes, a kayaking tour, and a workboat tour. In addition, students are able to explore the different habitats created in the near-shore, tidal, dune, salt marsh, freshwater marsh, and forest communities. A course fee is required.

BIOL 212 - Botany **4:3:3**

Introduces students to the basic concepts of plant biology and a survey of major groups of plants and plant-like organisms. This course expands on many of the biological concepts introduced in BIOL 101 - General Biology I, as it includes plant physiology, comparative anatomy, and plant classification. Plant reproduction and other major botanical concepts are emphasized through the study of local flora, laboratory exercises, and lectures. A course fee is required. *Prerequisite: BIOL 101 with a grade of C or higher.*

BIOL 215 - Introduction to Genetics **4:3:3**

Provides a foundation in classical and molecular genetics. This course allows students to gain an understanding of genetic material and explore topics within the field genetics including non-Mendelian inheritance, linkage, gene interactions and regulation, molecular genetics, and mutations. A course fee is required. *Prerequisite: BIOL 101 and 102 with grades of C or higher, or the equivalent.*

BIOL 221 - Microbiology **4:3:2**

Provides students with a comprehensive study of the structure and function of microorganisms. This course presents the control of microorganisms, immunity, and microbes in the news, as well as

discusses selected infectious diseases. Procedures and techniques used in the study of microorganisms are emphasized through the laboratory activities. A course fee is required. *Prerequisite: BIOL 101 or 111 or 115 or 121 or CHEM 100 or higher, with a grade of C or higher.* (SCI/LAB).

BIOL 230 - Physiological Pathology **3:3:0**

Covers the basics of pathophysiology, which is recommended for science majors and required by many Allied Health majors. Lecture topics detail how alterations in the normal anatomy and histology of human organ systems disrupt our homeostasis by developing into pathophysiological changes that manifest as diseases. Emphasis is placed on etiology of the diseases, signs and symptoms of the disease, diagnosis, treatment and prognosis. This course builds upon a student's prior knowledge of Anatomy and Physiology I and II courses. *Prerequisite: BIOL 122 with a grade of C or higher.*

BIOL 250 - Tropical Ecology of the Bahamas **4:3:3**

Introduces students to the study and general principles of ecology - specifically those pertaining to the tropical ecology of island ecosystems - using the scientific method. Course topics emphasize terrestrial and marine ecology of island ecosystems, biodiversity, food webs, natural history, conservation biology, ecotourism, and field research techniques. Students travel to the Bahamas and participate in hands-on field study. Their studies are supplemented through online coursework designed to educate them further on both ecological theory and the island ecosystems visited. This course is designed for Biology majors, but is open to all students of all majors. A course fee is required. *Prerequisite: ENGL 101 with a grade of C or higher; or permission of the Instructor.*

Business

BUSI 101 - Introduction to Business **3:3:0**

Introduces students to the broad field of business. This course covers an overview of the basic functions of business including management, marketing, finance, accounting, and human resources. The course also introduces students to basic economic systems and discusses the importance of ethics and corporate social responsibility to business success. (FYS)

BUSI 209 - Legal Environment of Business **3:3:0**

Introduces students to the law as it affects business organizations. Students are taught how to analyze, use and apply the law when making business decisions. This course also helps them to develop their knowledge in the areas of contracts, constitutional law, criminal law, court structures, ethics and social responsibility, negligence, torts, product and strict liability, intellectual property, technology law, and employment law. *Prerequisite: Eligibility for enrollment into ENGL 003, 007, 057 or ESL 070 as identified by the College Testing and Placement program.*

BUSI 230 - Introduction to International Business **3:3:0**

Explores the role and importance that international business plays in a diverse, global economy. This course discusses the environmental and cultural aspects of international business and the major functional areas of trade, investment, economic integration, and the international monetary system. There is also an emphasis on organizational strategy including entry modes, product development and marketing, operations, and human resources management. *Prerequisite: Eligibility for enrollment into ENGL 003, 007, 057 or ESL 070 as identified by the College Testing and Placement program.*

BUSI 245 - Business Ethics **3:3:0**

Provides students with a general introduction to ethics as it affects decision-making in the business environment. This course specifically addresses ethical theory, moral issues, economic justice, capitalism, corporate social responsibility, individual moral decision-making, social and economic policy, and the environment. A strong emphasis is placed on the use of case studies. *Prerequisite: Eligibility for enrollment into ENGL 003, 007, 057 or ESL 070 as identified by the College Testing and Placement program.*

BUSI 290 - Business Capstone **3:3:0**

Prepares students for both entry-level positions and upward career mobility in business. This capstone course allows students to apply the knowledge and skills acquired in prior courses through the organization of professional portfolios and completing an experiential learning activity. Students also develop professional skills needed for employment. This course is designed for students to enroll in their last semester prior to graduation. *Prerequisite: ACCT 101 or 150 and 160; BUSI 101 or HTMT 101; BUSI 201 or 209; CIS 105; ENGL 106; MGMT 201; and MKTG 201, all with grades of C or higher; Overall GPA of 2.0 or higher; Completion of at least 36 credits prior to enrollment.*

BUSI 291 - Business Internship **3:0:9**

Requires students to obtain an internship approved by the course instructor prior to registration. Students complete a minimum of 126 hours of verified professional field experience related to the student's concentration in a student-obtained internship approved by the course instructor. This internship experience allows students to apply the knowledge and skills they have acquired throughout a business curriculum culminating in a final reflective portfolio highlighting the main achievements of the internship. *Prerequisite: ACCT 101 or 150 and 160; BUSI 101 or HTMT 101; BUSI 201 or 209; CIS 105; ENGL 106; MGMT 201; and MKTG 201 all with grades of C or higher; Overall GPA of 2.0 or higher; Completion of at least 36 credits prior to enrollment; Obtain Instructor approval of the Internship Learning Agreement.*

Computer-Aided Drafting

CAD 115 - MicroStation I **1:0.25:2.25**

Introduces computer-aided drafting techniques using the latest release of MicroStation software. This course focuses on the basic terminology required to operate MicroStation including those associated with opening new drawing, saving, editing, setting dimensions, opening levels, and using text and plotting commands.

CAD 125 - MicroStation II **1:0.25:2.25**

Provides students with a practical application of MicroStation for technicians. This course focuses on Coordinate Geometry (COGO), using points, working with plan views, cross sections, typical sections, vertical and horizontal alignments and site plans. Dimensioning, stationing, angular measurements, and northing/easting values are also taught. *Co-Requisite: CAD 115.*

CAD 130 - Civil Engineering Drawing **3:2:3**

Provides civil technology students with advanced AutoCAD techniques. This course covers plan views, cross sections, stream and roadway profiles, application of surveyor units, measuring and computing quantities, and preparing tabulations. Plan presentation and basic civil engineering terminology are studied. A course fee is required. *Co-requisite: CVTE 107.*

CAD 154 - Computer-Aided Drafting and Design **3:2:3**

Studies basic drafting concepts including orthographic projection, sections, and auxiliary views. Students receive an introduction to selected computer-aided drafting and design programs as they create multi-view working drawings and study solids modeling techniques.

CAD 156 - AutoCAD for Architecture **3:1:6.25**

Introduces students to architectural drawing, which includes both orthographic and paraline. Students are taught computer-aided drawing skills utilizing the latest version of AutoCAD software. This course covers drawing, editing, and layering commands, as well dimensional notation and annotation. Also included is an introduction to Building Information Modeling (BIM) and the latest version of Revit.

CAD 158 - BIM Using Revit for Architecture and Construction **3:1:6.25**

Introduces Autodesk's Revit for architecture and construction. Students learn how to create a Building Information Model (BIM) of a structure. Three dimensional renderings and animated walk-throughs, along with the use of natural and artificial lighting within a model, provides a relationship to other architectural concepts. Other specific skills such as Concept Massing, creating partition types, and database importing/exporting to other software programs are covered. With emphasis on the Building Life Cycle, students are also introduced to the role BIMs can play in both architectural practice and in the overall construction process.

CAD 164 - Advanced Computer-Aided Drafting and Design **2:1:4**

Covers advanced 3-D topics in SolidWorks including sheet metal, cam, and gear design. Students examine applied problems in finite element analysis using simulation software. Applications in fluid flow simulation, motion simulation and solid animation are also discussed. *Prerequisite: CAD 154 with a grade of C or higher.*

Chemistry

CHEM 100 - Principles of Chemistry **3:3:2**

Provides students with an introduction to chemistry, who wish to increase their knowledge and understanding of this subject, or who are required to take a course that updates their knowledge of chemistry. This course stresses the fundamentals of atomic and molecular structure, bonding, solutions, acids and bases, chemical nomenclature, and stoichiometry. A course fee is required. *Prerequisites: MATH 091 or (MATH 033, 044, & 055) or 051; ENGL 003, 007 or 057 with grades of C or higher when identified by the College Placement & Testing Program.* (SCI/LAB)

CHEM 101 - General Inorganic Chemistry I **4:3:3**

Emphasizes the principles and theories of chemistry. This course addresses atomic theory and structure, bonding, periodicity, oxidation/reduction, stoichiometry, thermochemistry, molecular geometry, and gas laws. The laboratory work reinforces both the theoretical understanding and the quantitative nature of matter. A course fee is required. *Prerequisite: MATH 103 or 116 with a grade of C or higher. Along with eligibility for enrollment into ENGL 101 and either completion of CHEM 100 with a grade of C or higher; or completion of an academic high school chemistry course, or completion of the Toledo Placement Exam with a score of 26 or higher.* (SCI/LAB)

CHEM 102 - General Inorganic Chemistry II and Qualitative Analysis **4:3:3**

A continuation of CHEM 101. Concepts covered include gaseous equilibria, acid-base theories, equilibria in aqueous solutions, complex ion equilibria, solubility product equilibria, electrochemistry, thermodynamics, rates of reaction, and coordination compounds. The laboratory work emphasizes kinetics, equilibria and qualitative analysis. A course fee is required. *Prerequisite: CHEM 101 with a grade of C or higher.* (SCI/LAB)

CHEM 203 - Organic Chemistry I **4:3:4**

Introduces the chemistry of carbon-containing compounds. Emphasis is on bonding, structure, stereochemistry, reaction mechanisms, and related thermodynamic considerations. Methods of preparation and purification of compounds, as well as synthesis techniques, are covered. A course fee is required. *Prerequisite: CHEM 102 with a grade of C or higher.* (SCI/LAB)

CHEM 204 - Organic Chemistry II **4:3:4**

Continues the topics covered in CHEM 203. This course discusses the properties and reactions of functional groups, spectroscopy, and multistep synthesis are emphasized. Laboratory exercises include an introduction to the chemical literature, spectroscopy, organic qualitative analysis, and synthesis. A course fee is required. *Prerequisite: CHEM 203 with a grade of C or higher.*

CHEM 205 - Survey of Organic Chemistry **4:3:3.5**

Provides a survey of organic chemistry. This course is specifically designed for students that only need one semester of organic chemistry. The topics covered emphasize bonding, structure, stereochemistry, reaction mechanisms, thermodynamics, reactions of functional groups, spectroscopy, and multistep synthesis. The laboratory portion includes purification of organic compounds, spectroscopy, qualitative analysis, and synthesis. *Prerequisite: CHEM 102 with a grade of C or higher.*

Chinese

CHIN 101 - Elementary Chinese I **4:4:0**

Covers the fundamentals of Chinese grammar including written characters, drill-in structure and pronunciation, developing vocabulary, and cultural aspects. Aural-oral and reading skills are also introduced. *Prerequisite: Eligibility for enrollment into ENGL 101.* (H&A)

CHIN 102 - Elementary Chinese II **4:4:0**

Continues training in elementary Mandarin Chinese. This course aims to further develop fundamental language skills including speaking, listening, reading, and writing. Extended vocabulary and grammar are introduced and taught in a communicative context. To reinforce learning, students are able to engage in a wide variety of activities such as role-playing, task-centered group work, and timely homework submissions. Various aspects of the Chinese culture and daily-life topics are also covered. *Prerequisite: CHIN 101 with a grade of C or higher, or equivalent.*

Computer Information Systems

CIS 105 - Introduction to Software for Business **3:3:0**

Provides a fundamental understanding of computers and familiarizes students with the interaction of computer hardware and software. Emphasis is on the application of computers and hands-on use of software applications, including word processing, spreadsheet, presentation, file, and database management. A course fee is required. *Prerequisite: ENGL 057 or ESL 070; or a combination of ENGL 003, or 007 and 051 with grades of C or higher.*

CIS 108 - Introduction to PowerPoint **1:1:0**

A hands-on, project-oriented course designed to teach the student to produce professional looking presentation materials in the form of overhead transparencies, electronic presentations using a projection device attached to a computer. *Prerequisite: Working knowledge of computer operations.*

CIS 109 - Integrating Technology into the K-12 Classroom **3:3:0**

Introduces current or future teachers, administrators, and counselors to the strategies, pedagogies, and tools for integrating technology into the educational environment. The course covers basic

computer use, accessing information, using Web 2.0 tools on the World Wide Web, and integrating a current productivity software suite into the education curricula to satisfy National and State Technology Standards. *Prerequisite: Eligibility for enrollment into ENGL 101 or be a Guest student.*

CIS 110 - Introduction to Computer Systems **3:3:0**

Provides a hands-on understanding of the underlying concepts, terminology, and operations of hardware components and software associated with computer information systems in industry and for personal use. The Internet and its component parts are covered through in-class activities and extended class assignments. The course serves as a foundation for further study through topics including system design, data input/output processing, hardware basics, software integration, and associated technologies. *Prerequisite: Eligibility for enrollment into ENGL 101 and completion of all developmental reading and writing courses with a grade of C or higher required as a result of the College and Placement Testing Program.*

CIS 128 - Client Administration **3:3:1**

Provides students with the practical skills necessary to use and administer technologies and protocols found at the client interface in modern business user computing environments. Upon course completion, students are able to deploy and update desktop and mobile operating systems, manage policies and profiles, manage and protect devices, applications and data at user end-points. Automation, rollout and disposal principles for the desktop administrator are also covered. A course fee is required.

CIS 135 - Intermediate Spreadsheet Applications **3:3:0**

Builds upon the spreadsheet application, concepts, and skills developed in CIS 105. Using a hands-on approach with a widely used industry/business computer spreadsheet application package, this course focuses on introducing students to the Worksheet, Charts, Functions, Formulas, Tools, and Macro features. *Prerequisite: CIS 105 with a grade of C or higher; or permission of the Instructor.*

CIS 140 - Intermediate Database Management **3:3:0**

Provides an in-depth study of database management. The course builds on the concepts and skills introduced in CIS 105 that focus on database management development. *Prerequisite: CIS 105, WEB 143 or GIS 141 with a grade of C or higher; or permission of the Instructor.*

CIS 145 - Using Mobile Technologies **3:3:0**

Examines the emergence of such mobile technologies as Web 2.0, 3.0, and beyond. The mobility and evolving nature of these technologies, as well as their popularity and usefulness, are discussed. Students learn by engaging in hands-on exploration of the devices and mobile applications for integrating these emerging technologies into their everyday life. *Prerequisite: Eligibility for enrollment into COMM 101 and completion of all reading and developmental ENGL courses as required by the College Testing and Placement Program.*

CIS 222 - Introduction to Windows Servers **3:3:1.5**

Introduces students to local area client/server networking using the current generation of Microsoft Windows Servers. While providing students with the knowledge and skills necessary to install and configure the current Microsoft Windows operating system on stand-alone and client computers that are part of a workgroup or domain, this course also emphasizes the skills and knowledge necessary to install, configure, and administer Active directory. *Prerequisite: CNT 120 with a grade of C or higher.*

CIS 223 - Intermediate Windows Servers **3:3:1.5**

Local area client/server networking using the current generation of Microsoft Windows Servers. Provides students with the knowledge and skills necessary to configure and maintain advanced components of the Microsoft Windows 2000 operating system as a domain controller. This course emphasizes the skills and knowledge necessary to administer a domain using Network Services, Active Directory, and Security Services. *Prerequisite: CIS 222 with a grade of C or higher; or permission of the Instructor.*

CIS 224 - Introduction to Systems Analysis and Design **4:4:0**

Introduces Systems Analysis and Design, using the Systems Development Life Cycle (SDLC) as an organizing tool, to take the student from Planning and Selection through Implementation and Operation. This course presents current practices, as well as accepted concepts and principles of system development, with an understanding of the processes, techniques, and end products. In addition, this course provides extensive coverage of oral and written communication skills including documentation, project management, and team management. *Prerequisite: CNT 120 with a grade of C or higher; Co-requisite: CIS 245; or any one of the following: CIS 238, 245; CPS 115, 121, 135, 230; WEB 140, 143, 144, 220, 240, 242, 244 and 246 with a grade of C or higher.*

CIS 227 - Technical Support **3:3:0**

Provides skills needed to operate and manage in a technical support environment. The course covers technical support, troubleshooting, escalation channels, communication skills, and developing professional interaction with end users. Also included is an in-depth study of help desk software with an emphasis on call and asset management. *Prerequisite: CNT 120 and CIS 222 or 249 or 264 or 265 with grades of C or higher.*

CIS 232 - Introduction to COBOL Programming **3:3:0**

Fundamentals of the COBOL programming language and its applications, including maintenance and interaction with legacy COBOL systems. Course covers Job Control Language (JCL), Customer Information Control System (CICS), DB2, and TSO/ISPF. Students write and maintain programs written in the COBOL language. *Prerequisite: CIS 105 with a grade of C or higher; or permission of the Instructor.*

CIS 238 - Visual Basic Programming for Business Applications **3:3:0**

Provides a hands-on approach to the fundamentals of creating Visual Basic programs for supporting business operations. This course is designed to teach the student how to apply programming logic and Visual Basic tools to common business practices, such as data capture and data analysis, using file management techniques and basic data structures including arrays. *Prerequisite: CIS 135 and WEB 125 or 143 with grades of C or higher; or permission of the Instructor.*

CIS 239 - Database Report Development **3:3:0**

Covers the development of static and interactive reports for print, web, and mobile technologies. This course covers the use of reporting services to manage data sources and create paginated reports. Students are taught how to stylize reports and add visual elements, such as images and charts. In addition, this course covers the creation of Key Performance Indicator (KPI) dashboards and interactive menus. *Prerequisite: CIS 241 with a grade of C or higher.*

CIS 240 - Advanced Database Management **3:3:0**

Builds on the database management applications, concepts, and skills developed in CIS 140. The course provides an opportunity to develop a database application for business using the

programming language provided with the database. In addition, full documentation is developed by the student. *Prerequisite: CIS 140 with a grade of C or higher; or permission of the Instructor.*

CIS 241 - Database Administration I **3:3:0**

Introduces students to the core concepts of database systems and the role they play in modern business environments. This course introduces students to various database models and implementation strategies, database management systems, and database programming. Students are taught to model and normalize relational databases, as well as retrieve and store data from a database. *Prerequisite: CIS 140 or WEB 143 with a grade of C or higher; or permission of the Instructor.*

CIS 243 - Database Administration II **3:3:0**

Covers the installation, configuration, and administration of database management systems (DBMS). This course allows students to explore the relationship between the database and host-operating environment using database management tool and structured query language (SQL) commands. Students also explore common configuration settings, backup recovery scenarios, database security, and database administration tasks. *Prerequisite: CIS 241 with a grade of C or higher; or permission of the Instructor.*

CIS 245 - Database Programming **3:3:0**

Covers Structured Query Language (SQL) commands to manage a database. This course teaches students Data Manipulation Language (DML) commands for extracting data from a database using joins, sub-queries, scalar, and aggregate functions. Students are also taught database normalization and the use of Data Definition Language (DDL) to create and manage databases and database objects, such as tables, user defined procedures, and user defined functions. Lastly, the use of Data Control Language (DCL) to secure a database and control access to database objects is discussed. *Prerequisite: CIS 140 or WEB 143 with a grade of C or higher; or permission of the Instructor.*

CIS 247 - Database Backup and Recovery **3:3:0**

Introduces the critical task of planning and implementing database backup and recovery strategies. This course addresses backup and recovery techniques and examines various backup, failure, restore, and recovery scenarios. Backup methodologies, based on business requirements in a mission critical enterprise, are also addressed. *Prerequisite: CIS 243 with a grade of C or higher; or permission of the Instructor.*

CIS 249 - Fundamentals of the UNIX Operating System **3:3:0**

Covers the UNIX operating system and environment as well as similarities with LINUX. Topics covered include logging onto UNIX, the UNIX file system, basic operating system commands, processing and system resources, login profiles, and beginning shell scripting. Hands-on experience with the vi editor, the UNIX help system, and other UNIX tools and utilities is also covered. *Prerequisite: CIS 105 with a grade of C or higher; or permission of the Instructor.*

CIS 253 - Linux Development **3:3:0**

Explores the various development environments, tools, and best practices available with the Linux and Micro-Controller operating system. This course focuses on contemporary languages in the latest distributions available for this operating system. System installation and Object-Oriented Programming, with the latest languages such as CPP, Qt, Python and JAVA Development, may also be covered. *Prerequisite: CIS 249 with a grade of C or higher.*

CIS 257 - Data Warehousing **3:3:0**

Introduces the fundamental theory of data warehouse development and application. This course addresses development requirements, data warehouse architecture, dimensional model design, and physical database design. Skills to manipulate the data in the warehouse for updating, maintenance, and data extraction are also covered. This course presents applications of business intelligence techniques within the data warehousing framework. *Prerequisite: CIS 140 or 241 with a grade of C or higher; or permission of the Instructor.*

CIS 258 - Data Mining **3:3:0**

Introduces the concepts and application of data mining to discover useful and “interesting” patterns from large data sets. This course specifically covers computational algorithms to develop patterns and forecasts from databases, data selection, cleaning, coding, statistical and machine learning techniques, and visualization of generated structures. The course uses data mining software and examples to illustrate the process. *Prerequisite: CIS 110 or WEB 143, and CIS 135 with grades of C or higher; or permission of the Instructor.*

CIS 264 - Fundamentals of LINUX Administration **3:3:1.5**

Provides students with the practical skills necessary to use and administer the Linux operating system in the command line (CLI) environment. This course covers the following basic system usage topics: Secure Shell (SSH), basic (CLI) navigation commands, directory and file structures and permissions, the vi editor, file processing, processes, and shell scripting. System Administration topics include Linux installation, file systems, installing and configuring software, managing services, creating and administering user accounts, system backup and recovery, scheduling tasks, Linux security and networking, and the implementation of common applications such as web servers, Domain Name System (DNS) servers, email servers, and databases. *Prerequisite: CNT 120 with a grade of C or higher; or permission of the Instructor.*

CIS 265 - Fundamentals of UNIX Administration **3:3:0**

Covers the basics of the UNIX/LINUX operating system with an emphasis on system administration and security. Topics include: the installing and configuration of UNIX, logging into UNIX, basic commands, the vi editor, creating and administering user accounts, system backup and recovery, software installation and package management, the graphical user interface, and basic UNIX administration. Other UNIX tools and utilities are also covered. *Prerequisite: CIS 115 or CNT 120 with a grade of C or higher.*

CIS 266 - Computer Information Systems (CIS) Capstone **3:3:0**

Prepares students for careers in computer technology with an emphasis on troubleshooting strategies, industry standards and documentation, ethical decision-making, professional development, and portfolio management. Students are required to create a professional development plan (PDP) and complete a capstone project in addition to formalizing a professional portfolio highlighting work completed throughout the Computer Information Systems AAS program. Support Specialist Concentration *Prerequisite: ELEC 126 and WEB 102. Pre/Co-requisite: CIS 227 with grades of C or higher. Database Analyst Concentration Prerequisite: CIS 243 and 245. Co-requisite: CIS 224, 239 and 257 with grades of C or higher; Or permission of the Instructor.*

CIS 270 - Microcomputer Systems Internship **3:0:15**

Allows students to work in an approved internship for a total of 225-hours, where they apply the knowledge and skills acquired as a student in the Computer Information Systems curriculum in "real world" situations. Under the supervision of faculty, students work on site at a company with an IT professional for a minimum of 15-hours per week. Duties may vary with each place of employment,

but are directly related to the work done by IT professionals. *Prerequisite: CIS 135, 140, 210 and 222 with grades of C or higher. Co-requisite: ELEC 126; or permission of the Instructor.*

Computer Information Security

CISE 200 - Information Security Fundamentals **3:3:1.5**

Provides a basic understanding of industry standards for securing information. This course discusses legal, ethical, and business requirements, as well as an overview of security tools and practices and secure network architecture. A course fee is required. *Prerequisite: ENGL 101, CNT 120, and CIS 222 or 264 or 249 with grades of C or higher; or permission of the Instructor.*

CISE 210 - Information Security Administration **4:3:1.5**

Encompasses the practical application of operational, administrative, and basic management aspects of information security. Topics include: installation and administration of security hardware and software, expansion planning, equipment inventories, policy adherence, and documentation procedures. A course fee is required. *Prerequisite: CISE 200, CIS 264 and 222 with grades of C or higher; or permission of the Instructor.*

CISE 211 - Ethical Hacking and Incident Response **3:2:3**

Introduces students to hacking tools, techniques, and incident handling. This course focuses upon the evolution of hacking and penetration testing; the basics of cryptology for information security; foot printing; vulnerability scanning and exploit; wireless, web, and database attacks; malware and system exploit; traffic analysis; incident response; and defensive technologies and controls. Students are taught how to discover vulnerabilities, how to attack and defend systems, how to respond to attacks, and how to identify and design controls to prevent future attacks. *Prerequisite: ENGL 101 or 110, and CNT 125 with grades or C or higher; Or permission of the Instructor.*

Criminal Justice

CJ 101 - Introduction to Criminal Justice **3:3:0**

Introduces students to the realm of criminal justice - its philosophic basis and historical development. This course presents agencies and processes, technical and legal problems, and the role of the criminal justice system in American society. *Prerequisite: Completion of all developmental reading and writing courses required as a result of the College Testing and Placement program.*

CJ 104 - Police Operations **3:3:0**

Introduces students to the responsibilities of police and police agencies at the local, state and federal levels. This course examines police operations relative to their effectiveness in crime control, delivery of services, and maintenance of order with particular emphasis on patrol operations and techniques. *Prerequisite: Completion of all developmental reading and writing courses required as a result of the College Testing and Placement program.*

CJ 106 - Introduction to Corrections **3:3:0**

An overview of correctional processes and procedures; including various types of programs and systems at the local, state, and federal levels. Victim and offender rights are also discussed. *Prerequisite: Completion of all developmental reading and writing courses required as a result of the College Testing and Placement program.*

CJ 108 - Criminology **3:3:0**

Discusses the development and causes of criminal and delinquent behavior. This course presents an overview of criminological theories, social norms and criminal law, and patterns of crime, delinquency, and deviant behavior. *Prerequisite: Completion of all developmental reading and*

writing courses required as a result of the College Testing and Placement program.

CJ 109 - Instrumentation and Technologies **3:3:0**

Introduces students to the technologies presently utilized by criminal justice agencies. This course discusses the current technological hardware and software available to agencies with a focus on a cost/benefit approach. Such topics include speed detection devices, computerization, and communications. *Prerequisite: Completion of all developmental reading and writing courses required as a result of the College Testing and Placement program.*

CJ 201 - Criminal Investigation **3:3:0**

Covers the techniques, principles, problems, and theories of criminal investigation. This course emphasizes the questioning of witnesses and suspects; collection and preservation of evidence; and the preparation of cases. *Prerequisite: Completion of all reading and writing courses required as a result of the College Testing and Placement program.*

CJ 203 - Criminal Evidence **3:3:0**

Covers the evaluation of evidence and proof with regard to kind, degree, admissibility, competence and weight. Case studies are presented that are based upon court decisions that relate to force, search and seizure, as well as other legal aspects of evidence. *Prerequisite: Completion of all developmental reading and writing courses required as a result of the College Testing and Placement program.*

CJ 206 - Criminalistics **4:3:3**

Presents the scientific aspects of criminal investigation at the crime scene and in the criminalistics laboratory. This course discusses the documentation and reconstruction of crime scenes, evidence collection, photography, microscopy, hair/fiber/paint evidence, shoe/tire impression evidence, and the development, preservation and comparison of fingerprint evidence. Laboratory exercises help supplement the content students are taught in this course. A course fee is required. *Prerequisite: CJ 201 with a grade of C or higher and completion of all developmental reading and writing courses required as a result of the College Testing and Placement program, or, permission of the Instructor.*

CJ 208 - Intermediate Criminalistics **4:2:4**

Continues the topics covered in CJ 206. This course covers forensic examination, including the identification and analysis of physical evidence in the criminalistics laboratory, which also entails drugs/narcotics. In addition, this course analyzes firearms examination and shooting reconstruction, bloodstain pattern identification, serology, DNA, document examination, polygraph, entomology, and pathology. A course fee is required. *Prerequisite: CJ 206 with a grade of C or higher and completion of all developmental reading and writing courses required as a result of the College Testing and Placement program.*

CJ 211 - Juvenile Justice **3:3:0**

Introduces students to the juvenile justice system of the United States - its components and functions. This course addresses court processes, legal cases, and legislative initiatives. In addition to examining the evolution of the juvenile justice system and the transformation of the juvenile court within the United States, students gain an understanding of the current issues in the adjudication and treatment of juveniles. Differences between the United States system and that of other countries are also examined. *Prerequisite: Completion of all developmental reading and writing courses required as a result of the College Testing and Placement program.*

CJ 212 - Criminal Law and Procedure **3:3:0**

Presents and discusses the history, theory, and principles of criminal law with a particular emphasis placed on the duties and responsibilities of officers enforcing various criminal laws. *Prerequisite: Completion of all developmental reading and writing courses required as a result of the College Testing and Placement program.*

CJ 215 - Criminal Justice Organization and Administration **3:3:0**

Principles of management as they relate to organizational structures and activities of public and private police and corrections agencies. The development of policy, personnel administration, inspection procedures, performance evaluations, and planning and research are discussed. *Prerequisite: Completion of all developmental reading and writing courses required as a result of the College Testing and Placement program.*

CJ 240 - Ethics and Diverse Cultures **3:3:0**

Contemporary issues in the criminal justice field, including an analysis of diversity factors and of common life problems of persons employed in the criminal justice field. *Prerequisite: Completion of all developmental reading and writing courses required as a result of the College Testing and Placement program.*

CJ 243 - International and Domestic Terrorism **3:3:0**

Studies the phenomena of international and domestic terrorism from the historical and criminal justice perspectives. The course provides historical and political viewpoints and an examination of the changing trends in security and justice. *Prerequisite: Completion of all developmental reading & writing courses required as a result of the College Testing & Placement Program.*

CJ 245 - Criminal Justice Study Abroad in London **4:4:0**

Encompasses a comprehensive two-week study of the British criminal justice system - its historical development, operational procedures and policies, and its significance to the American criminal justice system. Students visit the City of London Police, Hendon Police College, the Old Bailey Central Criminal Court, Bow Street Magistrates Court, the Inns of Court, the Supreme Court of the United Kingdom (UK) and a number of other criminal justice-related institutions. Lectures are provided at the facilities by faculty and experienced criminal justice practitioners. Additionally, students are able to observe court sessions and English constables on patrol, as well as experience an evening tour of the crime scenes left by the most famous serial killer in history – Jack the Ripper. Visits to the Tower of London, Imperial War Museum, Stonehenge, Westminster Abbey, Warwick Castle, and Canterbury afford students with the opportunity to better comprehend and appreciate English culture and its history as it relates to the criminal justice process. A course fee is required. *Enrollment is restricted to students in the Criminal Justice AA and the Police Science AAS programs. Or, permission of the instructor is required. Prerequisite: Completion of all developmental reading and writing courses required as a result of the College Testing and Placement program.*

CJ 251 - Criminal Justice Internship **3:3:0**

Provides students the opportunity to gain a minimum of 200 hours of work experience in an approved public safety agency, commonly defined as police, courts, corrections, or fire service, or in a commercial/industrial security agency. The agency or industry selected must be approved by the Discipline Lead for the Criminal Justice AA and Police Science AAS programs and be specifically related to the curriculum of the student. This course also requires that students submit a comprehensive final report and daily diary. *Enrollment is restricted to students in the Criminal Justice AA and Police Science AAS programs. Prerequisite: CJ 101 and two (2) other Criminal Justice courses with grades of C or higher; and Completion of all developmental reading and writing*

courses required as a result of the College Testing and Placement program. Discipline Lead's recommendation or permission of the Instructor.

Computer Network Technology

CNT 120 - Network Communications Technology I **3:3:0**

Introduces students to the fundamental building blocks that form a modern network system, such as protocols, standards, addressing, media, topologies, and hardware. Other topics addressed are: basic terminology associated with networks, uses of networks, network architectures, TCP/IP Protocols, tools for troubleshooting TCP/IP networks, structured cabling, networking media, signaling methods, transmission flaws, wireless local area networks (WLANs), and virtualization. Additional focus is placed on the objectives on the Network+ exam to help students prepare for the Network+ certification exam. However, this course is not sponsored, nor endorsed, nor affiliated with CompTIA, Inc. *Prerequisite: Eligibility for enrollment into ENGL 101; completion of MATH 070, 080, or 090, (MATH 022) with a grade of C or higher: or Placement through the College Testing and Placement Program; or permission of the Instructor.*

CNT 125 - Network Communications Technology II **4:3:3**

Continues the competencies covered in CNT 120. This course teaches students the following concepts through lecture and hands-on laboratory exercises: virtualization, cloud computing, remote access, encryption, network risk management, firewalls, unified communications, network management, network monitoring, subnetting, super netting, Virtual Local Area Networks (VLANs), WAN technologies, Wireless Local Area Network (WLANs), Industrial networks, troubleshooting, and Network Design. Students regularly use multiple operating systems, virtual machines and network hardware to complete hands-on laboratory exercises. Additional focus is placed upon reviewing the objectives on the Network+ exam to help students prepare for the Network+ certification exam. However, this course is not sponsored, nor endorsed, or affiliated with CompTIA, Inc. A course fee is required. *Prerequisite: CNT 120 with a grade of C or higher.*

CNT 140 - The Physical Network **3:3:1.5**

Provides the student with practical skills necessary to design, install, test, and certify communications wiring systems. This course covers communications cabling choices that are currently available, the standards for their use, tools and equipment utilized, installation methods, testing, certification, and troubleshooting installed cable system failures. Students are taught the rules and standards that govern the design of cabling systems. The laboratory exercises require students to install, test, certify and troubleshoot a copper cable system and fiber-optic termination according to a standards-based installation. Students also prepare a bid specification for a cable system installation. A course fee is required. *Prerequisite: CNT 120 with a grade of C or higher.*

CNT 220 - Internetworking **5:4:3**

Provides students with a more detailed understanding of internetworking and internetworking devices. This course presents more in-depth details of the TCP/IP Protocol suite including the underlying applications, components and protocols, identifying TCP/IP layers, and components and functions. The devices discussed and utilized in this course include hubs, switches, routers, and servers. Topics include L2 addressing, Virtual Local Area Network (LANs) and VLAN Trunking, L3 addressing, routing techniques, routing protocols, Network Address Translation (NAT), security, remote access, troubleshooting, and traffic capture and analysis. In addition, this course presents the following protocols: Ethernet, Address Resolution Protocol (ARP), IPv4, IPv6, Internet Control Message Protocol (ICMP), Routing Information Protocol (RIP), Open Shortest Path First (OSPF), Enhanced Interior Gateway Routing Protocol (EIGRP), Transmission Control Protocol (TCP), User Datagram Protocol (UDP), Domain Name System (DNS), Dynamic Host Configuration Protocol (DHCP), and various application layer protocols such as HyperText Transfer Protocol (HTTP) and

Simple Mail Transfer Protocol (SMTP). A course fee is required. *Prerequisite: CNT 125 and CIS 264 with a grade of C or higher, or permission of the Instructor.*

CNT 240 - Cisco Routing & Switching **3:2:3**

Prepares students for the Cisco Certified Network Associate Routing and Switching certification by covering the CCNA Routing and Switching exam objectives. This course is not sponsored, endorsed, or affiliated with Cisco Systems, Inc. Cisco® and CCNA® are registered trademarks of Cisco Systems, Inc. in the United States and certain other countries. A course fee is required. *Prerequisite: CNT 220 with a grade of C or higher; or permission of the Instructor.*

CNT 250 - Virtualization and Cloud Computing **3:2:3**

Provides students with an in-depth understanding of virtualization and cloud computing concepts through lecture and hands-on lab exercises. This course covers topics that include benefits of virtualization, virtualization terminology, hardware requirements, hardware selection and compatibility, configuration and administration of desktop virtualization, server virtualization, cloud computing, virtual networking. The course also explores the “As a Service” (aaS) concept such as Infrastructure As a Service (IaaS), Platform As a Service (PaaS) and Software As a Service (SaaS) and the offerings available on common cloud providers. Cloud management and develops techniques are covered as well. Laboratory exercises allow students to use common commercial and freely available virtualization software and common cloud computing providers. *Prerequisite: CNT 120 with a grade of C or higher. Co-requisite: CIS 249 or 264; or permission of the Instructor.*

CNT 260 - Wireless Network Administration **3:3:1.5**

Provides the networking professional a complete foundation of knowledge for entering into or advancing in the wireless networking industry. From basic RF theory to link budget math, including topics from troubleshooting to performing a site survey, this course delivers hands-on training that benefits the novice as well as the experienced network professional. This course targets both novice and experienced networking professionals who wish to gain a solid understanding of wireless networking to complement their knowledge of traditional wired networking. This course can be used to help students prepare for the CWNA (Certified Wireless Network Administrator) exam. A course fee is required. *Prerequisite: CNT 120 or CTEC 101 and CNT 125 with grades of C or higher.*

CNT 291 - Cooperative Work Experience **3:0:15**

Faculty-monitored employment in an approved internship with a local employer, maintaining an active network environment, for a minimum of 15-hours per week. The intern works on a day-to-day basis with a network administrator, specialist, or technician. As a job “shadow,” the intern has responsibilities that may include basic network configuration, documentation, support, and troubleshooting tasks. The qualified candidate applies the knowledge and skills acquired as a Computer Networking Technology major. This course is scheduled for the last semester and is intended for those not employed in a computer-related position. *Restricted, see Program Coordinator.*

Communication

COMM 101 - Effective Speaking **3:3:0**

Introduces the fundamentals of oral communication with an emphasis on helping the student increase their competence as a communicator in public speaking contexts. This course requires the student to deliver all major extemporaneous speeches to a live audience consisting of a minimum of three (3) members. *Prerequisite: Eligibility for enrollment into ENGL 101 and completion of any reading courses as required by the College Testing and Placement Program.*

COMM 101H - Honors Effective Speaking **3:3:0**

Introduces the fundamentals of oral communication with emphasis on helping the student increase competence as a communicator in public speaking contexts. Using a seminar or discussion-based approach, this course encourages independent, creative and critical inquiry and prepares students for the practical application of information by emphasizing effective research strategies and technologies congruent with the field of study. *Prerequisite: Completion of all developmental reading and writing courses required as a result of the College Testing and Placement Program.*

COMM 110 - Introduction to Communication **3:3:0**

Introduces the fundamental questions, methods, history, and theories that define the communication discipline and professions in public relations, integrated (mass) media, and speech communication. This course addresses human communication related to organizations, public relations, journalism, and the role of the communicator, the audience, the medium, context, and the message. Students are given the ability to investigate career opportunities and are taught how to make informed decisions about career options. *Prerequisite: Eligibility for enrollment into ENGL 101 and completion of any reading courses required by the College Testing and Placement Program.* (FYS)

COMM 120 - Mass Media and Society **3:3:0**

Studies the structure and functions of the mass media in the United States. This course discusses the organization, role, content, and effects that various mass media outlets - newspapers, magazines, television, radio, books, the Internet, and films – have upon society, people, government, and institutions. It also provides both a historical and present-day overview of the interaction between mass media and society with particular focus on the social influences (e.g., economics, politics, technology, law, and culture) that can shape media messages. Discussions pertaining to the social, cultural and technological forces impacting media today are also conducted. *Prerequisite: Eligibility for enrollment into ENGL 101 and completion of any reading courses required by the College Testing and Placement Program.* (S&BS)

COMM 171 - Workshop in News Writing and Reporting **1:1:0**

Provides first-hand experience in the demands of a journalism or broadcasting career. Students select a specific area of mass communication - advertising or journalism, including writing for media in print, video, or the Internet – to explore. The workshop experience involves the student's participation as a staff member on the College's student newspaper, web page, or video podcasts for one semester. *Prerequisite: Eligibility for enrollment into ENGL 101 and completion of any reading courses required by the College Testing and Placement Program.*

COMM 172 - Workshop in News Writing and Reporting **1:1:0**

Continues to provide students with first-hand experience in the demands of a journalism or broadcasting career. Students select a specific area of mass communication - advertising or journalism, including writing for media in print, video, or the Internet – to explore. The workshop experience involves the student's participation as a staff member on the College's student newspaper, web page, or video podcasts for one semester. *Prerequisite: Eligibility for enrollment into ENGL 101 and completion of any reading courses required by the College Testing and Placement Program.*

COMM 201 - Communication Theory **3:3:0**

Introduces students to communication as an academic discipline. This course explores how meaning is created and shared in multiple contexts, such as intrapersonal, interpersonal, small group, organizational, public, mass mediated, and intercultural. In addition, students learn and evaluate the fundamental theories that are covered from each context and conduct research in the

field. *Prerequisite: ENGL 101 with a grade of C or higher. It is recommended that students complete COMM 110 prior to enrolling into COMM 201.*

COMM 203 - Interpersonal Communication **3:3:0**

Studies formal and informal communication between individuals with emphasis upon developing effective communication skills in interpersonal contexts. *Prerequisite: Eligibility for enrollment into ENGL 101.*

COMM 211 - Public Relations **3:3:0**

Covers the theories and foundations of public relations, as well as its function within organizations and society, and its impact on publics. This course examines the issues, concepts, and responsibilities of public relation practitioners working in various professional settings. *Prerequisite: ENGL 101 with a grade of C or higher. It is recommended that students complete COMM 221 prior to enrolling into COMM 211.*

COMM 221 - Media Writing **3:3:0**

Explores a variety of mass communication mediums that students may encounter in their professional careers. The course content focuses on the preparation and presentation of various mass communication formats and examines Message Construction, Message Framing, and Message Interpretation by (or from) print and electronic media, public relations, and advertising practitioners. Students are to use grammar, spelling, and Associated Press (AP) News Style in their practice of writing public relations news releases, public information announcements, print, television and radio advertisements, as well as news stories and editorials. *Prerequisite: ENGL 101 with a grade of C or higher.*

COMM 222 - News Writing and Reporting **3:3:0**

Focuses on the development of basic writing and publishing skills for journalists. This course covers such topics as: developing skills for judging news value, following the Inverted Pyramid Style of writing, and using the Associated Press (AP) News Style. Students use newsgathering tools, such as interviewing and covering traditional sources of news - meetings, speeches, and press conferences - as well as applying journalistic forms and tools specifically for print and electronic media. Lastly, this course helps students build grammar skills and develop critical analysis of writing through the editing and publishing process. *Prerequisite: ENGL 101 with a grade of C or higher.*

COMM 241 - Visual Communication **3:3:0**

Introduces students to a broad base of visual communication, graphic concepts, and tools used to create specific messages for identified audiences. Students are taught the fundamentals of typography, design, layout, visual imagery, and digital media for communication messages. In addition, students are taught design strategies for creating communication messages for intended audiences by utilizing emerging technology. *Prerequisite: Completion of all developmental reading and writing courses required as a result of the College Testing and Placement Program.*

COMM 251 - Small Group Communication **3:3:0**

Provides an overview of the communication process involved in small group interactions. This course investigates the theories of leadership, decision-making, and problem solving. This course allows students to develop competencies for future challenges. *Prerequisite: Eligibility for enrollment into ENGL 101.*

COMM 252 - Business and Professional Communication **3:3:0**

Focuses on the development of oral skills in the business setting. Students study interpersonal relationships in the workplace, basic leadership and team communication, resume writing, interviewing, oral reporting, and the use of electronic media in professional presentations. Emphasis is placed upon the development of communication habits that demonstrate professionalism. *Prerequisite: ENGL 101 and COMM 101 with grades of C or higher.*

COMM 253 - Intercultural Communication **3:3:0**

Explores global communication and culture, as well as examines how culture is reflected through languages, behaviors, rituals, and worldviews. This course investigates communication practices and attitudes that enhance communication between members of different cultures and co-cultures. In addition, students are to examine and describe their own cultural heritage and how they may respectfully interact with individuals of another culture. *Prerequisite: ENGL 101 with a grade of C or higher.* (S&BS)

COMM 253H - Honors Intercultural Communication **3:3:0**

Explores global communication and culture, as well as examines how culture is reflected through languages, behaviors, rituals, and worldviews. This course investigates communication practices and attitudes that enhance communication between members of different cultures and co-cultures. In addition, students are to examine and describe their own cultural heritage and how they may respectfully interact with individuals of another culture. Using a seminar or discussion-based approach, this course encourages independent, creative and critical inquiry and prepares students for the practical application of information by emphasizing effective research strategies and technologies congruent with the field of study. *Prerequisite: ENGL 101 with a grade of C or higher.* (S&BS)

COMM 261 - Public Relations Writing **3:3:0**

Provides an overview of the skills needed for effective public relations (PR) writing. This course teaches students to write informatively and persuasively for diverse audiences using a variety of PR formats. These PR Formats include press releases, Public Service Announcements (PSA's), interviews, Media Alerts, Fact Sheets, features, public presentations, etc. used for a variety of media outlets such as print, broadcast, and the Internet. *Prerequisite: ENGL 101 with a grade of C or higher. It is recommended that students complete COMM 211 prior to enrolling into COMM 261.*

COMM 271 - Workshop in News Writing and Reporting **1:1:0**

Continues to provide students with first-hand experience in the demands of a journalism or broadcasting career. Students select a specific area of mass communication - advertising or journalism, including writing for media in print, video, or the Internet – to explore. The workshop experience involves the student's participation as a staff member on the College's student newspaper, web page, or video podcasts for one semester. *Prerequisite: Eligibility for enrollment into ENGL 101 and completion of any reading courses required by the College Testing and Placement Program.*

COMM 272 - Workshop in News Writing and Reporting **1:1:0**

Continues to provide students with first-hand experience in the demands of a journalism or broadcasting career. Students select a specific area of mass communication - advertising or journalism, including writing for media in print, video, or the Internet – to explore. The workshop experience involves the student's participation as a staff member on the College's student newspaper, web page, or video podcasts for one semester. *Prerequisite: Eligibility for enrollment into ENGL 101 and completion of any reading courses required by the College Testing and Placement Program.*

Computer Science

CPS 113 - BASIC Programming Using Microcomputers **3:3:0**

Covers the fundamentals of programming. This course introduces a beginner-level programming language to the new programmer, who defines and writes simple programs. Throughout the course, program design techniques are developed to enable the student to write more complex programs in an efficient manner. These programs incorporate numeric and string processing, file access, peripheral device control, subprograms, single dimension array processing, and basic object-oriented programming. *Prerequisite: MATH 033 & 044 (or MATH 051) or MATH 045 with grades of C or higher; Placement through the College Testing and Placement Program.*

CPS 115 - Visual Basic Programming I **3:3:0**

Covers the concepts and techniques of programming in a Windows environment. This course contains project assignments that require students to demonstrate an understanding of BASIC programming structures and incorporate event-driven interfaces, decision-making structures, and arrays. An introduction to more advanced Visual Basic topics is also included. No prior programming experience is necessary for enrollment into the course. *Prerequisite: MATH 033, 044, & 055 (or MATH 051) or MATH 045 with grades of C or higher; Or placement through the College Testing and Placement Program.*

CPS 121 - Computer Science I - Introduction to Computer Programming JAVA **3:3:0**

Covers the defining and writing of simple programs that emphasize object-oriented programming (OO). This course explores programming concepts such as algorithms, data types, classes, methods, looping, decision-making, arrays, and files. JAVA Applications are developed using an appropriate development environment, as well as program design techniques to enable the students to write more complex programs from a variety of fields in an efficient manner. This course is geared towards the computer science major but would also benefit the general college student. *Prerequisite: MATH 103 or 116 with a grade of C or higher.*

CPS 135 - C Programming **3:3:0**

An introduction to structured programming using the C language. C is a powerful language, rich in data types; its flexibility allows a wide range of applications that normally would be written in Assembly language through self-documenting high-level languages. An integral part of the course is exploration of the type of programming that is encouraged by C's flexibility. *Prerequisite: CPS 113 or 115 or 121 with a grade of C or higher; or permission of the Instructor.*

CPS 161 - Computer Science II - Algorithmic Design JAVA and C++ **3:3:0**

Studies the techniques of algorithm development and programming style. This course employs two high-level languages for algorithm testing and allows students the opportunity to work on a number of projects (e.g. character manipulation, polynomial operations, file processing) to design, code, and document. *Prerequisite: CPS 121 with a grade of C or higher.*

CPS 162 - Computer Science III - Data Structures C++ **3:3:0**

Continues the topics covered in CPS 161 with a focus on logical data structures and various physical implementations of the structures. Students are required to design and code several programs in such topics as stacks, queues, linked lists, recursion, string processing, hashing, trees, and graphs. *Prerequisite: CPS 161 with a grade of C or higher.*

CPS 230 - Object Oriented Programming JAVA **3:3:0**

Presents Object-oriented or OO programming. This course introduces students to the concept of classes and how abstraction, encapsulation, and inheritance fit into the object paradigm. Students

are taught OO analysis and design. Syntax and its idioms are covered with particular emphasis on programming using OO. *Prerequisite: CPS 121 with a grade of C or higher.*

Culinary

CULI 100 - The World of Wine **1:0.67:1**

Acquaints the student with the fundamentals of wine. This lecture/laboratory course focuses on basic terminology, service standards, wine and champagne service, types of wine, and the major wine producing countries and regions around the world. A course fee is required. The Pennsylvania Liquor Control Board allows persons 18 years of age and older to serve wines and spirits. Since some activities involve wine sampling, including in-class activities and winery tours, students must provide the same documentation of age as would be required by a public establishment to be served alcoholic beverages.

CULI 102 - Culinary Math **2:2:0**

Utilizes basic math principles as related to industry specific calculations, operating ratios and formulas used by hospitality professionals. This course specifically addresses decimals; percentages; weight, volume, and metric measurements; edible and as-purchased yields; food and beverage cost percentages; and recipe conversions, costing, and menu pricing. A course fee is required. *Prerequisite: Completion of MATH 006 (or MATH 008) with a grade of C or higher; Or placement through the College Testing and Placement Program.*

CULI 106 - Professional Bartending **1:0.67:1**

Covers the fundamentals of bartending. The course focuses on basic terminology, service standards, product knowledge, beverage preparation, and the legal aspects of serving alcohol. The Pennsylvania Liquor Control Board allows persons 18 years of age and older to serve wines and spirits. Since some course activities involve wine tasting and a brewery tour, students must provide the same documentation of age to be served alcoholic beverages as would be required by a public establishment. A course fee is required.

CULI 107 - Nutrition for Food Service **3:3:0**

Covers basic nutrition principles as it applies to food service. This course addresses the digestive system, the six nutrients and their role in the body, food sources, nutrient recommendations, and nutritional needs during the life cycle, nutritional factors in food selection and preparation, and the development of healthful recipes and menus. Nutrition and disease including weight control, diabetes, cardiovascular disease, and cancer are discussed. In addition, this course applies computerized nutrition analysis software for menus and diets, as well as to evaluate nutritional information for the public.

CULI 110 - Menu Design and Marketing **3:3:0**

Covers the principles of marketing as they apply to menu design and product promotion in a hospitality operation. This course addresses the principles and practices used to develop a variety of menus for a specific market group, for merchandising food and beverages, and for physical menu design, pricing, and promotion.

CULI 113 - Sanitation and Safety **2:2:0**

Covers the principles of safe food-handling in the commercial foodservice environment. This course addresses the different types of microorganisms and toxins that may cause foodborne illnesses; the role that time and temperature controls play in the flow of food throughout the operation; the importance of proper food handling and adhering to food safety systems and procedures; and the various food allergens affecting people today. This course also covers sanitary facilities and pest

management, as well as the importance of employee training. Current issues in food sanitation, along with the local, state, and federal regulations that apply, are also discussed. This course meets the Pennsylvania Department of Agriculture requirement for certified food handlers. The SERVSAFE examination of the National Restaurant Association is administered.

CULI 122 - Food Purchasing **3:3:0**

Introduces students to the necessary skills and knowledge to become a buyer or purchasing manager for a food service operation. This course focuses on the purchasing and inventory management of foods and other supplies, which include the development of purchase specifications, determination of order quantities, formal and informal price comparisons, proper receiving procedures, storage management and issue procedures. Emphasis on product cost analysis, yields, controls and record keeping at each stage of the purchasing cycle. A course fee is required. *Prerequisite: CULI 102 with a grade of C or higher.*

CULI 123 - Catering: Principles, Garnishing and Hors D'oeuvre **3:1:4**

Introduces students to the logistics of catering, including legal regulations, menu selection, client relations, and costing. The course also serves as an introduction to the use of edible garnishes to enhance food presentations and to the selection, preparation, serving, and storage of hors d'oeuvres as used in food service operations. The course is conducted through demonstration, visuals, and hands-on experience. Participation in a catering event may be required. *Students must purchase an approved uniform.* A course fee is required.

CULI 125 - Dining Room Management **3:3:0**

Introduces basic dining-room operations. This course specifically addresses dining-room management, facility design, types of food service operations, sanitation and safety, leadership and supervision/personnel responsibilities, labor and revenue control, legal issues, equipment, customer relations, menu development, table set-ups, and napkin folding. In addition, methods of American, French, and Russian service are addressed.

CULI 133 - Culinary Arts I **5:3:5**

Introduces the student to culinary theories and techniques through lecture and demonstration. This course focuses on the preparation and presentation of basic recipes, as well as techniques used in a professional kitchen, by covering such topics as professionalism, sanitation and safety, knife skills, mise en place, plate presentation, principles of cooking, vegetables, potatoes, grains and pastas, dairy and cheeses, stocks and sauces, soups, and meats including beef, veal, lamb, pork, and poultry. Students are responsible for purchasing an appropriate uniform and a designated knife kit. A course fee is required. *Enrollment is restricted to students in the Baking and Pastry Arts Certificate and the Culinary Arts AAS and Certificate programs. Co-requisite: CULI 113.*

CULI 143 - Culinary Arts II **5:3:5**

Focuses on the preparation and presentation of recipes as well as the techniques used in a professional kitchen. This is a lecture/laboratory and demonstration course that covers game meats, fish and shellfish, egg cookery, principles of the bakeshop, quick breads, yeast breads, pies, pastries, cookies, cakes and frostings, custards, frozen desserts, and dessert sauces. There is also an introduction to the garde manger kitchen including salads, dressings, fruits, sandwiches, and hors d'oeuvres. A course fee is required. *Enrollment is restricted to students in the Baking and Pastry Arts Certificate and the Culinary Arts AAS and Certificate programs. Students must have an approved uniform and a designated knife kit. Prerequisite: CULI 133 with a grade of C or higher; and CULI 113 with a grade of D or higher and the National Restaurant Association Educational Foundation's SERVSAFE Certification.*

CULI 153 - Culinary Arts III **5:3:5**

Introduces students to a variety of regional and world foods. This lecture and laboratory course examines local cooking methods, culinary specialties, and indigenous ingredients and products. Students develop weekly presentations identifying cultural, topographical, and social circumstances that have created diverse regional cuisines. This course also outlines advanced charcuterie and garde manger techniques. A class project that involves conceptualizing, preparing and executing an eight-course served dinner is included. Students must have an approved uniform and designated knife kit. A course fee is required. *Enrollment is restricted to students in the Baking and Pastry Arts Certificate and the Culinary Arts AAS and Certificate programs. Prerequisite: CULI 143 with grade of C or higher.*

CULI 205 - Restaurant Operations I **2:2:0**

Introduces students to the culinary industry by working in a commercial kitchen operation. This lecture course requires students to obtain employment and participate in a “hands – on” learning experience as they are introduced to various kitchen stations and employment procedures. Areas include main kitchen production, bulk production, and banquet operations. This course is offered at HACC’s partnering culinary teaching facility, The Hotel Hershey. *Students must meet with the Program Director for approval into the class. Students must have an approved uniform and designated knife kit. Enrollment is restricted to students in the Baking and Pastry Arts Certificate and the Culinary Arts AAS and Certificate programs. Prerequisite: CULI 143 with a grade of C or higher.*

CULI 209 - International Culinary Tour: Italy **3:3:0**

Guides students on a culinary tour of Italy. This course focuses on the social and cultural culinary dimensions and regional development of food and wine. Tours of local producers, markets, and historical sites are included as well as hands-on culinary classes. Local chef instructors lecture and demonstrate local and regional specialties and students have an opportunity to assist in food production as well as sample many traditional local foods. Introductory lectures are scheduled several weeks prior to the trip. A course fee is required.

CULI 210 - International Culinary Tour: Spain **3:3:0**

Guides students on a culinary tour of Spain. This course focuses on the social and cultural culinary dimensions and regional development of food and wine. Tours of local producers, markets, and historical sites are included as well as hands-on culinary classes. Local chef instructors lecture and demonstrate local and regional specialties and students have an opportunity to assist in food production as well as sample many traditional local foods. Introductory lectures are scheduled several weeks prior to the trip. A course fee is required.

CULI 211 - International Culinary Tour: France **3:3:0**

Guides students on a tour of France. This course focuses on the social and cultural culinary dimensions and regional development of food and wine. Tours of local producers, markets, and historical sites are included as well as hands-on culinary classes. Local chef instructors lecture and demonstrate local and regional specialties and students have the opportunity to assist in food production as well as sample many traditional local foods. Introductory lectures are scheduled several weeks prior to the trip.

CULI 221 - Basic Foods: Preparation and Production **4:3:2.5**

Covers the basic fundamental principles of food preparation. This lecture/laboratory course discusses all the major food areas including sauces, soups, vegetables, starches, proteins, salads, eggs, fruits, hors d’oeuvre, baking and pastry prepared in a commercial kitchen. Students must purchase an approved uniform. A course fee is required.

CULI 230 - Cost Control: Food, Beverage and Labor **3:3:0**

Covers the principles and procedures involved in an effective food and beverage control system, including standards determination, the operating budget, cost-volume-profit analysis, income and cost control, menu pricing, theft prevention, labor cost control, and computer applications.

CULI 251 - Hospitality Supervision **3:3:0**

Addresses issues in management as they relate to the hospitality field. The course covers responsibilities of the supervisor to employees, leadership, communication, motivational skills, hospitality organizational management, and current issues in hospitality human resources management.

CULI 291 - Culinary Arts Internship **3:0:20**

Provides students with the opportunity to gain hands-on experience working in the food service industry for a total 280- hours at an approved site. This course is designed to help students refine the skills developed throughout the Culinary Arts programs and prepare them for full-time employment. The student compiles a portfolio of the internship experience for a grade. *Enrollment is restricted to students in the Culinary Arts AAS program. Prerequisite: CULI 153 and CULI 205 with grades of C or higher.*

Cardiovascular Technology

CVAS 235 - Introduction to Vascular Sonography **3:3:0**

Provides the student with anatomy and pathophysiology of the venous, arterial and abdominal-visceral vascular systems. This course emphasizes normal structures, disease states, mechanisms of diseases, signs and symptoms, and risk factors commonly encountered in vascular disease states in the cardiovascular patient. Physical assessment and common clinical findings encountered during the evaluation of the cardiovascular patient with known vascular disease is also presented. *Signature of the Cardiovascular Technology Program Director is required.*

CVAS 236 - Concepts in Vascular Ultrasound **3:3:0**

Introduces the student to the arterial, venous, and abdominal-visceral vascular system testing methods. Intra-cranial and extra-cranial arterial, upper and lower extremity arterial and venous, and abdominal-visceral vascular arterial and venous testing methods are discussed including direct and indirect testing methods. Interpretation of all clinical findings associated with vascular disease states are presented. *Signature of the Cardiovascular Technology Program Director is required.*

CVAS 237 - Vascular Hemodynamics and Doppler Physics **4:3:3**

Enables the student to discover the Doppler principles of flow hemodynamics as they relate to the arterial and venous vascular systems. Through laboratory experience, this course covers units of measure, pressure and flow resistance, arterial and venous hemodynamics and direct and indirect methods used to assess vascular disease states. Ultrasound quality assurance and safety is also discussed. These principles are then applied to vascular imaging techniques in the laboratory. *Signature of the Cardiovascular Technology Program Director is required.*

CVAS 238 - Vascular Specialty Procedures **2:2:0**

Introduces the student to imaging procedures employed in the correlation and treatment of vascular abnormalities. This course discusses vascular angiography and interventions, pre-operative and intra-operative procedures, Computed Tomography Angiography (CTA), Computed Tomography Venography (CTV), Magnetic Resonance Angiography (MRA), Magnetic Resonance Venography (MRV), nuclear medicine – Ventilation Perfusion scans, laboratory testing, and treatment options. *Signature of the Cardiovascular Technology Program Director is required.*

CVT 100 - Foundations of Cardiovascular Medicine **3:3:0**

Provides students with a foundational knowledge that covers all aspects of patient care in cardiovascular medicine. In addition, this course addresses current trends within the healthcare profession. *Enrollment is restricted to the students in the Cardiac Sonography and the Invasive Cardiovascular Technology AS programs. Prerequisite: ENGL 003, 007 or 057 with a grade of C or higher.* (FYS)

CVT 101 - Introduction to Cardiovascular Technology **3:3:0**

Provides instruction in cardiac anatomy and physiology, electrophysiology, basic Electrocardiogram (ECG) interpretation, and arrhythmia recognition. This course also discusses 12 Lead ECG interpretation specifically related to acute coronary syndrome. *Enrollment is restricted to the students in the Cardiovascular Technology AS programs. Prerequisite: BIOL 121 and MATH 070, 080 or 090 (or MATH 022) with grades of C or higher. Pre or Co-requisite: CVT 100 with a grade of C or higher. Co-requisite: CVT 102. This course must be completed within three years, or less, before a student may apply to the clinical component of the Cardiovascular Technology programs. Students who have completed this course more than three years ago must see the Program Director.*

CVT 102 - Cardiovascular Technology Laboratory **1:0:3**

Provides students with a foundation to basic non-invasive cardiovascular procedures. This course allows the students the opportunity to practice and demonstrate skills involving 12 Lead ECG, Holter monitoring, patient assessment, exercise stress testing, and vital signs. In addition, standard cardiovascular laboratory procedures are discussed. A course fee is required. *Enrollment is restricted to students in the Cardiovascular Technology AS programs. Prerequisite: BIOL 121, and MATH 070, 080 or 090 (or MATH 022) with a grade of C or higher. Pre or Co-requisite: CVT 100 with a grade of C or higher. Co-requisite: CVT 101.*

CVT 103 - Cardiovascular Technology Clinical Experience **2:0:8**

Introduces students to the Non-Invasive Cardiology Department within a hospital or cardiology outpatient office. Students gain hands-on experience with health care topics previously discussed in CVT 101 and 102. This clinical rotation requires students to complete a total of 120 hours and the student must attend a minimum of two days per week at an approved clinical site that is assigned by the director of clinical education. Students are expected to integrate all the information learned in classroom and laboratory experiences obtained during the previous semester into clinical practice. This clinical rotation focuses on electrocardiograms (ECGs), Exercise Stress Testing, and Holter Monitoring. Throughout the clinical rotation, emphasis is placed on developing the student's interpersonal skills with patients and staff. Students receive a partial clinical manual for which they are expected to complete in addition to one case study, and a research paper. A course fee is required. *Prerequisite: CVT 101 and 102 with grades of C or higher.*

CVT 200 - Cardiac Pathophysiology **4:4:0**

Introduces students to the cardiovascular system and provides them with an overview of various cardiac diseases. This course enables the student to understand the field of cardiology by covering basic pathophysiologic concepts that include patient signs and symptoms, physical examination results, and related diagnostic tests. In addition, this course presents a correlation between cardiac diseases and other general patient illnesses; diagnostic procedures to assess the status of cardiac disease that focus on signs, symptoms, disease processes; and diagnostic and therapeutic treatment options. In addition, students are prepared to communicate effectively with members of the health care team utilizing appropriate medical terminology and cardiology medical terminology. *Enrollment is restricted to students in the Cardiovascular Technology AS programs. Prerequisite: BIOL 122, CVT 101, 102 and 103 with grades of C or higher.*

CVT 210 - Introduction to Invasive Cardiovascular Technology **3:3:0**

Introduces students to cardiac catheterization procedures. This course specifically includes indications and contraindications for cardiac catheterization, left and right heart procedures, arterial and venous access, coronary angiography, application of pathophysiology, and procedural care. *Enrollment is restricted to students in the Cardiovascular Invasive Technology AS program. Prerequisite: CVT 200 with a grade of C or higher. Co-requisite: CVT 211, 212 and 213.*

CVT 211 - Radiation Safety and Invasive Instrumentation **2:2:0**

Presents radiation safety principles, catheterization equipment, and instrumentation. This course reviews and demonstrates current technologies employed in the cardiac catheterization area. *Enrollment is restricted to students in the Cardiovascular Invasive Technology AS program. Prerequisite: CVT 200 with a grade of C or higher. Co-requisite: CVT 210 and 212.*

CVT 212 - Invasive Hemodynamic Assessment **3:3:0**

Encompasses hemodynamic assessment of the cardiac patient in the invasive setting. This course discusses normal and abnormal findings, diagnostic procedure findings, calculations and reporting findings. *Enrollment is restricted to students in the Invasive Cardiovascular Technology AS program. Prerequisite: CVT 200 with a grade of C or higher. Co-requisite: CVT 210, 211 and 213.*

CVT 213 - Invasive Instrumentation Laboratory **2:1:3**

Enables students to receive hands-on experience with the Mentice Vist Simulator, a mannequin, and other equipment used in the cardiac catheterization laboratory. Students are expected to complete a left and right heart catheterization without assistance and to develop skills with a variety of instruments. A course fee is required. *Enrollment is restricted to students in the Cardiovascular Invasive Technology AS program. Prerequisite: CVT 200 with a grade of C or higher. Co-requisite: CVT 210, 211 and 212.*

CVT 214 - Interventional Cardiac Practices **4:4:0**

Discuss and reviews current trends and research practices in Interventional Cardiology, Electrophysiology, and Peripheral Vascular Procedures. Students are taught to develop skills in order to perform percutaneous coronary interventional procedures, through hands-on experience. *Enrollment is restricted to students in the Cardiovascular Invasive Technology AS program. Prerequisite: CVT 213 with a grade of C or higher. Co-requisite: CVT 215.*

CVT 215 - Invasive Cardiovascular Clinical I **4:0:24**

Introduces students to the Cardiac Catheterization laboratory and the health care environment. This course is the first clinical rotation of the program and requires students to complete a total of 340 hours, or three eight-hour days per week, during a semester at an approved clinical site that is assigned by the director of clinical education. Students are expected to integrate all the information learned in classroom and laboratory experiences, obtained during the previous semester, into clinical practice. This clinical rotation focuses on diagnostic procedures in the cardiac catheterization laboratory. Throughout the clinical rotation, emphasis is placed on developing the student's interpersonal skills with patients and staff. Finally, students are expected to submit daily journals and log all the appropriate clinical data and documentation of procedures performed. A case presentation is also required. *Enrollment is restricted to students in the Invasive Cardiovascular Technology AS program. A course fee is required. Prerequisite: CVT 213 with a grade of C or higher.*

CVT 216 - Congenital Heart Disease **1:1:0**

Provides students with an overview of congenital heart disease in both pediatric and adult populations. The course includes a review of embryology, a-cyanotic and cyanotic defects, and corrective interventional and surgical procedures. *Enrollment is restricted to students enrolled in the Cardiovascular Invasive Technology AS Program.*

CVT 217 - Invasive Cardiovascular Clinical II **5:0:32**

Continues the skills covered in CVT 215 to ensure that the student has gained a high level of competency with diagnostic procedures. This clinical rotation focuses on gaining hands-on experience and knowledge with interventional procedures. This course is the final clinical rotation of the program and requires students to complete a total of 500 hours, or four to five eight-hour days per week, during a semester at an approved clinical site that is assigned by the director of clinical education. Students are to submit daily journals and log all the appropriate clinical data and documentation of procedures performed. A course fee is required. *Enrollment is restricted to students in the Invasive Cardiovascular Technology AS Program. Prerequisite: CVT 214 and 215 with grades of C or higher.*

CVT 218 - Cardiovascular Pharmacology **2:2:0**

Provides an overview of pharmacology with specific focus given to the pharmacology used in the cardiac catheterization laboratory. *Prerequisite: BIOL 122 with a grade of C or higher.*

CVT 219 - Introduction to Ultrasound Imaging Systems **1:0:3**

Introduces the Cardiac Sonography student to a variety of ultrasound imaging systems. This course emphasizes image optimization, storage and manipulation of data, programmatic reporting, and proper body mechanics of imaging. The imaging parameters covered include ultrasound principles of frequency, harmonics, dynamic range/compression, frame rate, focal zone, overall gain and time gain compensation (TGC). The importance of storing and manipulating data and programmatic reporting is addressed as students acquire diagnostic cardiac images – stored on the ultrasound system – for interpretation. Students then create a programmatic report of each study to demonstrate their interpretative skills of the image findings. The use of proper body mechanics to prevent musculoskeletal strain injury (MSI) is also covered. The student is expected to create quality diagnostic images in accordance with the standards established by the American Society of Echocardiography. A course fee is required. *Enrollment is restricted to students in the Cardiovascular Sonography AS program. Prerequisite: CVT 221 and 222 with grades of C or higher. Co-requisite: CVT 220 and 223.*

CVT 220 - Introduction to Cardiac Sonography **3:2:3**

Provides students with a thorough introduction to cardiac anatomy and function of the adult heart. This course gives the student an overview of echocardiographic scanning equipment including transducers, image display, and storage. Concepts of cardiac ultrasound diagnostic, qualitative, and quantitative techniques including 2D, M-Mode, Color Doppler and Doppler Echocardiography are thoroughly covered. In addition, instrument controls including power, gain, compression, and focal zone are covered, as well as the presentation of normal and abnormal cardiac pathologies. The laboratory component provides an introduction to echocardiography examinations including proper techniques, image acquisition, and probe manipulation. Students manipulate equipment controls to optimize image quality and acquire diagnostic images. They also utilize digital technology while performing standard 2D and M-Mode examinations. Students must perform a complete 2D and M-Mode echocardiogram with limited Doppler according to established lab standards. Finally, ethics, professionalism, current job descriptions for the cardiac sonographer, and the code of ethics are presented. A course fee is required. *Enrollment is restricted to students in the Cardiovascular*

Sonography AS program. Prerequisite: CVT 221 and 222 with grades of C or higher. Co-requisite: CVT 219 and 223.

CVT 221 - Cardiac Pathophysiology and Echocardiography Concepts I **4:4:0**

Introduces students to the cardiovascular system and provides them with an overview of various cardiac diseases. This course enables students to understand the field of cardiology by covering basic pathophysiologic concepts that include patient signs and symptoms, physical examination results, and related diagnostic tests. In addition, this course presents a correlation between cardiac diseases and other general patient illnesses; diagnostic procedures to assess the status of cardiac disease that focus on signs, symptoms, disease processes; and diagnostic and therapeutic treatment options. Students are prepared to communicate effectively with members of the health care team utilizing appropriate medical terminology and cardiology medical terminology. In addition, students develop the knowledge to evaluate each pathology comprehensively, that is aided by current recommendations regarding appropriate assessment of each pathology in accordance with the standards established by the American Society of Echocardiography (ASE). *Enrollment is restricted to students in the Cardiovascular Sonography AS program. Prerequisite: BIOL 122, CVT 101, 102 and 103 with grades of C or higher. Co-requisite: CVT 222.*

CVT 222 - Cardiac Sonography Physics and Instrumentation **3:2:3**

Introduces students to the basic principles of Doppler physics including the Doppler Effect, Doppler equations, and related diagnostic tests. This course provides an overview of continuous and pulsed wave Doppler including aliasing, Nyquist limit, velocity calculations, and angle correction techniques. Color flow Doppler and tissue imaging, and Power Doppler concepts are also covered. In addition, Cardiac Hemodynamics is presented including the relationship to cardiac anatomy, physiology, and cardiovascular function parameters, as well as quantitative evaluation methods used to evaluate cardiac pathologies. The lab component emphasizes following the steps of the basic scanning protocols. Basic two-dimensional and M-Mode measurement techniques are also discussed and demonstrated. Students are evaluated by competency testing throughout the semester. *Enrollment is restricted to students in the Cardiovascular Sonography AS program. Prerequisite: MATH 111 with a grade of C or higher. Co-requisite: CVT 221.*

CVT 223 - Cardiac Pathophysiology and Echocardiography Concepts II **4:4:0**

Continues the topics covered in CVT 221 as it provides the student with a thorough discussion of cardiac pathophysiologic concepts and cardiac pathologies commonly encountered in the cardiovascular patient. This course emphasizes the student's comprehension of the underlying cardiovascular disease process and then applies that knowledge to the practice of cardiac sonography. The student develops the knowledge to evaluate each pathology comprehensively that is aided by current recommendations regarding appropriate assessment of each pathology in accordance with the standards established by the American Society of Echocardiography (ASE). *Enrollment is restricted to students in the Cardiovascular Technology - Sonography AS Program. Prerequisite: CVT 221 with a grade of C or higher. Co-requisite: CVT 219 and 220.*

CVT 224 - Cardiac Sonography Clinical I **4:0:24**

Introduces students to the cardiac sonography laboratory and the health care environment. This course is the first clinical rotation of the program and requires students to complete a total of 340 hours, or three eight-hour days per week during a semester at an approved clinical site that is assigned by the director of clinical education. Students are expected to integrate all the information learned in classroom and laboratory experiences obtained during the previous semester into clinical practice. Students are expected to perform the following clinical skills: prepare patients for the cardiac ultrasound examination; enter patient data and perform normal and abnormal studies under the direct supervision of the clinical instructor; perform echocardiographic measurements (2D,

M-Mode and Doppler), as well as to calculate all related hemodynamic data; compose technical impressions on all studies performed utilizing the appropriate programmatic reporting system and software; and independently perform studies with limited supervision, once the clinical instructor and director of clinical education has agreed that the student is competent to handle this level of responsibility. Throughout the clinical rotation, emphasis is placed on developing the student's interpersonal skills with patients and staff. Finally, students are expected to submit daily journals and case study journals that log all the appropriate clinical data and documentation of studies performed. A course fee is required. *Enrollment is restricted to students in the Cardiovascular Sonography AS program. Prerequisite: CVT 219, 220, 222 and 223 with grades of C or higher. Co-requisite: CVT 226.*

CVT 226 - Cardiac Hemodynamics **1:0:3**

Presents extensive cardiac hemodynamics for all valvular disease states including the relationship to cardiac anatomy, physiology, and cardiovascular function parameters. Quantitative evaluation methods utilized in the adult cardiac sonography laboratory in order to evaluate all cardiac pathologies are first presented and then performed by the student. The laboratory component is designed to teach scanning techniques necessary to quantitate cardiac hemodynamic abnormalities in the clinical setting. Emphasis is placed on master performance of basic and advanced Doppler techniques and valvular pathologies. The student is expected to perform each measurement during weekly laboratory assignments throughout the semester. A course fee is required. *Enrollment is restricted to students in the Cardiovascular Sonography AS program. Prerequisite: CVT 219, 220 and 223 with grades of C or higher. Co-requisite: CVT 224.*

CVT 228 - Cardiac Sonography Clinical II **5:0:32**

Continues the skills covered in CVT 224 to ensure that the student has gained a high level of competency with both normal and abnormal cardiovascular echocardiographic findings. This course is the final clinical rotation of the program and requires students to complete a total of 500 hours, or four to five eight-hour days, per week during a semester at an approved clinical site that is assigned by the director of clinical education. The student is expected to independently complete normal and abnormal echocardiograms utilizing the technical expertise gained during CVT 224. In addition, the student is expected to perform the following: echocardiographic measurements (2D, M-Mode and Doppler); calculate all related hemodynamic data; and compose technical impressions on all studies performed utilizing programmatic reporting system and software. Finally, the student presents echocardiographic images to the clinical instructor and supervising physician for critique and interpretation. Students are to submit daily journals and case study journals that log all the appropriate clinical data and documentation of studies performed. A course fee is required. *Enrollment is restricted to students in the Cardiovascular Sonography AS program. Prerequisite: CVT 224 and 226 with grades of C or higher. Co-requisite: CVT 230.*

CVT 230 - Intro to Pediatric Echo **2:2:0**

Provides an overview of the normal anatomy and physiology of the fetal and pediatric heart, including functional assessment. Embryology, including a comparison between fetal and postnatal circulation, is presented. Congenital conditions, including outflow and inflow obstruction, as well as volume overload, are discussed. Acquired pathological conditions are also presented. Material is correlated with sonographic images and differential diagnoses discussed based upon the segmental and sequential approach to the evaluation of congenital heart defects in the pediatric cardiology population. *Enrollment is restricted to students in the Cardiovascular Sonography AS program. Prerequisite: CVT 224 and 226 with grades of C or higher. Co-requisite: CVT 228.*

CVT 231 - Concepts in Adult Congenital Heart Disease **4:4:0**

Provides the student with a thorough discussion of adult congenital heart defects and cardiac pathologies commonly encountered in the cardiovascular patient with known congenital heart disease. The course emphasizes the student's comprehension of adult congenital defects and then allows them to apply their knowledge in evaluating each pathology comprehensively during an echocardiographic examination. Each examination is reviewed by a cardiologist to ensure that the appropriate assessment of each pathology is in accordance with the standards established by the American Society of Echocardiography (ASE). *Prerequisite: CVT 228 and 230 with grades of C or higher. Signature of the Cardiovascular Technology Program Director is required.*

CVT 232 - Congenital Heart Disease: Clinical Experience **4:0:24**

Continues the skills covered in CVT 228 to ensure the student has gained a high level of competency with both normal and abnormal cardiovascular echocardiographic findings. This course is an additional clinical rotation of the adult cardiac sonography program, which enables the student to complete 360 hours in an adult congenital or pediatric echocardiographic laboratory. The student is expected to independently complete echocardiograms under the direct supervision of the clinical instructor in patients with congenital heart defects. *Prerequisite: CVT 228 and 230 with grades of C or higher. Signature of the Cardiovascular Technology Program Director is required. Co-requisite: CVT 231.*

CVT 233 - Pediatric Hemodynamic Assessment **4:3:1**

Provides the student with an in-depth review of congenital abnormalities encountered in the pediatric patient. The course covers normal and abnormal physiology of the fetal and pediatric heart, cardiac embryology and development, congenital pathologies, and acquired pathologies, as well as cardiac hemodynamics and calculations encountered in the evaluation of pediatric congenital heart defects. *Prerequisite: Signature of the Cardiovascular Technology Program Director is required.*

CVT 234 - Pediatric Surgical and Specialty Procedures **2:2:0**

Provides an introduction to pediatric surgery, palliative surgical procedures, and corrective surgical procedures commonly encountered in the pediatric patient. The course also covers common specialty procedures performed on the pediatric patient including Pericardiocentesis, cardiac catheterization, device occlusion procedures, transesophageal echocardiography, balloon atrial septostomy, saline contrast, exercise and pharmacologic stress testing, and special considerations for the sedated pediatric patient. *Prerequisite: Signature of the Cardiovascular Technology Program Director is required. Co-requisite: CVT 233.*

Civil Technology

CVTE 103 - Surveying I **3:1.5:4**

Introduces students to land surveying methods and field procedures. This course focuses on the operation and care of surveying instruments, the collection of field data, and the preparation of base plans. Surveying types studied include topographic, construction, boundary surveys, control traverses and benchmark level loops. A course fee is required.

CVTE 107 - Civil Plan Reading **3:3:1**

Introduces students to the fundamentals of civil engineering print reading. The course focuses on reading basic civil engineering drawings and specifications, as well as recognizing and interpreting E&S, bridge, roadway, right of way, utility, and lighting plans. A course fee is required. *Enrollment is restricted to students in the Civil Technology AAS and Certificate programs.*

CVTE 110 - Civil Engineering Graphics **2:1:4**

An integration of hand and computer drafting. Students study the basics of civil engineering drafting on the board, followed by the AutoCAD application. The topics covered include civil engineering scale, basic geometric shapes, measuring angles, definition of slope, introduction of a plan view and cross section. The AutoCAD part of the class focuses on basic commands, scales, line types, colors, layers, dimensioning, placing text, and the file management. A course fee is required.

CVTE 207 - Drainage **3:2:3.5**

Emphasizes hydraulics and hydrology as applied to storm sewer design. This course covers design storm determination and drainage area delineation, Rational Formula and Manning's Formula, pipe design and pipe alternates, computation of actual depths and velocities in pipes, setting inverts for sewer main line and laterals, inlets, capacities, bypasses, and outfall protection. The student is introduced to the PennDOT Design Manual 2, Chapter 10 Drainage, the Department of Environmental Protection (DEP) Agency Manual, PennDOT Roadway Construction (RC) Standards, and the PennDOT Publication 408 section that relates to roadway/highway drainage design. A course fee is required. *Prerequisite: CVTE 103, 212 and ARCH 214 with grades of C or higher.*

CVTE 208 - Strength of Materials **3:3:0**

Emphasis is on axial stress and strain, shear, riveted and welded connections, torsion, beam stresses and deflections, columns, resilience and toughness of materials, yield, combined stress, shear and moment diagrams. The computer is used in solving problems. *Prerequisite: GTEC 201 with a grade of C or higher.*

CVTE 212 - Introduction to Transportation and Environmental Engineering **3:3:0**

Introduces students to environmental laws and safety practices related to civil engineering. This course discusses historical, cultural, existing structural, archeology, National Environmental Policy Act (NEPA), and hazardous waste environmental laws. General structural, environmental, and civil terminology and definitions are covered, as well as professional certifications and organizations within the industry. *Prerequisite: CVTE 107 with a grade of C or higher.*

CVTE 213 - Capstone Project **3:2:3.5**

Provides students with the opportunity to work on an assigned civil engineering or environmental project. This project encompasses the preparation of the plan view, profile, typical section, cross slopes, longitudinal slopes, details, actual cross section, storm sewer design, grading, and erosion and sediment control design, or any other supporting plan documentation. The complete set of plans must also adhere to the requirements established by the various regulatory agencies and the client. Students are required to prepare a complete package for presentation at the college's annual Student Symposium. This presentation is to include complete documentation of the project development, such as computations, graphs, charts, reference books, and narratives. Students have the freedom to construct a physical model to scale of their projects for public viewing. A course fee is required. *Prerequisite: CVTE 212 with a grade of C or higher. Co-requisite: CVTE 207.*

Dental Assisting

DA 170 - Dental Assisting Pre-clinic **4:3:4**

Introduces the duties of a chairside assistant through lecture and pre-clinical instruction. The pre-clinical component introduces students to basic dental assisting responsibilities, such as seating the patient; performing vital signs; reviewing medical history; applying principles and performing four-handed dentistry; identifying procedural set-ups; performing oral evacuation; and properly using and caring for equipment and instruments. Emphasis is placed on proper infection control practices throughout all duties and functions. Students complete rotations in the Dental Hygiene Clinic to assist the Dental Hygiene students with dental and periodontal charting, fluoride application, and

oral evacuation procedures. *Enrollment is restricted to students in the Dental Assisting Certificate. Prerequisite: BIOL 111 or 121 with a grade of C or higher. Non-majors need permission of the Program Director.*

DA 171 - Dental Assisting I **4:3:2**

Orients students to the role of the dental assistant as an integral member of the dental health team. This course is designed to introduce the student to basic dental assisting responsibilities such as proper infection control practices and the manipulation of various dental materials. This course also covers professional ethics, Pennsylvania dental law, and the members of the dental health team. Students develop clinical skills through the laboratory component. A course fee is required. *Enrollment is restricted to students in the Dental Assisting Certificate program. Prerequisite: BIOL 111 or 121 with a grade of C or higher. Non-majors need permission of the Program Director.*

DA 172 - Dental Materials **4:3:2**

Familiarizes the Dental Assisting certificate student to the materials used in dental practice. This course emphasizes infection control and safety precautions, physical and biological properties, and the manipulation and clinical application of these materials. Students are able to develop and demonstrate proficient clinical skills while manipulating dental materials relevant to theory and practice during the laboratory component. A course fee is required. *Enrollment is restricted to students in the Dental Assisting Certificate*. *Prerequisite: DA 170, 171, 173 and 175 with grades of C or higher. Non-majors need permission of the Program Director.*

DA 173 - Dental Radiology I **4:3:3**

Introduces students to the concepts of ionizing radiation and the production, properties, dosages, hazards, and protective devices related to the dental x-ray. The primary focus of the course includes theory for exposing, processing, mounting, and interpreting dental radiographs as well as quality assurance in the practice setting and alternate imaging modalities. The laboratory portion of the course focuses on the application of dental radiology theory in a clinical setting. Emphasis is placed on the practice of exposing, processing, and mounting intra-oral radiographs with appropriate radiation hygiene and infection control protocol. A course fee is required. *Enrollment is restricted to students in the Dental Assisting Certificate. Prerequisite: BIOL 111 or 121 with a grade of C or higher. Non-majors need permission of the Program Director.*

DA 175 - Oral Anatomy **3:3:0**

Introduces the student to the hard and soft tissues of the oral cavity and of the head and neck. This course provides the necessary background to recognize normal structures and also includes basic dental histology and embryology, dental morphology, the blood and nerve supply of the head and neck regions, and the bone and muscular structures. *Enrollment is restricted to students in the Dental Assisting Certificate program. Prerequisite: BIOL 111 or 121 with a grade of C or higher. Non-majors need permission of the Program Director.*

DA 177 - Dental Sciences **3:3:0**

Introduces students to recognized dental specialties. This course covers dental procedures and the role of the dental assistant within the following areas: dental public health, endodontics, oral and maxillofacial surgery, oral pathology, orthodontics, pediatric dentistry, periodontics, prosthodontics and pharmacology. *Enrollment is restricted to students in the Dental Assisting Certificate. Prerequisite: DA 170, 171, 173 and 175 with grades of C or higher. Non-majors need permission of the Program Director.*

DA 178 - Dental Clinical Experience **4:0:16**

Focuses on clinical practice. This clinical experience provides students an opportunity to apply the knowledge and skills acquired in the classroom and in laboratory sessions in a dental office environment. Students are assigned to work in area dental offices two days per week for a total of 224-hours. Students are able to gain additional experience in chairside techniques, dental material manipulation, and patient management at both general and specialty practices. In addition, periodic seminars are provided on campus for students to share experiences and to discuss situations and/or problems encountered in the dental office setting. A course fee is required. *Enrollment is restricted to students in the Dental Assisting Certificate program. Prerequisite: DA 170, 171, 173 and 175 with grades of C or higher. Non-majors need permission of the Program Director.*

DA 179 - Clinical Dental Assisting **2:1:32**

Provides students with an intersession clinical experience that allows them to spend a total of 96-hours working in an approved dental office environment in order to gain exposure to all aspects of its operation. This clinical experience is supplemented through in-class lectures that review and discuss student progress at clinical sites. Observation and evaluation reports generated by clinical staff and instructors are periodically reviewed with the student. A course fee is required. *Enrollment is restricted to students in the Dental Assisting Certificate. Prerequisite: DA 170, 171, 173 and 175 with grades of C or higher. Non-majors need permission of the Program Director.*

DA 180 - Dental Office Practice **3:3:0**

Prepares the student for the various business-office aspects of a dental practice. This course covers patient psychology, communication skills such as telephone technique and correspondence, maintenance of patient records, appointment control, recall systems, bookkeeping, filing, preparation of insurance forms, and maintaining supply inventories. *Enrollment is restricted to students in the Dental Assisting Certificate. Prerequisite: DA 170, 171, 173 and 175 with grades of C or higher. Non-majors need permission of the Program Director.*

DA 181 - Preventive Dentistry **2:2:0**

Provides an in-depth knowledge of the concepts and methods used in the practice of preventive dentistry. This course emphasizes the necessity for the dental assistant to both recognize certain oral hygiene needs of each patient and communicate those needs to the patient. In addition, this course covers current techniques used in caries prevention, such as coronal polishing, oral hygiene instruction, nutritional counseling; and the application of sealants. This course also includes a community service project. *Enrollment is restricted to students in the Dental Assisting Certificate. Prerequisite: DA 170, 171, 173 and 175 with grades of C or higher. Non-majors need permission of the Program Director.*

DA 252 - Expanded Functions I **4:3:3**

Expands the student's skillset in the area of restorative dentistry. The first of a two-part, post-graduate, course sequence for certified dental assistants and licensed hygienists, this course covers the placement of temporary and permanent restorations using a variety of dental materials; finishing techniques; the construction of bleaching and fluoride trays; and Mouthguards. Students also prepare for the expanded function dental assistants' state certification examination. A course fee is required. Graduate from an accredited Dental Assisting Program with faculty recommendation, Certification as a dental assistant, Licensure as a Dental Hygienist, or two years of clinical experience within a general dental practice.

DA 253 - Expanded Functions II **2:0:6**

Focuses on clinical practice. This clinical experience provides students with an opportunity to apply the knowledge and skills acquired in the classroom and in laboratory sessions in a dental office

environment. Students are assigned to work in area dental offices two days per week for a total of 224-hours. Students are able to gain additional experience in chairside techniques, dental material manipulation, and patient management at both general and specialty practices. In addition, periodic seminars are provided on campus for students to share experiences and to discuss situations and/or problems encountered in the dental office setting. A course fee is required. *Enrollment is restricted to students in the Dental Assisting Certificate. Prerequisite: DA 252 with a grade of C or higher; Certification as a Dental Assistant or Licensure as a Dental Hygienist.*

Dental Hygiene

DH 100 - Introduction to Dentistry **1:1:0**

Basic information about the practice of dentistry and dental hygiene for students with no prior experience in a dental office. Basic terminology, procedures and principles related to dental practice are presented for students who are interested in pursuing a career in dental hygiene. This introductory course provides a foundation for future courses within the dental hygiene curriculum.

DH 101 - Dental Hygiene Theory and Clinical Experience I **6:3:9**

Introduces disease and preventive oral health services. This course studies the intraoral structures to provide students with a basis for understanding abnormal and disease states. Emphasis is placed on assessment techniques, instrumentation skills, ergonomic considerations to prevent occupational injury, infection control procedures that protect both the client and the hygienist, and basic home care instructions for the client. A course fee is required. *Enrollment is restricted to student in the Dental Hygiene AS program. Prerequisite: BIOL 221 with a grade of C or higher. Co-requisite: DH 110 and 120.* (FYS)

DH 110 - Dental Radiology I **3:2:3**

Covers the physics of radiation, the principles of proper exposure techniques, and the processing of radiographs including infection control and radiation safety. A course fee is required. *Enrollment is restricted to students in the Dental Hygiene AS program. Prerequisite: BIOL 121 with a grade of C or higher. Co-requisite: DH 120 and 180.*

DH 111 - Dental Radiology II **1:1:0**

Interpretation of intraoral radiographs and introduction to extraoral radiography. Emphasis on accurate exposure as well as the dental hygienist's role in supervising maintenance of equipment, collaborating on exposure policies, and keeping records. *Prerequisite: DH 110 with a grade of C or higher.*

DH 113 - Clinical Experience II **2:0:16**

Provides basic information on preventive oral care services for clients of all ages. This course focuses on the development of clinical skills and the application of the dental hygiene process of care. A course fee is required. *Enrollment is restricted to students in the Dental Hygiene AS program. Prerequisite: DH 101, 110 and 120 with grades of C or higher. Co-requisite: DH 116.*

DH 116 - Medical/Dental Emergencies and Intermediate Dental Hygiene Theory **3:2:3**

Provides basic information on preventive oral-care services and medical history conditions for clients of all ages. Students are introduced to dental hygiene treatment planning, client motivation, learning styles, and medical/dental emergencies. A course fee is required. *Enrollment is restricted to students in the Dental Hygiene AS program. Prerequisite: DH 101, 110 and 120 with grades of C or higher. Co-requisite: DH 113.*

DH 120 - Dental Anatomy **2:2:0**

Covers the form, function, occlusion, and eruption of primary and permanent teeth. This course studies endodontic and coronal morphological considerations and periodontal health. *Enrollment is restricted to students in the Dental Hygiene AS program. Prerequisite: BIOL 121 with a grade of C or higher. Co-requisite: DH 110 and 180.*

DH 150 - Dental Materials **3:2:3**

Studies the characteristics and use of dental materials. The course is designed to familiarize the dental hygiene student with materials utilized by the dental profession. Presented as an overview of materials, this course emphasizes the following areas: esthetic maintenance of restorations, sealants, margination, construction of sports guards/fluoride trays/bleaching trays, alginate impressions and the construction of study models from those impressions, periodontal dressings, use of the pulp vitality tester, and the placement/ removal of rubber dam and temporary restorations. Opportunities are provided for students to manipulate common restorative materials. A course fee is required. *Enrollment is restricted to students in the Dental Hygiene AS program. Prerequisite: CHEM 100 or high school equivalent with a grade of C or higher. Co-requisite: DH 113.*

DH 160 - Extended Clinical Techniques and Remediation **2:0:16**

Provides additional instruction to students needing further training in the clinical skills area. Infection control practices and instrumentation, assessment, treatment planning, and evaluation of treatment are reinforced. A course fee is required. *Enrollment is restricted to students in the Dental Hygiene AS program. Prerequisite: BIOL 121, 245 and DH 101 with grades of C or higher.*

DH 161 - Clinical Techniques and Remediation **1:0:8**

Provides additional instruction to students needing further training in the clinical skills area. Infection control practices and instrumentation, assessment, treatment planning, and evaluation of treatment are reinforced. A course fee is required. *Enrollment is restricted to students in the Dental Hygiene AS program. Prerequisite: BIOL 121, 245 and DH 101 with grades of C or higher.*

DH 170 - Techniques in Pain Control **2:1:3**

Covers the theory and clinical knowledge for safe and effective administration of various anesthetic agents utilized in dentistry for pain control. This course emphasizes injectable local anesthetics. A course fee is required. *Enrollment is restricted to students in the Dental Hygiene AS program. Prerequisite: DH 180, 113 and 116 with grades of C or higher. Co-requisite: DH 240.*

DH 180 - Head and Neck Anatomy and Histology **3:3:0**

Encompasses a detailed study of gross anatomical structures and relationships of the head and neck. This course includes histological and physiological fundamentals of odontology with a detailed look at integumentary, skeletal and muscular systems. *Prerequisite: BIOL 121 with a grade of C or higher.*

DH 190 - Periodontics **3:3:0**

Studies the clinical presentation of periodontal structures including the histology and immunology in health and disease, disease etiology, epidemiology, and diagnosis. This course also discusses evaluation, treatment planning, and therapeutic treatment modalities for clients with periodontal disease. *Enrollment is restricted to students in the Dental Hygiene AS program. Prerequisite: DH 101, 120, and 180 with grades of C or higher.*

DH 211 - Dental Hygiene Theory III **3:3:0**

Discusses dental specialties, as well as treatment of clients with specific conditions and special needs. *Enrollment is restricted to students in the Dental Hygiene AS program. Prerequisite: DH 113, 150 and 190 with grades of C or higher. Co-requisite: DH 212.*

DH 212 - Clinical Experience III **2:0:16**

Continues the refinement of clinical techniques including the use of advanced instrumentation techniques and diagnostic and preventive aids such as study models, pit and fissure sealants, and nutritional counseling. A course fee is required. *Enrollment is restricted to students in the Dental Hygiene AS program. Prerequisite: DH 101, 113, 180 and 150 with grades of C or higher. Co-requisite: DH 211.*

DH 223 - Dental Hygiene Theory IV **2:2:0**

Emphasizes the dental hygienist as a professional member of a dental team. This course discusses professional ethics, office practices, resume writing, and conduct during an employment interview. *Enrollment is restricted to students in the Dental Hygiene AS program. Prerequisite: DH 211 with a grade of C or higher. Co-requisite: DH 224.*

DH 224 - Clinical Experience IV **2:0:16**

Continues the refinement of clinical techniques. A course fee is required. *Enrollment is restricted to students in the Dental Hygiene AS program. Prerequisite: DH 190, 211 and 212 with grades of C or higher. Co-requisite: DH 223.*

DH 230 - Oral Pathology **2:2:0**

Covers the characteristics of the head and neck region so that students recognize the difference between normal and abnormal conditions. *Enrollment is restricted to students in the Dental Hygiene AS program. Prerequisite: DH 111 and 116 with grades of C or higher.*

DH 235 - Community Dental Health Education **2:2:0**

Studies the role that the dental hygienist plays as an educator, planner, and evaluator for community dental health programs. This course explores global perspectives in oral health needs, demand and utilization, cultural competence, biostatistics, oral epidemiology, and the evaluation of evidence-based research in dentistry. *Enrollment is restricted to students in the Dental Hygiene AS program. Prerequisite: DH 116 with a grade of C or higher. Co-requisite: DH 224.*

DH 240 - Pharmacology **2:2:0**

Provides the dental hygiene student with an overview of the primary categories of medications prescribed by health care practitioners. This course emphasizes those medications that have dental implications, as well as those used to control pain. *Enrollment is restricted to students in the Dental Hygiene AA program. Prerequisite: DH 116, 180 and NUTR 104 with grades of C or higher. Co-requisite: DH 170.*

Diagnostic Medical Sonography

DMS 105 - Introduction to Health Care **4:3:3**

Provides students with an introduction to the fundamental skills common to healthcare professions. This course presents concepts that include: ergonomics, infection control, patient care, effective communication, medical ethics and law, medical and sonographic terminology, maintaining clinical records, trends in healthcare, and professionalism. In addition, related patient care skills are practiced in the DMS lab. A course fee is required. *Enrollment is restricted to students in the*

Diagnostic Medical Sonography AAS program. Prerequisite: BIOL 111, ENGL 101 and MATH 103 with grades of C or higher. Co-requisite: DMS 110 with a grade of C or higher.

DMS 110 - Introduction to Diagnostic Medical Sonography **4:3:3**

Presents basic sonographic image production and optimization and Doppler patterns. Sonographic terminology and details of the clinical process are covered related to the ultrasound department of an imaging facility. This course also describes ergonomics, sectional and relational anatomy in correlation with scanning techniques and protocols. Details of physiology, pathophysiology, and sonographic appearances are included. Students engage in an observational clinical rotation. A course fee is required. *Enrollment is restricted to students in the Diagnostic Medical Sonography AAS program. Prerequisite: BIOL 111, ENGL 101 and MATH 103 with grades of C or higher. Co-requisite: DMS 105 with a grade of C or higher.*

DMS 115 - Clinical Experience I **2:0:16**

Allows students to gain skills and achieve clinical competency at approved clinical affiliates. This course is the first clinical component of the diagnostic medical sonography program and consists of two, eight-hour days per week. A course fee is required. *Enrollment is restricted to students in the Diagnostic Medical Sonography AAS program. Prerequisite: DMS 105 and 110 with grades of C or higher.*

DMS 120 - Diagnostic Medical Sonography Lab I **1:0:3**

Covers ultrasound-scanning techniques that utilize ultrasound systems in a laboratory setting. This course focuses on sonographic imaging techniques related to the abdomen and pelvic structures including Doppler application. A course fee is required. *Enrollment is restricted to students in the Diagnostic Medical Sonography AAS program. Prerequisite: DMS 105 and 110 with grades of C or higher.*

DMS 125 - Clinical Experience II **3:0:19**

Continues teaching the skills needed to achieve clinical competency at approved imaging sites. This is the second clinical component of the diagnostic medical sonography program that consists of three, eight-hour days per week at clinical sites. A course fee is required. *Enrollment is restricted to students in the Diagnostic Medical Sonography AAS program. Prerequisite: DMS 115, 120, 130, 150 and 170 with grades of C or higher.*

DMS 130 - Abdominal Sonography **4:4:0**

Details the anatomy, physiology, pathophysiology, sonographic appearances and Doppler patterns of the abdomen, male pelvis, and lung/pleura. The course explains sonographic techniques and measurements of both normal and abnormal structures. *Enrollment is restricted to students in the Diagnostic Medical Sonography AAS program. Prerequisite: DMS 105 and 110 with grades of C or higher.*

DMS 140 - Diagnostic Medical Sonography Lab II **1:0:3**

Covers ultrasound-scanning techniques that utilize ultrasound systems in a laboratory setting. This course focuses on sonographic imaging techniques related to the abdomen, pelvic, and vascular structures including Doppler application. A course fee is required. *Enrollment is restricted to students in the Diagnostic Medical Sonography AAS program. Prerequisite: DMS 115, 120, 130, 150 and 170 with grades of C or higher.*

DMS 150 - OB/GYN Sonography I **3:3:0**

Details the anatomy, anatomic variants and sonographic appearances of structures of the female pelvis. Details related to the gynecologic pathology, physiology, and pathophysiology, including Doppler patterns, are included. Sonographic appearance of normal fetal development through term is covered. *Enrollment is restricted to students in the Diagnostic Medical Sonography AAS program. Prerequisite: DMS 105 and 110 with grades of C or higher.*

DMS 170 - Acoustical Principles I **4:4:0**

Studies acoustical physical principles, image production and optimization and the physics of Doppler. This course also covers application and uses in the field of diagnostic medical sonography. *Enrollment is restricted to students in the Diagnostic Medical Sonography AAS program. Prerequisite: DMS 105 and 110 with grades of C or higher.*

DMS 180 - High Resolution Sonography **1:1:0**

Details the anatomy, physiology, pathophysiology, sonographic appearances and Doppler patterns of superficial structures. The course explains the sonographic techniques and measurements of both normal and abnormal structures. *Enrollment is restricted to students in the Diagnostic Medical Sonography AAS program. Prerequisite: DMS 115, 120 and 170 with grades of C or higher.*

DMS 210 - Vascular Sonography **1:1:0**

Introduces the fundamentals of vascular sonography. This course covers the details of anatomy, physiology, pathophysiology, sonographic appearances and Doppler flow of the cardiovascular system. Sonographic techniques and measurements of both normal and abnormal vascular structures are explained. *Enrollment is restricted to students in the Diagnostic Medical Sonography AAS program. Prerequisite: DMS 115, 120, 130 and 170 with grades of C or higher.*

DMS 215 - Clinical Experience III **4:0:32**

Continues teaching the skills needed to achieve clinical competency at approved imaging sites. This is the third clinical component of the diagnostic medical sonography program that consists of four, eight-hour days per week at clinical sites. A course fee is required. *Enrollment is restricted to students in the Diagnostic Medical Sonography AAS program. Prerequisite: DMS 125, 140, 180 and 210 with grades of C or higher.*

DMS 220 - Diagnostic Medical Sonography Lab III **1:0:3**

Covers ultrasound-scanning techniques that utilize ultrasound systems in a laboratory setting. This course focuses on the sonographic imaging techniques related to the abdomen and vascular structures with emphasis on Doppler application. A course fee is required. *Enrollment is restricted to students in the Diagnostic Medical Sonography AAS program. Prerequisite: DMS 125, 140, 180 and 210 with grades of C or higher.*

DMS 225 - Clinical Experience IV **4:0:32**

Continues teaching the skills needed to achieve clinical competency at approved imaging sites. This is the fourth clinical component of the diagnostic medical sonography program that consists of four, eight-hour days per week at clinical sites. A course fee is required. *Enrollment is restricted to students in the Diagnostics Medical Sonography AAS program. Prerequisite: DMS 215, 220, 250 and 270 with grades of C or higher.*

DMS 240 - Diagnostic Medical Sonography Lab IV **1:0:3**

Covers ultrasound-scanning techniques that utilize ultrasound systems in a laboratory setting. This course focuses on the sonographic imaging techniques related to the abdominal vascular and

peripheral vascular structures including Doppler application. A course fee is required. *Enrollment is restricted to students in the Diagnostic Medical Sonography AAS program. Prerequisite: DMS 215, 220 and 270 with grades of C or higher.*

DMS 250 - OB/GYN Sonography II **3:3:0**

Explains the sonographic appearance of the second and third trimesters of pregnancy. This course addresses pathology, physiology, pathophysiology, sonographic technique, measurements and Doppler patterns in obstetric abnormalities. *Enrollment is restricted to students in the Diagnostic Medical Sonography AAS program. Prerequisite: DMS 125 and 140 with grades of C or higher.*

DMS 270 - Acoustical Principles II **2:2:0**

Continues the topics covered in DMS 170. This course addresses advanced principles of image production and optimization. Biological effects are also explained. Students are required to attempt the American Registry for Diagnostic Medical Sonography (ARDMS) Sonographic Principles and Instrumentation (SPI) national credentialing exam, as scheduled by the program director, to complete this course. *Enrollment is restricted to students in the Diagnostic Medical Sonography AAS program. Prerequisite: DMS 125, 140 and 210 with grades of C or higher.*

DMS 274 - Diagnostic Medical Sonography Topics **3:3:0**

Covers the sonographic review of anatomy, physiology, pathophysiology, sonographic appearances and Doppler patterns and integration and documentation of relevant data. Students are required to attempt the American Registry for Diagnostic Medical Sonography (ARDMS) ABD and OB/GYN national credentialing exams, as scheduled by the program director, to complete this course. *Enrollment is restricted to students in the Diagnostic Medical Sonography AAS program. Prerequisite: DMS 215, 220, 250 and 270 with a grade of C or higher.*

Economics

ECON 201 - Principles of Economics I: Macro **3:3:0**

Structure, operation, and performance of the American economy. The course includes the market system, national income, employment, inflation, economic growth, business cycles, fiscal policy, money, monetary policy, and international economics. (S&BS)

ECON 202 - Principles of Economics II: Micro **3:3:0**

Analysis of demand, supply, production costs, market structures, and resource allocation. Current economic policies and problems and other special topics such as government regulation, income distribution, and labor economics. *Prerequisite: ECON 201 or permission of the Instructor.* (S&BS)

Education

EDUC 110 - Foundations of PK-4 Education **4:4:0**

Introduces students to the professional knowledge, skills, and dispositions required and defined by the National Association for the Education of Young Children (NAEYC) and the PA Department of Education Pre-K to 4th grade guidelines for teachers serving children ages three through nine years. This course covers the purposes, structure, impact of schools, teaching methodology, curriculum, and the teaching profession as they relate to students, families, and society. Students observe and reflect upon professional dispositions and behaviors in diverse settings during ten hours of field experience. *Enrollment is restricted to students in the Early Childhood-Elementary Education AA and the Early Childhood Care and Education Certificate programs. Prerequisite: Completion of all developmental reading and writing courses required as a result of the College Testing and Placement Program.* (FYS)

EDUC 111 - Fundamentals of Early Care **4:4:0**

Introduces students to the professional knowledge, skills and dispositions, required and defined by the National Association for the Education of Young Children (NAEYC), for teachers serving children ages 0 – 8 years. Students reflect upon both the teaching applications and the learning theories implemented in diverse early care and educational settings. Examination of current transition practices into public schools is also covered. *Ten (10) hours of observation is required. Prerequisite: Eligibility for enrollment into ENGL 101.* (FYS)

EDUC 113 - Infant and Toddler Development and Behavior **3:3:0**

Presents the theories, principles, processes, milestones, and exceptions related to infant/toddler development and learning. This course emphasizes the interaction between children's development and their early environment, particularly the critical role of warm, responsive, nurturing relationships in healthy development. Students examine factors that influence the trajectory of children's development, particularly those that pose a risk to long-term well-being and those that serve a protective role for children at risk. Students explore legal and ethical responsibilities of early childhood professionals in response to children with special needs and children experiencing maltreatment. The appropriate uses of observation and assessment in infant/toddler settings are also discussed. *Enrollment is restricted to students in the Early Care and Education AAS and certificate programs.*

EDUC 117 - Building Family and Community Partnerships to Support Infants and Toddlers **3:3:0**

Emphasizes the importance and benefits of positive, collaborative, and supportive relationships with families as an essential responsibility of the infant/toddler educator. This course examines effective strategies for building those relationships. Students explore the many ways in which they and the families they serve can differ as a reflection of personal/family experience, cultural influences, and community influences. Connections to community resources that benefit children and families are also explored. Advocacy for coordinated and responsive services are presented. *Enrollment is restricted to students in the Early Care and Education AAS and certificate programs.*

EDUC 119 - Infant and Toddler Practicum **4:3:2**

Allows students to apply and practice knowledge and skills, acquired in previous coursework/training, in working with infants, toddlers, and their families during 90-hours of field experience. This course permits students with many opportunities to reflect and receive feedback on their role as an early childhood professional and their proficiency in the competencies needed to support infants and toddlers. Emphasis is placed on effective application of recommended practices, as identified in state and national professional criteria, in authentic early childhood program settings. *Enrollment is restricted to students in the Early Care and Education AAS and certificate programs. Prerequisite: EDUC 113, 117 and 145 with grades of C or higher.*

EDUC 120 - Observation and Assessment of the Young Child **3:3:0**

Highlights the purposes, benefits, and techniques of systematic observation and assessment of children from birth - 9 years. Various observation and assessment methods are evaluated, compared, and contrasted. Course discussions cover how various types of formal and informal observations and assessments guide the development of the child's instructional and behavioral plan and help maintain accountability in the classroom and in schools. *Ten (10) hours of classroom observation are required. Prerequisite: EDUC 110 or 111, and PSYC 212 or EDUC 185 with grades of C or higher.*

EDUC 131 - Child Development Associate Assessment and Portfolio Preparation **3:3:0**

Prepares the student for assessment by the Council for Professional Development, leading to credentialing as a Child Development Associate. The student develops a competency portfolio

according to standards of the Council and is observed and assessed functioning in one of these settings: infant and toddler, preschool, family child care, or home visitor. Students who intend to apply for CDA assessment at the conclusion of this course must meet the current training and experience requirements of the Council for Professional Recognition. *Prerequisite: EDUC 130 with a grade of C or higher, or permission of the Faculty in Early Childhood Education and are currently working in an early childhood classroom where the student can be observed.*

EDUC 135 - Health, Safety and Nutrition in Early Childhood Care and Education **3:3:0**

Analysis of the health, safety, and nutritional needs of children ages birth – nine years. Topics include children with special needs; the examination of PA state early childhood education programs and standards; the strategies for teaching health, safety and nutrition to young children; and the current issues affecting the overall health and physical wellness of young children. *Prerequisite: EDUC 110 or 111 with a grade of C or higher, or be concurrently enrolled in either EDUC 110 or 111, as well as eligible for enrollment into ENGL 101.*

EDUC 140 - Integrating the Arts and Play as Educative Process **3:3:0**

Introduces the development and expression of creativity - within the early childhood classroom - through the integration of visual art, music, movement, drama, and play. Students plan, implement, and assess creative activities through the process of investigation, exploration, and participation. A course fee is required. *Prerequisite: EDUC 110 or 111 with a grade of C or higher; or be concurrently enrolled in either EDUC 110 or 111, as well as eligible for enrollment into ENGL 101.*

EDUC 145 - Infant and Toddler Care and Education **3:3:0**

Explores the critical role that the adult-child relationship plays in supporting children's optimal development and learning in three key areas: (1) social-emotional, (2) cognitive, and (3) language and literacy. Students are taught specific skills to capitalize on teacher-child interactions by turning them into valuable learning opportunities for children. Students will also gain knowledge and skills to enable them to recognize and adjust their teaching practices for the unique characteristics and needs of children from dual-/multi-lingual families and vulnerable populations. *Ten hours of observation is required in both infant and toddler group settings. Enrollment is restricted to students in the Early Care and Education AAS and certificate programs. Prerequisite: EDUC 113 or 185 with a grade of C or higher.*

EDUC 155 - Fundamentals of Family Child Care **3:3:0**

Introduces the essentials for operating a family childcare home-based business to potential and existing childcare providers. Emphasis is on the home-based environment, scheduling and programming, financial considerations, state regulations, family partnerships, and current issues. *Prerequisite: EDUC 111 with a grade of C or higher.*

EDUC 165 - Fundamentals of School Age Care **3:3:0**

Covers the developmental theory of school-age children and how it applies to program planning, design, and implementation. Topics also include age appropriate guidance strategies, the role and purpose of school-age care, activity planning, licensing, and national standards. *Prerequisite: EDUC 111 with a grade of C or higher.*

EDUC 175 - Program Administration in Early Childhood Care and Education **3:3:0**

Examines the administrative role of the Child Care Director. Topics include regulatory considerations, staffing, administrative responsibilities, financial management, facility development, client relations, marketing, and employee supervision. *Prerequisite: EDUC 185 or PSYC 212, and*

EDUC 111 with grades of C or higher; completion of nine credits in the Early Childhood Care and Education Certificate, or permission of the Instructor or Program Coordinator.

EDUC 180 - Diversity and Partnerships in Family, Schools, and Community **3:3:0**

Examines the importance of building respectful and reciprocal relationships among families, schools, and communities. Topics include global education systems, historic and modern family configurations, and the effects a child's home culture has on learning aptitudes and educational expectations. The impact of special needs on families and family-partnerships is also covered. *Prerequisite: EDUC 110 or 111 with a grade of C or higher and eligibility for enrollment into ENGL 101.*

EDUC 185 - Development and Behavior in Children **3:3:0**

Examines theories of child development. This course emphasizes how the biological, environmental, and cultural influences affect the typical and atypical growth/development of children, from birth to 12 years, covering all developmental domains. *Prerequisite: EDUC 111 or 110 with a grade of C or higher or concurrently enrolled in EDUC 111 or 110 and eligibility for enrollment into ENGL 101.*

EDUC 190 - Growth and Wellness in Childhood **3:3:0**

Designed to help caregivers, teachers, parents, and students become partners in assisting children achieve educational success. Course covers the stages of development as they relate to health, safety and injury prevention, and physical activity. Students learn how movement, games, and healthful living contribute to the growth and development of children in both care and education environments. *Prerequisite: EDUC 110 or 111 with a grade of C or higher.*

EDUC 209 - Educational Psychology **3:3:0**

Presents an overview of the principles and theories of psychology as they relate to the teaching-learning process. This course covers the theories of learning and cognitive development, methods and use of media in instruction, individual differences, and measurement and evaluation. *Prerequisite: EDUC 110 and PSYC 101 with grades of C or higher.*

EDUC 210 - Exceptional Learners **3:3:0**

Covers the origins, status, and trends of Early Intervention and school age Special Education. Students are introduced to the characteristics of exceptional children from birth to school age. Primary focus is on preparing prospective teachers and early childhood students to work with the individual differences of children within an inclusive educational and/or childcare setting. Child giftedness is also covered. *Ten hours of field visits/observations at programs/schools, serving exceptional children, are required. Prerequisite: EDUC 110, PSYC 212 or EDUC 185, and ENGL 101 with grades of C or higher.*

EDUC 211 - Early Childhood Inclusion **3:3:0**

Introduces the principles and rationales for partnerships in the provision of early intervention services for young children with disabilities. The course focuses on legislation, service-delivery models, curriculum planning, classroom strategies, and the role teachers and families play in supporting children with Individual Family Service Plans (FSP)/Individual Education Plans (IEP). *Ten hours of field visits and observations are required. Prerequisite: EDUC 110 or 111, and PSYC 212 or EDUC 185 with grades of C or higher.*

EDUC 220 - Mathematics for the Young Learner **3:3:0**

Covers a variety of developmental theories that foster mathematical thinking in young children. Students gain knowledge in teaching mathematics using appropriate methods, strategies, and

materials for children ages birth-9 years. The course also includes content, strategies, resources, and technology information. *Prerequisite: EDUC 110 or 111 with a grade of C or higher.*

EDUC 221 - Math and Science: Birth through Kindergarten **3:3:0**

Introduces students to topics in the field of early Math and Science. This course focuses on research-based practices in emergent Math and Science and assessment techniques for children ages birth through five years. Developmentally appropriate strategies for teaching Math and Science concepts through active discovery, and play, including the use of technology is emphasized. Ten hours of exploration in an early care setting is required for this course. *Enrollment is restricted to students enrolled in the Early Care and Education AAS and Certificate programs. Prerequisites: EDUC 110 or 111 with a C or higher.*

EDUC 235 - STEM for the Young Learner **3:3:0**

Introduces students to the current issues and trends in the teaching and learning of Science, Technology, Engineering, and Mathematics (STEM) concepts for the young learner. This course focuses on STEM education and its application with children using developmentally appropriate practices and technology. *Enrollment is restricted to students in the Early Care & Education degree and certificate, as well as the Early Childhood – Elementary Education AA program. Prerequisite: EDUC 110 or 111 with a grade of C or higher.*

EDUC 260 - Social Studies for the Young Learner **3:3:0**

Prepares students to apply the standards and thematic strand of social studies as defined by the National Council for the Social Studies. Emphasis is on creating effective citizens using developmentally appropriate practices, as outlined by the Pennsylvania Learning Standards, which include the four disciplines (civics and government, economics, geography, and history) used to define social studies in Pennsylvania. *Prerequisite: EDUC 110 or 111 with a grade of C or higher and PSYC 212 or EDUC 185 with a grade of C or higher.*

EDUC 261 - Integrating Curriculum in Early Childhood Classrooms **3:3:0**

Studies how children acquire and process information using Brain-based learning research. Students apply the knowledge of Developmentally Appropriate Practice, the PA Early Learning Standards, the PDE Standard Aligned System, and the National Association for the Education of Young Children (NAEYC) guidelines to develop strategies that engage children in the learning process. Students plan a classroom environment that supports development and learning for children Pre-K- grade 4 and use an integrated approach to lesson planning by incorporating learning experiences from all content areas throughout the curriculum. Creating lesson plans that contain developmentally appropriate learning opportunities and support and conform to model SAS planning (including big ideas, essential questions, and developing learning outcomes that support standards, etc.) is an integral part of the course. *Ten (10) hours of observation are required. Prerequisite: ENGL 101; EDUC 110 or 111; PSYC 212 or EDUC 185; At least two of the following: EDUC 140, 220, 260 or 270 with grades of C or higher.*

EDUC 265 - Integrating Technology and STEM in PK-4th Grades **3:3:0**

Explores how technology can be used as a tool in the classroom to facilitate student learning including the legal, ethical, and social implications. This course also examines the many ways technology can be used to engage students and create positive environments for learning. The Pennsylvania Early Learning Standards, International Society for Technology in Education (ISTE) Standards, and the 21st Century Learning Skills are also incorporated. *Prerequisite: EDUC 110 or 111 with a grade of C or higher.*

EDUC 270 - Foundations of Early Literacy **3:3:0**

Introduces topics in the field of literacy. Focus is on research-based practices in emergent literacy, early literacy, language development, comprehensive literacy instruction, assessment techniques and literacy strategies for the multicultural, English Language Learner, and exceptional child. Students are to explore a variety of genres of children's literature and ways in which to integrate literature is emphasized. *Six hours of community-based field participation are required. Prerequisite: EDUC 110 or 111 with a grade of C or higher and PSYC 212 or EDUC 185 with a grade of C or higher.*

EDUC 271 - Early Literacy: Birth though Kindergarten **3:3:0**

Introduces students to topics in early literacy and writing. This course focuses on research-based practices in emergent and beginning literacy and writing including assessment techniques for children ages birth through five. Developmentally appropriate strategies for teaching literacy and writing concepts through active discovery, play, including the use of technology to diverse learners, is emphasized. Students are able to explore a variety of genres in children's literature, as well as ways to integrate this literature into the curriculum. *Six hours of community-based field hours are required. Enrollment is restricted to students in the Early Childhood Care and Education AAS and Certificate programs. Prerequisite: EDUC 111 with a grade of C or higher and PSYC 212 or EDUC 185 with a grade of C or higher.*

EDUC 275 - Teaching and Supporting English Language Learners (ELLs) in the Mainstream Classroom **3:3:0**

Covers the skills teachers need to support English Language Learners (ELLs) in the mainstream classroom. The focus of this course is on best practices, differentiated instruction, and accommodations. Skills taught also include supporting and communicating with families, integrating literature to support ELLs, management strategies for teachers, and lesson planning using the Curriculum Overlay for the PA State Standards individualized by ELLs proficiency levels. Technology enhanced instruction for supporting ELLs is also explored. *Prerequisite: EDUC 110, 220, 260 and 270 with grades of C or higher.*

EDUC 291 - Early Care and Education Practicum **4:3:2**

Requires students to complete 90-hours of active participation, under the supervision of a PA state certified teacher, in a diverse birth through PreK child-care setting, PK Counts, or Head Start center. This capstone course allows students to develop and assess lessons based upon the outcomes of National Association for the Education of Young Children (NAEYC) and the PA Early Learning Standards. Students also meet weekly throughout the class to reflect upon/discuss the implementation and integration of coursework as applied to children's learning and care. *Enrollment is restricted to students in the Early Care and Education AAS and certificate, as well as the Early Childhood - Elementary Education AA program. Prerequisite: EDUC 110 or 111; EDUC 210 or 211; EDUC 185 or PSYC 212; EDUC 261, EDUC 270 or 271; and ENGL 101 - all with grades of C or higher.*

EDUC 295 - Program Development and Supervision for Directors in Childcare **3:3:0**

Covers the study skills and techniques needed to develop a curriculum and a program operational-system within the philosophy of the childcare center. Theories underlying curriculum development and implementation are stressed as materials and equipment are analyzed within the environmental framework. Curriculum supervision and delegation are part of the learning experience*. Prerequisite: EDUC 175 and ENGL 101 with grades of C or higher.*

EDUC 296 - Leadership and Professionalism for Childcare Directors **3:3:0**

Provides an in-depth study of the leadership skills and techniques needed to manage childcare center staff. Supporting and educating the staff in legal and ethical issues is also included. Students learn skills in and philosophies of leadership styles, conflict management, team building, stress management, and leading advocacy efforts for children and families. *Prerequisite: EDUC 175 and ENGL 101 with grades of C or higher.*

Electronics

ELEC 100 - Fundamentals of Electricity and Electronics **1:0:3**

Introduces students to the fundamentals of electricity and electronics. The course covers the basics of direct and alternating current circuits using components such as batteries, fuses, switches, resistors, capacitors, inductors, diodes and transistors. Additional topics include safety, energy generation, green energy, magnetics, motors, transformers, power supplies, and digital electronics. Lectures and demonstrations relate course content with products found in the home, automobile and business. A course fee is required. *Prerequisite: MATH 090 (or MATH 033) with a grade of C or higher; or placement through the College Testing and Placement Program. Co-requisite: MATH 091.*

ELEC 106 - Fundamentals of Electronics **3:3:2**

Introduces students to electronic devices and circuits including semiconductor diodes, rectifiers, special purpose diodes, bipolar transistors, JFETs, and MOSFETs. This course examines the biasing circuits and small signal amplifiers, such as common emitter, common collector, common base, common source, common drain and common gate. A course fee is required. *Prerequisite: ELEC 111 with a grade of C or higher.*

ELEC 111 - AC/DC Circuits I **4:3:3**

Provides students with a basic study of AC/DC circuits and magnetism. This course covers Ohm's and Kirchhoff's Laws applied to AC/DC circuits; effect of resistance, inductance, and capacitance in AC/DC circuits; and solutions of circuits using Thevenin's Theorem and Norton's Theorem. A course fee is required. *Prerequisite: ELEC 100 with a grade of C or higher. Co-requisite: MATH 103 or 116 with a grade of C or higher.*

ELEC 125 - Introduction to PC Technology **3:2:3**

Provides students with operational skills for windows-based Operating Systems. This course covers the basics of Personal Computer (PC) hardware functions as students learn terminology and how to properly install hardware components used in a desktop PC or computer. Other basic computer operational skills are covered, such as Basic Input/Output System (BIOS) configurations, internal/external wiring connections, and other major components of the Windows architecture. A course fee is required. *Prerequisite: Familiarity with word processing and MS Windows Operating System.*

ELEC 126 - Installing and Troubleshooting PCs **4:3:3**

Provides students with a thorough understanding of Personal Computer (PC) hardware, electronics, and software, through a lab-oriented approach. This course allows students to develop analytical skills in problem solving and troubleshooting common computer failures. Students have the opportunity to gain hands-on experience in upgrading and troubleshooting computer systems, laptops, netbooks, and hand-held devices via lab simulations designed to reflect real-world scenarios. In addition, students are introduced to the basic concepts of networking. A course fee is required. *Prerequisite: ENGR 208 or ELEC 125 with grades of C or higher.*

ELEC 144 - Semiconductor Principles and Applications **3:2:3**

Provides fundamental knowledge of common industrial electronic components to students pursuing credits in the Mechatronics and/or other technology programs. Students are taught lifelong skills in diagnosing, testing and repairing industrial applications of diodes, transistors, thyristors, rectifiers, voltage regulation, and amplifiers. Classroom theory is supported by hands-on experience. A course fee is required. *Prerequisite: ELOC 153 or ELEC 100 with grades of C or higher.*

ELEC 203 - Electronic Circuit Design **4:3:3**

Analysis of Class A, B, and C power amplifiers; frequency effects of small signal amplifiers; operational amplifiers; negative feedback; oscillators, timers. The computer is used as a problem-solving tool. A course fee is required. *Prerequisite: ELEC 106 and 211.*

ELEC 211 - AC/DC Circuits II **4:3:3**

Continuation of ELEC 111. Network analysis using vectors and complex Notation; solutions of AC/DC networks using mesh and nodal analysis; solutions of AC/DC circuits using Thevenin, Norton, and superposition theorems; energy, power, and resonance in AC/DC circuits; and an introduction to single and polyphase transformer theory and PSpice software as a circuit-analysis simulator are all included. A course fee is required. *Prerequisite: ELEC 111. Co-requisite: MATH 104.*

ELEC 213 - Digital Electronics **4:3:3**

Provides students with a strong foundation in digital electronics. This course covers number systems, such as binary, octal and hexadecimal; basic logic elements and devices; combinational and sequential logic circuits; circuit simplification using Boolean Algebra and Karnaugh Maps; and digital-to-analog/analog-to-digital conversion. This course includes a design project. A course fee is required. *Prerequisite is ELEC 100 and MATH 103 or 116 with grades of C or higher.*

ELEC 220 - Microprocessors and Embedded Systems **4:3:3**

Provides students with a foundation in microprocessors, microcontrollers and embedded electronic circuits. This course covers microcomputer architecture, assembly language programming, Arduino programming, I/O interface peripherals, hardware and software timing and interrupts. Upon completion, the student is able to design and analyze embedded systems, program microcontrollers and use appropriate techniques and test equipment to troubleshoot microprocessor systems. This course also includes a design project. A course fee is required. *Prerequisite: ELEC 213 with a grade of C or higher.*

ELEC 291 - Cooperative Work Experience **3:0:15**

Provides the students with an opportunity to obtain part-time work experience with an approved electronic employer. Under the supervision of a faculty member, the student performs duties and tasks consistent with topics studied in program courses. *Prerequisite: ELEC 100 and 111 with grades of C or higher.*

Electrical Technology

ELOC 153 - Fundamentals of Electricity **4:2:4**

Presents basic electrical terms, units and Ohm’s Law, analysis of series, parallel and series/ parallel circuits, and the operation and use of batteries. The use of capacitance in DC currents and the operation of magnetic circuits are also covered. In addition, the course introduces alternating current waveforms, average and effective values, and capacitors and inductors in AC circuits. Reactance and impedance are defined. The operation of series and parallel AC circuits, resonance circuits (series and parallel), and polyphase systems are covered. A course fee is required.

ELOC 157 - Electrical Wiring I **4:2:4**

Provides an introduction to residential wiring practices, including safety procedures and to basic tools. This course specifically addresses cutting, stripping, and splicing Romex wire installation of duplex and basic receptacles, lighting circuits, single pole, 3-way and 4-way switches. Students wire combination lighting/receptacle circuits, baseboard heaters, dryers, range circuits and other circuits according to the National Electrical Code (NEC). In addition, installing fused and fuse less panels are also covered. A course fee is required. *Co-requisite: ELOC 153 or permission of the Instructor or Discipline Lead.*

ELOC 163 - Electrical Wiring II **4:2:4**

Introduces commercial wiring safety requirements, basic tools and related equipment. Installation of branch circuits, feeders, switches, receptacles and appliances are covered. In addition, students learn lighting terminology, fixture locations, installation, overcurrent protection, and emergency systems operations. A course fee is required. *Co-requisite: ELOC 157; Or permission of the Instructor or Discipline Lead.*

ELOC 167 - Photovoltaic Energy and Systems **3:2:3**

Instructs students to survey, design, and install photovoltaic solar and battery backup systems for residential and commercial use. Buildings, including their layout designs, are analyzed for proper application of solar and battery technologies. This course also covers solar radiation, installation planning, system configurations, DC and AC circuit integration, battery principles, charge controllers, inverters, power conditioners, sizing calculations and methodologies, mounting considerations, overcurrent protection, grounding and bonding, permitting, inspection, utility interconnection policies, maintenance and troubleshooting, incentives, and cost analysis. *Prerequisite: ELOC 153 with a grade of C or higher.*

ELOC 169 - Low Voltage Cabling **3:2:1**

Encompasses the installation, troubleshooting, and repair of single and multi-line systems for telephones, fax machines, alarms, and fiber-optic cabling. Students are introduced to fiber optics as a modern communications system. Laboratory activities include fusion splicing of these multi-line systems, as well as fiber-optic terminations and connections. A course fee is required. *Prerequisite: ELOC 153 with a grade of C or higher.*

ELOC 170 - Distributed Generation & Storage II **3:2:4**

Emphasizes the design, calculation, construction use, and the storage of energy. The course presents the increased utilization of monitoring equipment for software analysis of power efficiencies and environmental impact studies. *Prerequisite: ELOC 163 with a grade of C or higher, or permission of the Instructor or Department Chair.*

ELOC 171 - Electrical Service **2:1:2**

Covers the procedures for the safe installation of commercial and residential services. A course fee is required. *Prerequisite: ELOC 163 with a grade of C or higher.*

ELOC 172 - National Electric Code **2:2:0**

Emphasizes the requirements of the National Electrical Code for service, feeder, and branch circuits, conductor sizing, and grounding. An analysis of appropriate wiring methods for residential and commercial buildings is also provided.

ELOC 175 - Electrical System Troubleshooting **3:2:2**

Develops skills and procedures for troubleshooting electrical circuits. Students are taught to systematically identify problems, isolate probable causes, repair malfunctions, and establish preventative maintenance systems. Laboratory work involves addressing issues and problems found in typical industrial settings. *Prerequisite: ELOC 153 with a grade of C or higher.*

ELOC 177 - NFPA 70E - Standard for Electrical Safety in the Workplace **1:1:0**

Addresses electrical safety requirements for employee workplaces. This course provides necessary guidelines and strategies for avoiding or reducing the occurrence of injuries within the workplace. This course specifically addresses activities involving interaction with electrical systems from electrocution and arc blasts to electrical explosions and should be garnered as essential training for the practical safeguarding of employees.

ELOC 291 - Cooperative Work Experience **3:0:15**

Allows students the opportunity to engage in a part-time work experience for a total of 210 hours (15-hours per week) at an approved employer within the electrical profession. Under the supervision of a faculty member, students gain on-the-job work experience performing the duties and tasks consistent with the topics covered in the electrical technology curriculum. *This course is only available to students, who have earned 24 or more credits in ELOC courses and are enrolled in the Electrical Technology AAS or certificate programs. Prerequisite: IA 201 and ELOC 163 with grades of C or higher, or permission of the Instructor*.

English

ENGL 001 - Strategy-Based Reading I **3:3:0**

Emphasizes beginner-level reading comprehension strategies and is also designed to help students improve upon their vocabulary and reading fluency. Courses in reading and comprehension improvement are open to all students. Students who are required to take reading courses are identified through the College Testing and Placement Program and may need to work through more than one semester. *Prerequisite: ENGL 001 entry-level performance in the College Testing and Placement Program.*

ENGL 002 - Strategy-Based Reading II **3:3:0**

Emphasizes intermediate-level reading comprehension strategies and is also designed to help students improve upon their vocabulary and reading fluency. Courses in reading and comprehension improvement are open to all students. Students who are required to take reading courses are identified through the College Testing and Placement Program and may need to work through more than one semester. *Prerequisite: ENGL 002 entry-level performance in the College Testing and Placement Program. Students who are eligible to enroll into ENGL 029 may take ENGL 029 and ENGL 002 concurrently.*

ENGL 003 - Strategy-Based Reading III **3:3:0**

Emphasizes advanced reading comprehension strategies and is also designed to help students improve upon their vocabulary and reading fluency. Courses in reading and comprehension improvement are open to all students. Students who are required to take reading courses are identified through the College Testing and Placement Program and may need to work through more than one semester. *Prerequisite: ENGL 003 entry-level performance in the College Testing and Placement Program, or ENGL 002 with a grade of C or higher, or completion of ENGL 002 exit criteria while a student in ENGL 001. Students required to enroll in ENGL 003 and who choose to enroll in ENGL 101 in the same semester must maintain their enrollment in ENGL 003 or they will be dropped from ENGL 101.*

ENGL 026 - English as a Second Language: High Beginner Level **6:5:2.25**

Encompasses a high-beginner level skills-building sequence that teaches grammatical structure, vocabulary, and the sound system of American English for non-native English-speaking individuals. This course integrates the development of listening, speaking, reading, and writing skills with a focus on both fluency and accuracy. Students who must enroll in ESL courses are identified through the ESL portion of the College Testing and Placement Program. *Prerequisite: ENGL 026 performance in the ESL portion of the College Testing and Placement Program at the ENGL 026 entrance level.*

ENGL 027 - English as a Second Language: Low Intermediate Level **6:5:2.25**

Encompasses a low intermediate level skills-building sequence that teaches grammatical structure, vocabulary, and the sound system of American English for non-native English-speaking individuals. This course integrates the development of listening, speaking, reading, and writing skills with a focus on both fluency and accuracy. Students who must enroll in ESL courses are identified through the ESL portion of the College Testing and Placement Program. *Prerequisite: Placement into ENGL 027 through the ESL portion of the College Testing and Placement Program.*

ENGL 028 - English as a Second Language: High Intermediate Level **6:5:2.25**

Encompasses a high-intermediate level skills-building sequence that teaches grammatical structure, vocabulary, and the sound system of American English for non-native English-speaking individuals. This course integrates the development of listening, speaking, reading, and writing skills with a focus on both fluency and accuracy. Students who must enroll in ESL courses are identified through the ESL portion of the College Testing and Placement Program. *Prerequisite: ENGL 027 with a grade of C or higher. Or, meeting the ENGL 027 exit criteria through the ESL portion of the College Testing and Placement Program.*

ENGL 029 - English as a Second Language: Advanced Level **6:5:2.25**

Encompasses an advanced-level skill-building sequence that teaches grammatical structure, vocabulary, and the sound system of American English for non-native English-speaking individuals. This course integrates the development of listening, speaking, reading, and writing skills with a focus on both fluency and accuracy. Students who must enroll in ESL courses are identified through the ESL portion of the College Testing and Placement Program. *Prerequisite: ENGL 028 with a grade of C or higher. Or, meeting the ENGL 028 exit criteria through the ESL portion of the College Testing and Placement Program.*

ENGL 050 - Fundamentals of College Writing I **3:3:0**

Provides students with the skills necessary to develop clear sentences, paragraphs, and short essays with an emphasis on basic grammar and usage skills. *A grade of C or higher in this course, which includes satisfactory completion of a final writing project, qualifies the student for English 051. Prerequisite: Placement through the College Testing and Placement Program.*

ENGL 051 - Fundamentals of College Writing II **3:3:0**

Provides students with the skills necessary to develop clear, coherent paragraphs and longer essays with an emphasis on basic grammar and syntax. Attention is given to the formulation of thesis statements and the development of ideas. *A grade of C or higher in this course, which includes satisfactory completion of a final writing project, qualifies the student for ENGL 101. Prerequisite: Placement through the College Testing and Placement Program or completion of ENGL 050 or 029 with a grade of C or higher.*

ENGL 057 - Critical Connections in Reading and Writing **3:3:0**

Focuses on the two areas of reading and writing. This course is designed to help the student develop and use the strategies and skills needed to negotiate and understand readings, and to compose text. *A grade of C or higher in this course completes the developmental sequences in both reading (ENGL 003) and writing (ENGL 051) required for enrollment into any other courses that require ENGL 003 and/or ENGL 051 as prerequisites. Prerequisite: ENGL 003 entry-level performance in the College Testing and Placement Program, or ENGL 002 with a grade of C or higher, and ENGL 051 placement, or completion of ENGL 050 with a grade of C or higher.*

ENGL 101 - English Composition I **3:3:0**

Emphasizes the composition of organized, clear, coherent, and well-supported essays, which features standard English conventions, effective style, and the appropriate use of research strategies and sources. Students develop the critical reading and thinking skills necessary to produce effective college-level writing that communicates to a particular audience, fulfills a specified purpose, and conforms to a given genre. *Prerequisite: Placement through the College Testing and Placement Program or completion of ENGL 007, 051 or 057 with a grade of C or higher; ENGL 003 is a pre- or co-requisite.*

ENGL 101H - Honors English Composition I **3:3:0**

Emphasizes the composition of organized, clear, coherent, and well-supported essays featuring standard English conventions, effective style, and appropriate use of research strategies and sources. Students develop the critical reading and thinking skills necessary to produce effective college-level writing that communicates to a particular audience, fulfills a specified purpose, and conforms to a given genre. Using a seminar or discussion-based approach, this course encourages independent, creative and critical inquiry and prepares students for the practical application of information by emphasizing effective research strategies and technologies congruent with the field of study. *Prerequisite: Placement through the College Testing and Placement Program or completion of ENGL 007, 051 or 057 with a grade of C or higher; ENGL 003 is a pre- or co-requisite.*

ENGL 102 - English Composition II **3:3:0**

Focuses on expository and argument writing. Students develop advanced reading, critical thinking, and writing skills as they analyze and build arguments in various forms, using research as the basis for developing their own arguments. *Prerequisite: ENGL 101 with a grade of C or higher and completion of ENGL 003, 007 or 057 with a grade of C or higher, or its equivalent.*

ENGL 102H - Honors English Composition II **3:3:0**

Focuses on expository and argument writing. Students develop advanced reading, critical thinking, and writing skills as they analyze and build arguments in various forms, using research as the basis for developing their own arguments. Using a seminar or discussion-based approach, this course encourages independent, creative and critical inquiry and prepares students for the practical application of information by emphasizing effective research strategies and technologies congruent with the field of study. *Prerequisite: ENGL 101 with a grade of C or higher; Completion of ENGL 003, 007 or 057 with a grade of C or higher, or its equivalent.*

ENGL 104 - Technical Writing **3:3:0**

Applies technical communication principles in the writing of effective reports and technical papers such as definitions, descriptions, instructions, proposals, and research reports. This course is primarily for technical students. *Prerequisite: Completion of ENGL 101 with a grade of C or higher.*

ENGL 106 - Business Writing **3:3:0**

Applies business communication principles in the writing of effective business documents such as memos, letters, resumes, brochures, and short reports. This course is primarily for business students. *Prerequisite: Completion of ENGL 101 with a grade of C or higher.*

ENGL 107 - Creative Writing I **3:3:0**

Emphasizes the techniques and terminology of creative writing; experimentation and innovation in the writing process through workshops; finding solutions to writing problems, as well as developing individual voice and submitting work for publication. This course is intended for students interested in writing fiction, nonfiction, and poetry. *Prerequisite: ENGL 101 with a grade of C or higher; Or permission of the Instructor.* (H&A)

ENGL 108 - Creative Writing II **3:3:0**

Further develops the skills taught in ENGL 107 with a focus on workshops in fiction and poetry. This course includes the study of more advanced craft and terminology, the professional writers whose aims complement students' own objectives or priorities, cross-cultural influences on the writing scene, and publishing work at the professional level. *Prerequisite: ENGL 107 with a grade of C or higher; Or the permission of the Instructor.*

ENGL 110 - Foundations in Professional Writing **3:3:0**

Applies the foundations of technical and business communication in developing clear, concise, and effective documents. This course allows students to prepare resumes and documents commonly found within most business establishments and is designed specifically for AAS degree programs and may not be transferable. *Prerequisite: Eligibility for enrollment into ENGL 101. Co-requisite: ENGL 003.*

ENGL 114 - Introduction to Novel Writing **3:3:0**

Emphasizes the techniques and terminology used in writing a novel. Students may explore variations within the genre particularly in premise, structure, plot, subtext, tone, dialogue, character development, point of view, and voice. This course aids writers in developing successful writing habits that serve to bring their novel draft to completion. *Prerequisite: ENGL 101 with a grade of C or better, or permission of the Instructor.*

ENGL 116 - Introduction to Poetry Writing **3:3:0**

Introduces the techniques and terminology of writing poetry. This course focuses on experimentation and innovating in the writing process through workshops; finding solutions to writing problems; developing individual voice, and submitting poetry for publication. *Prerequisite: ENGL 101 with a C or better, or permission of the Instructor.*

ENGL 118 - Introduction Flash Fiction Writing **3:3:0**

Presents the techniques and terminology used in flash fiction composition. This course explores the models and structures of subgenres used in flash fiction. Students experiment in constraint; develop a writer's voice through characterization, mood and setting; create plot with subtext and causality; and develop scenes with dialogue and conflict. *Prerequisite: ENGL 101 with a grade of C or better, or permission of the Instructor.*

ENGL 120 - Introduction to Writing Short Fiction **3:3:0**

Covers the techniques and terminology used in writing short stories through process. This course focuses on methods of invention and discovery; writing original short stories; analyzing and evaluating original student work (in workshop); revising original work; utilizing elements of fiction;

and advancing the development of the writer's voice. *Prerequisite: ENGL 101 with a grade of C or better, or permission of the Instructor.*

ENGL 131 - Workshop: Literary Publication **1:1:0**

Provides students with first-hand experience in the process of literary publication through producing the College's literary journal. Students explore design and layout principles, use publication software, build evaluation and editing skills, discuss ethical standards of publishing, and use marketing strategies. *Prerequisites: Eligibility for enrollment into ENGL 101; completion of any reading courses required by the College Testing and Placement Program; or permission of the Instructor.*

ENGL 201 - British Literature I **3:3:0**

Traces the origin and development of English Literature from the Anglo-Saxons to the dawn of Romanticism. The literature studied in this course includes works from the Old English period, the Middle Ages, the Renaissance, the Early Modern period, and the Restoration and 18th Century. In addition, this course emphasizes an understanding of the interplay of character, style, structure, tone, and theme, as well as a sense of the relevant history, culture, and social issues that influenced the works studied. *Prerequisite: Eligibility for enrollment into ENGL 101 and completion of any reading courses required by the College Testing and Placement Program.* (H&A)

ENGL 202 - British Literature II **3:3:0**

Surveys British writers from 1780 through the current period. The literature studied in this course includes works from the Romantic, Victorian, early 20th century, and contemporary periods. The course emphasizes an understanding of the interplay of character, style, structure, tone, and theme, as well as a sense of the relevant history, culture, and social issues that influenced the works studied. *Prerequisite: Eligibility for enrollment into ENGL 101 and completion of any reading courses required by the College Testing and Placement Program.* (H&A)

ENGL 203 - American Literature I **3:3:0**

Traces the emergence of a distinctly American identity seen through its literature produced from early 1600's to 1865. Through the study of representative works from male and female writers reflecting differing social, religious, racial, and ethnic backgrounds and views, this course examines the resulting history of conflicts and strains in political and philosophical views that both unify and divide our country. Students have the opportunity to read fiction and nonfiction in genres including captivity narratives, public journals, private diaries and letters, autobiographies, essays, plays, poetry, and novels. *Prerequisite: Eligibility for enrollment into ENGL 101 and completion of any reading courses required by the College Testing and Placement Program.* (H&A)

ENGL 204 - American Literature II **3:3:0**

Examines a multifaceted representation of writers from 1865 to the present. Emphasizes the ways in which American writers have incorporated literary forms and stylistic development into their works to reflect the influences of class, gender, history, politics, race, and religion on American literature. *Prerequisite: Eligibility for enrollment into ENGL 101 and completion of any reading courses required by the College Testing and Placement Program.* (H&A)

ENGL 205 - World Literature I **3:3:0**

Explores the development of global literature from 1900 BCE to the 1600's CE, including Mesopotamia, Egypt, Persia, India, China, Japan, and Western Europe (Greece, Rome, Britain, Italy, Spain, and the Americas). The importance of history and diverse culture on the development of language is explored along with the interplay of characters, style, structure, tone, and theme.

Prerequisite: Eligibility for enrollment into ENGL 101 and completion of any reading courses required by the College Testing and Placement Program. (H&A)

ENGL 206 - World Literature II **3:3:0**

Covers the development of global literature from the 1700 to the present, including works from Europe, the Middle East, Asia, Africa, and the Americas. The importance of history, society, culture, religion, class, and gender is explored along with the interplay of characters, style, structure, tone, and theme. *Prerequisite: Eligibility for enrollment into ENGL 101 and completion of any reading courses required by the College Testing and Placement Program.* (H&A)

ENGL 206H - Honors World Literature II **3:3:0**

Covers the development of global literature from the 1700 to the present, including works from Europe, the Middle East, Asia, Africa, and the Americas. The importance of history, society, culture, religion, class, and gender is explored along with the interplay of characters, style, structure, tone, and theme. Using a seminar or discussion-based approach, this course encourages independent, creative and critical inquiry and prepares students for the practical application of information by emphasizing effective research strategies and technologies congruent with the field of study. *Prerequisite: Completion of all developmental reading and writing courses required as a result of the College Testing and Placement program.* (H&A)

ENGL 207 - Introduction to Literature **3:3:0**

Explores literature in a variety of genres such as short fiction, poetry, and drama. The focus of this course is on the elements of the literature studied, including character, style, structure, form, tone, and theme. The historical and cultural context of the works studied, including history, geography, culture, race, gender, class, ethnicity, and religion are also considered. Literature studied in this course is drawn from various literary periods as well as from a range-writers, including American, British, western European, and world literary figures. *Prerequisite: Eligibility for enrollment into ENGL 101 and completion of any reading courses required by the College Testing and Placement Program.* (H&A)

ENGL 207H - Honors Introduction to Literature **3:3:0**

Explores literature in a variety of genres such as short fiction, poetry, and drama. The focus of this course is on the elements of the literature studied, including character, style, structure, form, tone, and theme. The historical and cultural context of the works studied, including history, geography, culture, race, gender, class, ethnicity, and religion are also considered. Literature studied in this course is drawn from various literary periods, as well as from a range-writers, including American, British, western European, and world literary figures. Using a seminar or discussion-based approach, this course encourages independent, creative and critical inquiry and prepares students for the practical application of information by emphasizing effective research strategies and technologies congruent with the field of study. *Prerequisite: Completion of all developmental reading and writing courses required as a result of the College Testing and Placement program.* (H&A)

ENGL 208 - Introduction to Literary Theory **3:3:0**

Emphasizes the interpretation of literary texts in light of major critical movements. Students develop the critical reading and thinking skills necessary to read, analyze, write about, and teach sophisticated theoretical texts. *Prerequisite: ENGL 101 and 207 with grades of C or higher. Co-requisite: ENGL 102.*

ENGL 217 - African-American Literature **3:3:0**

Examines race, class, gender, and politics as they are portrayed in African-American literature from colonial times to the present. This course emphasizes the ways in which African-American writers have created and integrated literary traditions and construction into their works to depict the perils and the promise of reconstruction, the migration to urban life, and the struggle for social justice. *Prerequisite: Eligibility for enrollment into ENGL 101 and completion of any reading courses required by the College Testing and Placement program.* (H&A)

ENGL 246 - Shakespeare **3:3:0**

Introduces one of the key literary and cultural figures of Western history: William Shakespeare. Students study at least six Shakespeare plays from across the four major genres (Tragedy, Comedy, History, and Romance), as well as his fascinating Sonnets sequence. Using a variety of critical approaches to these texts, including Shakespeare in film and/or theater performances, students are able to place the works in their historical and contemporary contexts. *Prerequisite: Eligibility for enrollment into ENGL 101 and completion of any reading courses required by the College Testing and Placement Program.*

ENGL 247 - English Arthurian Literature **3:3:0**

A survey of the literary tradition of Arthurian romance in Western thought, beginning with medieval writings on courtly love as seen through the legends of King Arthur, and tracing that tradition through European literature to the present. *Prerequisite: Eligibility for enrollment into ENGL 101 and completion of any reading courses required by the College Testing and Placement Program.*

ENGL 265 - Women Writers **3:3:0**

Analyzes representative works by women writers from the 12th Century to the present. This course explores many genres including fiction, non-fiction, drama, and poetry utilizing a common understanding of literary elements. Readings include works by women that reflect their own diverse cultures, experiences, perspectives, and worldviews. *Prerequisite: Eligibility for enrollment into ENGL 101 and the completion of any reading courses required by the College Testing and Placement Program.*

ENGL 267 - Banned Books **3:3:0**

The study of representative works of poetry and prose banned in the U.S. and around the world by courts, schools, churches, and governments. Topics include the legal and ethical issues of banning and the politics of censorship. *Prerequisite: Eligibility for enrollment into ENGL 101 and completion of any reading courses required by the College Testing and Placement Program.*

ENGL 269 - Native American Literature **3:3:0**

Surveys the diverse body of Native American literature from oral traditions to contemporary forms in fiction, non-fiction, poetry, and drama. Readings explore themes such as identity, cultural experience, and sovereignty in the indigenous Native American experience. *Prerequisite: Eligibility for enrollment into ENGL 101 and completion of any reading courses required by the College Testing and Placement Program.*

ENGL 275 - Science Fiction **3:3:0**

Covers short stories, novels, films, and critical essays from the science fiction genre. This course allows students the opportunity to explore this genre and, within a cultural context, examine the characteristics of each of the selected works in order to gain an appreciation for the elements that made the narratives revolutionary. *Prerequisite: Eligibility for enrollment into ENGL 101 and completion of any reading courses required by the College Testing and Placement Program.*

ENGL 278 - American Short Story **3:3:0**

Study of works of representative writers with emphasis on the development of an appreciative response to the American short story as a distinctive art form. Typical writers studied are Crane, James, Hemingway, Wright, Faulkner, and O'Connor. *Prerequisite: Eligibility for enrollment into ENGL 101 and completion of any reading courses required by the College Testing and Placement Program.*

ENGL 279 - The Modern Novella **3:3:0**

Studies the works of representative writers from several cultures with an emphasis on developing an appreciative response to the novella as a distinctive art form. Typical writers to be studied are: Tolstoy, Conrad, Kafka, McCullers, and Bellow. *Prerequisite: Eligibility for enrollment into ENGL 101 and completion of any reading courses required by the College Testing and Placement Program.*

Engineering

ENGR 102 - Engineering & Engineering-Technology Orientation **2:2:0**

Presents both engineering technology and engineering careers to students for discussion, as well as introduces them to computer software engineering applications. This course covers engineering problem solving, ethics, career suitability, and issues that can occur when transferring to a four-year institution. This course emphasizes the hands-on use of engineering software applications including word processing, spreadsheets, HACC's online tools, and internet research. Guest speakers and off-campus events also augment the topics covered in this course. *Prerequisite: Eligibility for enrollment into ENGL 101*. (FYS)

ENGR 208 - Microcontrollers and PLCs **3:2:2**

Involves teaching students skills in programming industrial programmable logic controllers (PLCs) and Microcontrollers. This course covers the elements used to control automated systems, the elements in microcontrollers and the exposure to languages from assembler to Python. Coursework instruction uses a Programmable Logic Controller, a ladder logic simulator, and microcontrollers. A course fee is required. *Prerequisite: ELEC 100 or ELOC 153 with a grade of C or higher.*

ENGR 213 - Statics **3:4:0**

Covers the characteristics of a force; equilibrium of coplanar force systems; non-coplanar force systems; couples; analysis of structures; friction; centroids; and moments of inertia. Calculus oriented. *Prerequisite: MATH 121 with a grade of C or higher.*

ENGR 214 - Dynamics **3:4:0**

Covers rectilinear and curvilinear translation, rotation and plane motion; work and Energy; impulse and momentum; and mechanical vibrations. Calculus oriented. *Prerequisite: ENGR 213 with a grade of C or higher.*

ENGR 271 - Design for the Environment **3:3:0**

Examines the effects of progress and advances in technology on the global environment. Product design and manufacturing processes are studied for their effects on the environment.

ENGR 291 - Engineering Cooperative Experience **3:0:15**

Allows students to work in an engineering firm. Under the supervision of the faculty, students work on site at an engineering facility with a licensed professional engineer, or an equivalent Engineer, for a minimum of 15 hours per week. The duties may vary with each place of employment, but are to be directly related to the work done by engineering professionals. *Enrollment is only open to students*

who have earned more than 24 credits in the Engineering or Mechanical Engineering Technology AS programs. Prerequisite: Restricted, see the Discipline Lead.

Energy

ENGY 111 - Introduction to Energy Alternatives **3:3:1**

Patterns of energy use, principles of energy conversion for traditional and non-traditional sources, and conservation techniques. Environmental, social, political, and economic implications are discussed in the context of resource availability and distribution. The laboratory develops facility in the measurement of energy and energy flow. Field trips may be required. A course fee is required. *Pre or Co-requisite: MATH 103.*

ENGY 215 - Energy Evaluation and Planning **3:2:3**

Energy usage and environmental effects in business, industry, and residences. Topics include energy auditing and efficiency planning. Laboratory exercises feature site visits, energy assessments, and recommendations. A course fee is required. *Prerequisite: Permission of the Instructor.*

Environmental Specialist

ENSP 100A - Environmental Seminar **1:1:0**

Topical sessions on multidisciplinary environmental issues, research, assessment approaches, and implementation procedures. Activities involve participation by students, faculty, and environmental professionals. Seminar may be taken more than once. A course fee is required. *Prerequisite: Permission of Instructor.*

ENSP 100B - Environmental Seminar **1:1:0**

Topical sessions on multidisciplinary environmental issues, research, assessment approaches, and implementation procedures. Activities involve participation by students, faculty, and environmental professionals. Seminar may be taken more than once. A course fee is required. *Prerequisite: Permission of Instructor.*

ENSP 100C - Environmental Seminar **1:1:0**

Topical sessions on multidisciplinary environmental issues, research, assessment approaches, and implementation procedures. Activities involve participation by students, faculty, and environmental professionals. Seminar may be taken more than once. A course fee is required. *Prerequisite: Permission of Instructor*.

ENSP 100D - Environmental Seminar **1:1:0**

Topical sessions on multidisciplinary environmental issues, research, assessment approaches, and implementation procedures. Activities involve participation by students, faculty, and environmental professionals. Seminar may be taken more than once. A course fee is required. *Prerequisite: Permission of Instructor.*

ENSP 160 - Professional Issues **1:1:0**

Covers the history, scope and trends of the environmental movement, diversity of environmental career options, professional expectations and ethical issues, team dynamics, public communications, and environmental information sources. Students investigate various environmental services provided by companies located within the local area and conduct detailed research in the career area of their choice.

ENSP 200 - Quantitative Field Methods **4:3:3**

Sampling and analysis of air, soil, water, and other resources in natural and built environments. Students develop skills in the use of sampling devices, operation of field instruments, reporting, and the integration of field procedures with laboratory requirements. A course fee is required. *Prerequisite: CHEM 100 or 101, GEOL 201, and MATH 103 with grades of C or higher.*

ENSP 205 - Environmental Lab Methods **4:3:3**

Provides basic knowledge of environmental laboratory analysis requirements and application methods. This course covers equipment calibration, sample preparation and analysis, quality control, quality assurance, and legal requirements with an emphasis on chromatographs, spectrophotometers, and detection-measurements meters. Application methods include sample analysis of air, soil, groundwater, surface water, and waste streams from industry and facilities. Data processing and laboratory report preparation are also emphasized. A course fee is required. *Prerequisite: CHEM 100 or 101, and MATH 103 with grades of C or higher.*

ENSP 210 - Site Assessment and Planning **3:2:3**

Covers the principles and procedures of site evaluations and planning. This course addresses aspects of environmental assessment, evaluative techniques, and data resources used for site assessment. Students conduct a site assessment following the National Environmental Policy Act (NEPA) methodology in relation to a planned site development. A course fee is required. *Prerequisite: GEOL 201 with a grade of C or higher. Pre or Co-requisite: GIS 141 with a grade of C or higher.*

ENSP 215 - Hazardous Substances and Safety **3:2:3**

Complies with the OSHA/EPA site safety training requirements for workers employed at job sites containing hazardous materials. This course covers the fundamentals of hazardous materials including the characteristics of chemicals, identifying workplace hazards and selecting personal protective equipment and respiratory protection for various exposure conditions. Focus is on environmental contamination and clean up, hazard communication, and safety regulations and procedures. Laboratory sessions include hands-on exercises and demonstrations in the management of hazardous waste and spills. A course fee is required. *Prerequisite: Physician's permission to participate in hands-on laboratory exercises with a respirator and permission of Instructor. Pre or Co-requisite: CHEM 100 or 101 with a grade of C or higher.*

ENSP 225 - Aquatic Resource Management **3:2:3**

Aquatic resource topics such as watershed management, stormwater management, erosion control, wetland protection, and wetland delineation. Laboratory activities include the application of techniques for site evaluation and management. A course fee is required. *Prerequisite: BIOL 101 or 130, and MATH 178 or 202 with grades of C or higher. Pre or Co-requisite: GEOL 201, and ENSP 180 or ENVS 201 with grades of C or higher; or permission of the Discipline Lead.*

ENSP 230 - Pollution Prevention and Waste Management **3:2:3**

Techniques for preventing pollution, minimizing waste, and increasing energy efficiency. Emphasis is on conducting site evaluations, waste audits, and program monitoring. Laboratory exercises cover assessment and management strategies for a facility. A course fee is required. *Prerequisite: CHEM 100 or 101, and MATH 178 or 202 with grades of C or higher; or permission of the Discipline Lead.*

ENSP 235 - Environmental Systems and Sustainability **3:3:0**

Strategies for comprehensive management of environmental systems with the goal of sustainability. Approaches studied include environmental accounts, total quality environmental management, and ISO 14001 management systems. *Prerequisite: Permission of the Discipline Lead.*

ENSP 260A - Environmental Internship **3:0:20**

A minimum of 300 hours of work experience, over at least 15-weeks, in an approved internship applying the knowledge and skills acquired in the Environmental Specialist Program. Written documentation of internship activities and other performance-evaluation measurements are used to determine the final course grade. A student may take the course more than once. *Enrollment is restricted to students in the Environmental Specialist AS program. Prerequisite: Permission of the Discipline Lead.*

ENSP 260B - Environmental Internship **3:0:20**

A minimum of 300 hours of work experience, over at least a 15-weeks, in an approved internship applying the knowledge and skills acquired in the Environmental Specialist Program. Written documentation of internship activities and other performance-evaluation measurements are used to determine the final course grade. A student may take the course more than once. *Enrollment is restricted to students in the Environmental Specialist AS program.*

Entrepreneurship

ENTR 101 - Introduction to Entrepreneurship **3:3:0**

Introduces students to creative thinking skills with emphasis placed upon how they are applied to entrepreneurial ventures. Students have an opportunity to engage with the entrepreneurial mindset including idea creation, motivation, experimentation, focus, reframing and persistence. They must produce a portfolio that serves as a tool to examine and improve their own thinking processes.

ENTR 221 - Entrepreneurial Planning **3:3:0**

Presents information about planning, starting and operating a small business. This presents various ways to plan and start a small business, including types of legal structures, startup costs, location factors, competitor analysis, and competitive advantages. This course also examines the business skills necessary to operate a small venture, including management of operations and human resources, marketing, obtaining vendors, completing pro-forma financial statements and assessing risk. Students are required to complete a business plan, which incorporates the topics presented and discussed in the course.

Environmental Science

ENVS 220 - Environmental Laws, Regulations and Compliance **3:3:0**

Covers the major laws, regulations, administrative directives, and aspects of compliance and enforcement pertaining to environmental protection, air, energy resources, carbon emissions, alternative fuel sources, workplace safety, pollution, waste management, and management of natural resources. This course emphasizes the responsibilities of Due Diligence, record keeping, reporting, and legal testimony. *Co-requisite: BIOL 203.*

English as a Second Language

ESL 030 - Reading and Writing I **4:4:0**

Introduces students to reading and writing English for academic purposes. This course focuses on reading comprehension strategies in an academic context, academic writing conventions, and academic formatting. *Prerequisite: Placement through the ESL portion of the College Testing and Placement Program.*

ESL 035 - Reading and Writing II **4:4:0**

Explores advanced approaches to reading and writing in English for academic purposes. Focuses on advanced reading comprehension, research writing, and advanced conventions in Academic English. *Prerequisite: Completion of ESL 030 with a grade of C or higher or placement through the ESL portion of the College Testing and Placement Program*.

ESL 040 - Speaking and Listening I **4:4:0**

Encompasses speaking and listening skills for academic purposes with focus on multi-step instructions, note-taking, spoken and written discourse, speech sounds and word endings, and oral presentation. *Prerequisite: Placement through the ESL portion of the College Testing and Placement Program.*

ESL 045 - Speaking and Listening II **4:4:0**

Provides advanced speaking and listening techniques for the academic environment. This course emphasizes extended oral presentation and written expression from oral materials. *Prerequisite: ESL 040 with a grade of C or higher or placement through the ESL portion of the College Testing and Placement Program.*

ESL 050 - Grammar I **4:4:0**

Focuses on grammar development in Academic English for non-native speakers. This course discusses parts of speech, verb tenses, sentence structure (meaning and function), and punctuation for academic purposes. *Prerequisites: Placement through the ESL portion of the College Testing and Placement program.*

ESL 055 - Grammar II **4:4:0**

Emphasizes advanced grammar development skills in Academic English for non-native speakers. This course covers passive and active voice, conditionals, modals, reported speech, complex sentence structure, and revision are a focus. *Prerequisites: Completion of ESL 050 with a C or higher or placement through the ESL portion of the College Testing and Placement program.*

ESL 070 - Integrated Reading and Writing for English Language Learners **3:3:0**

Integrates English reading and writing skills for academic purposes. This course focuses on active reading strategies, the writing process, and rhetorical skills for academic writing in English. *Prerequisites: Completion of ESL 035 and 045 with grades of C or higher or placement through the ESL portion of the College's Testing and Placement program.*

Exercise Science

EXSC 102 - Introduction to the Exercise Sciences **3:3:0**

Introduces students to the academic study of the exercise sciences. The course emphasizes exploring the specific theories, skills, and abilities required of practicing professionals in the fields of physical education, exercise science, sports medicine, and other related fields. *Prerequisite: Eligibility for enrollment into ENGL 003 as a result of the College Placement and Testing Program.*

EXSC 202 - Functional Anatomy and Exercise Physiology **3:3:0**

Introduces the fundamentals of biomechanics and exercise physiology. The course emphasizes the anatomical and mechanical fundamentals of human movement and the physiological concepts related to acute and chronic exercise adaptations. *Prerequisite: BIOL 121 and EXSC 102 with grades of C or higher.*

EXSC 203 - Exercise Testing and Measurement **3:3:0**

Teaches the student how to conduct and interpret exercise-testing protocols. The course emphasizes how to evaluate the health-related components of physical fitness: cardiorespiratory endurance, muscular strength, muscular endurance, flexibility, and body composition. In addition, liability and safety issues are also covered. *Prerequisite: MATH 022 or higher, and PE 201 with grades of C or higher; Eligibility for enrollment into ENGL 101; Or approval from the Discipline Lead.*

EXSC 204 - Exercise Physiology **4:3:2**

A comprehensive study of the extent and nature of body variations as a result of physical exertion. The student receives laboratory experience dealing with the oxidation processes of the body in terms of the utilization of proteins, carbohydrates, and fats. The course includes an in-depth survey of neuromuscular, metabolic cardiorespiratory, and hormonal responses to acute exercise as well as the physiological adaptations to chronic exercise. Topics include thermoregulation, ergogenic aids, body composition, sport training, growth and development, and aging. *Enrollment is restricted to students in the Exercise Science-Physical Education AS program. Prerequisite: EXSC 202 with a grade of C or higher.*

Finance

FIN 201 - Principles of Finance **3:3:0**

Covers accounting and economic topics and how they apply to decisions made by financial professionals in contemporary businesses. This course discusses how managing short and long-term assets, selecting financing options and determining the cost of capital influences these decisions. The tools used to make these decisions teach students how to minimize costs and efficiently allocate resources in their role as a financial manager. In addition, the role of financial intermediaries and financial markets are examined as they relate to important financial decisions. *Prerequisite: ACCT 160 with a grade of C or higher.*

Fire Science

FIRE 101 - Principles of Emergency Services **3:3:0**

Provides an overview to fire protection and emergency services. This course covers the culture and history of emergency service; the organization and function of public and private fire protection services; fire departments as part of local government; laws and regulations affecting fire service; fire service nomenclature; specific fire protection functions; introduction to fire protection systems, strategies, and tactics; fire loss analysis; basic fire chemistry and physics; and life safety initiatives. Students are also introduced to career opportunities in fire protection and related fields. *Prerequisite: Eligibility for enrollment into ENGL 051*. (FYS)

FIRE 102 - Fire Prevention **3:3:0**

Provides fundamental knowledge relating to the field of fire prevention. This course covers the history and philosophy of fire prevention, the organization and operation of a fire prevention bureau, and the use and application of codes and standards. Plan reviews, fire inspections, fire and life safety education, and fire investigation are also discussed. *Prerequisite: Eligibility for enrollment into ENGL 051.*

FIRE 103 - Principles of Fire and Emergency Services Safety and Survival **3:3:0**

Introduces the basic principles related to the national firefighter life safety initiatives. This course covers the history and culture of fire service with specific focus on the need for cultural and behavior change throughout the emergency services. *Enrollment is restricted to students in the Fire Science Technology AAS. Pre/Co-requisite: FIRE 101 with a grade of C or higher; Eligibility for enrollment into ENGL 051; Recommended: GP 202.*

FIRE 105 - Building Construction for Fire Protection **3:3:0**

Covers the components of building construction related to firefighter and life safety. This course specifically addresses the elements of construction and design as key factors involved in building inspections, pre-planning of fire operations, and in successful operations during emergencies. *Prerequisite: ENGL 051, 057 or higher; or ESL 070 with grades of C or higher.*

FIRE 106 - Fire Behavior and Combustion **3:3:0**

Explores the theories and fundamentals encompassing the nature of fire - how and why they start, spread, and controlled. *Prerequisite: ENGL 051 or 057 or higher; or ESL 070 - all with grades of C or higher.*

FIRE 201 - Fire Protection Hydraulics and Water Supply **3:3:0**

Provides a basic foundation for the use of water in fire protection situations. Students are able to apply theoretical knowledge of hydraulic principles to analyze and to solve water supply problems. *Enrollment is restricted to students in the Fire Science Technology AAS. Prerequisite: FIRE 101 with a grade of C or higher; Completion of MATH 070, 080 or 090 (or MATH 022) with a grade of C or higher; or placement through the College Testing and Placement Program.*

FIRE 202 - Hazardous Materials Chemistry **3:3:0**

Covers basic chemistry fundamentals relating to categories of hazardous materials such as recognition, identification, reactivity, and health hazards encountered by emergency services personnel. *Prerequisite: ENGL 051 or 057 or higher; or ESL 070 - all with grades of C or higher.*

FIRE 203 - Fire Protection Systems **3:3:0**

Provides an overview of the design and operational features of fire alarm systems, water-based suppression systems, special hazard fire suppression systems, water supply for fire protection, and portable fire extinguishers. *Prerequisite: ENGL 051 or 057 or higher; or ESL 070 - all with grades of C or higher.*

FIRE 204 - Fire Investigation I **3:3:0**

Provides the student with the fundamentals and technical knowledge needed for conducting proper fire scene investigations. This course specifically addresses “origin” and “cause” recognition, preserving evidence, documentation, scene security, determining the motives of the fire setter, and the types of fire causes. *Enrollment is restricted to students in the Fire Science Technology AAS. Pre/ Co-requisite: ENGL 101 or 110 with a grade of C or higher.*

FIRE 207 - Educational Methodology **3:3:0**

Methods of teaching adults in fire service. Included are knowledge through identification of the five senses, principles of learning, lesson plans, and the components of an instructional objective. Application of skills is demonstrated through teaching with the use of lesson plans. Feedback from peers, instructors, and supervisory fire personnel is included to stimulate continually improved teaching without direct supervision. *Prerequisite: ENGL 101 or 110 with a grade of C or higher; FIRE 101.*

FIRE 209 - Fire and Emergency Services Administration **3:3:0**

Introduces students to the organization and management of a fire and emergency services department and its relationship to government agencies. The course emphasizes fire and emergency service, ethics, and leadership from the perspective of the company officer.

FIRE 210 - Strategy and Tactics **3:3:0**

Covers the principles of fire ground control through utilization of personnel, equipment, and extinguishing agents related to various emergency scenarios. Focus is on ground communication, pre-fire planning, and the roles and responsibilities and resource allocation in Incident Command Systems/National Incident Management Systems (ICS/NIMS). *Enrollment is restricted to students in the Fire Science Technology AAS.*

Film & Theatre

FMTH 101 - Introduction to Theatre **3:3:0**

Discusses the role that the performing arts plays within society dating back to primitive times through the present. Students explore the functions of actors, directors, researchers, designers, playwrights and audiences in a theatrical performance. (H&A)

FMTH 103 - Introduction to Acting **3:2:3**

Introduces students to the theory and techniques of the actor's art through exercises, improvisations, basic script analysis and exposure to live theatre and film. A course fee is required. *Prerequisite: Eligibility for enrollment into ENGL 101.* (H&A)

FMTH 104 - Acting II **3:2:3**

Covers the transition between exercises involving student actors' portrayal of self and their subsequent portrayal of characters. Course activities allow students to build an auditioning repertoire that can be used for audition purposes. A course fee is required. *Prerequisite: FMTH 103, 120 and 125 with grades of C or higher.*

FMTH 107 - Introduction to Film Production **3:2:3**

Introduces students to the basics of digital film and video production. This course presents fundamental elements of creative development, shooting, and editing. A course fee is required. *Co-Requisite: FMTH 111.*

FMTH 109 - The Art of the Cinema **3:3:0**

Explores film as an art form. This course focuses on the integration of the key fundamentals of filmmaking, such as cinematography, mise en scene, editing, and sound. Film theory and criticism are also discussed as a framework for understanding film and its significance. Students are then able to synthesize these foundational components, through shared viewing experiences, in order to critically analyze film. *Prerequisite: Eligibility for enrollment into ENGL 101 and completion of any reading courses required by the College Testing and Placement Program.*

FMTH 111 - The History of Film **3:3:0**

Investigates the development of film from the late nineteenth century to the present. This course emphasizes film genres, the people who encouraged or created those genres, and how cultural patterns have affected the history of film.

FMTH 120 - Voice for Actors I **1:1:1**

Introduces students to voice techniques that allow actors to develop a natural speaking voice for work, on stage and/or on-camera. This course also covers how to interpret written materials (e.g. scripts, novels, etc.) effectively. A course fee is required.

FMTH 121 - Voice for Actors II **3:2:3**

Introduces students to the International Phonetic Alphabet and dialects specifically intended for film and theatre. A course fee is required. *Prerequisite: FMTH 120 with a grade of C or higher.*

FMTH 125 - Movement for Actors I **1:1:1**

Covers basic movement for the actor and emphasizes motion and alignment. A course fee is required.

FMTH 126 - Movement for Actors II **2:1:3**

Presents the development of a character through whole-body movement that focuses upon period styles. This course also includes an introduction to the basic skills of unarmed combat. A course fee is required. *Prerequisite: FMTH 120 and 125 with grades of C or higher.*

FMTH 132 - Scenic Design for Film and Theatre **3:2:3**

Explores the aesthetics of scene design. Students are taught the fundamentals of construction, painting, drafting, and mounting used in film and theatre productions. A course fee is required. *Prerequisite: Completion of MATH 006 with a grade of C or higher; or placement through the College Testing and Placement Program.*

FMTH 133 - Theatre Makeup **3:2:3**

Studies the application of makeup, including straight, corrective and prosthetic types based on character analysis. The course emphasizes the design and implementation of special effects makeup, including life masks and casting of prosthetics. A course fee is required.

FMTH 134 - Costuming for Film and Theatre **3:2:3**

Introduces the study and practical application of costume construction techniques for film and theatre. The course covers fabric study, patterning, draping, fitting, and script analysis for film and theatre. *Prerequisite: Completion of MATH 006 with a grade of C or higher; or placement through the College Testing and Placement Program.*

FMTH 135 - Lighting for Film and Theatre **3:3:0**

Explores the art and the technology of lighting used in film and theatrical environments. Students are introduced to both the theory and practice of film and theatrical lighting technology and design. *Prerequisite: Completion of MATH 006 with a grade of C or higher; or placement through the College Testing and Placement Program. Co-requisite: FMTH 207.*

FMTH 147 - Practicum A **1:1:2**

Introduces students to theatre production through practical, hands-on experiences. This course is the first of three practicum experiences, in which students must participate in a HACC theatre production. A course fee is required. (FYS)

FMTH 148 - Practicum B **1:1:2**

Introduces students to theatre production through practical, hands-on experiences. This course is the second of three practicum experiences in which students must participate in a HACC theatre production. This course is open to all HACC students who meet the course prerequisite. A course fee is required. *Prerequisite: FMTH 147 with a grade of C or higher.*

FMTH 149 - Practicum C **1:1:2**

Introduces students to theatre production through practical, hands-on experiences. This course is the third of three practicum experiences in which students must participate in a HACC theatre production. This course is open to all HACC students who meet the course prerequisite. A course fee is required. *Prerequisite: FMTH 148 with a grade of C or higher.*

FMTH 203 - Acting III **3:2:3**

Uses the Meisner Technique to prepare students by means of exercise and projects to analyze plays, to develop characterizations, and to discuss pivotal scenes. This course also covers resumes, headshots, auditions, and interviews. A course fee is required. *Prerequisites: FMTH 104, 121 and 126 with grades of C or higher.*

FMTH 204 - Acting IV **3:2:3**

Studies the histrionic theories, techniques and performance practices of Period Acting. Period Acting includes the following styles: Greek, Commedia, Elizabethan, Restoration, Melodrama and Absurdism. A course fee is required. *Prerequisite: FMTH 203 with a grade of C or higher.*

FMTH 205 - Acting for the Camera **3:2:3**

Introduces students to the basic differences between the acting styles used in film versus those used in theatre. This course presents the fundamentals for auditioning and performing on-camera with specific focus on sight-reading, vocal quality, physical preparation, commercial presentation and scene work. *Prerequisites: FMTH 103, 104 or 203 with a grade of C or higher.*

FMTH 206 - Improvisation for the Actor **3:2:3**

Builds upon the skills acquired in previous acting courses. This course allows students to enhance their improvisational abilities through spontaneous action. A course fee is required. *Prerequisite: FMTH 103 with a grade of C or higher.*

FMTH 207 - Film Production II **3:2:3**

Covers the techniques of single camera video production from the pre-production phase to the post-production phase. A course fee is required. *Prerequisites: FMTH 107 and MUSB 227 with grades of C or higher. Co-requisite: FMTH 135 with a grade of C or higher.*

FMTH 212 - Modern American Theatre **3:3:0**

Studies six socially and culturally diverse plays by major American playwrights. Students examine the social, historical and cultural fabric of the theatrical voice of America through three main units: Theatre of Identity, Theatre of Protest, and Cross-Cultural Theatre. *Prerequisites: ENGL 101 and FMTH 101 or 103 with grades of C or higher.*

FMTH 220 - Writing for the Stage and Screen **3:3:0**

Focuses on the art and craft of writing for the stage and screen. This course covers the rules and conventions of the form, as well as the principles of storytelling central to the one act and short film formats. Students are directed, by the instructor, through the process of creating a script, from initial conception to completed work, that includes the creation and shaping of story ideas, script structure, character development and arcs. Students are also taught how to write visually, compelling scenes. *Prerequisite: ENGL 101 with a grade of C or higher.*

FMTH 226 - Theatre in London & Dublin **3:3:0**

Immerses students into the vibrant theatre cities of London, England and Dublin, Ireland. This course explores the significance of each city’s contribution to history and its corresponding development of theatre by attending professional performances, taking backstage tours and exploring historical sites. Highlights in England include Stratford-upon-Avon, Warwick Castle, Stonehenge, the British Museum, Westminster Abbey, the Globe Theatre, and the Tower of London. Ireland highlights include the Trim Castle, St. Patrick’s Cathedral, and Smock Alley Theatre. Students are allotted time to explore the cities on their own to pursue individual interests. A course fee is required.

FMTH 228 - Theatre in London **3:3:0**

Highlights the best of London – one of the epicenters of theatre. Students attend five performances and participate in the backstage tours of some of London's most prominent theaters. Students visit Stratford-upon-Avon (Shakespeare's birthplace), the reconstructed Globe Theatre, Westminster Abbey, St. Paul's Cathedral, the Tower of London, Stonehenge, the City of Bath, Warwick Castle, the British Museum, The British Library, and the Victoria and Albert Museums. Students are allotted time to explore the city on their own to pursue individual interests. A course fee is required.

FMTH 230 - Performing Arts in Prague **3:3:0**

Encompasses a ten-day exposure to the performing arts and culture of Prague. This course features unique theatrical conventions that include puppetry, dance and black light theatre. Students are also able to study different aspects of the architecture, history and social life of the Czech Republic. A course fee is required.

FMTH 233 - Special Effects Makeup for Film and Television **3:2:3**

Studies the application of special effects makeup and emphasizes its design and implementation for film and television productions. This course specifically covers character renderings, script breakdown, hand-laying facial hair, tattoos, bald caps, and prosthetic application based upon character analysis. A course fee is required.

FMTH 234 - FX Airbrushing for Film and Television **3:2:3**

Examines the application of airbrush makeup to create special effects commonly found in the film and television industry. This course focuses upon airbrush gun and compressor maintenance, as well as beauty, fantasy, full body, stencils and character renderings. A course fee is required.

FMTH 250 - Acting Capstone **3:3:0**

Provides students with the ability to develop, rehearse and present an approved capstone experience that demonstrates their full understanding of script and character analysis. With consultation of both theatre and film faculty, the capstone experience is completed under a strict timeline and reflects the student's comprehension of professional standards in the respective industry. *Prerequisites: FMTH 121, 132, 133, 134, 149, 203 and 205 with grades of C or higher. Co-requisites: FMTH 204 or 206 with a grace of C or higher.*

FMTH 252 - Technical Capstone **3:3:0**

Provides students with an opportunity to develop a professional, digital, technical portfolio. In consultation with film and theatre faculty and within a strict timeline, students propose, develop and present a final project that demonstrates their understanding of professional standards in the respective industry. *Prerequisites: FMTH 132, 134, 135, 205, 207 and 220 with grades of C or higher. Co-requisites: FMTH 233 or 234 and 291 with grades of C or higher.*

FMTH 291 - Internship **3:0:10**

Provides students with the opportunity to gain valuable real-world experience, carefully chosen for optimal career exposure. This course allows students to apply the knowledge and skills taught in film and theatre courses directly to their desired area of specialization, for a total of 135-hours during a semester. The course emphasizes experiential learning, bolsters professional development and promotes the application of skills in the workplace. Students submit a final comprehensive reflective report that documents the main achievements of their internship experience. *Prerequisite: Completion of 37 credits of FMTH coursework, or permission of the Instructor.*

French

FRCH 101 - Elementary French I **4:4:0**

Covers the fundamentals of French grammar. This course addresses drill-in structure, pronunciation, and the development of vocabulary. Aural-oral and reading skills are also introduced. *Prerequisite: Eligibility for enrollment into ENGL 101*. (H&A)

FRCH 102 - Elementary French II **4:4:0**

Continues FRCH 101 competencies in grammar, pronunciation, and vocabulary. Aural-oral and reading skills are reinforced in the classroom. *Prerequisite: FRCH 101 or placement into the course by examination.* (H&A)

FRCH 201 - Intermediate French I **4:4:0**

Reviews the fundamentals of French grammar. This course focuses on practice in conversation and composition. Students engage in the extensive reading and analysis of those works acknowledged to be of both cultural and literary merit. *Prerequisite: FRCH 102 or equivalent with a grade of C or higher.* (H&A)

FRCH 202 - Intermediate French II **4:4:0**

Continues FRCH 201 competencies with further practice in oral and written skills and the continued reading and analysis of those works acknowledged to be of both literary and cultural merit. *Prerequisite: FRCH 201 or equivalent, with a grade of C or higher*. (H&A)

Foundational Studies

FS 100 - College Success **3:3:0**

Aids students in a successful transition to college-level courses. This first-year experience course is designed to help students with goal-setting, time management, accessing college resources, strengthening their study skills, and information literacy. Additional “tools for success” are also integrated into this course. A course fee is required.

FS 101 - Career Development and Decision Making **3:3:0**

Explores the process of career and decision-making. This course covers career planning, World-of-Work exploration, self-awareness, occupational research, and goal setting. This is a personalized, interaction-based course that utilizes short lectures, group exercises, personal assessments, audio-visual aids, and field interviews to accomplish the objectives. A course fee is required. *Prerequisite: Eligibility for enrollment into ENGL 002 or higher, and ENGL 051 or higher, as a result of the College Testing and Placement Program.* (FYS)

FS 102 - Introduction to the College Experience **1:1:0**

Provides an introduction to college learning and experiences. Students are taught about life planning, self-management, goal setting, understanding college technology, resources and policies, as well as other academic strategies. (FYS)

FS 103 - College Success for Online Students **3:3:0**

Aids students in a successful transition to college-level coursework and the online environment. This first-year experience course is designed to help students with goal-setting, time management, accessing college resources, strengthening study skills, and information literacy. Additional "tools for success" are also integrated into the course. *Prerequisite: Reading placement higher than ENGL 003 (no developmental reading is required based upon the placement scores through the College Testing and Placement Program) and placement into ENGL 051, or higher.* (FYS)

FS 130 - Promoting Academic Success **1:1:0**

Assists students with disabilities in the transition to college. Students become aware of disability laws and the types of technology available to assist them. In addition, students become more knowledgeable of HACC's various campus locations and, specifically, the programs, policies, and services. Skills designed to help students succeed and cope with college are also introduced.

Geography

GEOG 101 - Physical Geography **3:3:0**

Elements of the physical environment - climate, vegetation, soil, and landforms - with particular emphasis on conservation of resources and the nature and distribution of geographical regions.

GEOG 201 - World Geography **3:3:0**

Introduction to the world's cultural regions (Europe, Asia, Middle East, Africa, Anglo and Latin America), their interactions and interdependence (migrations, conflict, commerce), and the relationship between their respective human aspects (settlements, culture, economics, political systems) and natural aspects (climate, soils, vegetation, landforms, resources). (S&BS)

GEOG 230 - Introduction to Human Geography **3:3:0**

A survey of human settlement patterns and cultural activities throughout the world. Special emphasis is placed on the patterns of human distribution, adjustments to the natural environment, and the land use practices. (S&BS).

Geology

GEOL 101 - Physical Geology **4:3:3**

Studies the composition of the earth and the physical processes which tend to alter and shape its surface. Laboratory sessions include field trips through central and eastern Pennsylvania, the identification of common rocks and minerals, and the study and interpretation of topographic and geologic maps. A course fee is required. (SCI/LAB)

GEOL 101H - Honors Physical Geology **4:3:3**

Studies the composition of the earth and the physical processes which tend to alter and shape its surface. Laboratory sessions include field trips through central and eastern Pennsylvania, the identification of common rocks and minerals, and the study and interpretation of topographic and geologic maps. Using a seminar or discussion-based approach, this course encourages independent, creative and critical inquiry and prepares students for the practical application of information by emphasizing effective research strategies and technologies congruent with the field of study. A course fee is required. *Prerequisite: Completion of all developmental reading and writing courses required as a result of the College Testing and Placement Program.* (SCI/LAB)

GEOL 102 - Historical Geology **4:3:3**

Examines the geologic history of the earth. This course specifically covers the development of plant and animal life through geologic time and the development of various rock formations, as well as studies the past, present, and possible future environments of man and the integration of geologic findings with those of other sciences. Several field trips through central and eastern Pennsylvania are taken as part of the laboratory experiences. A course fee is required. (SCI/LAB)

GEOL 201 - Environmental Geology **4:3:3**

Studies geologic resources and processes, impact of geo-environmental processes on humans, and human interaction with Earth's geologic resources by engaging scientific principles, concepts, and methods. This course explores how geology relates to diverse human experiences, international

politics, social costs, and world economics. Topics include: geologic processes and tectonics; surface geologic processes; mineral and energy resources; mining and land-use impacts; water resource use and pollution; and geologic data analysis. Laboratory and field trips are part of the course. A course fee is required. *Prerequisite: Completion of all developmental reading and writing courses required as a result of the College Testing and Placement Program. Co-requisite: MATH 033 (or MATH 020).* (SCI/LAB)

GEOL 201H - Honors Environmental Geology **4:3:3**

Studies geologic resources and processes, impact of geo-environmental processes on humans, and human interaction with Earth's geologic resources by engaging scientific principles, concepts, and methods. This course explores how geology relates to diverse human experiences, international politics, social costs, and world economics. Topics include: geologic processes and tectonics; surface geologic processes; mineral and energy resources; mining and land-use impacts; water resource use and pollution; and geologic data analysis. Using a seminar or discussion-based approach, this course encourages independent, creative and critical inquiry and prepares students for the practical application of information by emphasizing effective research strategies and technologies congruent with the field of study. Laboratory and field trips are part of the course. A course fee is required. *Prerequisite: Completion of all developmental reading and writing courses required as a result of the College Testing and Placement Program. Co-requisite: MATH 033 (or MATH 020).* (SCI/LAB)

Gerontology

GERT 100 - Introduction to Gerontology - Overview **1:1:0**

Provides an introduction to the study of gerontology, relevant aging resources, and health promotion. This course focuses on socio-demographic trends, ageism, longevity, the geriatric workforce, health care and social policy issues, and health behavior, as well as gender, race, and ethnicity aging issues.

GERT 101 - Introduction to Gerontology - Social Services **1:1:0**

Provides an overview of the ways in which social services are provided to and utilized by older persons. This course focuses on selected health education topics, community health organizations, health promotion programs, volunteerism, advocacy, public health, and cultural diversity in the aging population. The history of social services for the aging is also covered.

GERT 102 - Introduction to Gerontology - Allied Health **1:1:0**

Provides an overview of the physiology and pathology of aging. The course addresses clinical preventive services, nutritional needs and aging, exercise and aging, and weight management and aging. Attention is given to diversity issues such as gender, race, ethnicity, and the socio-economic status of elderly populations.

GERT 103 - Introduction to Gerontology - Psychosocial Issues **1:1:0**

Provides an overview of mental health and aging. This course specifically addresses psychiatric and organic mental disorders maintenance and the enhancement of mental function later in life, complementary and alternative medicine, caregivers, diverse social support systems, depression, Alzheimer's Disease and dementia, and stress management.

GERT 104 - Introduction to Gerontology - Service Learning **1:1:0**

Provides students with the opportunity to volunteer two hours per week – totaling 20 hours - in a long-term care setting. The focus of this course is to allow a student to develop a personal relationship with an aging individual. Through journaling and course discussions, the student is able

to reflect upon the implications of their experience, develop enhanced communication skills with an older adult, and analyze the collaboration and communications among health care professionals and their clients.

GERT 105 - Careers in Gerontology **1:1:0**

Examines and explores all of the possible careers in the field of gerontology. This course focuses on career positions, salaries, job responsibilities, and roles/functions in areas of aging such as advocates, direct service providers, educators/trainers, managers/administrators, marketers or product developers, program planners or evaluators, and researchers. Topics also include discussions on both traditional and emerging career paths and positions in new sub-fields of gerontology.

GERT 200 - Law, Ethics, and Aging **3:3:0**

Addresses both the traditional and current legal and ethical issues that impact the elderly in American society. Topics include informed consent, medical record keeping, healthcare financing, elder abuse and neglect, representative decision-making, and end-of-life issues. *Prerequisite: GERT 100, 101, 102 or 103 with a grade of C or higher; Or permission of the Instructor.*

GERT 201 - Social Aspects Aging **3:3:0**

Provides knowledge of the field of social gerontology with focus on the impact that social and socio-cultural conditions have on the process of aging. This course emphasizes social problems of aging and the impact that aging has on an individual. Specific topics include: the growth of gerontology; global aging; biological theories of aging; the social aspects of physical aging; managing chronic diseases; cognitive, personality and mental health issues in old age; sexuality and aging; social theories of aging; and social policies and programs. Gender, ethnicity, culture, race, and economic status and aging are also discussed. *Prerequisite: GERT 100, 101, 102 or 103 with a grade of C or higher.*

GERT 211 - Women and Aging **3:3:0**

Studies the status, roles, and experiences of women in society with a special focus on aging. This course introduces students to how gender roles impact society by studying women's lives with regard to race, culture, socioeconomic status, sexuality, work, families, religion, politics, health, and social reform. In addition, this course discusses the social construction of gender and social institutions, using feminist theory, and the history of the women's movement.

GERT 215 - Aging around the World **3:3:0**

Explores major concepts in gerontology worldwide, such as the challenges and opportunities presented by population aging and the universal and unique aspects of aging that span cultures and nations. Topics are examined from a comparative, cross-national perspective and include: developed/developing nation status; political systems; health care and long-term care provision; employment/retirement; and formal and informal support systems.

GERT 220 - Caregiving and Aging **3:3:0**

Examines and explores all the aspects of caregiving for older adults. This course focuses on six main principles of caregiving for older adults that includes legal, financial, living environment, social, medical, and spiritual. Special topics are explored in-depth, including caregiving for older adults with Alzheimer's disease, related dementias, and memory loss.

GERT 225 - Long-Term Care Leadership and Management **3:3:0**

Examines the changing landscape of long-term care and the issues and trends that impact the administration and management of long-term care settings. This course focuses on best practices and model programs for maximizing quality of care; tools, strategies and benchmarks for leaders; and the facilitation of partnerships with family, staff, and community.

GERT 232 - Death and Dying **3:3:0**

Identifies and discusses attitudes and feelings toward death so as to examine and experiment with the common defense mechanisms of dying persons. This course acquaints students with the typical psychological stages of the terminally ill and exposes them to the reality of human finiteness. Other topics include: cultural attitudes and behavior regarding death, mourning rituals, ethics, and children and death. *Prerequisite: GERT 100, 101, 102 or 103 with a grade of C or higher.*

Geographic Information Services

GIS 141 - Introduction to Geospatial Technology **3:2:3**

Introduces students to the fundamentals of Geospatial Technology including concepts and use of Geographic Information Systems (GIS), a brief overview to the use of Global Positioning Systems (GNSS/GPS), cartography and visualization, remote sensing, and spatial analysis through use of professional grade GIS software exercises. Students are taught how geospatial technology is used in business, industry and government. A course fee is required. (S&BS)

GIS 141H - Honors Introduction to Geospatial Technology **3:2:3**

Introduces students to the fundamentals of Geospatial Technology including concepts and use of Geographic Information Systems (GIS), a brief overview to the use of Global Positioning Systems (GNSS/GPS), cartography and visualization, remote sensing, and spatial analysis through use of professional grade GIS software exercises. Students are taught how geospatial technology is used in business, industry and government. Using a seminar or discussion-based approach, this course encourages independent, creative and critical inquiry and prepares students for the practical application of information by emphasizing effective research strategies and technologies congruent with the field of study. A course fee is required. *Prerequisite: Completion of all developmental reading and writing courses required as a result of the College Testing and Placement program.* (S&BS)

GIS 165 - Geospatial Programming **3:2:3**

Provides students with theory and hands-on experience in customizing geographic information system (GIS) software applications by way of modified service interface elements. This course discusses the theory and implementation of the various scripting languages currently in use within the industry. Students are able to apply the theory to solve geospatial problems and streamline GIS workflows through the creation and modification of scripts. A course fee is required. *Prerequisite: GIS 141 with a grade of C or higher.*

GIS 201 - Professional Issues **1:1:0**

Covers the professional practice of geospatial technology. Topics include history, scope, and trends in geospatial technology, professional ethics and expectations, career options, team participation, and professional communications. (FYS)

GIS 204 - Cartographic Design **3:2:3**

Applies the fundamental concepts of cartographic design. This course allows students to utilize design principles to create and edit effective visual representations of data (e.g. maps, graphs and diagrams) in different formats (e.g. hardcopy, digital, web). Specific topics include the ethical and

appropriate application of map scale, map projections, generalization, and symbolization. A course fee is required. *Prerequisite: GIS 141 with a grade of C or higher; or permission of the Instructor.*

GIS 205 - Data Acquisition and Remote Sensing **4:3:3**

Presents remote sensing techniques to the study of the Earth's landscape. This course discusses the physical principles on which remote sensing is based, as well as its history and future trends, sensors and their characteristics, image data sources and image classification, and interpretation and analysis techniques. Students are able to perform remote sensing workflows, such as change detection and image processing. A course fee is required. *Prerequisite: GIS 141 with a grade of C or higher; or permission of the Instructor.*

GIS 221 - Web GIS **3:2:3**

Instructs students how to build, configure, and share web mapping applications. Students are taught how to integrate desktop, cloud, and mobile geographic information system (GIS) applications, as well as be exposed to various web GIS deployment models. A course fee is required. *Pre/Co-requisite: GIS 141 with a grade of C or higher.*

GIS 275 - Spatial Analysis **4:3:3**

Builds on the concepts and problem-solving skills taught in prior geographic information system (GIS) courses and aids students in the interpretation and analysis of spatial data to determine solutions for a variety of geospatial sectors. The lectures and laboratory exercises cover advanced technical issues in GIS including complex data issues, databases, spatial modeling and analysis, elevation and terrain modeling, geographic analysis, and GIS management. A course fee is required. *Prerequisite: GIS 141 and 204 with grades of C or higher; or permission of the Instructor.*

GIS 291 - Internship in Geospatial Technology **3:0:15**

Provides students with the opportunity to gain work experience through working a minimum of 225 hours in a supervised setting. In this environment, students are exposed to the same procedural, professional, and ethical issues faced by geospatial technicians on the job. Each internship experience is tailored to the student's major and/or interests and is overseen by either the faculty or internship supervisor. Students are required to present a summary of their experiences. *Enrollment is restricted to students in the Geospatial Technology AS program. Prerequisite: GIS 141 with a grade of C or higher.*

German

GRMN 101 - Elementary German I **4:4:0**

Covers the fundamentals of German including drill-in grammar competency, pronunciation, vocabulary, and application. Aural-oral reading skills are also introduced. *Prerequisite: Eligibility for enrollment into ENGL 101 and completion of any reading courses required by the College Testing and Placement Program.* (H&A)

GRMN 102 - Elementary German II **4:4:0**

Continuation of GRMN 101 with increased emphasis on speaking and reading. *Prerequisite: GRMN 101 or equivalent with a grade of C or higher.* (H&A)

GRMN 201 - Intermediate German I **4:4:0**

Review of the fundamentals of German grammar, practice in conversation and composition; extensive reading and analysis of works of acknowledged cultural and literary merit. *Prerequisite: GRMN 102 or equivalent.* (H&A)

GRMN 202 - Intermediate German II **4:4:0**

Continuation of GRMN 201. Further practice in oral and written skills; continued reading of works of literary and cultural merit. *Prerequisite: GRMN 201 or equivalent.* (H&A)

General Technology

GTEC 101 - Safety: OSHA-30 & NFPA-70E **3:3.5:0**

Provides essential knowledge of industry standard safety practices for industrial environments. This course covers electrical and workplace safety standards as set forth by the National Fire Prevention Association (NFPA) and the Occupational Safety and Health Administration (OSHA). Students earn an OSHA-30 General Industry Card through successful completion of this course.

GTEC 104 - Engineering Materials and Processes **3:2:3**

Addresses the mechanical properties of materials used in manufacturing. This course explores the basic principles of materials selection, manufacturing processes, and the relationship of materials to manufacturing methods. Material properties are examined in laboratory sessions with destructive and nondestructive tests. A course fee is required.

GTEC 105 - Customer Service **1:1:0**

The skills required to communicate effectively and efficiently with customers and the overall importance of good customer service to the company. Sound customer service decisions, accuracy in documentation and reporting, and the importance of personal and workplace appearances are also covered.

GTEC 106 - Introduction to Manufacturing **3:2:3**

Modern manufacturing principles and processes. This survey course includes business planning, forecasting, master scheduling, master resource planning, and just-in-time manufacturing. Students become familiar with local manufacturing companies. The course is divided into three parts. Part I includes classroom discussion and exercises on the evolution of the manufacturing industry and manufacturing economics. Part II consists of laboratory activities and observations at participating manufacturing companies. Part III is follow-up classroom discussion and exercises focusing on critical workplace skills (attendance, punctuality, communication, teamwork, resume writing, and interview skills). A course fee is required.

GTEC 110 - Construction Print Reading **3:3:0**

Introduces construction print reading fundamentals. The course focuses on reading basic construction drawings and specifications and recognizing and interpreting architectural, mechanical, and electrical symbols commonly found in both residential and commercial applications.

GTEC 201 - Statics **3:4:0**

Addresses force systems on rigid bodies and their response to the applied forces. This course analyzes the equilibrium of planar and non-planar force systems, centroids, and moments of inertia. Algebra and trigonometry are used to solve applied examples. *Prerequisite: MATH 103 or 116; and 104 with grades of C or higher.*

GTEC 202 - Statistical Quality Control **3:3:0**

Analyzes manufacturing effectiveness through the application of fundamental statistical concepts to production processes. Control charting, including mean (X) and range (R) charts, are studied and applied as a technique to improve productivity through the analysis of process variability. *Prerequisite: Completion of MATH 080 or 090 (or MATH 033) with grade of C or higher; or placement through the College Placement and Testing Program.*

GTEC 208 - Strength of Materials Lab **1:0.25:2.2**

Laboratory exercises to support theory of CVTE 208. Labs include measurement of mechanical properties of materials, and structural testing. A course fee is required. *Prerequisite: GTEC 201 with a grade of C or higher.*

History

HIST 101 - World History to 1500 CE **3:3:0**

Provides an overview of the historical development and interrelationships of the major population centers of Asia, Africa, Europe, and the Americas from Neolithic times to 1500 CE. Using a thematic approach, this course observes the political, economic, social, and cultural characteristics of the various regional groups chosen for study. Important ideas, significant persons, and world views are described in the context of each theme. (S&BS)

HIST 101H - Honors World History to 1500 CE **3:3:0**

Provides an overview of the historical development and interrelationships of the major population centers of Asia, Africa, Europe, and the Americas from Neolithic times to 1500 CE. Using a thematic approach, this course observes the political, economic, social, and cultural characteristics of the various regional groups chosen for study. Important ideas, significant persons, and world views are described in the context of each theme. Using a seminar or discussion-based approach, this course encourages independent, creative and critical inquiry and prepares students for the practical application of information by emphasizing effective research strategies and technologies congruent with the field of study. *Prerequisite: Completion of all developmental reading and writing courses required as a result of the College Testing and Placement program*. (S&BS)

HIST 102 - World History: 16th Century to the Present **3:3:0**

Provides an overview of the historical development and interrelationships of the major population centers of the world from the 16th century to the present. This course observes the political, economic, social and cultural characteristics of the various regional groups chosen for study. Significant people, their ideas, accomplishments, and/or types of expression are described in the context of each region. (S&BS)

HIST 102H - Honors World History: 16th Century to the Present **3:3:0**

Provides an overview of the historical development and interrelationships of the major population centers of the world from the 16th century to the present. This course observes the political, economic, social and cultural characteristics of the various regional groups chosen for study. Significant people, their ideas, accomplishments, and/or types of expression are described in the context of each region. Using a seminar or discussion-based approach, this course encourages independent, creative and critical inquiry and prepares students for the practical application of information by emphasizing effective research strategies and technologies congruent with the field of study. *Prerequisite: Completion of all developmental reading and writing courses required as a result of the College Testing and Placement program.* (S&BS)

HIST 103 - History of the United States I **3:3:0**

Covers the history of the United States from Indigenous America to the year 1865. This course examines the major events, as well as the individuals, that played a significant role in the development of the United States during this time period. Special attention is paid to the following topics: Indigenous America, European Conquest and Settlement, the Slave Trade and African Diaspora in America, the Atlantic Economy, Imperial Conflicts in North America, America and the Revolution, the New Republic, Jacksonian America, Westward Expansion, Civil Rights and Reform in Early America, and A Divided Union and the American Civil War. (S&BS)

HIST 103H - Honors United States to 1865 **3:3:0**

Covers the history of the United States from Pre-European colonization to the year 1865. This course examines the major events, as well as the individuals, that played a significant role in the development of the United States during this time period. Special attention is paid to the following topics: Native America, European Conquest and Settlement, the Atlantic Economy, Imperial Conflicts in North America, America and the Revolution, the New Republic, Jacksonian America, Westward Expansion, Antebellum America, and A Divided Union and the American Civil War. Using a seminar or discussion-based approach, this course encourages independent, creative and critical inquiry and prepares students for the practical application of information by emphasizing effective research strategies and technologies congruent with the field of study. *Prerequisite: Completion of all developmental reading and writing courses required as a result of the College Testing and Placement Program.* (S&BS)

HIST 104 - United States History: 1865 to the Present **3:3:0**

Covers the history of the United States from 1865 to the present. This course examines the major events, as well as the individuals, that played a significant role in the development of the United States during this time period. Special attention is paid to the following topics and themes: Civil War Reconstruction, African American Agency in Post-War America, and the Rise of Jim Crow; Industrialization, Labor, and the Gilded Age; Conflicts, Conquest, and Change in the West; United States Foreign Policy and Imperialism; Populism and the Progressive Era; World War I and a Global Pandemic; The Great Migration, the 1920s; the Great Depression and the New Deal; World War II; the Cold War and the Vietnam Era; the Struggles for Civil Rights; The Conservative Ascendance; the 1990s and the New Democrats; Globalization and Technology; and the Twenty-First Century. (S&BS)

HIST 107 - Contemporary American History **3:3:0**

Covers the history of the United States from the year 1918 to the present. This course examines the significant events, as well as the individuals, that contributed to the development of the United States during this time period. Special attention is given to the following topics: The United States and World War I; The Roaring 20's; The Great Depression and the New Deal; World War II; The Cold War; Vietnam; The Civil Rights Movement; Rising Power of American Conservatism, The Clinton Era; Globalization, and a "Post 9/11 World." In addition, emphasis is placed on the United States' political, social, and economic development throughout the past 100 years. (S&BS)

HIST 110 - America in Vietnam **3:3:0**

Provides a survey of Vietnamese history and the causes surrounding the United States' involvement in war with that country during the 20th century. This course emphasizes Southeast Asia and the United States in the context of what was occurring during World War II through the "fall of Saigon." Special attention is given to America's conduct during the conflict, US civil unrest related to the war, and the ultimate results that the war had on both the United States and Southeast Asia.

HIST 111 - Twentieth Century Europe **3:3:0**

Introduces students to an overview of European history during the 20th and 21st centuries. This course covers the historical development of the major European countries and their interaction with each other, as well as the rest of the world. Special focus is placed on World War I, Fascism, Nazism, Communism, World War II, the Cold War, the collapse of Imperialism, the fall of the Soviet Union, and the growth of the European Union.

HIST 120 - Military History of World War II **3:3:0**

Provides an introductory survey of World War II military strategy and operations used on the European, African, and Asian fronts - beginning with Hitler's 1939 invasion of Poland and ending with the Japanese surrender six years later. Attention is given to the causes and results of the war with special emphasis placed on decisive battles, important military leaders, and various Allied and Axis weapons.

HIST 161 - The American Civil War and Reconstruction **3:3:0**

Provides a detailed examination of America's Civil War beginning in 1860 and continuing through to the conclusion of Reconstruction in 1877. This course emphasizes the causes of the war, political and military development of the Union and Confederacy, economic and technological developments, key leaders and battles, and the social consequences of the conflict.

HIST 201 - Western Civilization I **3:3:0**

Explores the growth of European Civilization from Prehistory to the 16th Century. This course discusses Ancient Near Eastern Civilizations, the origins of western religions, the Greco-Roman World, Medieval Europe, the Renaissance and the Reformation, and Global Exploration. Special attention is paid to the significant people and the events they were part of that demonstrate how their influence impacted history on a global perspective. (S&BS)

HIST 202 - Western Civilization II **3:3:0**

Explores the growth of European Civilization from the 15th Century to the present. This course discusses religious upheavals, global exploration and colonization, the Enlightenment and its revolutions, industrialization, the formation of Nation-States, the World Wars, the Atomic Age, and the future of the west. Special attention is paid to the significant people and the events they were part of that demonstrate how their influence impacted history on a global perspective. (S&BS)

HIST 205 - African American History **3:3:0**

Studies the unique history and contributions of African Americans from their time in Africa to the present. This course emphasizes African Kingdoms and the Transatlantic Slave Trade; slavery in the Americas; Abolitionism, the free African American experience and the Civil War; emancipation and segregation; African American intellectualism; the modern freedom struggle, social justice, and protest movements of the present; and African American popular culture.

HIST 207 - Greek and Roman History **3:3:0**

Provides an overview of the multi-faceted contributions that both the ancient Greeks and Romans have brought to history. Course topics begin with the historical development of ancient Greece and concludes with the fall of the Roman Empire. Minoans and Myceneans, rise of the City-State, Persia-Epic Clash, the Peloponnesian War, Alexander, the Rise of Rome, Hail Caesar, and the Barbarians are many of the topics addressed. The focus of this course observes the political, economic, social and cultural characteristics of these societies during this time in history.

HIST 214 - A History of the Middle East **3:3:0**

Introduces students to the history, religious diversity, political systems, economy, and culture of the Middle East. This course covers the contents, similarities, and diversities of Middle Eastern culture by briefly examining ancient Middle Eastern civilizations and their historical impacts while also exploring the important historical junctures influencing the region today.

HIST 218 - Hitler and Nazi Germany **3:3:0**

Provides students with an in-depth study of German history from the period 1920-1945. This course emphasizes the German social, political, and economic history in relation to the rise and fall of Nazism. Topics include the Jewish Holocaust, Hitler's character, the structure and solidarity of the Nazi State, Nazi propaganda and its use, the Nazi plan for a New World Order, and World War II and its aftermath.

HIST 221 - History of England **3:3:0**

A general historical survey of England from Roman times to the present. Key events and persons are studied by examining the sites and structures in southern England and London that are associated with them. This course is part of the College's international educational program and is taught in England. A course fee is required.

Health

HLTH 101 - Healthful Living **3:3:0**

Studies the lifestyle factors and healthy choices that promote the dimensions of wellness and maintain the present and future health of the individual and the community. This course emphasizes health-related behavior change, risk factor reduction, and disease prevention, as well as explores such topics as: Psychological Health, Stress Management, Nutrition, Physical Activity, and Exercise. (W)

Honors Studies

HONS 101H - Honors Foundation Seminar: Education as Critical Inquiry **3:3:0**

Uses education as the primary subject of critical inquiry. This course provides students with an environment in which to examine themselves and the world around them in order to develop their own personal philosophy and perspective on community, government, global issues, and technology. Collaborative learning and skills related to research, writing, rubric development, and presentations are emphasized. Bias, persuasion, and propaganda; technology and the culture of science; and mass media and the arts are also examined. Using a seminar or discussion-based approach, this course encourages independent, creative, and critical inquiry and prepares students for the practical application of information by emphasizing effective research strategies and technologies congruent with the field of study. *Prerequisite: Completion of all developmental reading and writing courses required as a result of the College Testing and Placement program.* (FYS)

HONS 250H - Honors Capstone Seminar: An Inquiry into Meaning, Value, and Self **3:3:0**

Encourages student reflection on accomplishments within their individual academic pursuits. This course is designed to challenge students to envision their future through critical inquiry and promotes the consideration of value and meaning in their own lives, as well as within wider cultural, social, and historical contexts. In addition, this course examines the possibilities of a meaningful life lived through thought, commitment, and expression. Students reflect upon their Honors program experiences through the analysis and presentation of their program electronic portfolios. Using a seminar or discussion-based approach, this course encourages independent, creative, and critical inquiry and prepares students for the practical application of information by emphasizing effective research strategies and technologies congruent with the field of study. *Prerequisite: HONS 101H with a grade of C or higher.*

Hospitality and Tourism Management

HTMT 101 - Introduction to the Hospitality Industry **3:3:0**

Discusses the background and scope of the hospitality industry. The course outlines the various types of hotels/lodging and food/beverage establishments, as well as travel and hospitality

organizations and their individual organizational structures. In addition, future trends and career opportunities within the hospitality industry are discussed. (FYS)

HTMT 214 - Hotel/Lodging Operations I **3:3:0**

Presents the principles of organization, management, and decision models that apply to the tasks and challenges of hotel/lodging operations from the manager's perspective. This course discusses techniques of problem solving (including planning, organizing, directing and controlling operations) in areas of front office operations, housekeeping, sales/marketing and food/beverage personnel. *Prerequisite: HTMT 101 with a grade of C or higher.*

HTMT 216 - Hotel/Lodging Operations II **3:3:0**

Provides students with an advanced analysis of organization, management, and decision models that focus on the tasks and challenges of hotel operations from the mid-level to the General Manager's (GM) perspective. This course teaches students strategic solutions (including planning, organizing, directing and controlling operations) in areas of revenue management, accounting, human resources, housekeeping, facilities, and security. *Prerequisite: HTMT 214 or 218 with grades of C or higher.*

HTMT 218 - Food/Beverage Operations I **3:3:0**

Introduces principles of organization, management, and decision models, applied to the tasks and challenges of food/beverage management, from the manager's perspective. This course presents and discusses the techniques of problem solving (including planning, organizing, directing and controlling operations) in areas of food/beverage purchasing, food/beverage costs, labor control, inventory control, and menu management. *Prerequisite: HTMT 101 with a grade of C or higher.*

HTMT 220 - Food/Beverage Operations II **3:3:0**

Provides students with an advanced analysis of organization, management, and decision models, which focus on the tasks and challenges of food/beverage management from the mid-level to upper level manager's perspective. This course teaches students strategic solutions (including planning, organizing, directing and controlling operations) in areas of human resource management, revenue management, accounting, facilities maintenance and management, contract negotiations, sales and marketing. *Prerequisite: HTMT 214 or 218 with grades of C or higher.*

HTMT 270 - Meeting and Events Management **3:3:0**

Provides an overview of the event planning industry. including various types of meetings and events, site location and suitability, logistics of the planning process, market and sales research, and careers opportunities.

Humanities

HUM 101 - Introduction to Humanities **3:3:0**

Broadens the students' perception of and appreciation for the humanities of the world by exploring the contribution of the arts to the individual and to society. Emphasis is given to developments in such areas as the visual, performing, and literary arts. Concepts basic to a systematic understanding of the humanities in relation to everyday life are examined through a variety of media and aesthetic experiences. *Prerequisite: Eligibility for enrollment into ENGL 101; Or permission of the Instructor.* (H&A)

HUM 101H - Honors Introduction to Humanities **3:3:0**

Broadens the students' perception of and appreciation for the humanities of the world by exploring the contribution of the arts to the individual and to society. Emphasis is given to developments in

such areas as the visual, performing, and literary arts. Concepts basic to a systematic understanding of the humanities in relation to everyday life are examined through a variety of media and aesthetic experiences. Using a seminar or discussion-based approach, this course encourages independent, creative and critical inquiry and prepares students for the practical application of information by emphasizing effective research strategies and technologies congruent with the field of study. *Prerequisite: Completion of all developmental reading and writing courses required as a result of the College Testing and Placement Program.* (H&A)

HUM 114 - Chinese Arts and Culture **3:3:0**

An overview of Chinese culture as revealed in religion, art, literature, drama, music and film.

HUM 115 - Architecture: Aesthetics and History **3:3:0**

Provides a chronological survey of architectural development throughout the world with an emphasis on how differing geographic, climatic, religious, cultural, philosophical and social influences affected the design of structures. This course also seeks to create an awareness and an appreciation of the built environment as it examines architecture as both a cultural phenomenon and an artistic and technological achievement. Function, structural principles, and elements of design are also covered. *Prerequisite: Eligibility for enrollment into ENGL 101 and completion of any reading courses required by the College Testing and Placement Program*. (H&A)

HUM 116 - Introduction to Lesbian and Gay Studies **3:3:0**

An introductory interdisciplinary course in lesbian and gay studies. Emphasis is on literature, popular culture, and psychological and sociological perspectives in the field. *Prerequisite: Eligibility for enrollment into ENGL 101 and completion of any reading courses required by the College Testing and Placement Program*.

HUM 117 - Architecture Through the Ages: Prehistory to the Gothic Period **3:3:0**

Provides a chronological survey of architectural development from Prehistory to the Gothic period. The course discusses architecture throughout the world with an emphasis on the relationship between architecture and geographic, climatic, religious, cultural, economic, philosophical and social influences. In addition, this course seeks to create an awareness and an appreciation of the built environment through the examination of architecture as both a cultural phenomenon and an artistic and technological achievement. Function, structural principles, and elements of design are also covered. *Prerequisite: Eligibility for enrollment into ENGL 101 and completion of any reading courses required by the College Testing and Placement Program.* (H&A)

HUM 118 - Architecture Through the Ages: Renaissance Period to the Present **3:3:0**

Provides a chronological survey of architectural development from the Renaissance period to the present. This course discusses architecture throughout the world with an emphasis on the relationship between architecture and geographic, climatic, religious, cultural, economic, philosophical and social influences. In addition, this course seeks to create an awareness and an appreciation of the built environment through the examination of architecture as both a cultural phenomenon and an artistic and technological achievement. Function, structural principles, and elements of design are also covered. *Prerequisite: Eligibility for enrollment into ENGL 101 and completion of any reading courses required by the College Testing and Placement Program*. (H&A)

HUM 201 - World Mythology **3:3:0**

A cross-cultural consideration of the great myths of the world, including creation, fertility, and hero myths. The myths will be studied as unique expressions of individual cultures and also as universal ideas. *Prerequisite: Eligibility for enrollment into ENGL 101; Or permission of the Instructor.* (H&A)

HUM 201H - Honors World Mythology **3:3:0**

A cross-cultural consideration of the great myths of the world, including creation, fertility, and hero myths. The myths will be studied as unique expressions of individual cultures and also as universal ideas. Using a seminar or discussion-based approach, this course encourages independent, creative and critical inquiry and prepares students for the practical application of information by emphasizing effective research strategies and technologies congruent with the field of study. *Prerequisite: Completion of all developmental reading and writing courses required as a result of the College Testing and Placement Program.* (H&A)

HUM 202 - Classical Mythology **3:3:0**

Surveys the classical myths of Greece and Rome, as well as, the foundation narratives of Western culture, literature, art and discourse. *Prerequisite: Eligibility for enrollment into ENGL 101 through the College Testing and Placement Program.* (H&A)

HUM 202H - Honors Classical Mythology **3:3:0**

Surveys the classical myths of Greece and Rome, as well as, the foundation narratives of Western culture, literature, art and discourse. Using a seminar or discussion-based approach, this course encourages independent, creative and critical inquiry and prepares students for the practical application of information by emphasizing effective research strategies and technologies congruent with the field of study. *Prerequisite: Completion of all developmental reading and writing courses required as a result of the College Testing and Placement Program.* (H&A)

HUM 216 - China Study Tour **3:3:0**

Chinese culture and arts through reading, attending lectures, attending live Chinese opera and dance performances, and through guided study tours of the Great Wall of China, Tiananmen Square and the Forbidden City, the Temple of Heaven, the Terra Cotta Soldiers of the First Emperor of China, Ming Gardens, and more. The course covers Chinese traditional arts, painting, calligraphy, architectural design, performing arts, folklore, and the three dominant philosophic and religious beliefs, Confucianism, Taoism and Buddhism.

HUM 228 - Humanities in London/Paris **3:3:0**

A survey of the basic genres of the humanities – art, architecture, literature, music and theatre, set in their philosophical, historical and cultural context.

HUM 229 - Italian Art, Architecture and History **3:3:0**

A travel course which explores the art, architecture and history of Italy from Classical Rome to the late Baroque era. These are the arts and ideas that shaped Western civilization. Students explore Classical and High Renaissance/Baroque style in Rome and the Vatican, Medieval and Early Renaissance style in Florence and the Baroque in Venice.

Human Services

HUMS 100 - Introduction to Human Services **3:3:0**

Provides students with essential information needed to choose whether or not to pursue a career in the Human Services field. This course examines all of the fundamental components of a typical community and allows students to apply their classroom knowledge through their observation of a local community's social, political, and economic conditions, as well as, the implications of social programming. In addition, students must meet with local agency representatives. Students must have reliable transportation to meet course requirements. In addition, students receive information about the Pennsylvania Child Abuse History Clearance, the FBI Check, and the PA State Police

Criminal Record Check. Prerequisite: *Eligibility for enrollment into ENGL 101 and completion of any reading courses required by the College Placement and Testing Program.*

HUMS 108 - Drugs and Alcohol: Use and Abuse **3:3:0**

Introduces students to alcohol and drug use within both a historical and social context. This course exposes students to the models of prevention and the role that community resources have in providing treatment services. This course is particularly relevant for individuals pursuing careers in human services, corrections, and law enforcement. *Prerequisite: Eligibility for enrollment into ENGL 101.*

HUMS 109 - Drugs and Alcohol: Issues and Treatment **3:3:0**

Surveys historical developments and the current systems of addiction treatment policies. This course focuses on the changing attitudes of society related to addiction. In addition, this course covers causality theories, funding, and policy development, current social problems and society's response to them. Regulatory institutions and the U.S.'s formal drug control system are also examined. This is a research and writing course with an emphasis on computer skills. *Prerequisite: Eligibility for enrollment into ENGL 101.*

HUMS 120 - Social Welfare Programs and Policies **3:3:0**

A research and writing course, with emphasis on computer skills. The course surveys historical developments and current systems of social welfare services, emphasizing changing attitudes of society. Included in the course are causality theories, funding, and policy developments, and current social problems and the social response to these. *Prerequisite: ENGL 101 and HUMS 100 with grades of C or higher; and GPA of 2.0 or higher.*

HUMS 121 - Skills and Methods in Human Services I **3:3:0**

Basic interviewing skills, with emphasis on listening, responding, discussing difficult topics, and resolving conflicts. Self-awareness and ethics in the practice of human services are emphasized. *Prerequisite: ENGL 101 and HUMS 100 with grades of C or higher; and GPA of 2.0 or higher.*

HUMS 122 - Skills and Methods in Human Services II **3:3:0**

Discusses case management procedures from intake to termination that includes individual goal planning, development of service plans, referrals, and record keeping. Students have the opportunity to apply case management skills to several high-risk client populations. *Prerequisite: HUMS 100 with a grade of C or higher.*

HUMS 200 - Group Work Practice **3:3:0**

Introduces group work practice methods. Designed to teach students the knowledge and practice skills necessary for group work practice. Emphasis is on basic group theory and process and effective practice skills. Students are acquainted with the many uses of task and treatment groups in a broad range of settings. *Prerequisite: HUMS 121, 216 or 217 with a grade of C or higher.*

HUMS 206 - Human Development in a Social Environment **3:3:0**

Examines the ecological model, which describes the effects of the social environment on human development and the reciprocal relationship between the individual and that environment. Emphasis is placed on the cultural, religious, racial, and ethnic diversity of the populations served by human service professionals. Special focus is given to the uniqueness of the individual when determining the types of interventions needed for the client. Evaluation and assessment of problems faced by clients of human services are also discussed. *Prerequisite: HUMS 100 and ENGL 101 with grades of C or higher; and GPA of 2.0 or higher.*

HUMS 215 - Field Work Practicum **4:2:18**

Provides students with a cumulative learning experience. This course allows students to work in a human services agency for a total of 125 hours. All students are under the direct supervision of a Bachelor's or Higher Level, Human Service Professional. In this environment, students learn to apply knowledge, skills, and attitudes acquired in core Human Service courses – to work with clients within a human services agency. Students also meet with the instructor to integrate classroom learning with job performance. Emphasis is placed on students assuming the Human Service Worker role in working directly with clients. Students complete assignments that focus on the human services agency of where they are completing their 125 hours, as an organization, emphasizing their work with agency staff, and goal planning. All students accepted into this component of the program must submit to a Pennsylvania Child Abuse History Clearance, FBI Check, and a PA State Police Criminal Record Check. A course fee is required. *Enrollment is restricted to students in the Human Services AAS, Addiction and Recovery Services AAS and the Social Services AA degree. Prerequisite: Human Services and Social Services: HUMS 120, 122 and 206 or 100 with grades of C or higher; and permission of the Instructor. Addiction and Recovery Services: HUMS 100, 108, 216, 217, 218 and 219 with grades of C or higher; and permission of the Instructor.*

HUMS 216 - Crisis and Brief Intervention Counseling **3:3:0**

Introduces students to the fundamental concepts, theories, strategies, and skills needed to comprehend and conduct effective crisis and brief intervention counseling. This course focuses on the prevalent types of crisis commonly encountered in community-based settings that serve individuals with drug and alcohol issues. Through class discussions, role-playing, and films, students are given opportunities to develop the skills necessary to be effective drug and alcohol counselors. The skills developed in this course are crucial for work in the human services, corrections, and law enforcement fields.

HUMS 217 - Addictions Counseling Interventions **3:3:0**

Introduces counseling approaches in the treatment of substance use disorders, with an emphasis on practical applications in the addictions field, such as Motivational Interviewing (MI) and Solution-Focused Therapy (SFT). Students are provided training in core counseling skills, as well as in therapy models proven to be efficacious with individuals in addictions treatment. In addition, the course incorporates experiential and problem-solving components to assist students in developing conceptual frameworks and counseling skills. The skills developed in this course are crucial for work in the human services, corrections, and law enforcement fields. *Prerequisite: HUMS 108 with a grade of C or higher.*

HUMS 218 - Co-Occurring Disorders **3:3:0**

Provides a comprehensive overview of current theories, models, and principles pertinent to the identification, description, and delineation of Co-Occurring Disorders. The course examines concepts from the Diagnostic Statistical Manual (DSM) that can be applied to clinical concerns and situations arising in the addictions/mental health treatment field. Students receive a knowledge-based skillset to identify symptoms and behaviors that constitute the basis for diagnostic judgments. *Prerequisite: Eligibility for enrollment into ENGL 101.*

HUMS 219 - Drug and Alcohol Screening and Assessment **3:3:0**

Covers drug and alcohol screening and assessments of both adolescents and adults. This course emphasizes emergent care issues, screening options, determining the appropriate level of care, interviewing techniques, and reviewing the Diagnostic Statistical Manual (DSM) criteria for substance use disorders, crisis intervention techniques, relapse planning, and confidentiality regulations. *Prerequisite: HUMS 108 with a grade of C or higher.*

HUMS 220 - Drug and Alcohol Foundational Counseling Skills **3:3:0**

Emphasizes drug and alcohol counseling techniques and strategies. This course covers individual and group counseling skills, Cognitive Behavioral Therapy (CBT), Motivational Interviewing (MI), Solution-Focused Brief Therapy (SFT), the 12-step approach, family counseling skills, emergent care issues within counseling, and working with special populations in both individual and groups dynamics. *Prerequisite: HUMS 108, 216, 217, 218 and 219 with grades of C or higher.*

Heating/Ventilation/Air Conditioning

HVAC 100 - EPA Refrigerant Handling, Preparation, and Testing **1:1:0**

Designed to provide the HVAC student with the information necessary to successfully complete the certification test for safe refrigerant handling as required by the U.S. Environmental Protection Agency (EPA). The course covers the laws pertaining to Section 608 of the U.S. EPA Clean Air Act including the environmental impact of refrigerants, refrigerant venting and handling laws that pertain to CFC, HCFC, and HFC refrigerants. Upon successful completion of the core section of the test, and one or more of the four Certification Type Test sections, the student will become certified in one of the following U.S. EPA Certification Types: Type I - Small Appliance Refrigeration Systems; Type II - High Pressure and Very High Pressure, Refrigerant Systems; Type III - Low Pressure Refrigeration Systems; and/or Type IV - Universal (Type I, Type II, and Type III) Refrigeration Systems. This course may be taken only once for credit. A course fee is required. *Co-requisite: HVAC 103.*

HVAC 101 - Basic Electrical Fundamentals **4:2:4**

Introduction to basic electricity fundamentals. Topics include circuitry, meter usage, reading of wiring diagrams, schematics, and automatic controls as related to HVAC. A course fee is required.

HVAC 102 - R410A Safety and Handling **1:1:0**

Designed to provide the HVAC student with the information to successfully complete the R410A safety and handling test which is required to work on or purchase R410A equipment. Upon successful completion of this course, the student has the opportunity to become R410A safety certified. A course fee is required. *Co-requisite: HVAC 103.*

HVAC 103 - Fundamentals of Air Conditioning I **4:2:4**

Designed to introduce the physics and science theory relevant to the understanding of air-conditioning fundamentals. Emphasis is placed on components and controls used in air-conditioning equipment. CFC federal laws are reviewed. A course fee is required. *Co-requisite: HVAC 101 or ELOC 153; or permission of the Discipline Lead.*

HVAC 104 - Print Reading for HVAC **1:1:0**

Introduces print reading and specifications for air conditioning, heating and plumbing for residential and commercial applications. Students are taught to read basic construction drawings and recognize specifications, symbols, and information contained on HVAC construction drawings. Students are presented with the information necessary to use various kinds of scales and measuring devices and to recognize standard symbols and abbreviations used on building prints. Finally, students are taught to read and interpret information presented on prints for ductwork, plumbing, electrical wiring, and related equipment layouts. A course fee is required. *Co-requisite: HVAC 103 or 109; or permission of the Discipline Lead.*

HVAC 105 - Fundamentals of Air Conditioning II **4:2:4**

Residential and commercial air conditioning equipment and controls. Installation and repair of equipment are also covered. A course fee is required. *Prerequisite: HVAC 103.*

HVAC 106 - Plumbing for the Trades **3:2:3**

Covers the basic principles, layout skills, and techniques used in hand and machine operations of plumbing and carpentry in order to perform the installation of equipment and systems. Students are taught to install basic plumbing potable water supplies and drainage systems necessary for the successful installation of equipment. In addition, students obtain a basic understanding of the International Code Council's (ICC) Plumbing Code as it pertains to the industry. A course fee is required.

HVAC 107 - Fundamentals of Low and Medium Temperature Refrigeration **4:2:4**

Introduction to low-temperature and medium-temperature refrigeration systems and applications including special electrical and pressure controls associated with this equipment. A course fee is required. *Prerequisite: HVAC 101 and 103 with grades of C or higher; or permission of the Discipline Lead.*

HVAC 109 - Heating Systems **4:2:4**

Discusses the fundamentals of heating systems, including installation, troubleshooting, controls and servicing. A course fee is required. *Pre or Co-requisite: HVAC 101; Or permission of the Discipline Lead.*

HVAC 110 - Fundamentals of Air Conditioning and Heating System Design **3:2:3**

Introduction to entry-level design skills, principles, and theory necessary to identify, install, and operate various central A/C and heating systems for residential and light commercial installations. Basic hands-on skills required to calculate, design and lay-out air conditioning, heat pump, forced-air, and hot-water heating systems and their components utilizing both hand and computer-software calculations. A course fee is required. *Prerequisite: HVAC 101; Or permission of the Discipline Lead.*

HVAC 200 - HVAC Control Systems **3:3:0**

Introduction to the design theory of practical, simple, and complex control systems and identification of the control hardware components necessary to meet specific control parameters. Students develop an understanding of mechanical, electric and electronic, pneumatic, and fluidic control and control systems and the air conditioning systems to which they are applied. *Prerequisite: HVAC 101 and 103 with grades of C or higher; or permission of the Discipline Lead.*

HVAC 201 - HVAC Building Systems **3:3:0**

The study of advanced HVAC systems and equipment used in commercial, institutional, and industrial buildings and processes. The course deals with special equipment topics that require special design needs such as liquid chillers, computer rooms, clean rooms, laboratories, and test chambers and their service and maintenance. The course shows the proper design and equipment selection for these systems and their differences in standard cooling applications as well as their relationship to other building systems. *Prerequisite: HVAC 101, 105 and 109; Or permission of the Discipline Lead.*

HVAC 291 - HVAC Cooperative Work Experience **3:0:15**

Faculty-monitored training with an HVAC employer for a minimum of 15 hours per week. Students learn and practice technical skills on the job. *Open to HVAC majors who have completed 24 or more*

credit hours in the HVAC program, or with permission of the program coordinator. Prerequisite: Completion of 24 credit hours in HVAC; or permission of the Discipline Lead.

Industrial Automation

IA 101 - Introduction to Automation **2:2:0**

Presents students with the basics of automation in today's global factories. This course emphasizes a high level of understanding of concepts, terminology, systems and networks. In addition, the course covers details of the job opportunities that are available to mechatronics students worldwide. (FYS)

IA 107 - Shop Measurement and Calculations **1:1:0**

Teaches students the basics of the measurement systems that are required for a variety of trades. This course focuses on such measuring systems as: tape measure usage, rulers, micrometers, calipers and a variety of electronic tools. In addition, this course covers basics of unit-of-measure conversions and the use of formulas and lookup tables for a variety of shop calculations.

IA 201 - Motors and Controls I **4:3:2**

Introduces students to the basics of electric motors, control circuits, and troubleshooting. This course covers AC and DC motor theory and application as well as motor control devices and circuits. With a hands-on focus, students gain functional competencies in the design, wiring, and troubleshooting of basic motor control circuits. Basic AC and DC motors, NEMA (National Electrical Manufacturers Association) and IEC (International Electrotechnical Commission) motor starters, motor wiring, control circuits, motor control devices, and frequency drives are addressed. A course fee is required. *Prerequisite: ELOC 153 with a grade of C or higher.*

IA 202 - Motors and Controls II **4:3:2**

Provides students with advance study in motors and controls. This course addresses both Alternate Current (AC) and Direct Current (DC) motors and drives as well as encoder and other sensor feedback. Students design, build, and troubleshoot motor control circuits including Programmable Logic Controllers (PLCs), drives, and other programmable controls for specific applications. Both open- and closed-loop controls are also discussed. A course fee is required. *Prerequisite: IA 201 with a grade of C or higher, or permission of the Discipline Lead.*

IA 205 - Computer Numerical Control - CNC **3:2:3**

Covers the application of computer control of manufacturing methods. This course addresses how numerical control (NC) and computer numerical control (CNC) machining processes are integrated with computer-aided drafting techniques. Students are taught to import exchange files from CAD into a CAM program to create tool paths. A course fee is required. *Prerequisite: CAD 154 and MDES 207 with grades of C or higher.*

IA 208 - PLC's and Automation **3:2:3**

Addresses ladder logic and its use in programming industrial programmable logic controllers (PLC's) and structured text in microcontrollers. This course covers such topics as the use of using discrete Input/Output (I/O), timers, counters, and sequencers to control automated systems for manufacturing applications with the focus of instruction being on Allen Bradley PLC's using AB software and Structured Text on Microcontrollers. A course fee is required. *Prerequisite: ELEC 100 or ELOC 153 with a grade of C or higher.*

IA 210 - Industrial Robotics I **3:2:3**

Introduces students to the programming and maintenance of industrial robotic systems. This course covers the history and applications of industrial robots, safety, system anatomy, spatial coordinate systems, and general maintenance. Through hands-on studies using Yaskawa Motoman industrial robots, students develop competency in operation and basic programming for tasks including material handling and welding. A course fee is required. *Prerequisite: IA 221 with a grade of C or higher, or permission of the Discipline Lead.*

IA 211 - Industrial Robotics II **3:2:3**

Focuses on maintenance, programming, and application considerations. This is an advanced industrial robotics course in which students develop competencies through extensive hands-on studies using Yaskawa Motoman and ABB industrial robots. System configuration, maintenance, and troubleshooting are covered as well as application specific topics such as tooling and advanced programming. A course fee is required. *Prerequisite: IA 210 with a grade of C or higher.*

IA 213 - PLCs and Automation II **3:2:3**

Provides students with the essential knowledge of industry standard IEC61131-3 programming languages and automated systems. Students are taught data standards and programming languages as set forth by the IEC (International Electrotechnical Commission), as well as HMI (Human Machine Interface) programming. Students develop and apply skills and knowledge through project-oriented work that employs tasks and scenarios common within the industry. A course fee is required. *Prerequisite: IA 208 with a grade of C or higher.*

IA 221 - Sensor Technology **3:2:2**

Provides an advanced study in electrical controls for automation and artificial intelligence systems. This course teaches students about the types, characteristics, installation, and applications of a variety of industrial sensors, which include, temperature sensors, inductive sensors, photoelectric sensors, positioning sensors, and vision systems. Laboratory activities include wiring control circuits that use sensor technology, tuning Proportional Integral Derivative (PID) loops, and programming controllers. A course fee is required. *Pre- or co-requisite: IA 208 with a grade of C or higher; or permission of the Discipline Lead.*

IMT - Mechatronics

IMT 106 - Mechanical Technology I **3:2:2**

Knowledge and skills required by technicians in industry. Course covers personal industrial safety, OSHA requirements, hardware, safe use of hand tools, shop and measuring tools, mechanical and engineering drawings. A course fee is required.

IMT 108 - Power Transmission **4:3:3**

Knowledge and skills required by technicians in industry. Course covers gears, reducers, bearings and seals, drive belts, drive chains, alignment, adjusting speeds, lubrication, shaft couplings and alignment, and machine set-up. A course fee is required.

IMT 110 - Fluid Power **4:3:3**

Knowledge and skills in fluid power required by technicians in industry. Course covers basic fluid power theory and industrial applications of pneumatics and hydraulics. Reading schematics, building fluid power circuits and troubleshooting circuit faults are also covered. Students will understand the different types of process pumps, their application, installation, operation and maintenance. A course fee is required. *Prerequisite: IA 107 or MATH 100 (or higher) with a grade of C or higher, or permission of the Discipline Lead.*

IMT 291 - Mechatronics Cooperative Work Experience **3:0:15**

Offers students the chance to receive on-the-job training with an industrial maintenance employer for a minimum of 15 hours per week. This faculty-monitored course allows students to learn and practice technical skills while on-the-job. *Prerequisite: Completion of at least 24 credit hours in IMT-Mechatronics courses with grades of C or higher or permission of the Instructor.*

Internships

INTN 291 - Internship Seminar **3:3:0**

Requires students to complete a minimum of 135 hours of verified field experience at an internship site approved by the course instructor. The course emphasizes experiential learning, bolsters professional development, and promotes the application of skills in the workplace. Through a combination of field experience and virtual learning, students create a career development plan, strengthen interviewing skills, and apply professionalism in the workplace. Students are required to attend two one-to-one meetings – one at the beginning of the course and one at the end - with the instructor. This course is available to all students, but may not be used in the place of any required program internships, co-ops, or practicums. *Prerequisite: Student must obtain signature of the Instructor, have a GPA of 2.5 and have earned at least 18 college-level credits.*

Medical Assisting

MA 140 - Introduction to Medical Assisting **3:3:0**

Introduces the student to the fundamental knowledge, skills, and behaviors needed to function effectively in a medical office. This course is lecture-focused and emphasizes areas such as professionalism, communication skills, health care law and ethics, cultural diversity, and safety in the workplace. *Enrollment is restricted to students in the Medical Assisting Certificate program. Co-requisite: MA 141 and BIOL 111 or 121 with a grade of C or higher.*

MA 141 - Introduction to Medical Assisting: Laboratory **1:0:3**

Introduces the student to the fundamental skills and behaviors needed to function effectively in a medical office with focus being upon patient assessment skills. A course fee is required. *Enrollment is restricted to students in the Medical Assisting Certificate program. Co-requisites: MA 140 with a grade of C or higher.*

MA 142 - Introduction to Medical Laboratory Techniques **2:2:0**

Introduces students to the Clinical Laboratory Improvement Amendment (CLIA) waived clinical laboratory procedures commonly performed in ambulatory-care settings. Principles and techniques of commonly performed medical laboratory procedures are discussed. *Enrollment is restricted to students in the Medical Assisting Certificate program. Pre or Co-requisite: BIOL 111 or 121 with grades of C or higher. Co-requisite: MA 143 with a grade of C or higher*.

MA 143 - Introduction to Medical Laboratory Techniques: Laboratory **1:0:3**

Introduces students to Clinical Laboratory Improvement Amendment (CLIA) waived clinical laboratory procedures commonly performed in the ambulatory-care settings. This course is laboratory-focused and allows students to acquire the skills necessary to properly obtain blood specimens for laboratory testing. Basic laboratory principles are emphasized including quality assurance and safety requirements. Principles and techniques of commonly performed medical laboratory procedures are practiced. A course fee is required. *Enrollment is restricted to students in the Medical Assisting Certificate program. Co-requisites: MA 142 with a grade of C or higher.*

MA 150 - Pathophysiology for Medical Assisting **3:3:0**

Encompasses a review of anatomy and physiology with emphasis on human pathophysiology that includes etiology, prognosis, medical treatment, signs, and symptoms of common diseases of all human body systems. *Enrollment is restricted to students in the Medical Assisting Certificate program. Pre or Co-requisite: BIOL 111 or 121 with a grade of C or higher. Co-requisite: MA 110.*

MA 200 - Pharmacology for Medical Assisting **3:3:0**

Introduces the student to drug actions, drug classification, drug preparation, and drug dispensing and administration. The course emphasizes the most commonly prescribed drugs, dosages, systems of measurement, dosage forms and calculations, and adverse effects. *Enrollment is restricted to students in the Medical Assisting Certificate program. Prerequisite: MATH 006 (or MATH 008) with a grade of C or higher. Pre or Co-requisite: AH 150 with a grade of C or higher. Co-requisite: AH 105 with a grade of C or higher.*

MA 201 - Medical Assisting Pharmacology Laboratory **1:0:3**

Introduces the techniques of preparing, dispensing and administering medication. Special focus is on dosage calculation, patient education, and medication error reduction. Emphasis is placed on the most commonly prescribed medications. A course fee is required. *Enrollment is restricted to students in the Medical Assisting Certificate program. Pre or Co-requisite: MA 200 with a grade of C or higher.*

MA 212 - Ambulatory Care Clinical Procedures **3:3:0**

Introduces students to general clinical procedures performed in an ambulatory care setting. This course covers the preparation of patients, assistance with physical examinations, compliance and infection control, and the maintenance of the clinical setting. *Enrollment is restricted to students in the Medical Assisting Certificate program. Prerequisite: MA 140; AH 105 and 150 with grades of C or higher. Corequisite: AH 150 and MA 215 with grades of C or higher.*

MA 213 - Medical Insurance and Billing **3:3:0**

Covers third party billing techniques as well as the diagnosis and procedural coding systems that are common in medical offices. This course addresses the insurance systems and 3rd party billing techniques used at the state, federal, and commercial levels. Additional topics include: legal issues, resources, managed-care contracting, fee schedules, claims developing and processing, cost containment, and electronic data systems. *Enrollment is restricted to students in the Medical Assisting Certificate program. Prerequisite: MA 110 with a grade of C or higher.*

MA 215 - Ambulatory Care Clinical Procedures: Laboratory **1:0:3**

Introduces students to general clinical procedures performed in an ambulatory care setting. This is a laboratory-focused course that covers preparing patients, assisting with physical examinations, minor office surgery, specialized procedures, and the maintenance of the clinical setting. A course fee is required. *Enrollment is restricted to students in the Medical Assisting Certificate program. Prerequisite: MA 140 and AH 105 with grades of C or higher. Co-requisites: AH 150 and MA 212 with grades of C or higher.*

MA 220 - Medical Office Administration **3:3:0**

Provides a fundamental understanding of the professional, administrative and financial management responsibilities of the Medical Assistant. This course emphasizes scheduling, electronic medical record keeping, telephone etiquette, fundamental business writing skills, as well as the proper procedures for banking, billing, collections, accounts payable, payroll, and the use of medical-management accounting software to maintain patient records. *Enrollment is restricted to*

students in the Medical Assisting Certificate program. Prerequisite: CIS 105 and AH 105 with grades of C or higher.

MA 221 - Medical Office Administration II **3:3:0**

Provides a fundamental understanding of the financial management responsibilities of the medical assistant. Emphases are on the proper procedures for banking, billing, collections, accounts payable, payroll, and the use of medical-management accounting software to maintain patient records. *Prerequisite: MA 220 with a grade of C or higher.*

MA 230 - Medical Assisting Externship **4:0:20**

Encompasses supervised application of clinical and administrative skills during a 240-hour externship in an ambulatory care facility. Students record their clinical experience in an anecdotal format and are required to pass a mock certification skills exam for the American Medical Technologist Registered Medical Assistant examination. A course fee is required. *Enrollment is restricted to students in the Medical Assisting Certificate program. Prerequisite: AH 105, 213 and 150 and MA 140, 142, 200, 201, 212 and 220 with grades of C or higher.*

Mathematics

MATH 006 - Developing Confidence and Skills in Math **3:3:0**

Promotes mathematics readiness for college success. This course covers effective study habits, class participation techniques, and anxiety reduction strategies. Math performance is enhanced by the use of an individualized, computer-driven, instructor-guided program in developmental mathematics. Reviews the basic operations of arithmetic and introduces students to algebraic expressions. A course fee is required.

MATH 070 - Fundamentals of Quantitative Literacy **3:3:0**

Develops basic arithmetic and algebraic skills through problem-solving and the study of fundamental properties of numbers and fundamental operations in arithmetic, algebra, and geometry. This course covers percentages, ratios, proportions and linear equations. This course is designed for those students who are going into a non-STEM (Science, Technology, Engineering and Mathematics), non-statistics related field. *Prerequisite: Placement through the College and Testing Placement program or completion of MATH 006, or MATH 008 with grades of C or higher.*

MATH 080 - Fundamentals of Statistics **3:3:0**

Provides coverage of algebraic and descriptive statistics concepts essential for success in an introductory statistics course. Course topics support the development of statistical concepts that focus upon creating and interpreting statistical graphs, measurers of center and spread, probability, and linear regression. *Prerequisite: Placement through the College Testing and Placement Program or completion of MATH 006, or MATH 008 with a grade of C or higher.*

MATH 090 - Fundamentals of Algebra - Part I **3:3:0**

Reviews the basic skills of algebra to prepare students for future mathematics courses. This course allows each student to work in an individualized, computer-driven, instructor-guided program in mathematics and participate in-group, problem-solving activities. *Prerequisite: Placement through the College Testing and Placement Program or completion of MATH 006, or MATH 008 with grades of C or higher.*

MATH 091 - Fundamentals of Algebra - Part II **3:3:1**

Develops and strengthens algebraic skills in the following areas: polynomials, factoring, rational expressions and functions, radical equations and functions, quadratic equations and functions.

Prerequisite: Placement through the College Testing and Placement Program or completion of MATH 033 or MATH 090 with a grade of C or higher.

MATH 100 - College Mathematics for Business **3:3:0**

Covers the basic operations of arithmetic with emphasis on percentage, trade and cash discounts, merchandising, depreciation, property and sales taxes, payroll, income tax, insurance, simple and compound interest, notes, credit and time-buying, and basic descriptive statistics. *Prerequisite: Completion of MATH 070, 080, or 090, (or MATH 022) with a C or higher: or Placement through the College Testing and Placement Program*. (MATH)

MATH 103 - College Algebra **3:3:0**

Covers the fundamental algebraic operations, exponents and radicals, systems of equations, higher degree equations, logarithms, and inequalities. *Prerequisite: Placement through the College Testing and Placement Program or completion of MATH 033, 044, and 055 (or MATH 051) or MATH 045 or MATH 091 with grades of C or higher.* (MATH)

MATH 104 - Trigonometry **3:3:0**

Examines trigonometric functions, relationships, and graphs. This course includes identities and trigonometric equations. In addition, complex numbers are included. *Prerequisite: Completion of MATH 091 (or MATH 033, 044, and 055) with grades of C or higher; or placement through the College Testing and Placement Program.* (MATH)

MATH 110 - Applied Calculus for Business **4:4:0**

Designed for students in various business or social science programs. Topics to be considered include quadratic, polynomial, rational, exponential and logarithmic functions, differential calculus of single variable and of several variables, and techniques of integration. Numerous applications to business and economics will be considered. *Prerequisite: MATH 103 or 116 with a grade of C or higher.* (MATH)

MATH 111 - Principles of Mathematics **3:3:0**

Addresses the general transfer or degree requirements of those students pursuing an education in fields other than Mathematics, Physical Science or Engineering. This course covers an Introduction to Sets, Logic, Probability, Modular Arithmetic, Voting Methods and Graph Theory (Optional Topics - Numeration Systems, Group Theory, Statistics). *Prerequisite: Completion of MATH 070, 080 or 090 with a grade of C or higher: or Placement through the College Testing and Placement Program.* (MATH)

MATH 111H - Honors Principles of Mathematics **3:3:0**

Addresses the general transfer or degree requirements of those students pursuing an education in fields other than Mathematics, Physical Science, and Engineering. This course covers an Introduction to Number Theory, Geometry, Fundamentals of Logic and Sets, Descriptive Statistics, and Introduction to Probability. Using a seminar or discussion-based approach, this course encourages independent, creative and critical inquiry and prepares students for the practical application of information by emphasizing effective research strategies and technologies congruent with the field of study. *Prerequisite: MATH 033, 044, and 055 (or MATH 051) or MATH 045 with grades of C or higher; Completion of all developmental reading and writing courses required as a result of the College Testing and Placement program.* (MATH)

MATH 113 - Principles of Mathematics for Elementary Teachers I **3:3:0**

Covers mathematical topics for prospective elementary school teachers. This course specifically addresses such topics as basic concepts of logic, sets, counting numbers, numeration systems, integers, rational numbers, real numbers, and descriptive statistics. *Prerequisite: Completion of MATH 091 (or MATH 033, 044, and 055) with grades of C or higher; or placement through the College Testing and Placement Program.* (MATH)

MATH 114 - Principles of Mathematics for Elementary Teachers II **3:3:0**

Continues covering mathematical topics for prospective elementary school teachers. This course addresses geometry with computer applications, measurement of geometric figures, the metric system, and provides an introduction to probability. *Prerequisite: Completion of MATH 091 (or MATH 033, 044, and 055) with grades of C or higher; or placement through the College Testing and Placement Program*.

MATH 116 - College Algebra for Calculus **4:4:0**

Covers fundamental algebraic operations, exponents and radicals, systems of equations, higher degree equations, logarithms, inequalities, conic sections, sequences and series, non-linear systems of equations, mathematical induction and limits. *Prerequisite: Completion of MATH 091 with a grade of C or higher or placement by the College's Placement and Testing program.* (MATH)

MATH 119 - Pre-Calculus **4:4:0**

Augments a background in algebra and trigonometry with material selected to improve students' chances for success in calculus. This course specifically covers elementary algebraic and transcendental functions, conic sections, non-linear systems of equations, vectors in the plane, parametric equations, polar coordinates, mathematical induction, sequences, series, and limits. *Prerequisite: Placement through the College Testing and Placement Program or completion of MATH 103 and 104 with grades of C or higher, or equivalent.* (MATH)

MATH 121 - Calculus I **4:5:0**

Introduces differential and integral calculus of algebraic and trigonometric functions. This course covers functions, limits, continuity, as well as the evaluation and application of derivatives and integrals. *Prerequisite: MATH 119, or 116 and 104 with grades of C or higher, or equivalent.* (MATH)

MATH 122 - Calculus II **4:5:0**

Continues the topics covered in MATH 121 pertaining to differential and integral calculus. This course covers transcendental functions, parametric curves, infinite series, and furthers the techniques of integration with applications. *Prerequisite: MATH 121 with a grade of C or higher.* (MATH)

MATH 125 - Discrete Mathematics **3:3:0**

Designed for students majoring in mathematics or computer science and others desiring a broader mathematical perspective. Topics include logic, sets, methods of proof, relations, functions, mathematical induction, counting techniques, recurrence equations, and mathematical systems. *Prerequisite: MATH 119, or 116 and 104 with a grade of C or higher.*

MATH 202 - Introduction to Statistics **4:4:0**

Focuses on the mathematical skills needed by students enrolled in technical, business, and liberal arts curricula. This course covers describing and summarizing single and bi-variate data, both graphically and numerically. Also, discrete and continuous probability distributions are covered. In addition, parametric estimation and tests of significance are studied. *Prerequisite: Completion of*

MATH 080 or 090 with a grade of C or higher; and eligibility for enrollment into ENGL 101; or placement through the College Testing and Placement program. (MATH)

MATH 204 - Statistics Special Topics **1:1:0**

Designed for students that have successfully completed an introductory statistics course that did not include the following topics: goodness-of-fit, tests of independence of categorical variables, and/or one-way analysis of variance. *Prerequisite: MATH 202 (3-credit course) with a grade of C or higher; or permission of the Instructor.*

MATH 220 - Linear Algebra **4:4:0**

Covers linear systems, matrix algebra, finite dimensional vector spaces (including function spaces), linear transformations and their matrix representations (including coordinates), change-of-basis, real spectral theorem, orthogonal diagonalization, and principal axes theorem. (For students of Mathematics, Science and Engineering.) *Prerequisite: MATH 122 with a grade of C or higher.*

MATH 221 - Calculus III **4:5:0**

Continues the topics of differential and integral calculus taught in MATH 122 to vectors and vector-valued functions, partial differentiation, multiple integrals, and space geometry. *Prerequisite: MATH 122 with a grade of C or higher.*

MATH 222 - Differential Equations **4:5:0**

Ordinary differential equations of the first and second orders with physical and geometrical applications; operators; the Laplace Transform matrices; solutions in series; numerical methods. *Prerequisite: MATH 122 with a grade of C or higher.*

Mechanical Design

MDES 201 - Dynamics **3:3:1**

Graphical and mathematical analysis of relative motions in mechanisms. Velocities and accelerations in linkages, crank mechanisms, cams, gears, and gear trains are discussed. The student studies the principles of dynamics as applied to linear and angular motions including Newton's Laws of Motion and Work and Energy. A course fee is required. *Prerequisite: GTEC 201 and CAD 154 with grades of C or higher.*

MDES 204 - Product Design **3:2:3**

Covers the design of machine elements including levers, clutches, springs, gears, shafts, bearings, and housings. Numerous failure analysis techniques are applied to practical problems based on the type of load and material used. Students also design several mechanical devices and use the computer to solve problems. A course fee is required. *Prerequisite: CVTE 208 with a grade of C or higher, or permission of the Discipline Lead.*

MDES 206 - Fluid Flow **3:2:3**

Elementary theory of fluid flow, measurement of flow, and fluid machinery. Primary emphasis is on the topics of fluid statics, flow of fluids in pipes and open channels, flow measurement, and forces developed by fluids in motion. Laboratory work demonstrates principles and applications of fluid mechanics. The computer is used in solving problems. A course fee is required. *Prerequisite: GTEC 201 with a grade of C or higher.*

MDES 207 - Machine Shop Theory and Practice **1:0:3**

Theory and hands-on experience with machine tools, such as the lathe and the milling machine. A course fee is required.

Mechanical Drafting

MDRF 101 - Engineering Drawing **2:1:3**

Basic drafting techniques, lettering, orthographic drawing, assembly drawings, auxiliary views, sections and conventions, and basic dimensioning. Drawings are made using drafting instruments and freehand sketching. Students are introduced to a CAD system. A course fee is required.

MDRF 103 - Geometric Tolerancing **1:0.5:1.5**

Dimensional and geometric tolerancing and true-position tolerancing presented as part of advanced drafting and production techniques. The student learns symbology for expressing allowable variations in part sizes. A course fee is required. *Prerequisite: MDRF 101 with a grade of C or higher, or permission of the Discipline Lead.*

Meteorology

METR 101 - Weather and Climate **3:3:1**

Introduces students to the basic elements of weather and climate for non-science majors. The course addresses how weather elements are used with computer prognostics, weather satellite imagery, observations, and weather radar to produce daily forecasts. Special topics such as thunderstorms, hurricanes, tornadoes, and global warming are also covered. A course fee is required.

Management

MGMT 130 - Introduction to Health Care Management **3:3:0**

Provides an introduction to the arena of health care management. The course reviews the evolution and current status of health care delivery and introduces the student to the concepts of health care leadership including cultural diversity, electronic records, HIPAA, and strategies for successful oversight of a department or unit. Through the examination of management topics and healthcare situations, the student is able to explore the skills and knowledge needed to be successful in a diverse healthcare environment. *Prerequisite: Eligibility for enrollment into ENGL 003, 007, 057 or ESL 070 as identified by the College Testing and Placement program.*

MGMT 201 - Principles of Management **3:3:0**

Introduces students to the primary functions of management and management theory. This course covers the knowledge and skills needed for planning, organizing, leading, and controlling modern organizations. Students are able to discuss current events and issues – ethics and social responsibility, organizational culture, global management, and technology – and the impact experienced by managers and management. *Prerequisite: Eligibility for enrollment into ENGL 003, 007, 057 or ESL 070 as identified by the College Testing and Placement program.*

MGMT 203 - Human Resources Management **3:3:0**

Covers the planning of personnel requirements. The course topics include: recruitment, selection, training and development; job evaluation, wage and salary administration; employee benefits and services; labor relations, career development, safety and health; performance appraisal, disciplinary action, and employee morale; international human resources management. *Prerequisite: Eligibility for enrollment into ENGL 003, 007, 057 or ESL 070 as identified by the College Testing and Placement program.*

MGMT 204 - Organizational Behavior **3:3:0**

Introduces students to the psychological and sociological aspects of organizational behavior as they relate to management situations and organizational performance. This course allows students to develop skills managing human behavior in organizations in such areas as: effective leadership,

teambuilding, human motivation, managing change and conflict, technology, ethics, interpersonal and intergroup communication, and managing cultural diversity. *Prerequisite: Eligibility for enrollment into ENGL 003, 007, 057 or ESL 070 as identified by the College Testing and Placement program.*

MGMT 221 - Small Business Development and Management **3:3:0**

Presents information about starting and operating a small business. The course includes various ways to start a small business, types of legal structures, startup costs, location factors, competitor analysis, and competitive advantages. This course also examines the business skills necessary to operate a small venture, which includes managing operations and human resources, marketing, obtaining vendors, completing pro-forma financial statements, and assessing risk. Students are required to complete a business plan that incorporates the topics presented and discussed in the course. *Prerequisite: Eligibility for enrollment into ENGL 003 as identified by the College Testing and Placement program.*

MGMT 226 - Principles of Leadership **3:3:0**

Introduces the evolution of leadership theorists and theories including behavioral, situational, and contingency schools of thought. Students discuss the various leadership styles and attributes of effective and ineffective leaders. They are able to discover the relationship between effective leadership and teamwork, organizational culture, diversity, ethics, interpersonal communications, organizational performance and quality, technology, conflict resolution, and problem solving. *Prerequisite: Eligibility for enrollment into ENGL 003, 007, 057 or ESL 070 as identified by the College Testing and Placement Program.*

MGMT 226H - Honors Principles of Leadership **3:3:0**

Introduces the evolution of leadership theorists and theories including behavioral, situational, and contingency schools of thought. Students discuss the various leadership styles and attributes of effective and ineffective leaders. They are able to discover the relationship between effective leadership and teamwork, organizational culture, diversity, ethics, interpersonal communications, organizational performance and quality, technology, conflict resolution, and problem solving. Using a seminar or discussion-based approach, this course encourages independent, creative and critical inquiry and prepares students for the practical application of information by emphasizing effective research strategies and technologies congruent with the field of study. *Prerequisite: Completion of all developmental reading and writing courses required, as a result of the College Testing and Placement program.*

MGMT 227 - Principles of Project Management **3:3:0**

Covers the basic methods of handling projects from start to finish, as well as the fundamental steps and functions of project management. The course emphasizes project management functions, which are applied to a written project management plan, and includes analysis that determines the necessary activities and deliverables required to complete a project. In addition, the course covers strategic planning, portfolio management, team development, and project communications. *Prerequisite: Eligibility for enrollment into ENGL 003, 007, 057 or ESL 070 as identified by the College Testing and Placement Program.*

Marketing

MKTG 201 - Principles of Marketing **3:3:0**

The functions involved in the marketing of consumer and industrial goods to their users. Emphasis is placed upon management's development of marketing strategies concerning product, place, promotion, and price. *Prerequisite: Eligibility for enrollment into ENGL 003, 007, 057 or ESL 070 as identified by the College Testing and Placement Program.*

MKTG 205 - Visual Merchandising **3:3:0**

Covers the fundamental techniques of presenting and selling merchandise. Students are taught to recognize the significance that these techniques have in attracting consumers. Emphasis is placed on branding a store image through the use of color, fixtures, and other display materials.

MKTG 212 - Professional Selling **3:3:0**

Introduces the principles of professional selling. This course covers the many skills pertinent to everyday life that result in effective interactions with others. Emphasis is on the four components of the consultative selling strategy - developing a relationship, product, customer, and presentation. *Prerequisite: Eligibility for enrollment into ENGL 003, 007, 057 or ESL 070 as identified by the College Testing and Placement Program.*

MKTG 216 - Retail Buying **3:3:0**

Explores the typical purchasing responsibilities of a retail buyer, such as identifying and understanding potential customers, conducting market research, developing sales forecasts, creating a merchandising plan, exploring retail buying trends, and using Excel spreadsheets for common retail buying calculations. *Prerequisite: Eligibility for enrollment into ENGL 003, 007, 057 or ESL 070 as identified by the College Testing and Placement Program.*

MKTG 218 - Advertising **3:3:0**

Determining appropriations; allocating among media; advertising layout and copy; measuring advertising effectiveness; the role of advertising in our economy. *Prerequisite: Eligibility for enrollment into ENGL 003, 007, 057 or ESL 070 as identified by the College Testing and Placement Program.*

MKTG 235 - Digital Media Marketing **3:3:0**

Examines the process of developing, implementing, and evaluating strategies to successfully market products and services using digital marketing tools. The course covers the similarities and differences between the digital economy and traditional marketing practices, as well as industry-specific terminology. Students learn how to integrate digital media into marketing and business processes. Topics also include customer relationship development and retention marketing, email marketing campaigns, website usability, search engine optimization, social media, and mobile marketing. *Prerequisite: Eligibility for enrollment into ENGL 003, 007, 057 or ESL 070 as identified by the College Testing and Placement Program.*

Medical Laboratory Technology

MLT 100 - Introduction to Medical Laboratory Technology **4:3:3**

Introduces students to the role that the Medical Laboratory Technician plays within the health-care system. This course covers microscopy, a general overview of the departments of the clinical laboratory and laboratory personnel, laboratory safety, infection control, glassware and equipment, medical terminology, and mathematics as they apply to laboratory science. Students review the skills needed to draw blood and prepare specimens for testing. This course is appropriate for students considering laboratory science as a career. A course fee is required. *Enrollment is restricted to students in the Medical Laboratory Technician AS program. Pre or Co-requisite: ENGL 101 with a grade of C or higher. Non-majors need permission of the Program Director.* (FYS)

MLT 120 - Hematology and Coagulation **4:3:3**

Studies blood cell maturation, morphology, and function. In addition, this course discusses blood diseases, diagnostic procedures relating to whole blood, and the theory of blood coagulation. A course fee is required. *Enrollment is restricted to students in the Medical Laboratory Technician AS*

program. Non-majors need permission of the Program Director. Prerequisite: MLT 100, 110, and 122 with grades of C or higher.

MLT 122 - Immunology and Molecular Biology **3:3:2**

Studies serum immunity and reactions to antigens and antibodies as they apply to blood. In addition, this course discusses serologic procedures including molecular biology testing. A course fee is required. *Enrollment is restricted to students in the Medical Laboratory Technician AS program. Non-majors need permission of the Program Director. Prerequisite: Eligibility for enrollment into ENGL 101*.

MLT 124 - Immunohematology **4:3:3**

Studies blood-group antigens and antibodies of the human body. In addition, this course emphasizes laboratory procedures for typing, compatibility testing, donor screenings, and the processing of blood. A course fee is required. *Enrollment is restricted to students in the Medical Laboratory Technician AS program. Non-majors need permission of the Program Director. Prerequisite: MLT 100, 120, 122 and 220 with grades of C or higher.*

MLT 220 - Clinical Microbiology I **4:3:3**

Studies bacteria that cause human disease. In addition, this course discusses diagnostic procedures. A course fee is required. *Enrollment is restricted to students in the Medical Laboratory Technician AS program. Non-majors need permission of the Program Director. Prerequisite: MLT 100, 110 and 122 with grades of C or higher.*

MLT 222 - Clinical Chemistry **4:3:3**

Studies the basic principles and techniques of biochemistry for clinical and laboratory applications. This specifically addresses enzymes, hormones, proteins, lipids, and carbohydrates, electrolytes, and acid-base balance. A course fee is required. *Enrollment is restricted to students in the Medical Laboratory Technician AS program. Non-majors need permission of the Program Director. Prerequisite: MLT 100, 110 and 122 with grades of C or higher.*

MLT 224 - Urinalysis and Body Fluids **2:2:1**

Studies the urinary system including the chemical and morphological characteristics of urine. A course fee is required. *Enrollment is restricted to students in the Medical Laboratory Technician AS program. Non-majors need permission of the Program Director. Prerequisite: MLT 100, 120, 122 and 220 with grades of C or higher.*

MLT 226 - Clinical Experience I **5:0:40**

Provides direct supervision of clinical laboratory skills application at affiliated hospitals or health-care agencies. Students gain experience working in a variety of laboratory areas. A course fee is required. *Enrollment is restricted to students in the Medical Laboratory Technician AS program. Non-majors need permission of the Program Director. Prerequisite: MLT 124, 222 and 224 with grades of C or higher.*

MLT 228 - Clinical Experience II **5:0:40**

Continues the clinical experience conducted in MLT 226. Students obtain direct supervision of clinical laboratory skills application at affiliated hospitals or health-care agencies. Students gain experience working in a variety of laboratory areas. A course fee is required. *Enrollment is restricted to students in the Medical Laboratory Technician AS program. Non-majors need permission of the Program Director. Prerequisite: MLT 226 and 230 with grades of C or higher.*

MLT 230 - Clinical Microbiology II **4:3:3**

Studies bacteria, fungi, parasites, and viruses that cause human disease. In addition, this course discusses diagnostic procedures. A course fee is required. *Enrollment is restricted to students in the Medical Laboratory Technician AS program. Non-majors need permission of the Program Director. Prerequisite: MLT 100, 120, 122 and 220 with grades of C or higher.*

MLT 236 - Clinical Laboratory Management **2:2:0**

Introduces management and education in the clinical laboratory. This course provides an overview of healthcare reimbursement, job design, cost accounting, performance appraisals, compliance, budgets, staffing, scheduling, education and training, and preparing for inspections. *Enrollment is restricted to students in the Medical Laboratory Technician AS program. Prerequisite: MLT 124, 222 and 224 with grades of C or higher. Non-majors need permission of the Program Director.*

MLT 238 - Clinical Capstone Project **1:1:0**

Provides students with the opportunity to integrate all the knowledge and skills acquired through their studies as Medical Laboratory Technician majors through the final organization of a clinical case study for presentation. *Enrollment is restricted to students in the Medical Laboratory Technician AS program. Non-majors need permission of the Program Director. Prerequisite: MLT 226 and 236 with grades of C or higher.*

Music

MUS 102 - Introduction to Music **3:3:0**

How music is created and the highlights of its historical development from ancient times to the present. Students are encouraged to become involved with music by actively participating or by becoming better-informed listeners. Whenever possible, class work is arranged to relate to local performances. (H&A)

MUS 102H - Honors Introduction to Music **3:3:0**

How music is created and the highlights of its historical development from ancient times to the present. Students are encouraged to become involved with music by actively participating or by becoming better-informed listeners. Whenever possible, class work is arranged to relate to local performances. Using a seminar or discussion-based approach, this course encourages independent, creative and critical inquiry and prepares students for the practical application of information by emphasizing effective research strategies and technologies congruent with the field of study. *Prerequisite: Completion of all developmental reading and writing courses required as a result of the College Testing and Placement Program.* (H&A)

MUS 103 - Introduction to Elementary Music **3:3:0**

The current trends in music education. Materials and techniques for the elementary school teacher. Fundamentals of music are presented and applied to the materials used.

MUS 104 - Introduction to World Music **3:3:0**

Examines how music is created and expressed around the world, including description, analysis, and comparisons of selected world music in both ancient and modern traditions. Whenever possible, classwork is arranged to relate to local performances. (H&A)

MUS 110 - History of Rock and Related Styles **3:3:0**

History of rock music. The course focuses specifically on rock, but also includes related styles, such as blues, country, and rap. Topics include roots, influences, and current trends of popular music within a historical context of political and social events.

MUS 111 - Choir I **1:0:3**

The study, rehearsal, and performance of standard works of choral literature. Open to any student without audition. A course fee is required.

MUS 112 - Choir II **1:0:3**

The study, rehearsal, and performance of standard works of choral literature. Open to any student without audition. A course fee is required.

MUS 115CO - Music Composition Lessons I **1:1:0**

Private lessons in the fundamentals of music composition. This course culminates in the composition of an original work or works. One credit-hour equates to one half-hour private lesson per week. Basic keyboard skills are required, as well as access to a keyboard or other primary instrument. A course fee is required. *Signed permission of the Instructor is required.*

MUS 115GU - Private Guitar Lessons I **1:1:0**

Designed for students who desire private, one-on-one instruction in guitar. This course enables students to gain increased proficiency in the performance of guitar literature. One credit-hour equates to one half-hour private lesson per week. A course fee is required.

MUS 115PI - Private Piano Lessons I **1:1:0**

Designed for students who desire private, one-on-one instruction in piano. This course enables students to gain increased proficiency in the performance of piano literature. One credit-hour equates to one half-hour private lesson per week. A course fee is required.

MUS 115VO - Private Voice Lessons I **1:1:0**

Designed for students who desire private, one-on-one instruction in voice. This course enables students to gain increased proficiency in the performance of vocal literature. One credit-hour equates to one half-hour private lesson per week. A course fee is required.

MUS 116CO - Music Composition Lessons II **1:1:0**

Continues the fundamentals covered in MUS 115CO for students desiring further private, one-on-one instruction. One credit-hour equates to one half-hour private lesson per week. A course fee is required. *Prerequisite: MUS 115CO with a grade of C or higher.*

MUS 116GU - Private Guitar Lessons II **1:1:0**

Continues the skills and techniques covered in MUS 115GU for students desiring further private, one-on-one instruction in guitar. One credit hour equates to one half hour private lesson per week. A course fee is required. *Prerequisite: MUS 115GU with a grade of C or higher.*

MUS 116PI - Private Piano Lessons II **1:1:0**

Continues the skills and techniques covered in MUS 115PI for students desiring further private, one-on-one instruction in piano. One credit hour equates to one half hour private lesson per week. A course fee is required. *Prerequisite: MUS 115PI with a grade of C or higher.*

MUS 116VO - Private Voice Lessons II **1:1:0**

Continues the skills and techniques covered in MUS 115VO for students desiring further private, one-on-one instruction in voice. One credit hour equates to one half hour private lesson per week. A course fee is required. *Prerequisite: MUS 115VO with a grade of C or higher.*

MUS 119 - Introduction to Music Theory **3:3:0**

Designed for the student with a minimum background in music but who exhibits a desire to either complete the regular sequence of theory courses offered by the College and thereby transfer to a four-year music college or simply increase knowledge and appreciation of music in general.

MUS 120 - Music Theory I **3:3:0**

Principles of elementary harmony as developed in the Baroque and Classical eras. These include diatonic triads as used in major and minor keys.

MUS 127 - Performance Ensemble I **1:1:2**

Promotes and develops the performance skills and knowledge utilized by musicians in a group setting. This course is the first of four performance experience courses that provides students with the opportunity to develop performance skills and gain an understanding of the musical skills required of performers through the process of playing in a student-centered group facilitated by faculty. Diverse musical genres are performed and utilized as a framework to instruct the fundamentals of harmony, melody and improvisation. Students do not need prior experience performing in a group to enroll in this course.

MUS 128 - Performance Ensemble II **1:1:2**

Continues to promote and develop the performance skills and knowledge taught in MUS 127. This course is the second of four performance experiences courses that provides students with the opportunity to continue to develop their performance skills and gain further understanding of the musical skills required of performers through the process of playing in a student-centered group facilitated by faculty. Diverse musical genres are performed and utilized as a framework to instruct the fundamentals of harmony, melody and improvisation. *Prerequisite: MUS 127 with a grade of C or higher.*

MUS 129 - Performance Ensemble III **1:1:2**

Continues to promote and develop the performance skills and knowledge taught in MUS 128. This course is the third of four performance experience courses that provide students with the opportunity to continue developing their performance skills and gain an advanced understanding of the musical skills required of performers through the process of playing in a student-centered group facilitated by faculty. Diverse musical genres are utilized as a framework in which to perform and instruct the concepts of harmony, melody and improvisation instructed at prior levels. *Prerequisite: MUS 128 with a grade of C or higher. It is recommended that students also enroll in a private lesson course in order to supplement the skills taught in this course.*

MUS 130 - Performance Ensemble IV **1:1:2**

Allows students to refine the performance skills and knowledge taught in MUS 129. This course is the fourth of four performance experience courses that provide students with the opportunity to develop their performance skills and advance their understanding of the musical skills required of performers through the process of playing in a student-centered group facilitated by faculty. Diverse musical genres are utilized as a framework to perform and instruct the concepts of harmony, melody and improvisation. *Prerequisite: MUS 129 with a grade of C or higher. It is recommended that students also enroll in a private lesson course in order to supplement the skills taught in this course.*

MUS 201 - The History of Music I **3:3:0**

A critical analysis and survey of music and composers from the beginning of the history of music to 1800.

MUS 202 - The History of Music II **3:3:0**

A critical analysis and survey of music and composers from 1800 to the present.

MUS 204 - History of Jazz **3:3:0**

Promotes the appreciation and enjoyment of jazz. Students gain a better understanding of the evolution of jazz styles through the process of analysis. Active listening experiences and attendance at a live concert performance are required. No prior technical knowledge of music is needed for students to understand the content covered in this course.

MUS 211 - Choir III **1:0:3**

The study, rehearsal, and performance of standard works of choral literature. Open to any student without audition. A course fee is required.

MUS 212 - Choir IV **1:0:3**

The study, rehearsal, and performance of standard works of choral literature. Open to any student without audition. A course fee is required.

MUS 215CO - Music Composition Lessons III **1:1:0**

Continues the fundamentals covered in MUS 115CO and MUS 116CO for students desiring further private, one-on-one instruction in composition. One credit-hour equates to one half-hour private lesson per week. A course fee is required. *Prerequisite: MUS 115CO and 116CO with grades of C or higher.*

MUS 215GU - Private Guitar Lessons III **1:1:0**

Continues the skills and techniques covered in MUS 115GU and MUS 116GU for students desiring further private, one-on-one instruction in guitar. One credit-hour equates to one half-hour private lesson per week. A course fee is required. *Prerequisite: MUS 115GU and 116GU with grades of C or higher.*

MUS 215PI - Private Piano Lessons III **1:1:0**

Continues the skills and techniques covered in MUS 115PI and MUS 116PI for students desiring further private, one-on-one instruction in piano. One credit-hour equates to one half-hour private lesson per week. A course fee is required. *Prerequisite: MUS 115PI and 116PI with grades of C or higher.*

MUS 215VO - Private Voice Lessons III **1:1:0**

Continues the skills and techniques covered in MUS 115VO and MUS 116VO for students desiring further private, one-on-one instruction in voice. One credit-hour equates to one half-hour private lesson per week. A course fee is required. *Prerequisite: MUS 115VO and 116VO with grades of C or higher.*

MUS 216CO - Music Composition Lessons IV **1:1:0**

Continues the fundamentals covered in MUS 115CO, MUS 116CO and MUS 215CO for students desiring further private, one-on-one instruction in composition. One credit-hour equates to one half-hour private lesson per week. A course fee is required. *Prerequisite: MUS 115CO, 116CO and 215CO with grades of C or higher.*

MUS 216GU - Private Guitar Lessons IV **1:1:0**

Continues the skills and techniques covered in MUS 115GU, MUS 116GU and MUS 215GU for students desiring further private, one-on-one instruction in guitar. One credit-hour equates to one half-hour private lesson per week. A course fee is required. *Prerequisite: MUS 115GU, 116GU and 215GU with grades of C or higher.*

MUS 216PI - Private Piano Lessons IV **1:1:0**

Continues the skills and techniques covered in MUS 115PI, MUS 116PI and MUS 215PI for students desiring further private, one-on-one instruction in piano. One credit-hour equates to one half-hour private lesson per week. A course fee is required. *Prerequisite: MUS 115PI, 116PI and 215PI with grades of C or higher.*

MUS 216VO - Private Voice Lessons IV **1:1:0**

Continues the skills and techniques covered in MUS 115VO, MUS 116VO and MUS 215VO for students desiring further private, one-on-one instruction in voice. One credit-hour equates to one half-hour private lesson per week. A course fee is required. *Prerequisite: MUS 115VO, 116VO and 215VO with grades of C or higher.*

Music Business

MUSB 111 - Music Business and the Internet **3:3:0**

Introduces students to the Internet and Search Engine Optimization (SEO) marketing, which includes various social media resources used in the music industry. This course emphasizes how the Internet and SEO marketing are used to generate income through online promotion, networking and collaboration.

MUSB 214 - Music Business Studies **3:3:0**

Introduces students to the areas of songwriting and music publishing, copyright registration, and music licensing. This course explores performance, as a career choice as well as those in talent management, recording labels, live sound and/or recording studio production, and music product sales. Related career fields are also examined including private music studio teaching, music journalism, and music therapy. *Prerequisite: Eligibility for enrollment into ENGL 051 as required by the College Testing and Placement program.*

MUSB 224 - Music Industry and American Popular Music **3:3:0**

Introduces the study of popular music styles from their origins to present day performances. The course examines how music was popularized through diverse distribution marketing methods and how it influenced American popular music markets. In addition, emphasis is placed on specific musical characteristics found in music genres. *Prerequisite: Eligibility for enrollment into ENGL 051 as required by the College Testing and Placement program.*

MUSB 225 - Entertainment and Music Promotion **3:3:0**

Examines the overall processes of concert promotion and entertainment for commerce. The course covers the steps required for musicians to successfully self- promote and build an artistic career and includes the role that music unions and professional associations play in the career of a performer. The income producing process of both nonprofit and for-profit concert promotion is also explored as well as the function that record label promotion, concert promotion, radio promotion, live-sound production and social media marketing serves in supporting the musician. Finally, this course further examines how music is used in media, television and film. *Prerequisite: Eligibility for enrollment into ENGL 051 as required by the College Testing and Placement program.*

MUSB 226 - Music Computer Applications **3:3:0**

Introduces MIDI and Digital Audio Technologies through the use of digital audio workstation (DAW) software. This course presents an introduction to recording, editing, arranging and loop-based music products.

MUSB 227 - Studio and Performance Production Operations **4:3:2**

Covers the technical and artistic sides of recording studio activities. Students experience the workings of a real recording studio during the laboratory portion of the course. (Students must participate in laboratory sessions at off-campus recording studios and are responsible for their own transportation.) A course fee is required.

MUSB 228 - Audio Technology **4:3:2**

Provides students with an overview of the music production industry. This course allows students the opportunity to experiment with the current technology of the audio trades and research the complexities involved in the recording studio and at live performances. A course fee is required.

MUSB 229 - Commercial Songwriting and the Music Industry **3:3:0**

Explores the craft of songwriting. This integrative course combines the combination of melodic and harmonic songwriting theory and the design of lyric-phrasing through collaborative exercises. In addition, various song designs and their applications to popular music styles are examined. This course encourages collaborative exercises integrating different creative talents of its students. *Prerequisite: MUS 119 with a grade of C or higher.*

MUSB 291 - Music Industry Internship **3:0:15**

Encompasses a faculty and business-monitored internship where students complete 180-hours per semester in an approved music industry establishment. This internship experience provides students with an opportunity to apply the knowledge and skills acquired in the music industry curriculum to real-world scenarios. *Prerequisite: MUSB 111, 214, and 228 with grades of C or higher.*

Nanofabrication Technology

NFAB 211 - Material, Safety, and Equipment Overview for Nanofabrication **3:2:3**

This course provides an overview of the materials, safety and equipment issues encountered in the practice of “top down” and “bottom up” nanofabrication. It focuses on safety, environmental and health issues in equipment operation and materials handling as well as on cleanroom protocol. Topics to be covered include: cleanroom operation, OSHA lab standard safety training, health issues, Biosafety Levels (BSL) guidelines, and environmental concerns. Safety issues dealing with nanofabrication equipment, materials, and processing are also discussed including those pertinent to biological materials, wet benches, thermal processing tools, plasma-based equipment, stamping and embossing lithography tools, vacuum systems and pumps, gas delivery systems and toxic substance handling and detection. Specific material handling procedures to be discussed include corrosive, flammable, and toxic materials, biological materials, carcinogenic materials, DI water, solvents, cleaners, photo resists, developers, metals, acids, and bases. The course also concentrates on safe equipment maintenance and operation. Students will be given an overview of basic nanofabrication materials, equipment and equipment operation. This technical overview and operational introduction to processing equipment and characterization tools include: chemical processing, furnaces, vacuum-based processing (physical vapor deposition equipment, chemical vapor deposition equipment, and dry etching equipment), and lithography as well as scanning probe microscopy (e.g., atomic force microscopy), optical microscope, electron microscopy (e.g., scanning electron microscopy), ellipsometer, nano spec, and profilometer equipment. A course fee is required. *Prerequisite: Restricted, see Instructor.*

NFAB 212 - Basic Nanofabrication Processes **3:2:3**

This course is the hands-on introduction to the processing involved in “top down”, “bottom up”, and hybrid nanofabrication. The majority of the course details a step-by-step description of the equipment, facilities processes and process flow needed to fabricate devices and structures. Students learn to appreciate processing and manufacturing concerns including process control, contamination, yield, and processing interaction. The students design process flows for micro- and nano-scale systems. Students learn the similarities and differences in “top down” and “bottom up” equipment and process flows by undertaking hands-on processing. This hands-on exposure covers basic nanofabrication processes including colloidal chemistry, self-assembly, catalyzed nanoparticle growth, lithography, wet and dry etching, physical vapor deposition, and chemical vapor deposition. A course fee is required. *Prerequisite: Restricted, see Instructor.*

NFAB 213 - Thin Films in Nanofabrication **3:2:3**

This course is an in-depth, hands-on exposure to materials fabrication approaches used in nanofabrication. Students learn that these processes can be guided by chemical or physical means or by some combination of these. Hands-on exposure includes self-assembly; colloidal chemistry; atmosphere, low-pressure and plasma enhanced chemical vapor deposition; sputtering; thermal and electron beam evaporation; nebulization and spin-on techniques. This course is designed to give students hands-on experience in depositing, fabricating and self-assembling a wide variety of materials tailored for their mechanical, electrical, optical, magnetic, and biological properties. A course fee is required. *Prerequisite: Restricted, see Instructor.*

NFAB 214 - Lithography for Nanofabrication **3:2:3**

This course is a hands-on treatment of all aspects of advanced pattern transfer and pattern transfer equipment including probe techniques; stamping and embossing; e-beam; and optical contact and stepper systems. The course is divided into five major sections. The first section is an overview of all pattern generation processes covering aspects from substrate preparation to tool operation. The second section concentrates on photolithography and examines such topics as mask template, and mold generation. Chemical makeup of resists is discussed including polymers, solvents, sensitizers, and additives. The role of dyes and antireflective coatings are discussed. In addition, critical dimension (CD) control and profile control of resists are investigated. The third section discusses the particle beam lithographic techniques such as e-beam lithography. The fourth section covers probe pattern generation and the fifth section explores embossing lithography, step-and-flash, stamp lithography, and self-assembled lithography. A course fee is required. *Prerequisite: Restricted, see Instructor.*

NFAB 215 - Materials Modification in Nanofabrication **3:2:3**

This course will cover in detail the processing techniques and specialty hardware used in modifying properties in nanofabrication. Material modification steps to be covered include etching, functionalization, alloying, stress control and doping. Avoiding unintentional materials modification is also covered including such topics as use of diffusion barriers, encapsulation, electromigration control, corrosion control, wettability, stress control, and adhesion. Hands-on materials modification and subsequent characterization is undertaken. A course fee is required. *Prerequisite: Restricted, see Instructor.*

NFAB 216 - Characterization, Packaging, and Testing of Nanofabricated Structures **3:2:3**

This course examines a variety of techniques and measurements essential for testing and for controlling material fabrication and final device performance. Characterization includes electrical, optical, physical, and chemical approaches. The characterization experience includes hands-on use of tools such as the Atomic Force Microscope (AFM), Scanning Electron Microscope (SEM),

fluorescence microscopes, and fourier transform infrared spectroscopy. A course fee is required. *Prerequisite: Restricted, see Instructor.*

Nursing

NURS 118 - Guatemala: A Cross Cultural Nursing Immersion **3:3:0**

Combines hands-on learning and service with a cultural-immersion experience as students travel to Guatemala to examine Guatemalan culture, its health care standards, Guatemalan's access to healthcare, and the country's current health-care system. This course builds upon the student's use of the Nursing Process and the clinical skills they acquired during the first year and beyond in the nursing curriculum. Focus is also on integrating the use of clinical skills, health promotion, critical thinking, and education while stimulating the student's self-awareness, confidence, and their pursuit of life-long learning. A course fee is required. *Prerequisite: NURS 140 and 141 with grades of C or higher. Instructor's signature is required.*

NURS 120 - Zambia: A Cross-Cultural Nursing Immersion **3:3:0**

Combines hands-on learning and service with a cultural-immersion experience as students travel to Zambia to examine Zambian culture, its health care standards, Zambian's access to healthcare, and the country's current health-care system. This course builds upon the student's use of the Nursing Process and the clinical skills acquired during the first year and beyond the nursing curriculum. Focus is also on integrating the use of clinical skills, health promotion, critical thinking and education while stimulating the student's self-awareness, confidence, and their pursuit of life-long learning. A course fee is required. *Prerequisite: NURS 140, 141, 142 and 144 with grades of C or higher. Instructor's signature is required.*

NURS 125 - Dosage Calculations **2:2:0**

Designed for students recently accepted into the Nursing program, are currently enrolled in the Nursing program, or have obtained permission of the course instructor. The course covers a complete basic review of math principles followed by information necessary to calculate and safely administer medications. Calculation and administration of medications to adults and children are discussed. Oral and parenteral doses will be addressed, as well as, the introduction of intravenous therapy. *Prerequisite: Permission of the Nursing Program Faculty.*

NURS 140 - Introduction to Nursing Practice Concepts I **1:0:3**

Focuses on the clinical skills necessary to practice safe nursing care at a fundamental level. The clinical skills include: psychomotor skills, rationale, critical thinking, and physical assessment. This course also introduces fundamental skills which include safety, vital signs, intake and output, hygiene, TED hose application, ROM (range of motion), patient positioning, patient transfer techniques, body mechanics, standard precautions, isolation, oxygen therapy, oral/pharyngeal suctioning, safe non-parenteral medication administration, and medical asepsis. This course emphasizes the concept of caring and caring interventions and uses hands-on skill development, theory, and simulation scenarios to facilitate student learning. A course fee is required. *Enrollment is restricted to students in the Nursing AS program. Prerequisite: BIOL 121 with a grade of C or higher. Students are to follow a cohort and take courses that follow a sequence defined by the Nursing Program.*

NURS 141 - Introduction to Nursing Practice Concepts II **1:0:3**

Builds upon the nursing practice concepts introduced in NURS 140. This course focuses on intermediate clinical skills necessary to provide safe and effective aseptic nursing care. The clinical skills include: psychomotor skills, rationale, critical thinking, and physical assessment. This course also builds upon the fundamental skills covered in NURS 140 and includes: sterility, isolation with sterility, introduction to IV therapy and IV pumps, safe parenteral medication administration, enemas,

urinary catheter insertion and care, specimen collection, and central line awareness. This course emphasizes the concept of caring and caring interventions and uses hands-on skill development, theory and simulation scenarios to facilitate student learning. A course fee is required. *Enrollment is restricted to students in the Nursing AS program. Prerequisite: Students are to follow a cohort and take courses that follow a sequence defined by the Nursing Program.*

NURS 142 - Health Assessment Concepts for Nursing Practice **3:3:0**

Introduces students to the health and physical assessment of clients and the detection of findings, which indicate an abnormal condition. This course covers the concepts of accountability, advocacy, assessment, caring, cellular regulation, cognition, comfort, communication, culture, diversity, elimination, ethics, evidence-based practice, family, basic electrolyte balance, health care systems, health policy, health/wellness/illness, mobility, nursing process, oxygenation, perfusion, safety, self, sensory perception, spirituality, stress and coping, teaching and learning, thermoregulation, tissue integrity, and violence as they all relate to the health and physical assessment clients. *Enrollment is restricted to students in the Nursing AS program. Prerequisite: Student are to follow a cohort and take the courses that follow a sequence defined by the Nursing Program.*

NURS 143 - Concepts of Informatics in Nursing Practice **1:1:0**

Introduces the concepts and skills related to Informatics in nursing practice. This course integrates "Tools for Success," along with educational technology. Didactic instruction focuses on basic computer competency, information literacy as aids in the decision-making process and the provision of evidenced-based nursing practice. In addition, the necessity for providing a "culture of safety," related to the use of Informatics in nursing practice, is stressed. *Enrollment is restricted to students in the Nursing AS program. Students are to follow a cohort and take courses that follow a sequence defined by the Nursing Program*. (FYS)

NURS 144 - Fundamental Concepts for Nursing Practice **3:3:0**

Introduces students to the foundational concepts for the practice of nursing. The foundational concepts emphasized are: accountability, advocacy, cellular regulations, clinical decision making, comfort, communication, critical thinking, culture, diversity, ethics, evidence-based practice, family, fluid and electrolytes, health care systems, health policy, health/wellness/illness, infection, inflammation, legal issues, metabolism, oxygenation, perfusion, professional behaviors, quality improvement, safety, sensory perception, spirituality, stress and coping, teaching and learning, therapeutic communication, thermoregulation, time management/organization, tissue integrity, and violence. Students incorporate cultural values and the client's right to choose in the process of healthcare decision-making. *Enrollment is restricted to students in the Nursing AS program. Prerequisite: Student are to follow a cohort and take courses that follow a sequence defined by the Nursing Program.*

NURS 146 - IV Essentials and Dosage Calculation **1:1:0**

Emphasizes the critical thinking skills required to assess and check patency of an intravenous peripheral infusion device (IPID); to hang and maintain a primary IV solution and prepare and administer intravenous piggyback (IVPB) medications; and to complete dosage calculation problems. This course is designed for students entering their second semester of the Nursing program or have obtained permission to enroll in the course by the Instructor. A course fee is required. *Enrollment is restricted to students in the Nursing AS program. Prerequisite: NURS 141 with a grade of C or higher.*

NURS 150 - Holistic Health Concepts for Nursing Practice I **5:4:3**

Addresses safe nursing care for the adult patient. This course is designed to develop the concepts of accountability, advocacy, behaviors, caring, clinical decision making, cognition, collaboration,

communication, culture, diversity, elimination, ethics, evidence-based practice, family, fluid and electrolytes, grief and loss, health care systems, health policy, health/wellness/illness, immunity, infection, inflammation, metabolism, mobility, perfusion, professional behaviors, quality improvement, safety, sexuality, spirituality, stress and coping, teaching and learning, time management/organization, and tissue integrity. Students gain the theoretical knowledge and clinical skills needed to organize and provide safe nursing care for diverse individuals. A course fee is required. *Enrollment is restricted to students in the Nursing AS program. Prerequisite: Students are to follow a cohort and take courses that follow a sequence defined by the Nursing Program.* (W)

NURS 151 - Holistic Health Concepts for Nursing Practice II **4.5:3:4.5**

Addresses safe nursing care for the adult patient and their families. This course is designed to develop the concepts of accountability, acid-base balance, advocacy, caring behaviors, clinical decision making, collaboration, communication, culture, diversity, elimination, ethics, evidence-based practice, family, fluid and electrolytes, grief and loss, health care systems, health policy, health/wellness/illness, immunity, inflammation, intracranial regulation, mobility, perfusion, professional behaviors, quality improvement, safety, sexuality, spirituality, teaching and learning, and time management/organization. Special consideration is placed upon events that are common in the normal life cycle. In addition, this course uses theory and guided clinical experiences to allow students to focus on meeting basic human needs while providing safe nursing care for diverse individuals and families. A course fee is required. *Enrollment is restricted to students in the Nursing AS program. Prerequisite: Students are to follow a cohort and take courses that follow a sequence defined by the Nursing Program.*

NURS 220 - Pharmacology for Nurses **3:3:0**

Introduces students to pharmacology and the safe administration of drugs. This course emphasizes the study of groups of drugs, their actions, and their side effects with special attention placed on nursing implications and pharmacokinetics. *Enrollment is restricted to students in the Nursing AS program. Prerequisite: NURS 151 with a grade of C or higher; Permission of the Nursing Program Faculty; Nursing Licensure - PN or RN.*

NURS 225 - Advanced Dosage Calculations **1:1:0**

Emphasizes critical thinking skills required to prepare and administer intravenous (IV) medications and advanced pediatric dosages. This course is designed for students, who are entering their second year of the nursing program or have obtained permission to enroll in the course by the Instructor. *Enrollment is restricted to students in the Nursing AS program. Prerequisite: Permission of the Nursing Program Faculty.*

NURS 240 - Adult Health Concepts for Nursing Practice I **2:1:3**

Addresses safe nursing care and the needs of patients with cancer and other cellular alterations. This course is designed to further develop the concepts of accountability, advocacy, caring, cellular regulation, clinical decision-making, collaboration, comfort, communication, culture, diversity, ethics, evidence-based practice, family, grief and loss, health care systems, health policy, health/wellness/illness, immunity, infection, perfusion, professional behaviors, quality improvement, safety, spirituality, teaching and learning, and time management/organization. A course fee is required. *Enrollment is restricted to students in the Nursing AS program. Prerequisite: BIOL 122 with a grade of C or higher. Otherwise, students are to follow a cohort and take courses that follow a sequence defined by the nursing program.*

NURS 241 - Adult Health Concepts for Nursing Practice II **2.5:1.5:3**

Covers safe nursing care for patients with complex physiological needs. This course is designed to further develop the concepts of accountability, acid-base balance, advocacy, caring, clinical decision

making, collaboration, communication, culture, diversity, ethics, evidence-based practice, family, grief and loss, health care systems, health policy, health/wellness/illness, infection, inflammation, metabolism, mobility, perfusion, professional behaviors, quality improvement, safety, self, spirituality, teaching and learning, and time management/organization. A course fee is required. *Enrollment is restricted to students in the Nursing AS program. Prerequisite: Students are to follow a cohort and take courses that follow a sequence defined by the Nursing Program.*

NURS 242 - Family Health Concepts for Nursing Practice I **2.5:1.5:3**

Covers the safe nursing care of women, newborns, and childbearing families. This course is designed to develop the concepts of accountability, advocacy, behaviors, caring, clinical decision making, collaboration, communication, culture, diversity, ethics, evidence-based practice, family, grief and loss, health care systems, health policy, health/wellness/illness, immunity, infection, metabolism, oxygenation, perfusion, professional behaviors, quality improvement, reproduction, safety, sexuality, spirituality, teaching and learning, thermoregulation, time management/organization, and violence as they relate to safe nursing care during the antepartum, intrapartum, and postpartum periods. Special consideration is placed on events that are common in the normal life cycle. A course fee is required. *Enrollment is restricted to students in the Nursing AS program. Prerequisite: Students are to follow a cohort and take the courses that follow a sequence defined by the Nursing Program.*

NURS 243 - Family Health Concepts for Nursing Practice II **2.5:1.5:3**

Addresses safe family-centered nursing care to children. This course fosters the ability to adapt care to a child's developmental level and focuses on promoting health, as well as providing atraumatic care from infancy through adolescence. Health education is stressed throughout the course. This course is designed to further develop the concepts of accountability, acid-based compensation, advocacy, caring, cellular regulation, clinical decision making, collaboration, communication, culture, development, diversity, elimination, ethics, evidence-based practice, family, grief and loss, fluid and electrolyte balance, health care systems, health policy, health/wellness/illness, infection, inflammation, metabolism, oxygenation, perfusion, professional behaviors, quality improvement, safety, spirituality, teaching and learning, time management/organization, tissue integrity, and violence. A course fee is required. *Enrollment is restricted to students in the Nursing AS program. Prerequisite: Students are to follow a cohort and take courses that follow a sequence defined by the Nursing Program.*

NURS 244 - Advanced Behavioral Health Concepts for Nursing Practice **2.5:1.5:3**

Addresses the safe nursing care of patients, families, and groups with complex behavioral health needs. This course is designed to develop the concepts of accountability, advocacy, behaviors, clinical decision making, cognition, collaboration, communication, culture, diversity, ethics, evidence-based practice, family, grief and loss, health care systems, health policy, health/wellness/illness, legal issues, mood and affect, professional behaviors, quality improvement, safety, self, spirituality, stress and coping, teaching and learning, time management/organization, and violence. In addition, this course presents the concepts related to behavioral health, societal implications involved in care, and the role of the professional nurse in various treatment settings. A course fee is required. *Enrollment is restricted to students in the Nursing AS program. Prerequisite: PSYC 101 with grade of C or higher; Students are to follow a cohort and take courses that follow a sequence defined by the Nursing Program.*

NURS 250 - Complex Health Concepts for Nursing Practice **2.5:1:4.5**

Covers safe nursing care for adult patients from socially, economically, and culturally diverse backgrounds. This course is designed to further develop concepts of accountability, advocacy, caring, clinical-decision making, collaboration, communication, culture, diversity, ethics,

evidence-based practice, family, grief and loss, health care systems, health policy, health/wellness/illness, perfusion, professional behaviors, quality improvement, safety, spirituality, teaching and learning, thermoregulation and time management/organization. In addition, this course is structured to assimilate the concepts learned in previous semesters as students are able to demonstrate the knowledge, skills, and attitudes necessary to provide quality, individualized entry-level nursing care for professional nursing practice. A course fee is required. *Enrollment is restricted to students in the Nursing AS program. Prerequisite: BIOL 221 with a grade of C or higher; Students are to follow a cohort and take courses that follow a sequence defined by the Nursing Program.*

NURS 251 - Leadership and Management Concepts for Nursing Practice **4:2.5:4.5**

Enhances the professional role of the student as the focus on safe nursing care for adult patients continues. Emphasis is placed on the concepts of accountability, acid-base, advocacy, caring, clinical decision making, collaboration, communication, culture, diversity, ethics, evidence-based practice, family, health care systems, health policy, health/wellness/ illness, intracranial regulation, leadership and management, legal issues, managing care, mobility, oxygenation, perfusion, professional behaviors, quality improvement, safety, spirituality, teaching and learning, therapeutic communication, and time management/organization. In addition, this course focuses on transitioning the student to the graduate nursing role as they further develop a Clinician's role. Professionalism and ethical decision making - within the context of socially, economically, and culturally diverse backgrounds of patients – is addressed. A course fee is required. *Enrollment is restricted to students in the Nursing AS program. Prerequisite: Students are to follow a cohort and take courses that follow a sequence defined by the Nursing Program.*

Nutrition

NUTR 104 - Nutrition **3:3:0**

Covers the science of nutrition, including the chemical properties, functions and food sources of the six classes of nutrients. This course emphasizes how nutrients are ingested and processed within the body and covers the absorption, transport, and biochemical processes during the various stages of food intake. Nutrition related to exercise, weight management and body composition, as well as an individual's nutritional needs and recommendations over the life cycle, is emphasized. How nutrition relates to health and disease, such as obesity, diabetes, cardiovascular disease, cancer and dental health is also examined. Lastly, this course covers tools for healthy food selection, nutrition educational materials for the public, and nutrition information in the media.

Physical Education

PE 109 - Golf/Physical Fitness **1:1:1**

An introduction to fundamental skills. The course includes an introduction to the health-related components of fitness and how the activity of golf can develop and contribute to overall fitness and wellness. (W)

PE 131 - Aquatics I - Beginning **1:1:1**

Basic swimming skills presented include: floats, recoveries, rhythmic breathing, elementary swim strokes, deep-water adjustments, and treading water. Also, survival swimming skills, elementary diving skills and non-swimming rescues will be presented. (W)

PE 135 - Fitness and Dance Variations **1:1:1**

Introduces the dimensions of wellness, the components of health-related fitness, and the behavior change process. Students participate in various forms of dance and exercise such as barre methods, ballet, jazz, modern, character, and Pilates to enhance physical fitness and personal wellness. (W)

PE 138 - Basic Fitness I **1:1:1**

Current information about lifestyle factors affecting the participants' health, in particular, the role of physical activity, exercise, and fitness. Strategies on how to improve health- related components of physical fitness are covered. Other topics include goal setting, motivation, and stress management. This course also involves participation in a variety of activities. (W)

PE 139 - Beginning Self-Defense **1:1:1**

Introduces the dimensions of wellness, the components of health-related fitness, and the behavior change process. Students establish personal wellness goals and participate in exercise and physical activity to improve fitness, promote health and wellness and self-defense proficiency. The course also introduces basic self-defense concepts, the components of unarmed combat and martial art skills that are practical for personal protection. (W)

PE 141 - Cardio Kickboxing and Resistance Training **1:1:1**

Designed to focus on the health-related benefits of moderate to vigorous exercise through the development of safe and effective kicks and punches. Flexibility, strength, and conditioning exercises for all major muscle groups will be included as well as an emphasis on cardiovascular health through a kickboxing workout. An additional focus will be on muscular strength and endurance exercises using free weights and other resistance training equipment. (W)

PE 142 - Aerobic Fitness I **1:1:1**

Development of flexibility and muscular strength and endurance of the major muscle groups and the joint actions involved in a variety of aerobic conditioning activities. In addition, a strong emphasis is placed on the importance of the health benefits of cardiovascular conditioning and on the prevention of injury. (W)

PE 166 - Fitness Walking and Resistance Training **1:1:1**

Designed to focus on the health-related benefits of moderate to vigorous exercise through walking and resistance training. Flexibility, strength, and conditioning exercises for all major muscle groups are included, as well as an emphasis on cardiovascular health through a variety of walking activities. (W)

PE 178 - Yoga I **1:1:1**

Introduces the dimensions of wellness, the components of health-related fitness, and the behavior change process. Students establish personal wellness goals and participate in exercise and physical activity to improve fitness and promote health and wellness. The course presents the foundation of Hatha yoga practice and focuses on stretching, postures and alignment, breathing exercises, body/mind awareness, relaxation, meditation techniques, health benefits of practice, and key philosophical concepts in the yoga tradition. A course fee is required. (W)

PE 179 - Power Yoga **1:1:1**

Includes a challenging workout composed of sun salutations, standing postures, balance postures, and floor work to increase strength and flexibility. Also, there is a focus on controlled breathing and stabilization exercises to release tension and stress. A special emphasis will be on the incorporation of stretching and relaxation techniques that contribute to stress management and overall health. (W)

PE 180 - Introduction to Pilates **1:1:1**

Introduces the Pilates method of body conditioning that uniquely combines stretching and strengthening exercises. The emphasis of the course is to develop an appreciation for the mind/body connection through exercises that improve posture, provide flexibility and balance. (W)

PE 181 - Introduction to T'ai Chi **1:1:1**

Introduces the dimensions of wellness, the components of health-related fitness, and the behavior change process. Students establish personal wellness goals and participate in exercise and physical activity to improve fitness and promote health and wellness. The course presents Taijiquan (T'ai Chi) form practice, the health benefits gained through regular practice, and self-defense techniques. A course fee is required. (W)

PE 183 - Exercise and Stress Management **1:1:1**

Introduces students to the dimensions of wellness, the components of health-related fitness, and the behavior change process. Students establish personal wellness goals and participate in exercise and physical activity to improve fitness and promote health and wellness. The course presents stress, the stress response, and the relaxation response and explores a variety of relaxation techniques and coping strategies to reduce and manage stress for a lifetime. A course fee is required. (W)

PE 184 - Exercise, Nutrition, and Weight Management **1:1:1**

Introduces the dimensions of wellness, the components of health-related fitness, and the behavior change process. Students establish personal wellness goals and participate in exercise and physical activity to improve fitness and promote health and wellness. This course presents the basic principles of nutrition, assesses body composition, and discusses factors that contribute to overweight and obesity. The course presents a variety of lifestyle choices and habits that improve body composition and weight for life. A course fee is required. (W)

PE 201 - Living Fit and Well **3:2:1**

Introduces the dimensions of wellness, the components of health-related physical fitness and the behavior change process. Students establish personal wellness goals and participate in fitness assessments to establish baseline fitness levels. This course presents current information about lifestyle factors affecting the participants' health. Focus is on developing strategies that improve health-related components of physical fitness, such as flexibility, muscular strength, muscular endurance, cardiorespiratory endurance and body composition. Additional topics include: goal setting, motivation, nutrition, weight management and stress management. A course fee is required. (W)

Philosophy

PHIL 101 - Introduction to Philosophy **3:3:0**

Classic philosophical problems are examined through classroom discussions and a wide range of historical readings. The foundations of Western philosophical thought are explored from such thinkers as Socrates, Descartes, Nietzsche and Martin Luther King, Jr. *Prerequisite: Completion of all reading courses required by the College's Testing and Placement Program and eligibility for enrollment into ENGL 101.* (H&A)

PHIL 101H - Honors Introduction to Philosophy **3:3:0**

Classic philosophical problems are examined through classroom discussions and a wide range of historical readings. The foundations of Western philosophical thought are explored from such thinkers as Socrates, Descartes, Nietzsche, and Martin Luther King, Jr. Using a seminar and discussion-based approach, this course encourages independent, creative and critical inquiry and prepares students for the practical application of information by emphasizing effective research strategies and technologies congruent with the field of study. *Prerequisite: Completion of all developmental reading and writing courses required as a result of the College Testing and Placement Program.* (H&A)

PHIL 102 - Logic **3:3:0**

Learning to think clearly by examining the logical principles of right reasoning. Practice in creating valid inductive and deductive arguments and spotting arguments and misleading ploys increases the student's powers of writing, speaking, and critical thinking. (H&A)

PHIL 200 - Comparative Religion **3:3:0**

Explores the central beliefs of the major world religions including Hinduism, Buddhism, Taoism, Confucianism, Judaism, Christianity, and Islam. This course addresses the varieties of religious experience from both Eastern and Western cultural traditions with an emphasis upon the similarities and differences among their major teachings. (H&A)

PHIL 215 - Philosophy of Science **3:3:0**

Investigates the conceptual structures and methods used in scientific thinking. This course presents the logic of scientific assumptions, theories, and laws and shows the relationship between scientific facts and ethical values in a global setting.

PHIL 225 - Ethics: Belief and Action **3:3:0**

Everyday moral problems are investigated through the insights of Aristotle, Kant, Mill, Sartre, and other philosophers to help students form their own philosophies of life. (H&A)

PHIL 225H - Honor Ethics: Belief in Action **3:3:0**

Everyday moral problems are investigated through the insights of Aristotle, Kant, Mill, Sartre, and other philosophers to help students form their own philosophies of life. Using a seminar or discussion-based approach, this course encourages independent, creative and critical inquiry and prepares students for the practical application of information by emphasizing effective research strategies and technologies congruent with the field of study. *Prerequisite: Completion of all developmental reading and writing courses required as a result of the College Testing and Placement program*. (H&A)

Physical Science

PHSC 113 - Introduction to Physical Science **3:3:1**

Provides an introduction to physics and chemistry for the non-science major. Students develop problem-solving skills and a practical understanding of the scientific method via an introduction to mechanics, waves, electricity and magnetism, nuclear/atomic physics, chemical elements, chemical bonding and reactions and organic chemistry. Practical applications of scientific concepts in business and education are emphasized. A course fee is required. *Prerequisite: MATH 090 with a grade of C or higher. Or placement through the College Placement and Testing Program. Completion of all developmental reading and writing courses required as a result of the College Testing and Placement Program.* (SCI/LAB)

PHSC 114 - Introduction to Earth and Space Sciences **3:3:1**

Introduces Astronomy, Geology, and Meteorology for the non-science major. Students develop problem-solving skills and an understanding of the scientific method via an introduction to the universe and solar system, earth materials and processes, weather, and the environment. Practical applications of scientific concepts in business and education are emphasized. A course fee is required. (SCI/LAB)

Physics

PHYS 105 - Concepts in Physics **3:3:1**

Designed for students who are not majoring in the sciences. The course provides a conceptual view of major topics in classical and modern physics with a limited mathematical approach. Topics include mechanics, energy, heat, optics, light, and special relativity, models of the atom, and electricity and magnetism. A course fee is required. *Prerequisite: MATH 051 or 045 with a grade of C or higher.* (SCI/LAB)

PHYS 151 - Physics for Technicians **4:3:3**

Is intended for students interested in pursuing careers as health technicians. The course covers such topics as mechanics, sound and electromagnetic waves, atomic structure, radioactivity and its production, electricity, circuits and magnetism, static and dynamic fluids. A three-hour laboratory is required with this course. A course fee is required. *Prerequisite: MATH 103, 119 or 121 with a grade of C or higher.*

PHYS 152 - Physics for Radiographers **4:3:3**

Designed for students who wish to become radiographers. Major topics include electromagnetic applications, diagnostic radiographic imaging systems, nuclear medicine, radiation therapy, and ultrasonography with major emphasis in the field of diagnostic radiology. *Prerequisite: PHYS 151 with a grade of C or higher.*

PHYS 153 - Rad Physics - College Based **3:3:0**

Reviews atomic structure and terminology and establishes knowledge of the nature and characteristics of radiation, x-ray production, and the fundamentals of photon interactions with matter. This course is restricted to students who are enrolled in the Radiology Technology AS program. *Prerequisite: PHYS 151 with a grade of C or higher.*

PHYS 161 - Physics for Imaging **3:2:3**

Discusses the topics essential to students interested in pursuing a career in diagnostic imaging. The course covers mechanics, sound and electromagnetic waves, electricity, circuits and magnetism, static and dynamic fluids, and radiation. *This course is restricted to students in the Diagnostic Medical Sonography AAS program. Prerequisite: MATH 103, 119 or 121 with a grade of C or higher.*

PHYS 201 - General Physics I **4:3:3**

Designed for students who are not majoring in the physical sciences. Course includes mechanics, heat, and sound. A course fee is required. *Prerequisite: MATH 104 or the equivalent.* (SCI/LAB)

PHYS 202 - General Physics II **4:3:3**

A continuation of PHYS 201. Electricity and magnetism, waves, some optics, light, introduction to modern physics. A course fee is required. *Prerequisite: PHYS 201 with a grade of C or higher.* (SCI/LAB)

PHYS 211 - Physics for Engineers and Scientists I **4:3:3**

Designed for students who are majoring in physics or engineering; topics include mechanics and heat. Calculus oriented. A course fee is required. *Prerequisite: MATH 121 or the equivalent, with a grade of C or higher.* (SCI/LAB)

PHYS 212 - Physics for Engineers and Scientists II **4:3:3**

A continuation of Physics 211. Topics include electricity and magnetism; light and wave mechanics. Calculus oriented. A course fee is required. *Prerequisite: MATH 122 and PHYS 211 or the equivalent, with grades of C or higher.*

PHYS 221 - Physics for Engineers and Scientists III **4:3:3**

Continues the topics covered in PHYS 212 as emphasis is provided upon relativity; relativistic mechanics; quantum properties; elementary particles; nuclear atom; radioactivity. Calculus is used to solve applied examples. *Prerequisite: PHYS 212 or the equivalent, with a grade of C or higher. Co-requisite: MATH 122 or the equivalent.*

Paralegal Studies

PLGL 101 - Introduction to Paralegal Studies **3:3:0**

Introduces students to the American legal system. This course outlines the organization and jurisdiction of federal and state courts; introduces legal terminology, ethics and research discusses the role that the paralegal plays within the profession, as well as their responsibilities to lawyers; and surveys the general law areas, including torts, criminal law, property law, family law, business organizations, and estate law. A course fee is required. *Pre or Co-requisite: ENGL 101. (FYS)*

PLGL 102 - Legal Research and Writing I **3:3:0**

Examination of the law library. An introduction to research in the various reference sources available to lawyers in determining applicable law; study of the processes of legal research and the writing of memoranda. Students gain practical experience by completing research and writing assignments. A course fee is required. *Prerequisite: PLGL 101 with a grade of C or higher.*

PLGL 104 - Legal Research and Writing II **3:3:0**

Continues the legal research techniques covered in PLGL 102 as students further examine various legal reference sources such as computer-assisted legal research. The course also includes extensive drafting of legal memoranda, correspondence, and trial briefs. A course fee is required. *Prerequisite: PLGL 102 with a grade of C or higher.*

PLGL 105 - Contracts **3:3:0**

Studies the legal issues pertaining to the formation, enforcement, and termination of contracts. This course specifically addresses the elements of a legally binding contract, the rights and obligations arising from contracts, and remedies for breach of contract, as well as an overview of Article II of the UCC. Emphasis is also placed upon the drafting of a variety of clauses, contracts and related documents. A course fee is required. *Co-requisite: PLGL 101.*

PLGL 201 - Civil Litigation I **3:3:0**

Prepares students for work with an attorney throughout the course of a civil case, including the initial pleadings. Focus is placed on performance of special tasks that include investigative techniques, client and witness interviews, law office software use, and the drafting of initial pleadings. In addition, this course provides an introduction to rules of evidence as they apply to civil actions, a review of state and federal court structure, and instruction in Rules of Civil Procedure. A course fee is required. *Prerequisite: PLGL 101 with a grade of C or higher.*

PLGL 202 - Civil Litigation II **3:3:0**

Continues the topics covered in PLGL 201 with an emphasis on motion practice, discovery, settlements, and trial preparation. The course requires extensive drafting of relevant legal

documents, including instruction in the use of standard forms. A course fee is required. *Prerequisite: PLGL 201 with a grade of C or higher.*

PLGL 203 - Family Law **3:3:0**

Studies the legal problems pertaining to the formation and dissolution of the family unit. This course specifically addresses marriage, annulment, divorce, custody and support of children, adoption, and protection from abuse. Emphasis is placed upon the preparation of documents and pleadings, as well as the interpersonal communication skills required to interact with clients. *Prerequisite: PLGL 101 with a grade of C or higher.*

PLGL 204 - Estate Planning and Administration **3:3:0**

Introduces students to the more common forms of wills, trusts, powers of attorney, advance directives for healthcare (living wills), other estate planning documents, and a survey of the fundamental principles of law applicable to each. This course also reviews Pennsylvania's Intestate Succession law and provides a detailed analysis of the administration of estates including the impact of applicable death transfer taxes. Students gain practical experience in preparing estate planning documents and inheritance tax returns. *Prerequisite: PLGL 101 with a grade of C or higher.*

PLGL 206 - Employment Law **3:3:0**

Introduces students to employment law terms and concepts relevant to the relationship between employer and employee from recruiting and hiring to termination. This course covers instruction in specific statutory law related to the workplace that includes Americans with Disabilities Act (ADA), Family and Medical Leave Act (FMLA), Age Discrimination in Employment Act (ADEA), and Title VII. Students receive instruction in the appropriate procedural law used in the different forums in which employment law issues are litigated. *Prerequisite: PLGL 101 with a grade of C or higher.*

PLGL 207 - Bankruptcy Law **3:3:0**

Provides students with an overview of consumer bankruptcy law and the procedures featured in the practice of document preparation. *Prerequisite: PLGL 101 with a grade of C or higher.*

PLGL 209 - Real Estate Law for Paralegals **3:3:0**

Provides an overview of the law relating to the transfer of residential real property. This course surveys the multiple forms of ownership, agreements of sale, title searching procedures, and mortgage documents. Students are taught to draft deeds and prepare settlement sheets. *Prerequisite: PLGL 101 with a grade of C or higher.*

PLGL 210 - Paralegal Ethics and Professionalism **3:3:0**

Provides an in-depth analysis of legal ethics including unauthorized practice of law, confidentiality, and conflicts of interest. In addition, this course also discusses professionalism and job interview preparation. This course is designed to be taken at the end of the student's course of study. A course fee is required. *Co-requisite: PLGL 102.*

PLGL 211 - Administrative Law **3:3:0**

Studies the creation, processes, and procedures of Federal and Pennsylvania administrative agencies and the laws that govern their behavior. This course specifically addresses the areas of workers' compensation, unemployment compensation, and Social Security disability, including eligibility requirements, procedures for filing claims and appeals, hearings, and common issues that arise thereunder. *Prerequisite: PLGL 101 with a grade of C or higher.*

PLGL 251 - PLGL Internship I **3:1:14**

At least 200 hours of work experience in an approved law firm or law office. A comprehensive daily diary is required and students meet on campus to discuss their experiences. *Limited to qualified students enrolled in the Paralegal Studies degree or certificate program. Prerequisite: PLGL 102 and 201 with grades of C or higher and permission of the Program Coordinator or Internship Instructor.*

PLGL 252 - PLGL Internship II **3:3:0**

At least 200 hours of work experience in an approved law office. A comprehensive daily diary is required and students meet on campus to discuss their experiences. *Limited to qualified students enrolled in the Paralegal Studies degree or certificate program. Prerequisite: PLGL 251 with a grade of C or higher, and permission of the Program Coordinator or Internship Instructor.*

Practical Nursing

PNUR 140 - Introduction to Practical Nursing Concepts I **1:0:3**

Focuses on the clinical skills necessary to practice safe practical nursing care at a fundamental level. The clinical skills include: psychomotor skills, rationale, critical thinking, and physical assessment/data collection. This course also introduces fundamental skills which include safety, vital signs, intake and output, hygiene, TED hose application, ROM (range of motion), patient positioning, patient transfer techniques, body mechanics, standard precautions, isolation, oxygen therapy, oral/pharyngeal suctioning, safe non-parenteral medication administration, and medical asepsis. This course emphasizes the concept of caring and caring interventions and uses hands-on skill development, theory, and simulation scenarios to facilitate student learning. A course fee is required. *Enrollment is restricted to students in the Practical Nursing certificate. Prerequisite: BIOL 121 with a grade of C or higher; Students are to follow a cohort and take courses that follow a sequence defined by the Department of Nursing.*

PNUR 141 - Introduction to Practical Nursing Concepts II **1:0:3**

Builds upon the nursing practice concepts introduced in PNUR 140. This course focuses on intermediate clinical skills necessary to provide safe and effective aseptic practical nursing care. The clinical skills include psychomotor skills, rationale, critical thinking, and physical assessment/data collection. This course also builds upon the fundamental skills covered in PNUR 140 and includes sterility, isolation with sterility, introduction to IV therapy and IV pumps, safe parenteral medication administration, enemas, urinary catheter insertion and care, specimen collection, and central line awareness. Finally, this course emphasizes the concept of caring and caring interventions and uses hands-on skill development, theory and simulation scenarios to facilitate student learning. A course fee is required. *Enrollment is restricted to students in the Practical Nursing certificate. Prerequisite: Students are to follow a cohort and take courses that follow a sequence designed by the Department of Nursing.*

PNUR 142 - Data Collection Concepts for Practical Nursing **1:0.5:1.5**

Introduces students to the health and physical assessment/data collection of clients. This course covers the concepts of accountability, advocacy, assessment/data collection, caring, cellular regulation, cognition, comfort, communication, culture, diversity, elimination, ethics, evidence-based practice, family, basic electrolyte balance, health care systems, health policy, health/wellness/illness, mobility, nursing process, oxygenation, perfusion, safety, self, sensory perception, spirituality, stress and coping, teaching and learning, thermoregulation, tissue integrity, and violence as they all relate to the health and physical assessment/data collection of clients. Lastly, students are taught to detect findings, which indicate an abnormal condition. A course fee is required. *Enrollment is restricted to students in the Practical Nursing certificate.-Prerequisite: Students are to follow a cohort and take courses that follow a sequence designed by the Department of Nursing.*

PNUR 143 - Concepts of Informatics in Practical Nursing **1:1:0**

Introduces the concepts and skills related to Informatics in practical nursing practice. “Tools for Success” are integrated into this course, along with educational technology. Didactic instruction focuses on basic computer competency, information literacy as aids in the decision-making process and the provision of evidenced-based nursing practice. In addition, the necessity for providing a “culture of safety,” related to the use of Informatics in nursing practice, is stressed. *Enrollment is restricted to students in the Practical Nursing program. Prerequisite: Students are to follow a cohort and take courses that follow a sequence of courses designed by the Department of Nursing.*

PNUR 144 - Fundamental Concepts for Practical Nursing **4:3:3**

Introduces students to the foundational concepts for the practice of practical nursing. The foundational concepts emphasized are: accountability, advocacy, cellular regulations, clinical decision making, comfort, communication, critical thinking, culture, diversity, ethics, evidence-based practice, family, fluid and electrolytes, health care systems, health policy, health/wellness/illness, infection, inflammation, legal issues, metabolism, oxygenation, perfusion, professional behaviors, quality improvement, safety, sensory perception, spirituality, stress and coping, teaching and learning, therapeutic communication, thermoregulation, time management/organization, tissue integrity, and violence. Students incorporate cultural values and the client’s right to choose in the process of health care decision-making. A course fee is required. *Enrollment is restricted to students in the Practical Nursing certificate*. *Prerequisite: Students are to follow a cohort and follow a sequence of courses designed by the Department of Nursing.*

PNUR 145 - Introduction to Concepts of Gerontology for Practical Nursing **2:1:3**

Introduces the practical nursing student to the aging/gerontological population. This course emphasizes the role of both the practical nurse and the rights and needs of the client. Fundamental nursing skills are utilized to provide clinically competent care for this population. Concepts of accountability, advocacy, assessment/data collection, caring, clinical decision making, cognition, communication, critical thinking, culture, diversity, elimination, ethics, evidence based practice, family, fluid and electrolytes, grief and loss, health care systems, health policy, health, wellness and illness, legal issues, metabolism, mobility, pain, professional behaviors, quality improvement, safety, self, sensory perception, spirituality, stress and coping, teaching and learning, tissue integrity, and violence are also covered. The nursing process is utilized as a critical thinking tool to guide practice as beginning concepts are solidified through clinical laboratory experience in long-term settings. A course fee is required. *Enrollment is restricted to students in the Practical Nursing certificate. Prerequisite: Students are to follow a cohort and take courses that follow a sequence as designed by the Department of Nursing.*

PNUR 147 - Introduction to Practical Nursing Concepts II-B **1:0:3**

Builds upon the fundamental nursing practice skills of the certified nursing assistant (CNA) curriculum. This course focuses on intermediate clinical skills necessary to provide safe and effective aseptic practical nursing care. The clinical skills include psychomotor skills, rationale, critical thinking, and physical assessment/data collection, including vital sign data collection. This course also builds upon the fundamental skills covered during CNA education and focuses on skills that include safety, sterility, isolation with sterility, oxygen therapy, safe medication administration (oral, parenteral and non-parenteral) introduction to IV therapy and IV pumps, enemas, urinary catheter insertion and care, specimen collection, ostomy care and central line awareness. Finally, this course emphasizes the concept of caring and caring interventions and uses hands-on skill development, theory and simulation scenarios to facilitate student learning. A course fee is required. *Enrollment is restricted to students accepted into the Practical Nursing certificate, who have graduated from HACC's Certified Nursing Assistant training program. Prerequisite BIOL 121 with a*

grade of C or higher; Students are to follow a cohort and take courses that follow a sequence designed by the Department of Nursing.

PNUR 150 - Holistic Health Concepts for Practical Nursing I **5.5:4:4.5**

Addresses safe practical nursing care for the adult patient. This course is designed to develop the concepts of accountability, advocacy, behaviors, caring, clinical decision making, cognition, collaboration, communication, culture, diversity, elimination, ethics, evidence-based practice, family, fluid and electrolytes, grief and loss, health care systems, health policy, health/wellness/illness, immunity, infection, inflammation, metabolism, mobility, perfusion, professional behaviors, quality improvement, safety, sexuality, spirituality, stress and coping, teaching and learning, time management/organization, and tissue integrity. Students gain the theoretical knowledge and clinical skills needed to organize and provide safe nursing care for diverse individuals. A course fee is required. *Enrollment is restricted to students in the Practical Nursing certificate. Prerequisite: Students are to follow a cohort and take courses that follow a sequence designed by the Department of Nursing.*

PNUR 151 - Holistic Health Concepts for Practical Nursing II **5:3:6**

Addresses safe practical nursing care for the adult patient and their families. This course is designed to develop the concepts of accountability, acid-base balance, advocacy, caring behaviors, clinical decision making, collaboration, communication, culture, diversity, elimination, ethics, evidence-based practice, family, fluid and electrolytes, grief and loss, health care systems, health policy, health/wellness/illness, immunity, inflammation, intracranial regulation, mobility, perfusion, professional behaviors, quality improvement, safety, sexuality, spirituality, teaching and learning, and time management/organization. Special consideration is placed upon events that are common in the normal life cycle. In addition, this course uses theory and guided clinical experiences to allow students to focus on meeting basic human needs while providing safe nursing care for diverse individuals and families. A course fee is required. *Enrollment is restricted to students in the Practical Nursing certificate. Prerequisite: Students are to follow a cohort and take courses that follow a sequence designed by the Department of Nursing.*

PNUR 152 - Introduction to Concepts of Leadership for Practical Nursing **4.5:3:4.5**

Enhances the professional role of the practical nursing student as the focus on safe nursing care for adult patients in a leadership role. Emphasis is placed on the concepts of accountability, advocacy, caring, clinical decision making, collaboration, communication, culture, diversity, ethics, evidence-based practice, family, health care systems, health policy, health/wellness/illness, leadership and management, legal issues, managing care/coordination of care, mobility, perfusion, professional behaviors, quality improvement, safety, spirituality, teaching and learning, therapeutic communication and time management/organization. Professionalism and ethical decision making within the context of socially, economically and culturally diverse backgrounds of patients is addressed. A course fee is required. *Enrollment is restricted to students in the Practical Nursing certificate. Prerequisite: Students are to follow a cohort and take courses that follow a sequence designed by the Department of Nursing.*

PNUR 242 - Family Health Concepts for Practical Nursing I **3:1.5:4.5**

Covers the safe nursing care of women, newborns, and childbearing families. This course is designed to develop the concepts of accountability, advocacy, behaviors, caring, clinical decision making, collaboration, communication, culture, diversity, ethics, evidence-based practice, family, grief and loss, health care systems, health policy, health/wellness/illness, immunity, infection, metabolism, oxygenation, perfusion, professional behaviors, quality improvement, reproduction, safety, sexuality, spirituality, teaching and learning, thermoregulation, time management/organization, and violence as they relate to safe practical nursing care during the

antepartum, intrapartum, and postpartum periods. Special consideration is placed on events that are common in the normal life cycle. A course fee is required. *Enrollment is restricted to students in the Practical Nursing certificate. Prerequisite: BIOL 221 with a grade of C or higher; Students are to follow a cohort and take courses that follow a sequence designed by the Department of Nursing.*

PNUR 243 - Family Health Concepts for Practical Nursing II **3:1.5:4.5**

Addresses safe family-centered practical nursing care to children. This course fosters the ability to adapt care to a child's developmental level and focuses on promoting health, as well as providing atraumatic care from infancy through adolescence. Health education is stressed throughout the course. This course is designed to further develop the concepts of accountability, acid-based compensation, advocacy, caring, cellular regulation, clinical decision making, collaboration, communication, culture, development, diversity, elimination, ethics, evidence-based practice, family, grief and loss, fluid and electrolyte balance, health care systems, health policy, health/wellness/illness, infection, inflammation, metabolism, oxygenation, perfusion, professional behaviors, quality improvement, safety, spirituality, teaching and learning, time management/organization, tissue integrity, and violence. A course fee is required. *Enrollment is restricted to students in the Practical Nursing certificate. Prerequisite: BIOL 221 with a grade of C or higher; Students are to follow a cohort and take courses that follow a sequence designed by the Department of Nursing.*

PNUR 244 - Behavioral Health Concepts for Practical Nursing **3:1.5:4.5**

Addresses the safe practical nursing care of patients, families, and groups with complex behavioral health needs. This course is designed to develop the concepts of accountability, advocacy, behaviors, clinical decision making, cognition, collaboration, communication, culture, diversity, ethics, evidence-based practice, family, grief and loss, health care systems, health policy, health/wellness/illness, legal issues, mood and affect, professional behaviors, quality improvement, safety, self, spirituality, stress and coping, teaching and learning, time management/organization, and violence. In addition, this course presents the concepts related to behavioral health, societal implications involved in care, and the role of the professional nurse in various treatment settings. A course fee is required. *Enrollment is restricted to students in the Practical Nursing certificate. Prerequisite: BIOL 221 and PSYC 101 with grades of C or higher; Students are to follow a cohort and take courses that follow a sequence designed by the Department of Nursing.*

PNUR 245 - Introduction to Concepts of Community Health for Practical Nursing **2:1:3**

Explores new aspects of community health in relation to practical nursing. The course is designed to develop the concepts of accountability, advocacy, and caring, clinical decision-making, collaboration, culture, diversity, ethics, and evidence-based practice. In addition, family, health care systems, wellness and professional behaviors are addressed. The concept of safety and illness prevention are discussed. The development of therapeutic communication and client teaching skills are emphasized. Students learn to integrate cultural sensitivity and caring behaviors by assisting clients to identify and meet their health care needs. A course fee is required. *Enrollment is restricted to students in the Practical Nursing certificate. Prerequisite: BIOL 221 with a grade of C or higher; Students are to follow a cohort and take courses that follow a sequence designed by the Department of Nursing.*

Political Science/Public Policy

PSPL 101 - Introduction to American Government **3:3:0**

Introduces students to the basic structure and concepts of the United States government including the founding ideals of the Constitution and the dynamic interaction of formal and informal institutions within our federal system. These founding ideals include Congress, the Presidency, the bureaucracy and the federal court system, as well as political culture and socialization, civil liberties and civil

rights, the media, political parties, elections and special interests. Emphasis is placed upon analyzing current events within the framework of our constitutional structure. *Prerequisite: Completion of all developmental reading courses, as a result of the College Testing and Placement program.* (S&BS)

PSPL 110 - Introduction to Public Policy **3:3:0**

Provides students with an overview of public policy in the United States and in Pennsylvania with a focus on the implementation of policy. This course examines the foundation, policy process, policy theories, federalism and intergovernmental relations, and rulemaking and regulations. Students write a policy analysis. *Prerequisite: Completion of all developmental reading and writing courses required, as a result of the College Testing and Placement Program.*

PSPL 202 - State and Local Government **3:3:0**

Introduces students to the structure, function and politics of state and local governments, with special emphasis placed upon Pennsylvania. This course discusses state and local legislative, executive and judicial systems, advocacy groups, budget and tax policy, and policy areas such as education, human services, the environment, economic development and criminal justice. Class time may include meetings with state and local officials and advocates. Students are encouraged to observe, summarize, examine and discuss current events, policies and policymaking at the state and local level. *Prerequisite: PSPL 101 with a grade of C or higher.* (S&BS)

PSPL 205 - International Politics **3:3:0**

Introduces students to relations among the states of the world. This course serves to expose students to a range of analytical tools that can be used to understand international politics and to examine the basic concepts utilized in the analysis of international politics and their application to current problems. Differences between domestic and international politics are also presented. The structural system, the state, and the individual levels of analyses are emphasized, as well as the application of these analytical tools to current international politics. *Prerequisite: PSPL 101 with a grade of C or higher.*

PSPL 208 - Comparative Politics **3:3:0**

Introduces students to the internal politics of states. This course starts with an examination of how comparative politics is studied and then moves to explore the state and its governance using theory and history. Significant in this exploration is the understanding of the development of the modern state, political institutions, political regime types (democratic versus non-democratic and centralized power versus federalized power), political violence and revolutions, the role of religion and ethnicity, and basic political economy and economic development. Finally, the course presents specific countries in the world. *Prerequisite: PSPL 101 with a grade of C or higher.*

Psychology

PSYC 101 - General Psychology **3:3:0**

Examination and application of major principles of psychology including: an introduction to scientific and research methods, biological foundations, sensation and perception, learning and conditioning, human development, motivation and emotion, thinking, memory, intelligence, personality theories, stress and coping, social psychology, psychological disorders and their treatment. *Prerequisite: Completion of ENGL 003, 007 or 057 with a grade of C or higher.* (S&BS)

PSYC 101H - Honors General Psychology **3:3:0**

Examination and application of major principles of psychology including: an introduction to scientific and research methods, biological foundations, sensation and perception, learning and conditioning,

human development, motivation and emotion, thinking, memory, intelligence, personality theories, stress and coping, social psychology, psychological disorders and their treatment. Using a seminar or discussion-based approach, this course encourages independent, creative and critical inquiry and prepares students for the practical application of information by emphasizing effective research strategies and technologies congruent with the field of study. *Prerequisite: Completion of ENGL 003, 007 or 057 with a grade of C or higher.* (S&BS)

PSYC 209 - Lifespan Development **3:3:0**

Provides students with an overview of human development, covering the lifespan of the individual. These topics include the integration of basic concepts and principles of physical, cognitive, and psychosocial development at each major stage of life across the lifespan. *Prerequisite: PSYC 101 with a grade of C or higher.*

PSYC 212 - Child Growth and Development **3:3:0**

Provides an overview of childhood development, specifically covering the lifespan of an individual from conception to adolescence. This course explores the basic concepts and theories of physical, cognitive, and psychosocial development. *Prerequisite: PSYC 101 with a grade of C or higher.*

PSYC 213 - Psychological Disorders and Treatment **3:3:0**

Survey of theories and etiology of abnormal behavior and its social significance; description of symptoms; consideration of techniques of therapy and theories of prevention. *Prerequisite: PSYC 101 with a grade of C or higher.* (S&BS)

PSYC 216 - Psychology of Human Sexuality **3:3:0**

Provides a comprehensive review of the biopsychosocial aspects of human sexuality. This course covers a number of topics including cultural views on sexuality, typical and atypical sexual behaviors, gender roles and identity and the stereotypes, misconceptions and biases that surround human sexuality. Course content covers a variety of ways that allows students to interact with real-life examples, or illustrations, which may include guest speakers, videos and/or group discussions. *Prerequisite: PSYC 101 with a grade of C or higher.*

PSYC 221 - Social Psychology **3:3:0**

Presents the dynamics of interpersonal behavior in various social contexts. This course focuses on communication; the self and the social world; attitude measurement and change; interpersonal attraction; aggression; prosocial behavior; conformity, compliance, and obedience; group influence; leadership; and prejudice. *Prerequisite: PSYC 101 with a grade of C or higher.* (S&BS)

PSYC 226 - Biopsychology **3:3:0**

Studies the manner by which the brain mediates behavior, emotion, and cognition. This course specifically addresses sensory systems, neural development, emotion, learning, memory, reproduction, and neurological and psychological disorders. *Prerequisite: PSYC 101 with a grade of C or higher.*

PSYC 228 - Child Development in Context **3:3:0**

Provides students with a unique opportunity to gain experience in ways to improve the lives of children through this 20-day trip to Romania. This course uses Romania as a case study to examine the impacts that individual bio-psychological, social, political, and economic factors have on the development and welfare of children. HACC's Romanian hosts and partners, New Horizons Foundation (FNO), provide students the opportunity to participate in service learning groups, organized by Romanian youth that help demonstrate the power that service can have on building

social capital and creating sustainable change that benefits children. Classes meet on campus during the semester with the trip taking place after final exams. *Prerequisite: PSYC 101 with a grade of C or higher; Or permission of the Instructor.*

PSYC 229 - Multicultural Psychology **3:3:0**

Examines the manner by which cultural experiences shape human psychology. This course specifically addresses a culture's effects on human thinking and self-concept; cultural variations of values, motivations, and feelings; a culture's effects on perception and understanding of the world, its influences on human relationships, mental and physical health, and the variables that can affect how individuals cope with and adapt to new cultures. *Prerequisite: PSYC 101 with a grade of C or higher.* (S&BS)

PSYC 241 - Research Design and Analysis I **4:3:3**

Introduces students to the statistics used in the behavioral sciences; specifically, the use of descriptive and inferential statistical tests. Students are taught to analyze both by hand and by using statistical software. Basic research design is introduced as it applies to data analysis. Students conduct simple projects in order to gain experience applying the various statistical tests. A course fee is required. *Prerequisite: PSYC 101 with a grade of C or higher, and eligibility for enrollment in MATH 103.*

PSYC 242 - Research Design and Analysis II **4:3:3**

Investigates the techniques required to conduct valid research in the social sciences. This course focuses on the formulation of research ideas, the development of research studies, the analysis of the results, and the presentation of findings. *Prerequisite: PSYC 241 with a grade of C or higher*.

Radiologic Informatics

RADI 100 - Digital Imaging and Communications in Medicine (DICOM) **2:1.5:1.5**

Introduces the student to the fundamental concepts and theory of Digital Imaging and Communications in Medicine (DICOM) as it relates to the picture archiving and communication system (PACS) environment. A course fee is required.

RADI 101 - Health Level 7 (HL7) **3:2.5:1.5**

Introduces the student to the fundamental concepts and theory of Health Level 7 (HL7) as it relates to the picture archiving and communication system (PACS) environment. A course fee is required.

RADI 102 - Radiology Informatics (RADI) Regulations, Quality Control, and Security **3:3:0**

Introduces students to the basics of information security, HIPAA, and patient privacy as they apply to the healthcare and the picture archiving and communication systems (PACS) environment. Students also gain exposure to the fundamental concepts of a PACS quality control program and the applicable regulations.

RADI 104 - Introduction Radiologic Technology for Radiology Informatics **4:3:4.5**

Introduces students to the field of Radiologic Technology. This course covers the medical imaging fundamentals, terminology, ethics, the clinical environment, and the law as it pertains to medical imaging. Students are able to spend a total of 40-hours in a clinical setting, rotating through various radiology modalities, observing and assisting healthcare professionals within these departments. Students are required to submit to health and criminal background clearances in order to work at the clinical sites. In addition, students are required to take the PACS Administrators Registry and Certification Association (PARCA) and the Certified PACS Associate (CPAS) clinical exam at the conclusion of this course. A course fee is required.

RADI 110 - Radiology Basics for Informatics **4:4:0**

Provides students with knowledge of the various medical imaging modalities. Students are taught how images are generated, the typical exam types, the basic operational procedures for exams, and the image characteristics for each modality's exams. In addition, this course covers image processing, viewing, and quality control (QC)/quality assurance (QA) for each modality. *Prerequisite: RADI 104 with a grade of C or higher; completion of MATH 091 with a grade of C or higher, or placement through the College Placement and Testing Program.*

RADI 125 - Radiology Informatics Hardware and Support **3:2:3**

Provides students with operational skills for both PC and Server-side Operating Systems. This course covers the basics of PC hardware functions and operational skills as students are taught terminology and how to properly install hardware components used in a desktop and server in a radiology environment. Students perform Picture Archive Communication System (PACS) routine server maintenance and are required to take the PACS Administrators Registry and Certification Association (PARCA) and the Certified PACS Associate (CPAS) technical exam at the conclusion of this course. A course fee is required. *Co-requisite: CNT 120.*

RADI 202 - Picture Archiving and Communication Systems (PACS) Interface and Systems Analysis **4:3:2**

Covers the picture archiving and communication systems (PACS) components, workflow, and administration functions related to radiology informatics. This course focuses on the integration of Picture Archive and Communication Systems (PACS) with all other imaging modalities, speech recognition software, electronic health records (EHR), Integrating the Healthcare Enterprise (IHE), health information systems (HIS), and radiology information systems (RIS). A course fee is required. *Prerequisite: RADI 100, 101, 125; CNT 120; CIS 140 with grades of C or higher.*

RADI 203 - Radiology Informatics (RADI) Advanced Concepts in Electronic Health Records (EHR) **2:2:0**

Introduces students to the foundational concepts of the electronic health record (EHR) and builds upon the concepts covered in RADI 100 and 101 pertaining to the picture archiving and communication systems (PACS) interface, digital imaging and communications in medicine (DICOM), and Health Level 7 (HL7) language. This course also builds upon Integrating the Healthcare Enterprise (IHE) knowledge taught in RADI 101. *Prerequisite: RADI 100 and 101 with grades of C or higher.*

RADI 204 - Advance Concepts Cardiology Picture Archiving & Communication Systems (CPACS) **2.5:2:1.5**

Introduces students to the Cardiology picture archiving and communication systems (CPACS) components, workflow, and administration functions related to radiology informatics. A course fee is required. *Co-requisite: RADI 202.*

RADI 205 - Radiology Informatics (RADI) Project Management **4:4:0**

Involves the creation of a Request for Proposal (RFP) to procure and implement a Picture Archiving and Communication System (PACS) for a healthcare environment. Students create a "PACS Plan" that involves designing an imaging department, evaluating PACS vendors, selecting a PACS, integrating the selected PACS within the enterprise environment that is most appropriate for the student's plan, and communicating with the PACS implementation team. This project requires students to consider budgets, installation or hardware/software, policies and procedures, and end-user training. *Prerequisite: RADI 202 with a grade of C or higher.*

RADI 206 - Advanced Concepts Business Analytics **2.5:2:1.5**

Introduces Radiology Informatics students to data mining, report writing and data- driven decision support in the healthcare environment. Students have the opportunity to code, write, and test reports using industry specific software against a real-time database. A course fee is required. *Prerequisite: RADI 202 with a grade of C or higher.*

RADI 210 - Radiology Informatics (RADI) Internship I **4:0:24**

Provides Students with the opportunity to apply their radiology informatics skills under the supervision of an informatics professional while working at an approved worksite for a total of 24-hours per week. Students maintain a portfolio of their experiences throughout the semester. They must obtain approval of their internship worksite by the course instructor prior to enrollment in the course. In addition, students are also required to submit to health and criminal background clearances in order to participate at an internship site. A course fee is required. *Enrollment is restricted to qualified students enrolled in the Radiology Informatic AAS program. Prerequisite: RADI 100, 101 with grades of C or higher. Co-requisite: RADI 202. Students must have passed the PARCA (PACS Administrators Registry and Certification Association) the CPAS (Certified PACS Associate) exams administered at the end of RADI 125 and RADI 104.*

RADI 211 - Radiology Informatics (RADI) Internship II **4:0:24**

Provides Students with the opportunity to apply their radiology informatics skills under the supervision of an informatics professional while working at an approved worksite for a total of 24-hours per week. Students maintain a portfolio of their experiences throughout the semester. They must obtain approval of their internship worksite by the course instructor prior to enrollment. In addition, students are also required to submit to health and criminal background clearances in order to participate at an internship site. A course fee is required. *Enrollment is restricted to qualified students enrolled in the Radiology Informatics AAS program. Prerequisite: RADI 210 with a grade of C or higher.*

RADI 212 - Radiology Informatics Seminar I **3:1:6**

Allows students to build all three major components of a Picture Archived Communication (PACS) system in a virtual box simulation. In addition, they are able to construct a scheduling system that is capable of supporting a modality worklist. Lastly, students populate the system tables to facilitate end-to-end imaging workflow. A course fee is required. *Enrollment is restricted to students in the Radiology Informatics AAS program. Prerequisite: RADI 100, 110 and 202 with grades of C or higher.*

RADI 213 - Radiology Informatics Seminar II **3:1:6**

Allows students to participate in a sequence of simulated system failures based upon common real-world scenarios. Students diagnose, correct, evaluate, and document the solution design for each system failure. A course fee is required. *Enrollment is restricted to students in the Radiology Informatics AAS program. Prerequisite: RADI 212 with a grade of C or higher.*

RADI 214 - RADI Certification Exam Prep I (Technical) **4:4:0**

Provides students with a comprehensive review of each section of the technical portion of the PACS Administrators Registry and Certification (PARCA) Certified PACS Associate (CPAS) exam. This course covers all six modules of the technical portion of the CPAS examination.

RADI 215 - RADI Certification Exam Prep II (Clinical) **4:4:0**

Provides students with a comprehensive review of each section of the clinical portion of the PACS Administrators Registry and Certification (PARCA) Certified PACS Associate (CPAS) exam. This course covers all five modules of the clinical portion of the CPAS examination.

Radiologic Technology

RADT 100 - Introduction to Radiographic Procedures **3:2:3**

Covers the fundamentals of radiographic procedures of the upper limb, lower limb, and pelvic girdle. This course involves both didactic instruction and laboratory demonstration and practice of these procedures. In addition, this is a web-enhanced course with multimedia digital content. A course fee is required. *Enrollment is restricted to students in the clinical component of the Radiologic Technology AS program. Prerequisite: BIOL 121, ENGL 101 and RADT 102 with grades of C or higher. Co-requisite: RADT 106.*

RADT 102 - Introduction to Radiologic Technology **3:1.25:7.75**

Introduces students to the field of Radiologic Technology. This course covers the fundamentals, terminology, ethics and law as it pertains to the radiologic sciences. Also included is didactic, laboratory, and clinical instruction that emphasizes patient care and management. Students spend 56 hours of clinical time at a healthcare facility. A course fee is required. *Enrollment is restricted to students in the Radiologic Technology AS program. Co-requisite: ENGL 101 and BIOL 121.*

RADT 105 - Radiation Protection and Biology **2:2:0**

Presents an overview of the principles of radiation protection, including the responsibilities of the radiographer for patients, personnel, and the public. This course incorporates radiation health and safety requirements with those of the federal and state regulatory agencies, accreditation agencies, and health care organizations. An overview of the principles involved in the interaction of radiation with living systems is also discussed, as well as the radiation effects on molecules, cells, tissues and the body as a whole. Factors affecting biological response are covered, including acute and chronic effects of radiation. This is a web-enhanced course with multimedia digital content. *Enrollment is restricted to students in the clinical component of the Radiologic Technology AS program. Prerequisite: RADT 102 and 111 with grades of C or higher*.

RADT 106 - Radiologic Technology Clinical Introduction **3:0:24**

Applies the theory learned in RADT 100 in the clinical setting. This is a web-enhanced course with digital materials for reviewing clinical skills. This course requires students to spend 336 hours of clinical time at an approved healthcare facility. A course fee is required. *Enrollment is restricted to students in the clinical component of the Radiologic Technology AS program. Prerequisite: BIOL 121, ENGL 101, and RADT 102 with grades of C or higher. Co-requisite: RADT 100.*

RADT 107 - Radiographic Procedures I **3:2:3**

Builds upon the knowledge and skills obtained in RADT 100. This course is designed with both a didactic and laboratory component with emphasis placed on the demonstration and practice of intermediate radiographic and fluoroscopic procedures. This is a web-enhanced course with multimedia digital content. A course fee is required. *Enrollment is restricted to students in the clinical component of the Radiologic Technology AS program. Prerequisite: RADT 100 and 106 with grades of C or higher. Co-requisite: RADT 109.*

RADT 108 - Radiation Characteristics and Production **3:3:0**

Establishes a basic knowledge of atomic structure and terminology. The course also presents the nature and characteristics of radiation, x-ray production and the fundamentals of photon interactions

with matter. This is a web-enhanced course with multimedia digital content. *Enrollment is restricted to students in the Radiologic Technology AS program. Prerequisite: MATH 103 and RADT 111 with grades of C or higher.*

RADT 109 - Radiologic Technology Clinical I **2:0:21**

Applies the theory learned in RADT 107 in the clinical setting. This is a web-enhanced course with digital materials for reviewing clinical skills. This course requires students to spend 288 hours of clinical time at an approved healthcare facility. A course fee is required. *Enrollment is restricted to students in the clinical component of the Radiologic Technology AS program*. *Prerequisite: RADT 100 and 106 with grades of C or higher. Co-requisite: RADT 107.*

RADT 111 - Introduction to Radiological Sciences **3:3:0**

Provides students with foundational knowledge of radiation production and characteristics, radiation protection and biology, radiographic equipment and radiographic imaging and processing. This is a web-enhanced course with multimedia digital content. *Enrollment is restricted to students in the Radiologic Technology AS program. Co-requisite: MATH 103.*

RADT 201 - Radiographic Procedures II **3:2:3**

Builds upon the knowledge and skills obtained in RADT 107. This course is designed with both a didactic and laboratory component and emphasizes demonstration and practice of advanced and special radiographic procedures. This is a web-enhanced course with multimedia digital content. A course fee is required. *Enrollment is restricted to students in the clinical component of the Radiologic Technology AS program. Prerequisite: RADT 100 and 106 with grades of C or higher. Co-requisite: RADT 203.*

RADT 202 - Imaging Equipment **2:1.5:1.5**

Provides students with foundational knowledge of stationary and mobile radiographic, fluoroscopic, and tomographic equipment. Quality assurance, as it relates to radiographic equipment, is also included. This is a web-enhanced course with multimedia digital content. A course fee is required. *Enrollment is restricted to students in the Radiologic Technology AS program. Prerequisite: RADT 105 with a grade of C or higher.*

RADT 203 - Radiologic Technology Clinical II **3:0:24**

Applies the theory learned in RADT 201 in the clinical setting. This is a web-enhanced course with digital materials for reviewing clinical skills and requires students to spend 336 hours of clinical time at an approved healthcare facility. A course fee is required. *Enrollment is restricted to students in the clinical component of the Radiologic Technology AS program. Prerequisite: RADT 107 and 109 with grades of C or higher. Co-requisite: RADT 201.*

RADT 205 - Radiographic Pathology **3:3:0**

Introduces students to the theories of disease causation and the pathophysiologic disorders that compromise health systems. Etiology, pathophysiology responses, clinical manifestations, radiographic appearance, and management of alterations in body systems are presented. This is a web-enhanced course with multimedia digital content. *Enrollment is restricted to students enrolled in the Radiologic Technology AS program. Prerequisite: BIOL 122 and RADT 201 with grades of C or higher.*

RADT 207 - Radiologic Technology Clinical III **3:0:24**

Applies the theory taught in RADT 100, 107, 201 and 209 in the clinical setting. This is a web-enhanced course with digital materials for reviewing clinical skills and requires students to

spend 336 hours of clinical time at an approved healthcare facility. A course fee is required. *Enrollment is restricted to students in the clinical component of the Radiologic Technology AS program. Prerequisite: RADT 203 and 201 with a grade of C or higher. Co-requisite: RADT 209.*

RADT 208 - Imaging and Processing **3:2.5:1.5**

Provides students with knowledge of factors that govern and influence the production and recording of radiologic images. The emphasis is placed on digital imaging with related accessories. Class demonstrations/labs are used to demonstrate application of theory. This is a web-enhanced course with multimedia digital content. A course fee is required. *Enrollment is restricted to students in the Radiologic Technology AS program. Prerequisite: RADT 108 with a grade of C or higher.*

RADT 209 - Image Analysis **2:1:3**

Provides a foundation for analyzing radiographic images. This course covers the importance of minimum imaging standards, problem-solving techniques for image evaluation, and the factors that can affect image quality. Actual images are included for analysis. This is a web-enhanced course with multimedia digital content. A course fee is required. *Enrollment is restricted to students in the Radiologic Technology AS program. Prerequisite: RADT 201 with a grade of C or higher.*

RADT 210 - Introduction to Computed Tomography **1:1:0**

Introduces the basic principles and procedures related to Computed Tomography (CT) imaging. *Prerequisite: RADT 201, 202 and 208 with grades of C or higher.*

RADT 211 - Radiologic Technology Clinical IV **3:0:27**

Applies advanced skills and theory in the clinical setting. This is a web-enhanced course with digital materials for reviewing clinical skills. This course requires students to spend a total of 384 hours of clinical time at an approved healthcare facility. A course fee is required. *Enrollment is restricted to students in the Radiologic Technology AS program. Prerequisite: RADT 207 and 209 with grades of C or higher.*

RADT 212 - Radiologic Technology Seminar **2:1:2**

Prepares students for the successful completion of the American Registry of Radiologic Technologies (ARRT) examination. This course provides an overview of topics that have been covered throughout the Radiologic Technology program including the review of registry content areas, the enactment of case scenarios and mock registries. *Enrollment is restricted to students in the Radiologic Technology AS program. Prerequisite: RADT 207, 208 and 209 with grades of C or higher.*

RADT 220 - Computed Tomography: Introduction to Clinical Practice **1.5:0:9.5**

Introduces students to the Computed Tomography (CT) clinical setting and provides them with the basic clinical skills needed to begin performing CT scans. This course is designed for the Radiologic Technologists registered in Radiography or Nuclear Medicine through the American Registry of Radiologic Technologist (ARRT) or Nuclear Medicine Technology Certification Board (NMTCB). Initially, students complete 21 hours in a laboratory setting or healthcare facility, in which they are expected to perform simulated skills. They then move on to complete a total of 112 hours of clinical work at an assigned healthcare facility where they begin scanning patients under the direct supervision of a technologist. A course fee is required. *Enrollment is restricted to ARRT or NMTCB credentialed technologists, or eligible graduates, in radiography or nuclear medicine. Co-requisite: RADT 222 and 224; and signature of the Radiologic Technology Program Director.*

RADT 221 - Computed Tomography: Clinical Practice **2:0:16**

Allows students the opportunity to work in a healthcare facility for a total of 240 hours to provide the clinical skills necessary to become employed as a Computed Tomography (CT) Technologist. This course is designed for Radiologic Technologists Registered (or registry eligible new graduates) in Radiography through the American Registry of Radiologic Technologists (ARRT) or in Nuclear Medicine through the Nuclear Medicine Technology Certification Board (NMTCB). It is also designed to meet the ARRT CT clinical requirements for the technologist who is seeking to obtain a post primary certification in CT. A course fee is required. *Prerequisite: RADT 220 with a grade of C or higher, and signature of the Radiologic Technology Program Director. Co-requisite: RADT 223 and 225.*

RADT 222 - Computed Tomography: Procedures, Patient Care, and Safety I **3:3:0**

Focuses on the procedures for Computed Tomography (CT) imaging of the head, neck, thorax, abdomen, and pelvis. The procedures include, but are not limited to, indications for the procedure, patient education, preparation, orientation and positioning, patient history and assessment, contrast media usage, scout image, selectable scan parameters, filming and archiving of the images, and radiation safety. CT procedures are taught for differentiation of specific structures, patient symptomology, and pathology and are reviewed for quality, anatomy, and pathology. This course is one of four didactic courses designed for Radiologic Technologists Registered (or registry eligible new graduates) in Radiography through the American Registry of Radiologic Technologists (ARRT) or in Nuclear Medicine through the Nuclear Medicine Technology Certification Board (NMTCB). This course is also designed for the technologist who is seeking to obtain one of the following: post primary certification in Computed Tomography (CT) through the ARRT, or NMTCB, employment as a CT Technologist, ARRT category A and NMTCB continuing education credits, or is a medical imaging professional seeking to complete the HACC's Radiologic Imaging option within the Health Science AAS degree. *Prerequisite: Signature of the Radiologic Technology Program Director is required.*

RADT 223 - Computed Tomography: Procedures, Patient Care, and Safety II **3:3:0**

Focuses on the procedures for Computed Tomography (CT) imaging of the spine, extremities, trauma patient, radiation therapy patient, and the pediatric patient. The procedures include, but are not limited to, indications for the procedure, patient education, preparation, orientation and positioning, patient history and assessment, contrast media usage, scout image, selectable scan parameters, filming and archiving of the images. Special procedure applications are also discussed. CT procedures are taught for differentiation of specific structures, patient symptomology and pathology and are reviewed for quality, anatomy, and pathology. This course is one of four didactic courses designed for Radiologic Technologists Registered (or registry eligible new graduates) in Radiography through the American Registry of Radiologic Technologists (ARRT) or in Nuclear Medicine through the Nuclear Medicine Technology Certification Board (NMTCB). This course is also designed for the technologist who is seeking to obtain one of the following: post primary certification in Computed Tomography (CT) through the ARRT, or NMTCB, employment as a CT Technologist, ARRT category A and NMTCB continuing education credits, or is a medical imaging professional seeking to complete the HACC's Radiologic Imaging option within the Health Science AAS degree. *Prerequisite: Signature of the Radiologic Technology Program Director is required.*

RADT 224 - Computed Tomography: Sectional Anatomy and Pathology **3:3:0**

Focuses on a detail study of gross anatomical structures and common diseases that are diagnosable via Computed Tomography (CT). This course identifies the gross anatomical structures in axial (transverse), sagittal, coronal and orthogonal (oblique) planes while simultaneously stressing the characteristic appearance of each anatomical structure on CT, Magnetic Resonance (MR) and ultrasound images. Additionally, each disease or trauma process diagnosable via CT is examined

and identified on the CT images. This course is one of four didactic courses designed for the Radiologic Technologists Registered (or registry eligible new graduates) in Radiography through the American Registry of Radiologic Technologists (ARRT) or in Nuclear Medicine through the Nuclear Medicine Technology Certification Board (NMTCB). This course is also designed for the technologist who is seeking to obtain one of the following: post primary certification in Computed Tomography (CT) through the ARRT or NMTCB, employment as a CT Technologist, ARRT category A and NMTCB continuing education credits, or is a medical imaging professional seeking to complete HACC's Radiologic Imaging option within the Health Science AAS degree. *Prerequisite: Signature of the Radiologic Technology Program Director is required.*

RADT 225 - Computed Tomography: Physics, Instrumentation, and Imaging **3:3:0**

Provides students with a holistic overview of the physical principles and instrumentation involved in Computed Tomography (CT). This course is one of four didactic courses designed for Radiologic Technologists Registered (or registry eligible new graduates) in Radiography through the American Registry of Radiologic Technologist (ARRT) or in Nuclear Medicine through the Nuclear Medicine Technology Certification Board (NMTCB). This course is also designed for the technologist who is seeking to obtain one of the following: post primary certification in Computed Tomography (CT) through the ARRT or NMTCB, employment as a CT technologist, ARRT category A and NMTCB continuing education credits, or is a medical imaging professional seeking to complete HACC's Radiologic Imaging option within the Health Science AAS degree. *Prerequisite: Signature of the Radiologic Technology Program Director is required.*

Real Estate

RE 101 - Real Estate Fundamentals **3:3:0**

Covers the practices of real estate in Pennsylvania. This course provides the foundation for further study, as it is designed to familiarize students with the language, principles, and laws governing the real estate profession. Emphasis is placed on the fundamental concepts of land, property, and rights in realty and the practices, methods, and laws that govern the conveyance of these rights.

RE 102 - Real Estate Practice **3:3:0**

Outlines the role of a real estate agent in the field of residential brokerage. This course introduces students to all facets of the real estate business, including fields of specialization. Students develop a working knowledge of the necessary forms and documents, including real estate mathematics as they become acquainted with the basic techniques, procedures, regulations, and ethics involved in a real estate transaction. *Pre or Co-requisite: RE 101 with a grade of C or higher.*

Respiratory

RESP 100 - Introduction to Respiratory Care **2:2:0**

Introduces respiratory care as an allied health specialty with an emphasis on role delineation, scope of practice, history, and the organization of the profession. This course emphasizes basic science concepts including gas physics, cleaning and the sterilization of equipment, disaster preparedness, and computer technology. Student success topics are also covered. This is a web-enhanced class. *Prerequisite: Completion of MATH 091 with a grade of C or better; or placement through the College Placement and Testing Program. RESP 100 must be completed within 24 months of starting the respiratory therapist clinical component.*

RESP 120 - Cardiopulmonary Anatomy and Physiology **4:4:0**

Covers the anatomy and physiology of the heart and lungs. This course discusses the factors influencing ventilation, ventilation and perfusion relationships, regulation of ventilation, and gas transport. Metabolic and respiratory acid-base balance, with stress on arterial blood gas interpretation, is also included. *Enrollment is restricted to students in the Respiratory Therapist AS*

program. Non-majors need permission of the Program Director. Prerequisite: CHEM 100 with a grade of C or higher. RESP 100 must be successfully completed within 24 months of taking this class.

RESP 130 - Hospital Orientation **2:1:4**

Covers the practitioner/patient relationship, patient rights, and the teamwork of healthcare workers. This course requires that the student spend four hours per week under the direct supervision of an instructor in a clinical affiliate. Topics include isolation techniques, patient positioning, lifting and moving, vital signs, charting, and patient interaction. Students rotate through various departments in order to gain an understanding of the roles of auxiliary services. A course fee is required. *Enrollment is restricted to students in the Respiratory Therapist AS program. Prerequisite: CHEM 100 with a grade of C or higher. Majors need the American Heart Association Basic Life Support (BLS) Certification. RESP 100 must be successfully completed within 24 months of taking this class.*

RESP 140 - Oxygen Administration **4:3:3**

Covers basic respiratory care equipment and procedures with an introduction to medical gas therapy, humidification and nebulization devices, manual resuscitators, Sustained Maximal Inspiration (SMI/ISB), arterial blood gas sampling, pulse oximetry, and oxygen analyzers. A course fee is required. *Enrollment is restricted to students in the Respiratory Therapist AS program. Prerequisite: RESP 120, 130, 160 and 200 with grades of C or higher.*

RESP 150 - Pharmacology **3:3:0**

Covers the safe use of therapeutic drugs. This course emphasizes drug actions, routes of administration, dosage calculation, and adverse reactions. A course fee is required. *Enrollment is restricted to students in the Respiratory Therapist AS program. Prerequisite: RESP 120, 130, 160 and 200 with grades of C or higher.*

RESP 160 - Patient Assessment **3:3:0**

Covers patient chest assessment, auscultation of breath sounds, principles of chest x-ray and interpretation, and ECG interpretation. *Enrollment is restricted to students in the Respiratory Therapist AS program. Prerequisite: CHEM 100 with a grade of C or higher.*

RESP 170 - Therapeutics **4:3:3**

Covers procedures such as airway insertion, airway care, airway removal, bronchopulmonary drainage therapy, and Non-invasive Positive Pressure Ventilation (NPPV). This course also covers indications, contraindications, and objectives for administration of these modalities to include weaning parameters and medication administration. This is a web-enhanced course. A course fee is required. *Enrollment is restricted to students in the Respiratory Therapist AS program. Prerequisite: RESP 140, 150 and 175 with grades of C or higher.*

RESP 175 - Clinical Practice I **2:0:16**

Allows students to gain experience under the direct supervision of a clinical instructor for an average of sixteen hours per week. This course focuses on oxygen administration, humidity/aerosol therapy, patient assessment, and electrocardiograms (ECG's). Clinical experience includes observation, patient rounds, clinical simulation, and practical work situations. Case studies are assigned. A course fee is required. *Enrollment is restricted to students in the Respiratory Therapist AS program. Prerequisite: RESP 120, 130, 160 and 200 with grades of C or higher. Co-requisite: RESP 140.*

RESP 200 - Cardiopulmonary Diseases **3:3:0**

Covers the pathophysiology, clinical signs and symptoms, treatment, and prognosis of cardiopulmonary disorders. *Enrollment is restricted to students in the Respiratory Therapist AS program. Non-majors need permission of the Program Director. Prerequisite: CHEM 100 with a grade of C or higher. RESP 100 must be successfully completed within 24 months of taking this class.*

RESP 205 - Clinical Practice II **2:0:16**

Allows students to gain practical experience under the direct supervision of a clinical instructor for an average of sixteen hours per week. This course focuses on therapeutic modalities that include positive pressure adjuncts, therapeutic gasses, bronchopulmonary drainage, manual resuscitation, and exercise therapy. Airway care is emphasized and indications, contraindications, and objectives for administration are stressed. Clinical experience includes observation, patient rounds, clinical simulation, and practical work situations. Case study presentations are assigned. A course fee is required. *Enrollment is restricted to students in the Respiratory Therapist AS program. Prerequisite: RESP 175 with a grade of C or higher. Co-requisite: RESP 170.*

RESP 210 - Critical Care **6:5:4**

Covers patient management, weaning techniques, monitoring, and a comprehensive study of ventilators commonly used in hospitals. This course also discusses hemodynamics, chest drainage, nutrition, home care, and ethical end-of-life decisions. This is a web-enhanced class. A course fee is required. *Enrollment is restricted to students in the Respiratory Therapist AS program. Prerequisite: RESP 170 and 205 with grades of C or higher.*

RESP 230 - Cardiopulmonary Laboratory Procedures **2:2:1**

Covers theory, application, and interpretation of pulmonary laboratory studies. This course also includes an introduction to pulmonary stress testing and pulmonary rehabilitation. A course fee is required. *Enrollment is restricted to students in the Respiratory Therapist AS program*. *Prerequisite: RESP 140, 150 and 175 with grades of C or higher.*

RESP 235 - Clinical Practice III **2:0:16**

Allows students to gain experience under the direct supervision of a clinical instructor. This course addresses mechanical ventilation, arterial blood gas sampling, analysis and interpretation, and hemodynamic monitoring. The clinical experience involves observation, patient rounds, clinical simulation, and practical work situations. Case studies are also assigned. A course fee is required. *Enrollment is restricted to students in the Respiratory Therapist AS program. Prerequisite: RESP 205 with a grade of C or higher, and current American Heart Association Advanced Cardiac Life Support Certification. Co-requisite: RESP 210.*

RESP 245 - Clinical Practice IV **2:0:16**

Allows students to obtain clinical experience under the direct supervision of a clinical instructor. Students gain exposure to neonatal and pediatric respiratory care, critical care, and adult respiratory care review. The actual clinical experience includes observation, patient rounds, clinical simulation, and practical work situations. Case studies are assigned. Students are required to pass comprehensive written, laboratory, simulation, and oral examinations in all aspects of respiratory care to complete this course as well as having to complete assigned professional development credits. A course fee is required. *Enrollment is restricted to students in the Respiratory Therapist AS program. Prerequisite: RESP 235 with a grade of C or higher. Co-requisite: RESP 270.*

RESP 270 - Neonatal/Pediatric Respiratory Care **4:3:3**

Discusses fetal development, assessment of the newborn, and pathophysiology of cardiopulmonary diseases common to neonates and pediatric patients. This course emphasizes treatments that are commonly used. A course fee is required. *Enrollment is restricted to students in the Respiratory Therapist AS program. Prerequisite: RESP 210 and 235 with grades of C or higher. Co-requisite: RESP 245.*

Science

SCI 100 - Science First-Year Seminar **1:1:0**

Provides an overview of science in the college environment for students pursuing a science degree. In addition, students are taught about academic tools for success, educational technology, professional expectations, scientific literacy, goal-setting, self-management, self-awareness, occupational research, transfer schools and life planning. (FYS)

Structural Engineering Technology

SET 201 - Introduction to Structural Engineering Technology **3:3:0**

Introduces basic information and design concepts in the area of structural engineering. This course covers the history of structural engineering including the evolution of design-load selection; the major types of structures encountered within the industry including the major building codes – both trade and professional – that apply to their design; and the identification of structural components through the interpretation of shop and contract drawings. Students work in teams on small design projects. *Prerequisite: ENGR 102 or ARCH 130 with grades of C or higher; or permission of the Instructor.*

SET 202 - Structural Design Fundamentals and Concepts **3:2:3**

Continues the topics covered in SET 201 by providing a more in-depth study of the major structural systems used in buildings, bridges, and other structures. The course emphasizes basic structural design and utilization of resources such as codes, design aids and software, and trade design manuals. Designs using wood, concrete, steel, and masonry are reviewed. Students participate in three team-based projects allowing them to complete basic designs for commercial buildings and other structures. These projects cover such specifics as calculating design loads and stresses, drawing free-body diagrams, and sizing components such as beams, columns, and joists. A course fee is required. *Prerequisite: CVTE 208, SET 201 and CAD 154 with grades of C or higher; or permission of the Instructor.*

Sociology

SOCI 201 - Introduction to Sociology **3:3:0**

Focuses on the relations between people and their social institutions, including problems that derive from these relations. Topics include culture, society, groups, social change, institutions (family, education, religion, etc.). *Prerequisite: Completion of all developmental reading and writing courses required as a result of the College Testing and Placement program.* (S&BS)

SOCI 201H - Honors Introduction to Sociology **3:3:0**

Focuses on the relations between people and their social institutions, including problems that derive from these relations. Topics include culture, society, groups, social change, institutions (family, education, religion, etc.). Using a seminar or discussion-based approach, this course encourages independent, creative and critical inquiry and prepares students for the practical application of information by emphasizing effective research strategies and technologies congruent with the field of study. *Prerequisite: Completion of all developmental reading and writing courses required as a result of the College Testing and Placement program.* (S&BS)

SOCI 202 - Social Problems **3:3:0**

Problems of society considered in the context of such concepts as social change, social disorganization, conflict, and deviant behavior. Emphasis on the need to develop strategies for confronting problems such as poverty, racial discrimination, sexual discrimination, and crime. *Prerequisite: Completion of all developmental reading and writing courses required as a result of the College Testing and Placement program. Recommended: SOCI 201.* (S&BS)

SOCI 203 - Marriage and Family **3:3:0**

A comparative study of the family as a social institution, including a functional approach to questions related to both premarital and post marital aspects of married and family life. *Prerequisite: Completion of all developmental reading and writing courses required as a result of the College Testing and Placement program. SOCI 201 recommended.* (S&BS)

SOCI 205 - Race and Cultural Relations **3:3:0**

The nature and dynamics of the relationship between minority and majority groups and the relation of these groups to social stratification, economics, political, and educational institutions in the culture. *Prerequisite: Completion of all developmental reading and writing courses required as a result of the College Testing and Placement program. Recommended: SOCI 201.* (S&BS)

SOCI 211 - Group Dynamics **3:3:0**

Introduction to dynamics of small-group functioning, with emphasis on developmental stages of group life. Examination of leadership processes in the context of interpersonal relations. Students learn group dynamics by functioning as a small group. *Prerequisite: Completion of all developmental reading and writing courses required as a result of the College Testing and Placement program.*

SOCI 226 - Perspectives on Aging **3:3:0**

Designed to provide students with basic knowledge of the concepts, theories and problems in the study of aging. Emphasis on social problems of aging and the impact aging has on the individual. Topics include the scope of gerontology, retirement, health, leisure, independence, and primary relationships, as well as larger issues of aging in relation to economics, government, and community programs. *Prerequisite: Completion of all developmental reading and writing courses required as a result of the College Testing and Placement program.*

Spanish

SPAN 100 - Conversational Spanish for the Workforce **1:1:0**

Introduces the basics of conversational Spanish for the workplace. This course is designed to provide students with the fundamentals of the Spanish language through the use of grammar, drill-in structure, and pronunciation development of the vocabulary. Students learn target language commands through field scenario simulations and develop an awareness of the Hispanic culture. *Prerequisite: Eligibility for enrollment into ENGL 101.*

SPAN 101 - Elementary Spanish I **4:4:0**

Covers the fundamentals of Spanish grammar, drill-in structure and pronunciation, and the development of vocabulary. Aural-oral and reading skills are also introduced. *Prerequisite: Eligibility for enrollment into ENGL 101.* (H&A)

SPAN 102 - Elementary Spanish II **4:4:0**

Continuation of SPAN 101 with increased emphasis on speaking and reading. *Prerequisite: SPAN 101 with a grade of C or higher.* (H&A)

SPAN 104 - Spanish for Healthcare **3:3:0**

Focuses on the use of the Spanish language within the healthcare setting. This course addresses the fundamentals of Spanish grammar, drill-in structure and pronunciation, and the development of vocabulary. Aural-oral and reading skills are also introduced. *Enrollment is restricted to students in the following programs: Cardiovascular Technology AS; Dental Assisting Certificate; Dental Hygiene AS; Diagnostic Medical Sonography AAS; Human Services AAS; Medical Assisting Certificate; Medical Laboratory Technician AS; Nursing AS; Practical Nursing Certificate; Radiologic Technology AS; Radiologic Informatics AAS; Respiratory Therapist AS; Social Services AA; and Surgical Technology AAS. Prerequisite: Eligibility for enrollment into ENGL 101; Or permission of the Instructor.* (H&A)

SPAN 201 - Intermediate Spanish I **4:4:0**

Continues the topics covered in SPAN 102. This course allows students to practice oral and written skills at the intermediate level. In addition, students continue reading works of literary and cultural merit. *Prerequisite: SPAN 102 with a grade of C or higher or equivalent.* (H&A)

SPAN 202 - Intermediate Spanish II **4:4:0**

Continues the topics covered in SPAN 201. Students receive further practice in oral and written skills, as well as the continued reading of works of literary and cultural merit. *Prerequisite: SPAN 201 with a grade of C or higher or equivalent.* (H&A)

Surgical Technology

SURG 101 - Concepts in Surgical Technology **3:3:0**

Introduces students to theories and concepts in the role of a surgical technologist. This course covers professionalism, communication, computer technology in the operating room, biomedical science, the biopsychosocial needs of the surgical patient, ethical/legal issues specific to the perioperative setting, patient, and workplace safety. *Enrollment is restricted to students in the Surgical Technology AAS program. Prerequisite: BIOL 105 with a grade of C or higher. Pre or Co-requisite: BIOL 121 with a grade of C or higher. Co-requisite: BIOL 221.*

SURG 105 - Pharmacology **1:1:0**

Introduces pharmacology for the surgical technologist. This course emphasizes pharmacologic principles in surgery, medications commonly utilized in the perioperative setting, and basic anesthesia concepts. *Enrollment is restricted to students enrolled in the Surgical Technology AAS program. Prerequisite: MATH 055 (or MATH 051) or equivalent, BIOL 105 and 221 with grades of C or higher. Pre or Co-requisite: BIOL 122 with a grade of C or higher.*

SURG 110 - Introduction to Surgical Technology **5:4:3**

Introduces students to the fundamentals of operating room techniques. This course emphasizes the principles and practices of asepsis and sterilization. Roles and responsibilities of the surgical technologist, and other surgical team members, are covered. Other topics include identification of common equipment, instruments and supplies; scrubbing; gowning; gloving; draping, and creating a sterile field. A course fee is required. *Enrollment is restricted to students in the Surgical Technology AAS program. Prerequisite: BIOL 105, 122, 221 and SURG 101 with grades of C or higher. Co-requisite: SURG 105.*

SURG 111 - Surgical Procedures I **5:4:3**

Develops the concepts learned in SURG 101, 105 and 110. This lecture/laboratory course covers the theory and practice for general, endoscopic, gynecological, obstetrical, genitourinary, otorhinolaryngology, maxillofacial and plastic surgical procedures with an emphasis on the steps of

the procedure and the instrumentation used for these interventions. A course fee is required. *Enrollment is restricted to students in the Surgical Technology AAS program. Prerequisite: SURG 105 and 110 with grades of C or higher. Co-requisite: SURG 210.*

SURG 112 - Surgical Procedures II **5:4:3**

Expands the student's knowledge of surgical specialties and clinical practice. This lecture/laboratory course specifically addresses cardiovascular, thoracic, neurological, ophthalmic and orthopedic surgical procedures. Considerations for pediatric and geriatric procedures are also discussed. A course fee is required. *Enrollment is restricted to students in the Surgical Technology AAS program. Prerequisite: SURG 111 and 210 with grades of C or higher. Co-requisite: SURG 220*.

SURG 210 - Surgical Clinical Externship I **3:0:24**

Develops the concepts taught in SURG 101, 105 and 110. Students are assigned to affiliated health care organizations where they practice skills related to surgical techniques and principles. In addition, they participate actively as members of the surgical team and develop the skills necessary to scrub during surgical procedures under supervision. A course fee is required. *Enrollment is restricted to students in the Surgical Technology AAS program. Prerequisite: SURG 105 and 110 with grades of C or higher.*

SURG 220 - Surgical Clinical Externship II **4:0:32**

Develops further clinical proficiency. Students are assigned to affiliated healthcare organizations where they practice skills related to surgical techniques and principles with the goal of scrubbing independently for common surgical procedures under supervision. They participate as members of the surgical team, building on skills developed in SURG 111 and 210. A course fee is required. *Enrollment is restricted to students in the Surgical Technology AAS program. Prerequisite: SURG 111 and 210 with grades of C or higher. Co-requisite: SURG 112.*

SURG 230 - Surgical Clinical Externship III **3:1:16**

Develops further clinical proficiency with progress into the surgical specialties of cardiothoracic, ophthalmology and endoscopy. Students are assigned to affiliated healthcare organizations where they are exposed and participate in surgical specialties under supervision. This course prepares the student for entry-level independent practice and certification as a surgical technologist. A course fee is required. *Enrollment is restricted to students in the Surgical Technology AAS program. Prerequisite: SURG 112 and 220 with grades of C or higher.*

Web Design

WEB 101 - Introduction to Web Design and Development **3:3:0**

Introduces the web design and development field. The course explores website creation skills, essential web technologies and various tools used in the field. Students are also informed about career options and the WEB program at HACC.

WEB 102 - Web Exploration & Design **3:3:0**

Explores the uses of the Internet and the World Wide Web in business. Students learn to accomplish tasks with common Web tools and services. An introduction to Web page design and development is included using HyperText Markup Language (HTML) and free editors. Students develop an online portfolio site that may be used throughout their college career. *Prerequisite: Eligibility for enrollment into ENGL 101 and completion of ENGL 057; a combination of 003, or 007 and 051, or ESL 070 with grades of C or higher (if required by the College Placement and Testing Program). Word processing skills and the ability to receive and send email attachments is recommended.*

WEB 110 - Website Creation and Content Management Systems (CMS) **3:3:0**

Covers the creation of websites using a content management system (CMS). This course introduces best practices for user interface (UI), user experience (UX) design and content writing. The course also covers various concepts, tools and technologies related to website production.

WEB 125 - HyperText Markup Language (HTML) & Cascading Style Sheets (CSS) **3:3:0**

Covers Hypertext Markup Language (HTML) and Cascading Style Sheets (CSS) code for creating websites. The course also covers associated topics such as validation, editors and best practices for coding and page layout.

WEB 127 - Advanced HyperText Markup Language (HTML) & Cascading Style Sheets (CSS) **3:3:0**

Continues to cover the topics of HyperText Markup Language (HTML) and Cascading Style Sheets (CSS), discussed in WEB 125, at an advanced level. This course presents HTML graphics and application programming interfaces (APIs), accessibility, CSS effects, typography, advanced styling, responsive web design and the use of popular CSS frameworks and pre-processors. *Prerequisite: WEB 125 with a grade of C or higher.*

WEB 130 - Graphics and Multimedia Fundamentals **3:3:0**

Introduces creating and editing graphics and other multimedia design elements for use on Web pages. This course covers such elements as raster images, vector graphics, audio, video, animation, and special effects. In addition to editing skills, the course discusses media file formats, design principles, technical issues and software tools that are available.

WEB 133 - Design Fundamentals **3:3:0**

Explores Web design principles for creating Web pages, layouts and graphic elements. This course covers color theory, layout, Cascading Style Sheets (CSS) color and typography control, usability, user experience design, prototyping and accessibility. *Prerequisite: WEB 125 with a grade of C or higher.*

WEB 135 - Raster Imaging and Photography **3:3:0**

Introduces raster-based techniques using Adobe Photoshop to create Web graphics and edit photographs for Web use. This course covers such topics as digital painting and editing tools, layer management, filters, special effects, vector-raster conversions, animation, and optimization for the Web. Basic digital photography techniques such as composition, lighting, and camera control are also introduced.

WEB 138 - Vector Imaging & SVG **3:3:0**

Introduces the creation and editing of Web vector graphics and page layouts using Adobe Illustrator software. This course focuses on digital drawing tools, manipulating points and curves, layer management, text-on-curve, filters, special effects, Web file formats, vector-raster conversions, and exporting to animation programs. Scalable Vector Graphics (SVG) are also featured in this course as an industry-standard format capable of adapting to responsive Web sites.

WEB 142 - Introduction to Programming for Business **3:3:0**

Provides a hands-on approach to the fundamentals of creating programs for supporting business operations and related processes. This course is designed to teach the student how to apply programming logic and development tools to common business practices, such as data capture, data analysis, and scripting, as well as the use of file management techniques and basic data structures, including classes. *Prerequisite: CIS 105 or WEB 101 with a grade of C or higher; Or, permission of the Instructor.*

WEB 143 - Development Fundamentals **3:3:0**

Introduces students to the fundamentals of web application development. This course covers web development concepts and hands-on programming skills, as students are taught to use a contemporary programming language, frameworks, development tools and a database.

WEB 144 - Introduction to JAVA Development **3:3:0**

Introduces Internet programming fundamentals, using JAVA, and object-oriented programming language. Students are taught the skills required to develop complex JAVA code such as classes, exceptions, libraries, and threads as applied to Web applications. This course also covers integration with databases and applet development. *Prerequisite: WEB 143 with a grade of C or higher.*

WEB 211 - Content Management System Development **3:3:0**

Covers beginning to intermediate Content Management System (CMS) development for web and mobile applications. Students are taught to perform a CMS installation, which includes themes, modules, and plugin development. Best practices for design and development of CMS applications are also presented. *Prerequisite: WEB 110 with a grade of C or higher.*

WEB 225 - Responsive Design and Typography 3:3:0

Explores Cascading Style Sheet (CSS) standards and flexible grid systems for Web page layout and typography. Responsive web design automatically adapts to various screen sizes. This course specifically addresses the history, design, and selection of typefaces, fonts and letterforms, rapid prototyping of Web sites, and the creation of comprehensive Web page layouts (comps) for conversion to CSS, HyperText Markup Language (HTML), scalable design, and media elements. *Prerequisite: WEB 125 and 133 with grades of C or higher.*

WEB 227 - eBooks, eDocs, & ePublishing **3:3:0**

Features industry-leading applications: Adobe InDesign and Adobe Acrobat. This course enables the Web Designer to create new electronic publications and/or convert traditional print documents for publication to the Web. Students also create files appropriate for mobile devices, such as the Apple iPad, the Amazon Kindle, and the Barnes & Noble Nook. *Prerequisite: WEB 133 with a grade of C or higher.*

WEB 230 - Motion Graphics **3:3:0**

Covers Web animation techniques using 2-Dimensional and 2.5-Dimensional animation software including Adobe Creative Cloud (CC) products, as well as HyperText Markup Language (HTML) and Cascading Style Sheet (CSS) capabilities. This course focuses on creating 2-D and 2.5-D vector objects. Students learn to animate those objects through space and over time, integrate audio and video, apply fills, textures, light sources and special effects and then optimize the animated objects for the Web. *Prerequisite: WEB 125 and 130 with grades of C or higher.*

WEB 231 - 3-Dimensional Animation for the Web **3:3:0**

Features the industry-leading application, Autodesk Maya. This course covers 3-Dimensional modeling, texturing, animating, dynamics, lighting, visualization, and special effects. Methods of passing graphic information in to and out of Maya are addressed, as well as optimization of animations for the Web. Other topics include motion capture, 3-Dimensional digitizing, 3-Dimensional printing, Google Sketch-Up, Google Earth, Web3D, Web Graphics Library (WebGL), and X3-D. Students should note that these applications require computers that have significant processing power, graphics ability, memory, and disc space. The College has computers that are able to handle these software applications available for students in the Web labs at HACC's

Midtown II building. Please consult the instructor for specifications. *Prerequisite: WEB 130 with a grade of C or higher.*

WEB 235 - Still Graphics for Web Design **3:3:0**

Covers web graphics for both raster images and vectors. The main focus is creating well-designed raster images and scalable vector graphics (SVG) using various software editing tools and techniques, especially Adobe Creative Cloud (CC). Topics also include web graphic concepts, software choices and optimization for web use. *Prerequisite: WEB 130 with a grade of C or higher.*

WEB 237 - Prototyping and Conceptual Design **3:3:0**

Masters the User Experience (UX) and User Interface (UI) Design process. This course covers advanced prototyping concepts, accessibility, high-quality design, integration of raster and vector graphics, implementation of UX concepts and user testing. *Prerequisites: WEB 125, 130 and 133 with grades of C or higher.*

WEB 240 - JavaScript Programming **3:3:0**

Introduces JavaScript programming and related technologies. This course covers programming constructs, logic, debugging, frameworks, libraries, version control and application programming interfaces (APIs). *Prerequisite: WEB 125 with a grade of C or higher.*

WEB 241 - JavaScript Technologies and Applications **3:3:0**

Covers application development techniques using JavaScript technologies, current applications, design structure, frameworks, and tools. Students are taught the skills required to develop applications using contemporary practices, utilities and frameworks. The course also addresses data flow, architecture, persistence, workflow and version control. *Prerequisite: WEB 240 with a grade of C or higher.*

WEB 245 - Advanced Development **3:3:0**

Provides in-depth experience to develop complete data-driven full-stack web applications. This course presents object-oriented programming, libraries and frameworks, application programming interfaces (APIs), database connectivity, workflow and version control. One popular language is chosen to use in the applications. *Prerequisite: WEB 143 and 240 with grades of C or higher.*

WEB 251 - Mobile Application Development **3:3:0**

Introduces applications for development for various mobile device platforms. Students are taught the basics of beginning and intermediate applications development on contemporary mobile devices including phones, tablets and voice devices for the web. In addition, this course covers screen and interface design, database development, communications, accessibility and responsive design. *Prerequisite: WEB 143 with a grade of C or higher.*

WEB 253 - Introduction to Windows Development **3:3:0**

Covers Web application development using current technologies available for Microsoft Windows. The course discusses eXstensible Markup Language (XML) and current online database technologies, as well as the creation of data-driven Web and mobile applications, the latest application architectures, XML, on-line data services, Web services, and supporting Windows technologies. *Prerequisite: WEB 143 with a grade of C or higher.*

WEB 255 - Introduction to PHP Development **3:3:0**

Covers Web application development using PHP programming and Web databases. This course focuses on the creation of database-driven Web pages, PHP programming, HyperText Markup

Language (HTML) tags, client/server applications, eXstensible Markup Language (XML) Web services, security issues, and database administration using MySQL, Web databases, and the Apache Web server. *Prerequisite: WEB 143 with a grade of C or higher.*

WEB 268 - Web Program Capstone **3:3:0**

Provides a capstone experience in which students are able to use the skills taught in the WEB Development and Design program to complete a personal portfolio website and a client website. Projects involve job application, interviewing and working as a web developer, designer or producer on a website project. *Enrollment is restricted to students in the Web Development and Design AAS and Certificate programs. Prerequisites: WEB 127, 130, 133 and 240 with grades of C or higher.*

WEB 270 - Cooperative Work Experience in Web **3:0:15**

Allows students to engage in a Faculty-monitored employment experience. Students spend a total of 225-hours, over the course of a term, working in an approved cooperative business where they can apply the knowledge and skills acquired in the Web curriculum to real-world situations. Students are required to submit written documentation of their work experience activities. *This course is restricted to students enrolled in the Web Development and Design programs. Prerequisite: Completion of at least 30 credits in WEB-discipline courses with a GPA of 3.0 or higher. An Instructor's signature is required for registration. Instructor approval of internship situation and Work Plan is also required.*

Welding

WELD 101 - Print Reading Analysis for Welders **3:3:0**

Introduces students to basic welding skills that includes the interpretation of typical welding drawings and symbols, orthographic projection, tolerancing, fitting, and dimensioning systems, and math concepts including whole numbers, common fractions, and basic math formulas. *Prerequisite: MATH 006 with a grade of C or higher for Fall 2020 or later; or placement above the MATH 006 level as determined by the College Placement and Testing Program.*

WELD 102 - Oxy-Fuel Welding and Cutting **3:2:3**

Provides students with technical information and hands-on experience in flat, horizontal, vertical, and overhead position using the oxygen-fuel welding and cutting. Carbon-arc cutting is also covered. In addition, other topics include rod sizes, common flaws, and types of welds and joints. Finally, this course emphasizes the personal safety and proper use of shop equipment and tools. A course fee is required.

WELD 103 - Shielded Metal Arc Welding **3:2:3**

Provides students with technical information and hands-on experience in flat and horizontal position shielded metal-arc welding. This course covers electrode sizes, common flaws, and types of welds and joints and emphasizes personal safety and proper use of shop equipment and tools. A course fee is required.

WELD 105 - Shielded Metal-Arc Welding - Vertical and Overhead **3:2:3**

Provides students with technical information and hands-on experience in vertical and overhead position shielded metal-arc welding. This course covers the identification of common flaws, the analysis of operating principles, and the principles of non-fusion welding. In addition, the course emphasizes the personal safety and proper use of shop equipment. A course fee is required. *Pre/Co-requisite: WELD 103 with a grade of C or higher.*

WELD 111 - Welding Applications **3:2:3**

Provides students with technical information and hands-on experience in electric arc, oxygen-acetylene (MIG), and (TIG) welding and covers other welding techniques, as well. In addition, this course emphasizes the personal safety and proper use of shop equipment and tools. A course fee is required.

WELD 120 - Gas Metal Arc Welding I **4:2:5**

Covers gas metal arc welding, as this course is the first in a series of courses that teaches students the operation and application of gas metal arc welding (GMAW). The student sets up, operates, and maintains a gas metal arc welder. The student makes satisfactory welds on steel in a variety of positions. A course fee is required.

WELD 130 - Gas Tungsten Arc Welding I **3:1.5:4.5**

Covers gas tungsten arc welding (GTAW), as this course is the first in a series of courses that teaches students the operation and application of gas tungsten arc welding. The student selects proper current, prepares metal, and makes satisfactory welds on ferrous metals. This course includes fillet and groove welds in a variety of positions. A course fee is required. *Prerequisite: WELD 101 and 102 with grades of C or higher.*

WELD 240 - Pipe Welding **3:1.5:4.5**

Covers the welding skills of piping or tubing. This course allows students to develop skills in the welding of pipe or tubing using shielded metal arc (SMAW), gas metal arc (GMAW), gas tungsten arc (GTAW), and other welding processes. Weldments are done on pressure-piping in rotated and non-related positions in accordance with industry Standards. Lastly, students prepare for required testing for American Society of Mechanical Engineers (ASME) certification. A course fee is required. *Prerequisite: WELD 103 with a grade of C or higher. Co-requisite: WELD 105 and 130; Or permission of the Instructor or Discipline Lead.*

WELD 290 - Welding Co-op Experience **3:0:15**

Provides students with a hands-on, part-time work experience, at an approved welding employer, for a minimum of 15-hours per week. Students work with a mentor to perform duties and tasks in welding and metal fabrication. *Enrollment is restricted to students in the Welding Technology certificate, Industrial Technology AAS, General Studies AAS, or Engineering AS programs. Prerequisites: WELD 101, 102, 103, 105, 120, 130, and GTEC 101 with grades of C or higher.*

Wellness and Health Promotion

WHP 101 - Introduction to Wellness and Health Promotion **3:3:0**

Introduces students to the field of wellness and health promotion. This course explores the basic concepts, models, theories, literature, and health-related sources of information and examines the various wellness and health promotion settings and potential career paths of the wellness professional. In addition, students create comprehensive career development plan to help guide them in their pursuit of professional and education goals.

WHP 102 - Approaches to Weight Management **3:3:0**

Examines the biological, behavioral, social, and environmental factors that influence weight management. This course explores the multifaceted role that nutrition, physical activity, exercise, and behavior change play in weight management and the prevention of obesity.

WHP 103 - Approaches to Stress Management **3:3:0**

Examines the science and theories of stress and its impact on both life and health. This course explores common approaches to the prevention, coping, and management of stress, as well as various relaxation techniques and lifestyle factors that contribute to a balanced life and wellness.

WHP 201 - Health Behavior Change and Interventions **3:3:0**

Explores the theoretical underpinning of behavior change and the challenges that are faced with lifestyle modification. Furthermore, the course examines the various strategies and interventions that are used for chronic disease prevention and management. *Enrollment is restricted to students in the Wellness and Health Promotion AAS program. Prerequisite: WHP 101, 102 and 103 with grades of C or higher. Co-requisite: WHP 202.*

WHP 202 - Foundations of Health Coaching **3:3:0**

Provides students with the foundation for health coaching through the exploration of the theoretical concepts, core competencies, and skills that are used to evoke behavior change and lifestyle modifications in individuals. Students are able to demonstrate the coaching approach through active listening, effective communication and questioning, motivational interviewing, visioning and goal setting. *Enrollment is restricted to students in the Wellness and Health Promotion AAS program. Prerequisite: WHP 101, 102 and 103 with grades of C or higher. Co-requisite: WHP 201.*

WHP 203 - Concepts of Community Health **3:3:0**

Introduces students to the foundations of community and public health through the examination of organizations and agencies, epidemiology, disease prevention, community organizing, health promotion programming, and school health. Health across the human lifespan, racial/ethnic populations, and health care delivery in the United States are addressed as well as key community concerns such as mental health, alcohol, tobacco, and drugs, and environmental health. Students gain field experience by working in an approved community health setting. In addition, they are able to design a community building/organizing plan that addresses a specific health concern. *Enrollment is restricted to students in the Wellness and Health Promotion AAS program. Prerequisite: WHP 101 with a grade of C or higher.*

WHP 204 - Concepts of Workplace Wellness **3:3:0**

Introduces students to the theory, research, and application of workplace wellness concepts and the impact that programming may have on employee health and productivity, healthcare costs, and the economy. This course explores workplace culture, employee diversity, health literacy and disparities and the challenges of workplace wellness. Students gain field experience in an approved workplace setting and examine effective program planning, implementation, and evaluation. In addition, they complete a workplace wellness evaluation and compile a report of recommendations and reflections. *This course is restricted to students enrolled in the Wellness and Health Promotion AAS program. Prerequisite: WHP 101 with a grade of C or higher.*

WHP 205 - Wellness Program Planning, Implementation, and Evaluation **3:3:0**

Explores the theoretical and practical aspects of planning, assessing, and evaluating health promotion programs across various settings. This course helps students to develop the skills necessary to plan and implement a program, collect and analyze data, and present an evaluation report. *Enrollment is restricted to students in the Wellness and Health Promotion AAS program. Prerequisite: WHP 201, 202 and MATH 202 with grades of C or higher. Co-requisite: WHP 206.*

WHP 206 - Wellness and Health Promotion Capstone **3:3:0**

Provides students with the opportunity to demonstrate the knowledge and skills obtained throughout

the Wellness and Health Promotion program in a capstone experience. During this course students develop and implement a Workplace Wellness or Community Health project. In addition, this course prepares students for employment in the field by participating in career counseling, creating an electronic portfolio for professional use, and submitting a post-graduation plan. *Enrollment is restricted to students in the Wellness and Health Promotion AAS program. Prerequisite: WHP 201, 202, and MATH 202, and WHP 203 or 204 with grades of C or higher. Co-requisite: WHP 205.*

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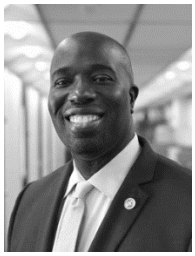

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Greg King, 2014

Full-time Faculty

HACC's full-time faculty list highlights the instructor's name, position, year started at HACC, degree earned and institution attended. To view the HACC Staff/Faculty directory, visit www.hacc.edu/Students/FacultyandStaffDirectory

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Andrew M. Aguirre-Glindeman, Instructor, Nursing, 2022. BSN, Millersville University
Ricki L. Alexander, Professor, Mathematics, 2009. M.S., Drexel University
Todd D. Allen, Professor, Biology, 2006. Ph.D., University of Maryland
Kim M. Allen Gleed, Professor, English, 2009. Ph.D., SUNY at Binghamton
Liya Arustamyan, Asst. Professor, Nursing, 2020. M.S.N., Sacred Heart University
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Mihajlo M. Balic, Professor, Economics, 2008. M.S., University of North Texas
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