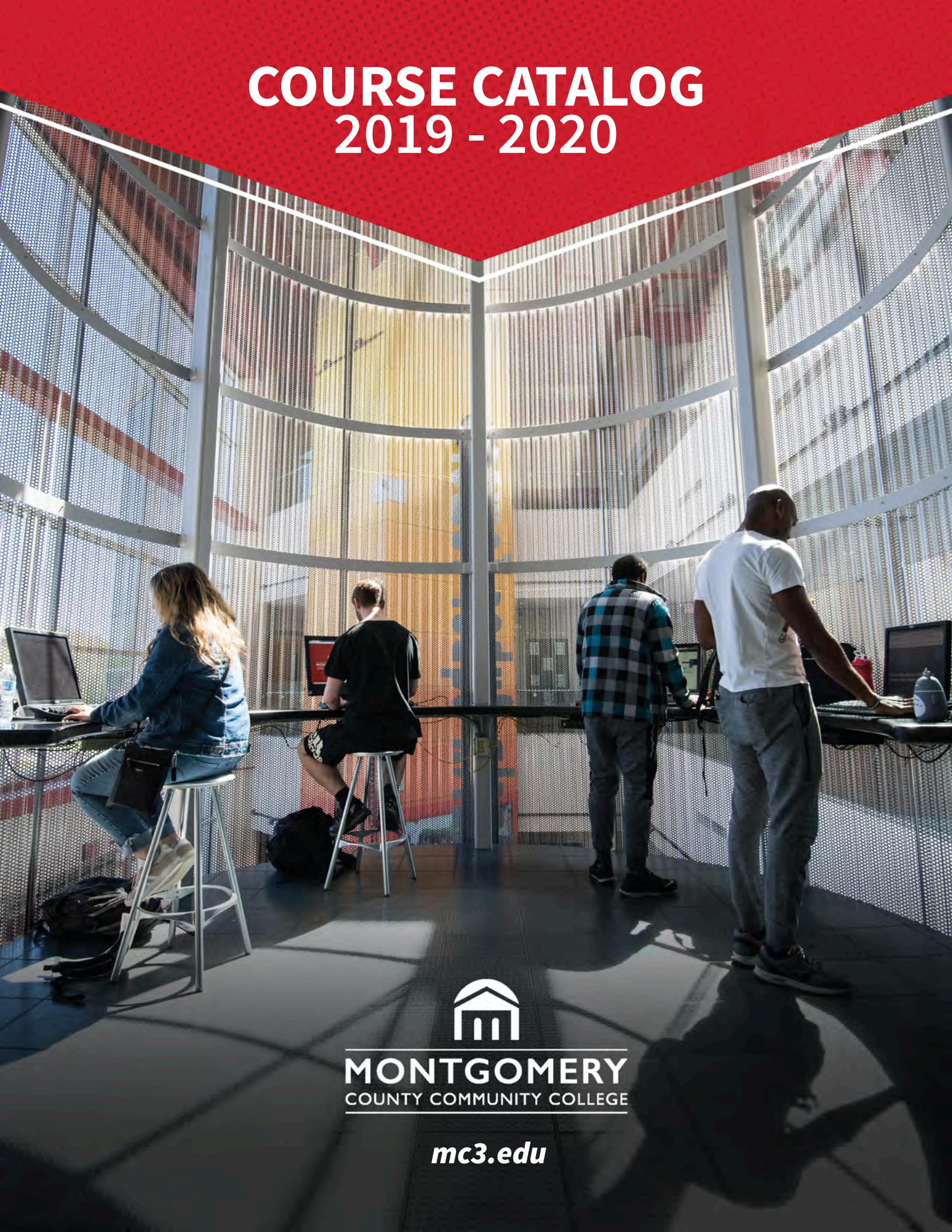
# COURSE CATALOG
# 2019 - 2020



MONTGOMERY
COUNTY COMMUNITY COLLEGE

*mc3.edu*

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To complete an online application, go to: **mc3.edu/apply**

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# ABOUT THE COLLEGE

## MISSION AND PHILOSOPHY

Montgomery County Community College is a place where the future is created, a place where desire and knowledge are combined to yield opportunity. The College is a reflection and a response to the needs and aspirations of those who live, work and conduct business in Montgomery County and beyond. Grounded in a set of values that teach us to encourage, listen, respect and treat fairly those whom we serve, those with whom we work, and those who work with us in service, the College strives to ensure that all residents of Montgomery County have access to the highest quality and most affordable higher education possible. Most importantly, the College is dedicated to fostering the growth and success of all we serve.

The College believes that learning is a lifelong activity requiring constant adaptation of programs, courses and learning support services to reflect social, technological and workforce changes and to ensure that all learners reach their unique goals.

Believing in the right of everyone to have access to a quality education, to workforce training, to opportunities for personal and professional growth, and to culture and recreation, the College translates the values of its community and reaches out to it, inviting involvement, offering learning and fostering understanding.

As part of its role in the greater community, the College serves these vital functions:

- It provides quality associate's degree, certificate and continuing education programs that lead to transfer, employment and/or personal enrichment.
- It extends the reach of its programs and services, and thus educational opportunity, to meet the learning needs of those who cannot readily access collegiate educational opportunities because of academic, physical, economic, cultural or geographic boundaries.
- It links with leaders of the region's businesses and industries to assist in developing a vital, current and educated workforce.
- It serves as a cultural and recreational destination, presenting opportunities for area residents to attend activities that feature stimulating and popular entertainment and ideas.
- And, acting as a significant element in a larger regional learning community, the College works with K-12 and university teachers, leaders and learners to ensure a seamless and successful transition from high school, to the associate's degree, to the baccalaureate degree and beyond.

It is through its role as one institution with one set of shared values and principles, yet with multiple physical and virtual points of access, that the College works to define itself.

### Evaluation of Mission Achievement

The College views education as a dynamic process that brings to the community a diverse, constantly changing set of learning opportunities; opportunities that grow, change, transform and multiply as the community and our learners confront and react to ever-present change. Thus, to fully meet our mission, the College participates in ongoing self-assessment and review in order to enhance and improve instructional programs and services to students and the county we serve.

## STATEMENT OF VALUES

The students, faculty, support staff, administration and Board of Trustees of Montgomery County Community College uphold the following values:

### Learning

To support this value, the College:

- Promotes learning as a lifelong activity.
- Encourages student-centered learning.
- Recognizes that learning is important in and of itself.

### Accessible and Affordable Educational Opportunity

To support this value, the College:

- Provides equal opportunities in education and employment.
- Offers support services to assist students in meeting their educational goals.
- Makes programs and services available at an affordable cost.
- Provides educational services to the community.
- Offers programs and services at convenient locations and times.

### Quality Programs and Performance

To support this value, the College:

- Provides up-to-date learning resources, tools and technologies within the framework of our financial support.
- Evaluates programs and services to improve institutionaleffectiveness.
- Promotes accountability, initiative, innovation and integrity.
- Provides a collegial work environment that rewards excellence, offers opportunities for professional development, and encourages teamwork and meaningful involvement in decision making.

### Fairness and Equity

To support this value, the College:

- Respects all people without prejudice or discrimination.
- Strives to deal fairly with all people.
- Encourages all members of our College community to communicate openly, honestly and with integrity. Promotes tolerance, appreciation and understanding of alternative cultural and intellectual ideas.

### Individual Worth

To support this value, the College:

- Is dedicated to each student's intellectual, personal and ethical growth.
- Respects the opinions of members of the College community and encourages open exchanges of ideas.
- Provides opportunities for the intellectual, personal, professional and ethical growth of faculty, support staff, administrators and members of the Board of Trustees.

### Community Service

To support this value, the College:

- Responds to the needs of the community it serves.
- Plans educational programs with business and government.
- Cooperates with other educational providers.
- Provides opportunities and activities that culturally enrich the community.

# A STRONG LEGACY, A SECURE FUTURE

Montgomery County Community College was formally founded by the Montgomery County Board of Commissioners on December 8, 1964. The College continues to be sponsored by Montgomery County.

Montgomery County Community College is approved as an institution of higher education by the Board of Education of the Commonwealth of Pennsylvania. The College is authorized by the Board to award associate's degrees in arts and sciences, as well as appropriate diplomas and certificates. Montgomery County Community College is accredited by the Middle States Commission on Higher Education, 3624 Market Street, Philadelphia, PA 19104, 267-284-5000.

Our operating funding sources are tuition, the Commonwealth of Pennsylvania and Montgomery County. In addition to support from the Commonwealth, County and other organizations, we benefit from the Montgomery County Community College Foundation, which raises funds to help the College develop programs, facilities and services.

# OUR LOCATIONS

## CENTRAL CAMPUS
340 DeKalb Pike, Blue Bell, PA 19422
215-641-6300

## WEST CAMPUS
101 College Drive, Pottstown, PA 19464
610-718-1800

## VIRTUAL CAMPUS
https://www.mc3.edu/virtual
215-641-6515

## THE CULINARY ARTS INSTITUTE
1400 Forty Foot Road, Lansdale, PA 19446
267-646-5970

# ADMISSIONS

### CENTRAL CAMPUS
Montgomery County Community College
340 DeKalb Pike
Blue Bell, PA 19422
215-641-6551
admissions@mc3.edu

### WEST CAMPUS
Montgomery County Community College
101 College Drive
Pottstown, PA 19464
610-718-1906
admissions@mc3.edu

## ADMISSIONS POLICY

### Purpose
The College provides accessible and affordable educational opportunities to all who apply. The Admissions Policy is intended to support the success of applicants as they enroll at the College.

### Policy
Admission to Montgomery County Community College is open to the following individuals:

- All high school graduates, General Equivalency/Commonwealth Diploma recipients and transfer applicants from another College or University.
- Any person who is a non-high school graduate and approved for enrollment in the Early Admissions program.
- Any non-high school graduate and non-General Equivalency recipient over the age of 18.

Montgomery County Community College has a strong institutional commitment to diversity and is committed to assuring equal opportunity to all persons as articulated in the EEO and Diversity Policy.

### Procedure
The College requires prospective students to submit an application for admission. Certain programs have additional criteria and requirements. Prospective students must reference the College's website for the current admissions procedures and requirements.
Once published on the College website, any subsequent changes to College or program admissions criteria must be presented through the governance process relative to the proposed updates.

## APPLICATION PROCESS
The College requires prospective students to submit an application for admission to enroll. All applicants are required to submit a high school transcript or transcript from their most recent educational experience.
All applicants seeking admission to a program of study must complete a placement (assessment) test or provide proof of test exemptions as stated in the College's Placement and Testing Policy in order to establish academic readiness prior to entering a degree program. Applicants who have never graduated from high school and who have not completed the GED may be admitted to the College provided they are over the age of 18 and demonstrate, through placement testing, an ability to benefit from postsecondary educational experiences.
Applicants who do not demonstrate the appropriate level of academic preparation necessary for success must enroll in developmental courses as outlined in the College's Placement and Testing Policy.

Montgomery County Community College is committed to assuring equal opportunity to all persons and does not discriminate on the basis of race, color, sex, religion, ancestry, national origin, age, applicable disability, or sexual orientation in its educational programs, activities, admissions, or employment practices as required by Title IX of the Educational Amendment of 1972, Section 504 of the Rehabilitation Act of 1973, the Americans with Disabilities Act, and other applicable statutes. Inquiries concerning Title IX and or 504 compliance should be referred to the Director of Equity and Diversity Initiatives, 340 DeKalb Pike, Blue Bell, PA 19422, (215) 619-7413 V/TTY. Central Campus students seeking information regarding services for students with disabilities should contact the Director of Services for Students with Disabilities at 340 DeKalb Pike, Blue Bell, PA 19422, (215) 641-6575 V. West Campus students should contact the Coordinator of Disability Services at 101 College Drive, Pottstown, PA 19464, (610) 718-1853 V/TTY.

## COMMONWEALTH SECONDARY SCHOOL DIPLOMA

The Department of Public Instruction of the Commonwealth of Pennsylvania will issue a high school diploma to students who never completed high school upon receipt of an official college transcript showing satisfactory completion of 30 college credits. A high school diploma may not be issued in advance of the student's high school graduation class. Students who pursue this program at the College may be limited to part-time study until the diploma is earned. Please refer to the Pennsylvania Department of Education's website at www.pde.state.pa.us for more information on the Commonwealth diploma. Once the 30 college credits have been completed, the student should request an official transcript from Enrollment Services to be mailed with the official diploma request form and PA State identification to the Pennsylvania Department of Education.

## GENERAL EQUIVALENCY DIPLOMA (GED)

Montgomery County Community College offers both a GED Preparation Program and administration of the GED test. Visit mc3.edu/ged or call 610-819-2056 for more information about testing.

## READMISSION BY STUDENTS IN GOOD STANDING

Former students who have taken an enrollment break of 3 or more consecutive years and are in good academic standing must apply for readmission to the College. In some cases, students applying to be readmitted to the College may be encouraged to take placement tests. The catalog in effect at the time of a student's readmission to the College, or any subsequent catalog, will govern the student's academic status and graduation requirements.

## ACADEMIC RENEWAL FOR PREVIOUS STUDENTS

Academic Renewal, a one-time-only option, provides eligible students with an opportunity to restart their academic records by resetting their GPA and Cumulative Credits Earned for past academic performance once they demonstrate recent success. To be eligible for Academic Renewal, the student must have:

- never been granted Academic Renewal
- an enrollment break of 3 or more consecutive years with a
- less than 2.0
- completed 15 or more credits after the enrollment break with a GPA of 2.0 or greater
- met with an advisor or counselor to review the Academic Renewal Policy including the application process

For more information regarding Academic Renewal, visit https://www.mc3.edu/about-mccc/policies-and-procedures/academic-renewal or visit the Student Success Center and talk with an advisor or counselor.

## READMISSION FOR STUDENTS PREVIOUSLY DISMISSED FOR DISCIPLINARY REASONS

Former students who have been dismissed from the College for disciplinary reasons must first receive approval from the Vice President of Student Affairs and Enrollment Management before being readmitted. This written approval must be received in Enrollment Services before the College can process the application.

## ADMISSIONS PROCEDURE FOR INTERNATIONAL STUDENTS

International students are citizens of another country who are authorized to remain in the United States for a temporary period as non-immigrant students (on an F-1 visa) and who intend to return to their home country after graduation. International students must complete International Student Application (F-1 visa). After completing the application, we will issue international students a Letter of Admissions and the SEVIS Form I-20 Certificate of Eligibility for Nonimmigrant (F1) Status to use when applying for their F-1 visa at a U.S. Consulate in their home country. To apply for admission to Montgomery County Community College and for issuance of the I-20, international students must complete an application and send all documents by the application deadlines. Students transferring from another U.S. institution of higher learning should submit their completed application packets at least three weeks prior to the beginning date of the semester they wish to start. Only international transfer students are eligible to apply for entrance into the summer sessions.

Students applying for a Change of Non-immigrant Status must submit the International Student Application and all required documents before receiving an I-20. All international students must submit an Immunizations-Submission Form along with documentation proving vaccination of Measles, Mumps and Rubella as well as a negative screening/diagnosis of Tuberculosis. Students applying from overseas must submit this requirement within 60 days after arrival in the U.S. Transfer and Change of Status students must submit this requirement within 60 days of receiving their I-20. Failure to submit immunization documents by the deadlines will result in a registration hold and could affect visa status.

International students must demonstrate English proficiency to enroll in an associate's degree program. Students can submit a TOEFL (Test of English as a Foreign Language) or take the placement test on campus achieving college-ready scores for admission. Per federal regulations, all F-1 students are required to enroll in no less than 12 credits a semester. To apply or learn more about international admissions, international students should contact the Office of Admissions at 215-641-6551 or visit http://mc3.edu/adm-fin-aid.

## ADMISSIONS PROCEDURE FOR PROGRAMS WITH SPECIAL ADMISSIONS REQUIREMENTS

Admission is selective for the Dental Hygiene, Medical Laboratory Technician, Nursing, Radiography, Surgical Technology, Physical Therapist Assistant, and Police Academy Act 120 training programs. Each program has specific admissions requirements and may have prerequisite coursework that must be completed before students are eligible to be admitted into the respective program. College coursework can begin before formal acceptance into each respective program. For the admissions prerequisite requirements for these programs, refer to the appropriate prerequisite curriculum listing in this catalog. Due to the competitive nature of these programs and class-size limitations, the College does not guarantee immediate acceptance into these programs even if you meet the admissions prerequisites. For certain programs, students may have to wait until there is space available in the class.

## EARLY ADMISSIONS

Applicants for Early Admissions, including Dual Enrollment, must follow the same procedures as applicants seeking regular admission, as well as provide approval from their high school or diploma-granting institution and parent/guardian. An applicant less than 15 years of age must also schedule a personal interview through the Admissions Office. Admissions decisions for Early Admissions students are made by a team of representatives from the Admissions Office, Academic Affairs and the Student Success Center.

## DUAL ENROLLMENT PROGRAM

The College's Dual Enrollment program enables current high school and home-schooled students to earn college credits prior to graduating from high school. Some dual enrollment students may also be granted dual credit for college course(s) to fulfill certain high school graduation requirements if their high school grants permission. The program is limited to students who have reached the age of 15 prior to the start of the semester for which they wish to enroll. If students desire dual credit, they are responsible to ensure that courses completed at the College will fulfill specific high school graduation requirements. Students who are less than 15 years of age may apply to participate in the Dual Enrollment program. Contact the Office of Admissions for specific requirements and to schedule an interview. Most students who are approved for the program enroll on a part- time basis. A student interested in the Dual Enrollment program must submit the online Dual Enrollment application and use the Dual Enrollment Registration Form to register for courses. The Dual Enrollment Registration Form requires the signature of the student and parent/guardian; if the student desires dual credit, a signature from a high school representative is required. Students must meet the prerequisites for the course(s) they wish to take, including completion of the reading, writing and math placement tests when required. Exemptions may apply (see the College's Competency Validations in Academic Readiness Policy).

For more information about our Dual Enrollment program, call 215-641-6577 or admissions@mc3.edu.

### Gateway to College

**Central Campus**
Student Success Center, College Hall
Esau Collins
215-461-1114
ecollins@mc3.edu

**West Campus**
Student Success Center, South Hall
Jezerey Weiderman
610-718-1841
jweiderm@mc3.edu

The Gateway to College program supports students who are at risk of not completing or have disengaged from their high school education. Through the program, students complete their high school diploma requirements at community and technical colleges while simultaneously earning college credits toward an associate's degree or certificate.

**Program Benefits:**

- scholarship program that pays for student tuition and books
- earn your high school diploma
- attend class in a supportive and educational environment
- earn college credit toward an associate's degree or certificate while taking classes toward high school diploma

**Program Requirements:**

- students 16- to 21-years-old who have dropped out of high school for at least 6 months
- students must be behind in high school credits for age or grade level
- possess reading skills at an eighth-grade level or higher
- referral and sponsorship by a partnering school district or community partner
- have the desire and determination to learn and to earn a high school diploma and a college degree (by age 21 and willing to commit to two or more year)

For more information about our Gateway to College program, please visit http://mc3.edu/student-resources/outreach or call one of our offices listed above.

## HONORS PROGRAM

The Honors Program at Montgomery County Community College offers highly motivated and academically talented students an enriched academic experience. The Honors Program achieves this goal by cultivating academic excellence in small, specialized classes, collaborative and experiential learning opportunities, and an emphasis on leadership, community building and service.
Students can participate in the Honors Program in two ways. They can:

- complete the full Honors Program to receive an Honors designation on their degree
- enroll in Honors courses only–students who have completed 9-12 credits and have a grade point average (GPA) of 3.2 or higher may take Honors courses while completing their degree requirements

Honors Program students complete nine credits of Honors course work plus an experiential enrichment experience consisting of either a three-credit Honors Experience course, a capstone project or two non-credit service-learning experiences. In addition, Honors Club participation and completion of two intellectual activities each year are required to earn the Honors designation. The College awards 25 Honors Program Scholarships each year to students who commit to completing the Honors Program and their degree at the College. Awards are based on merit and unmet need. Students who wish to be considered for an Honors scholarship must:

- apply to the College and the Honors Program
- file a FAFSA

- be a U.S. citizen or eligible non-citizen
- be pursuing first post-secondary degree
- be enrolled for 14 or more credits per semester
- be a resident of Montgomery County

For more information visit http://mc3.edu/academics/honors. The Honors International Business Certificate of Completion, a 12-credit international online experience, is available for students who have completed at least 12 college credit hours and maintain a 3.5 grade point average. This certificate may be combined with a certificate in Marketing or in Organizational Leadership in the Management A.A.S. program, or with the Business Administration A.S.

## TRANSFER STUDENT ADMISSIONS

The College applies the following guidelines in order to award academic credit for prior learning:

1. The consideration of transfer credit will be determined by course equivalencies, including expected learning outcomes, with those of the College's curricula and standards.
2. Generally, credit will only be transferred from regionally accredited postsecondary institutions; however, the College recognizes valid educational experiences worthy of consideration outside of regionally accredited schools and has procedures to accommodate these based upon approval from the academic coordinator/ program director and documentation of course equivalencies, including expected learning outcomes.
3. In addition, the College awards academic credit and course placement to students based on previous academic, employment, military and/or other learning experiences not earned in a traditional course. Credit is awarded for nationally recognized examinations [including Advanced Placement (AP) and College Level Examination Program (CLEP)], certifications or by portfolio evaluation of prior learning, based on course equivalencies, including expected learning outcomes.
4. Presented credits that meet grade and curricular requirements will be accepted at the College, up to 75 percent of the credits required for an associate's degree or certificate program. Transfer credit for specific majors are accepted to the extent that such acceptance would not be counter to discipline-specific accrediting agencies.
5. Developmental coursework is not accepted for transfer credit but will be transcripted for prerequisite purposes.
6. Courses with a grade value of 2.0 (C) or higher will be considered for transfer. Courses with a grade value of "pass" or "satisfactory" will be accepted as transfer credits when the transcript states that a "pass" or "satisfactory" is equivalent to a C or above. Transfer courses will be awarded credit with no grade value (quality points) assigned.
7. In general, courses will be considered for transferability regardless of their age; however, some programs may restrict the age of courses used for program admission, prerequisite purposes and/or program completion.

For up-to-date information on opportunities for advanced standing and prior learning credits, visit the College website at http://mc3.edu/adm-fin-aid/prior-learning-assessment. Here are some of the more common opportunities to receive advanced standing or credits for priority learning:

### Transfer of Credits

1. Only official transcripts or score reports sent directly to Enrollment Services from the issuing institutions/organizations or delivered in a signed, sealed envelope will be reviewed. Facsimiles and/or unsealed documents are not considered official. Official documents for credits earned prior to admission should be submitted no later than the end of the first semester of attendance to meet subsequent course prerequisites and provide for accurate academic planning for degree completion. External courses and exams completed while currently in attendance should be submitted as soon as possible.
2. Students who have credits from foreign educational institutions must have their transcript translated and reviewed by a NACES-accredited credential evaluation service. Military personnel are eligible to have their military experience and training evaluated for transfer credit by submitting an approved form (for example, a DD Form 214) and military transcript. Credit may be awarded for military training that has been evaluated by the American Council on Education and assigned a recommended credit value when the training is directly related to the student's program of study.
3. The MCCC transcript will reflect only the total number of credits equated; awarded individual course equivalencies will not appear.
4. The College operates under the semester system. If a student seeks transfer credit for work completed under the "quarter" system, credits will be transferred in as follows:
   - A one-year course of nine credits, taken over three quarters will transfer in as six semester hours.
   - Two quarters of coursework totaling six credits will transfer in as a two-course sequence of two credits each.
   - One quarter of coursework totaling three credits equals two semester credits.
   - If one course of a two-course sequence is completed, the student will receive two transfer credits, which may, with approval from the appropriate discipline, satisfy a course prerequisite. Students must complete the minimum number of credits to graduate from the College.

### AP Exams

Applicants from secondary schools offering college-level courses, as well as those who have gained educational experience from other sources, may take the appropriate Advanced Placement Examination from the College Board.

Students should request that the score, and the essay portion, of their examination be sent to Enrollment Services. AP exams with scores of three or higher for equivalent courses are accepted to meet degree requirements. See the College's website, mc3.edu, for the most up-to-date listing of AP credits awarded and more information.

### CLEP Exams

Students may receive credits if they have successfully completed the CLEP (College Level Examination Program) sponsored by the College Entrance Examination Board (CEEB).
CLEP exams with scores of 50 or higher for equivalent courses are accepted to meet degree requirements. Montgomery County Community College is an official CLEP testing center. Please visit www3.mc3.edu/clep for information regarding testing dates and registration.

### National Evaluations

**American Council on Education (ACE)** ACE assesses non-collegiate instructional programs to provide credit recommendations. If you

participated in a course through an organization that was evaluated by ACE, you can request a copy of your transcript from that organization. If those credit recommendations are equivalent to a course(s) in your MCCC program, you may be eligible for credit(s).

**Military** Military personnel are eligible to have their military experience and training evaluated for transfer credit by submitting a DD 214 and military transcript. Credit may be awarded for military training that has been evaluated by the American Council on Education and assigned a recommended credit value when the training is directly related to the student's program of study.

**Students Occupationally and Academically Ready (SOAR)** SOAR prepares students for college and careers in high priority occupations. Students who have participated in an approved SOAR program through their high school's Career and Technical Education Program may receive credit toward their certificate or degree. Visit CollegeTransfer.net to see how your high school credits may be accepted by Montgomery County Community College.

### Prior Learning

The College may provide credit for prior learning that does not come from an academic setting or by transfer of credit from another institution. Students must be enrolled as degree-seeking students in the College in order to qualify for Prior Learning credit. Students may then elect to earn credit for specific courses by submission of a comprehensive portfolio that demonstrates that the student has met the learning outcomes for the course or by taking a challenge examination developed and administered by department faculty. There is a fee for the review of materials and for the awarding of credits. Additional information on Prior Learning transfer credit is available on the College's website.

### Industry Certifications

The College recognizes various organizations that award professional certification, licenses and training in specific industry areas and grants credit based upon discipline faculty agreement on course equivalencies. Certifications and licenses must be current to be considered for credit. Students are required to submit a copy of their certification or license to the Records and Registration Office with their request for credit. A list of organizations for which credit is awarded is available on the College's website.

### Reverse Transfer

Students who have transferred from Montgomery County Community College without earning an associate's degree or certificate may complete program requirements by transferring back courses that have been earned at other institutions and are approved as equivalent to the degree requirements of a program of study at the College, in accordance with the transfer of credit policy.

### Appeal Procedures

Academic transcripts are evaluated based upon the procedures established in the Transfer of Credit Policy and through the guidance provided by the academic disciplines. When transcripts are received for which there appears to be no Montgomery County Community College equivalent, or for which no equivalency can be established based upon the course name and course description, the academic discipline may be called upon to make a determination.
It is possible that errors in the articulation of coursework or prior learning can occur. In the event a student believes that this has occurred, the appeal procedure is as follows:

1. The student should first contact the Office of Records and Registration to discuss the evaluation results with a transcript evaluator and provide any additional documentation needed to assist with the review (for example an updated transcript or college catalog, syllabus or other documentation from the sending institution).
2. If the issue is not resolved, the student may request further review from the Director of Records and Registration/Registrar. After conferring with the student, the Director will present the student's claim along with any additional documentation to the Vice President for Academic Affairs and Provost, in consultation with the academic dean, and academic coordinator/ program director, for consideration and will communicate the decision to the student in writing, within 15 working days during the academic fall and spring semesters. The decision of the provost is final.
3. Appeals to the Director of Records and Registration/ Registrar under item II above must be submitted no later than 90 days after the completion of the initial evaluation.

## SHARED PROGRAMS

Through shared program arrangements, students can complete programs of study that are not offered by Montgomery County Community College but are available at Bucks County Community College, Community College of Philadelphia, Delaware County Community College and Lehigh Carbon Community College. Students who enroll for these majors at the peer community colleges must be authorized by the Director of Student Recruitment at both Montgomery County Community College and the host college to be eligible for program enrollment. The host college's sponsored tuition rate applies.

| HOST COLLEGE | MAJOR |
|---|---|
| **Bucks County Community College** | Fine Woodworking (AFA)<br>Furniture and Cabinet Making (Cert)<br>Historic Preservation (Cert)<br>Paralegal (AAS and Cert)<br>Sports Management (AA) Meeting, Convention and Event Planning (AA and Certificate) |
| **Community College of Philadelphia** | Automotive Technology (AAS)<br>Chemical Technology (AAS)<br>American Sign Language/English Interpreting (AAS) |
| **Delaware County Community College** | Advanced Technology (AAS)<br>Paralegal Studies (AAS) |
| **Lehigh Carbon Community College** | Aviation - Professional Pilot (AAS)<br>Veterinary Technician (AAS) |

## ACADEMIC TERMS AND FLEXIBLE LEARNING OPTIONS

### COURSE DELIVERY

The College offers a variety of academic semesters and sessions. The regular fall, spring and summer semesters are approximately fourteen (14) weeks in length with one additional week for final examinations.

### CONTINUOUS PROGRAMS OF STUDY

Continuous Programs of Study consist of courses offered 12-months out of the year to complete an associate's degree in about 16 months.

### ACCELERATED DELIVERY

Accelerated Delivery options are also available. Students can complete a variety of select courses in as little as one week. Courses are also

available in 2-, 3-, 6-, 7-, 8-, 10-, and 12-week options. Accelerated degree programs are available in Liberal Studies and General Studies. For more information about flexible learning options, visit the academic calendar at http://mc3.edu/academics/academic-calendar

### VIRTUAL CAMPUS

The Virtual Campus offers courses and programs in a variety of technological platforms including online, hybrid (blended online and classroom) and videoconferencing. Courses are taught in traditional semesters and accelerated sessions to students who are motivated and independent learners. Currently, the College offers several completely online degrees through Virtual Campus. Refer to http://www3.mc3.edu/virtualcampus for course offerings, programs and support services.

# TESTING AND PLACEMENT

**Central Campus**
College Hall 264
(2nd Floor Brendlinger Library)
215-641-6646
testing@mc3.edu

**West Campus**
South Hall 163
610-718-1995
westtesting@mc3.edu

Montgomery County Community College offers testing services to meet the testing needs of students, faculty, staff and the community to promote student learning and success. The College's Testing Center offers these services:

- Placement testing (Accuplacer)
- Proctor class make-up exams
- Distance learning (online) proctored exams
- CLEP exams
- Workforce certification and licensure exams
- Peparation for placement test

Students with disabilities can receive testing in a distraction-free environment with special accommodations or adaptive technology available as needed. Hours of operation and other important information may be found at http://mc3.edu/adm-fin-aid/testing-placement.

## PLACEMENT TESTING

Degree-seeking students must demonstrate their college readiness in reading, writing and math in order to be placed in the appropriate classes. There are many ways students can demonstrate college readiness. Students may submit score reports (PSAT, SAT, ACT, PSSA, AP, etc.), dual enrollment courses or college transcripts for evaluation. Students who do not have these items or have low scores or grades are required to take the College's placement tests. The College offers students many ways to prepare for placement tests; preparation is encouraged and can take place both on- and off-campus. For more information, review the College's Academic Readiness Policy and list of competency validations at http://mc3.edu/about-us/policies/111.

## OTHER TESTING

Students taking exams for distance-learning (online) classes, classroom make-up exams, CLEP test, or workforce certifications or licensure will receive proctored testing in a quiet, secure environment. Appointments are required for these tests.

# TUITION AND PAYMENT

## TUITION AND FEES

Tuition and fees are established by the Board of Trustees of the College. The College reserves the right to change tuition and fees at any time. Please visit the College's website to review the approved tuition and fees at the time of enrollment at https://www.mc3.edu/paying-for-college/tuition-and-other-costs. The student is responsible for tuition and fees. If the student is receiving financial aid or other scholarship monies, any remaining balance must be paid by the student. In the event of the loss of financial support, the student is responsible for the full amount due to the College. If the student is not planning to attend classes, he or she must drop classes in accordance with the refund policy to avoid charges. Students may not register until their financial obligations to the College are satisfied. Students anticipating difficulty in meeting their future financial obligations should apply for financial aid or for a payment plan through the Office of Enrollment Services.

## RESIDENCY REQUIREMENTS

### IN-COUNTY TUITION

Effective June 19, 2017, all students who have resided in Montgomery for a period of six months prior to registration will receive the sponsored in-county tuition and fees rate. International Students with an F1 or F2 visa status, or students who reside outside of the county or state, are not eligible for the sponsorship rate. The proof for establishing residency or a change of residence rests with the student. Residency may be established in less than six months if positive action has been taken to establish residency, such as a lease or purchase of a permanent independent residence (student's name must be on the lease or purchase agreement and student will have moved into residence for purposes other than attending college); Montgomery County voter registration card showing the new address; PA Vehicle Registration Card with the new address or update card from the DMV.

In accordance with PA House Bill 131, “veterans, their spouses and dependent children; military personnel, their spouses and dependent children; and civilian personnel working on a military base, their spouses and dependent children, who are admitted to a community college, [to] be charged the local sponsor rate, provided that the student is a resident of the state on the first day of the semester.”

### IN-STATE TUITION

To establish residency in the Commonwealth of Pennsylvania, students must demonstrate continuous residence in the Commonwealth for a period of (12) months prior to registration as a student. Minors under the age of 18, or a student whose age is 18 to 23 and is claimed as a dependent on his/her parent's federal income tax return, shall be presumed to have the same domicile as their parents or guardian and must use that address as his/her permanent address. Establishing an address for the purpose of attending college does not establish residency. The proof for establishing residency or a change of residence rests with the student.

## PAYMENT PLAN

To assist students in meeting their financial obligation to the College, payment plans are offered for tuition and fees. To qualify for the payment plan for credit courses, you must:

- Be registered for three or more credits in a current semester and have a balance of at least $200.00;
- Accept the payment plan terms and conditions; and
- Pay a $35 non-refundable payment plan set-up fee (unless waived - see below), which is included with the initial payment. The fee will be waived if:
  - You select a six- or five-month payment plan option or
  - You select a four- or three-month payment plan option, and you elect for scheduled monthly payments.

Non-credit courses
This plan allows you to spread payments out over a four-month period. To qualify for the continuing education/non-credit course option, you must:

- Be in an approved program, such as Municipal Police Academy or Massage Therapy;
- Accept the payment plan terms and conditions;
- Pay a $35 non-refundable payment plan set-up fee, which is included with your first payment; and
- Be prepared to pay your initial installment and set-up fee at the time of registration.

## TUITION AND FEES REFUND POLICY

Tuition is fully refunded if we cancel a course. Otherwise, all refunds are subject to the College's Tuition Refund Policy. To withdraw or drop courses, or substitute another class for a canceled course, call or visit: Enrollment Services at either campus:

Central Campus, College Hall, 215-641-6551 West Campus, South Hall 610-718-1944

The amount of a tuition refund is based on the date the student drops a course.

Refund Policy for Regular Semesters (14 Weeks in Length or Longer)

| If Students Drop: | They Receive this Tuition Refund: |
|---|---|
| Prior to the first day of the semester | 100% refund of tuition and fees |
| To the end of the first week of the semester | 100% refund of tuition, no refund of fees |
| To the end of the second week of the semester | 50% refund of tuition, no refund of fees |
| To the end of the third week of the semester | 25% refund of tuition, no refund of fees |
| After the third week of the semester | No refund |

Refund Policy for Special Sessions and
Irregularly Scheduled Sessions and Courses (Less than 14 Weeks in Length)

| If Students Drop: | They Receive this Tuition Refund: |
|---|---|
| Prior to the first day of the semester | 100% refund of tuition and fees |
| To the day prior to the end of 10% of scheduled instruction | 100% refund of tuition, no refund of fees |
| To the day prior to the end of 20% of scheduled instruction | 50% refund of tuition, no refund of fees |
| After 20% of scheduled instruction | No refund |

# FINANCIAL AID

### Central Campus
College Hall, 215-641-6566
financialaid@mc3.edu

### West Campus
South Hall 151, 610-718-1906
financialaid@mc3.edu

Montgomery County Community College's Financial Aid Office offers an active financial aid program that is designed to bring educational expenses within the reach of students with varying financial resources. The Financial Aid Office can help students determine their eligibility for financial aid and assist them in applying for and securing a financial aid package that will meet their individual needs.

The College administers federal, state and institutional financial assistance, and offers these financial aid programs based on need:

- Pell Grants
- SEOG (Supplemental Educational Opportunity Grant)
- PHEAA Grants (Pennsylvania Higher Education Assistance Agency)
- Federal Work Study
- Subsidized Direct Loans

Federal Financial Aid Programs Non-need based:

- PLUS (Parent Loans for Undergraduate Students)
- Unsubsidized Direct Loans

The College also offers over 100 different scholarships, the majority of which are need-based, through the Montgomery County Community College Foundation. For more information on scholarships, call Financial Aid at 215-641-6566 or go to https://www.mc3.edu/paying-for-college/financial-aid.

## How to Apply for Financial Aid

To apply for financial aid, students must complete the Free Application for Federal Student Aid (FAFSA), which is online at https://fafsa.gov. Students must reapply each academic year for a financial aid package. The Financial Aid Office first awards students who file by the following deadline dates, then awards students by date of application.

## Important Dates and Deadlines

**2019-2020 Academic Year:**

- **October 1, 2019** – FAFSA application available
- **April, 15, 2020** – Academic Works MCCC Foundation Scholarship application available on the student portal
- **May 1, 2020** – File your FAFSA by this date to be eligible for PHEAA State Grant consideration.
- **June 1, 2020** – MCCC Foundation Scholarship priority consideration deadline. Register for at least six credits for Fall 2019 and file your FAFSA by this date for priority consideration for scholarships.
- **June 30, 2020** – Last day to file a 2019-20 FAFSA

## How Financial Aid is Awarded and Paid

The Financial Aid Office awards aid based on financial need. Financial need is the difference between the cost of attendance (COA) and the estimated family contribution (EFC). A student's EFC is determined by a federal formula that uses information provided by the applicant on the Free Application for Federal Student Aid (FAFSA). Generally, the Financial Aid Office offers a student a financial aid package consisting of grants, loans, scholarships and work-study. We first award gift aid, such as grants and scholarships to students with high financial need, followed by self-help aid, such as work-study and loan funds.

Students who plan to attend the entire academic year receive half of their aid for the fall semester and half for the spring semester.

The Business Office applies funds to the student's account, deducts any tuition and fees, and refunds the student any excess funds.

Summer Pell Grant funding will automatically be awarded, if available to you; loan funding may be available if enrolling in at least six credits and is to be requested in writing via email to financialaid@mc3.edu.

Financially eligible students may participate in the Act 101 Program, a state-funded program that offers one-on-one tutoring and counseling services, study skills workshops and individual guidance to help ensure that the students succeed in all courses and achieve their academic goals. Students are encouraged to take advantage of these resources to support their academic progress. Satisfactory academic progress is required to maintain eligibility for financial aid.

## Financial Aid Policies

- Must be a U.S. citizen or national, U.S. permanent resident, citizen of certain Pacific islands, or other eligible noncitizen
- Must be formally admitted to the College and have a high school diploma or GED
- Cannot be in default on a federally funded loan or owe a refund on a federal grant
- Students must be enrolled for at least six academic credits to be eligible for most financial aid programs. Only certain federal Pell Grant recipients can receive financial aid at a less than half-time status. Financial aid does not cover audited courses or courses that do not fall within the student's program of study/major.

Students:

- Students must attend the classes for which they are registered or they will not be eligible for the amount of aid being received.
- Students who completely withdraw at or before 60 percent of the term may have to return a portion of their unearned federal financial aid and may owe tuition, fees and a repayment of federal funds. Students earn their financial aid based on the percentage of the term that they have completed. Federal funds must be repaid in the following order: unsubsidized Stafford Loan, subsidized Stafford Loan, PLUS Loans, federal Pell Grant and FSEOG funds. More detailed information can be found at https://www.mc3.edu/paying-for-college/financial-aid/policies-and-resources/return-of-funds.
- Students cannot receive financial aid for a class they intend to audit. Students applying for a federal Direct Loan must complete an entrance and exit interview and complete a Master Promissory Note to understand their obligation for loan repayment. These obligations can be completed online at studentloans.gov.
- Students with unusual circumstances such as death, disability, loss of income etc. may submit a written request with supporting documentation to the Financial Aid Office for special consideration of the status of their financial aid.
- Students who perform services in the Peace Corps or under the Domestic Volunteer Service Act of 1973 or comparable service for a tax-exempt organization of demonstrated effectiveness in the field of community service may be eligible for a deferment on a FFEL/ Direct Loan.
- Students are eligible to receive Federal Pell Grant funds for the equivalent of six full-time years or 12 full-time semesters.
- PHEAA State Grant recipients must comply with PHEAA's Academic Progress Policy and meet PHEAA's eligibility requirements.
- Financial Aid for the semester will not be disbursed until all courses a student is registered in for the semester have started.

## Student Financial Aid Satisfactory Academic Progress Policy (SAP)

Federal regulations require that all financial aid recipients meet federal academic progress standards while taking courses toward a degree or certificate program. This policy applies to all terms of enrollment regardless of whether or not the student received federal aid. Progress is measured by the student's cumulative grade point average, percentage of credits successfully completed and timeframe or pace toward completion of the program. The College checks progress at the end of the fall and spring semesters.

## FINANCIAL AID PROGRAMS

| Grants | Amount | Who is Eligible? |
|---|---|---|
| Pell (federal program) | $625-$6,195 | Citizen/permanent resident |
| SEOG (federal and institutional program) | $200-$600 Varies - work max. 20 hours/wk @ $8/hour | Same |
| College work-study (federal and institutional) | Same | Same |
| Pennsylvania Higher Education Assistance Agency (PHEAA) | Minimum $100 Maximum is 80% of tuition up to $2,900 | Citizen/permanent resident - enrolled at least half-time. Resident of Pennsylvania. |
| **Loans** | **Amount** | **Who is Eligible?** |
| William D. Ford Federal Direct Loans | $500-$10,500 | Citizen/permanent resident - enrolled at least half-time. |
| PLUS* (parent loan, federal and state program) | Up to cost of education | Same |
| **Scholarships** | **Amount** | **Who is Eligible?** |
| Variety offered through The Foundation | Varies | Varies |

To apply for financial aid, students must file the FAFSA. Students must reapply for financial aid every academic year.

### Progress Standards

To be eligible for Federal Student Aid funds, the Department of Education requires that students make satisfactory academic progress while taking courses toward a degree or certificate program, and college must have a reasonable policy for monitoring academic progress. This policy applies to all terms of enrollment. Academic progress is measured by cumulative grade point average, percentage of credits successfully completed, and the time it takes to complete your program. Academic progress is checked at the end of each semester (Fall, Spring, and Summer). NOTE: This policy does not include PA State Grant academic progress requirements for maintaining PA State Grant funding.

**Completion Rate (2/3 Rule):** Students must complete at least 66.67% of all credits attempted, which is calculated by dividing cumulative credits earned by cumulative credits attempted. Incomplete, Withdrawn, and Failing grades count as attempted, but not as completed/earned credits. Transfer credits count as attempted and earned credits.

**Maximum hours (150% Rule):** The maximum timeframe for students to complete program requirements is 150% of the published program length. For example, if the student is enrolled in a 60- credit program, the student may only receive financial aid for up to 90 credits in that program. We count all credits attempted and all transfer credits that are applicable to the program.

**Developmental Courses/English as a Second Language Courses:** Developmental and ESL courses are evaluated in your progress calculation, including completion rate, maximum hours and cumulative grade point average. You may receive federal financial aid for a maximum of 30 semester hours of developmental coursework. There is no limit on ESL courses.

**Cumulative GPA Minimum Requirements (GPA Rule):** Students must earn at least the minimum cumulative grade point average as shown in the table below based upon the number of credits attempted.

| Cumulative Credits Attempted | Minimum Acceptable Progress Cumulative GPA |
|---|---|
| 12-23 | 1.51 |
| 24-35 | 1.75 |
| 36-47 | 1.83 |
| 48-59 | 2.00 |
| 60+ | 2.00 |

**Withdrawals, Incompletes, Audits and Repeat Courses:** Withdrawals and Incompletes do not count as a passing grade. These grades are counted in attempted credits. Once an Incomplete grade has been changed to a passing grade, academic progress can be recalculated upon written request. Audited courses do not earn academic credit and are not eligible for financial aid payment. As such, they are not evaluated in the review

of the student's satisfactory academic progress. Repeated coursework is also counted as attempted credits, with all grades related to this repeated coursework included in cumulative GPA calculation.

**Change of Major and Second Degrees:** Once you complete all the requirements for your program, you can no longer receive financial aid unless you enter a new degree program. You may apply for financial aid for the completion of two associate degree programs. All applicable courses in the completed program will count as part of the 150% attempted credits in your second degree program.

### Falling Below Academic Progress Standards

If you fall below any of the three (3) academic progress standards, you will be notified by email. You may also check your satisfactory academic progress status at any time on **https://my.mc3.edu/**.

**Warning**
If you do not meet satisfactory academic progress standards, you will receive a financial aid warning. Once you are in financial aid warning status, you may continue to receive financial aid in the next semester, but will be expected to meet the minimum standards by the end of the next semester. Failure to meet the minimum standards after the warning term will result in financial aid suspension.

**Financial Aid Suspension**
Your financial aid is suspended when you fail to meet the minimum Satisfactory Academic Progress requirements for one or more the following reasons:

1. You have been assigned a warning status, a probation status, or you are in a monitoring term after your probation, and you fail to meet the requirements of your warning status or academic plan.
2. You have exceeded the maximum time frame limits for your degree.

**Financial Aid Satisfactory Academic Progress Appeals**
If you have faced extenuating circumstances that may have affected your academic progress, you may appeal the academic progress suspension. Extenuating circumstances include you experiencing a serious illness or accident; the death, accident or serious illness of your immediate family member; or other mitigating circumstances beyond your control. To appeal, you must complete the Financial Aid Academic Progress Appeal Form, provide acceptable supporting documentation and complete all required steps outlined on the form.

On the Academic Progress Appeal Form, you will be required to explain the following:

You must explain the circumstances that kept you from meeting the satisfactory academic progress standards in the past.

- You must explain your plan for corrective action — that is, tell us what changes you have made that will allow you to be successful in the future.
- You must describe your current educational objective and your plan for successfully achieving this goal at Montgomery County Community College. If you are transferring in new academic credit, please explain how the transfer credit relates to your current educational objective at Montgomery County Community College.

Your appeal will not be reviewed unless all required items have been completed and submitted.

**Probation**
If your appeal is approved, you will be placed on financial aid probation status and your financial aid will be restored. During probationary status, you must follow the academic plan from your Academic Progress Appeal Form and you must successfully complete all registered courses with a grade of C or better. Withdrawals, Incompletes or Audits do not count as a successful completion grade. Failure to follow the plan and successfully complete all registered courses during the semester of appeal will result in loss of federal financial funding.

**Regaining Financial Aid Eligibility**
If you do not meet satisfactory academic progress requirements and choose to enroll at the College without financial aid assistance, we will check your progress at the end of that term of enrollment. At that time, if you do meet the requirements, we will reinstate your eligibility for financial aid in subsequent semesters.

# ACADEMIC RESOURCES, SPECIAL PROGRAMS AND SERVICES

## THE COLLEGE LIBRARIES

**Central Campus**, Blue Bell, College Hall, 215-641-6596
**West Campus**, Pottstown, South Hall, 610-718-1864

The Brendlinger Library at Central Campus and the West Campus Library provide calm, inviting spaces for solo and group study. Every library study room has a whiteboard and one of the larger rooms at Central is equipped with a SmartBoard. Central campus study rooms can be reserved from the library website or used on a drop-in basis. At either library, you can use computer workstations, borrow a laptop or access the wireless network to use your own device. Printers, photocopiers and scanners are also available at both libraries. In addition to current novels, non-fiction, and graphic novels, the Central and West campus libraries offer a large selection of feature films and documentaries on DVD. To support your coursework, the libraries provide academic books, journals, archival and primary sources, streaming media, and online research databases.The libraries also provide access to government information and support for grant-seekers. You can browse the library collection and borrow circulating items for free using your college ID or other approved identification. Access the article databases, e-books, and online tutorials 24/7 at our website: www.mc3.edu/library. We are here to help. Contact the libraries' staff online by using chat or in-person by visiting our service desks. You can also make an appointment to meet with a librarian. The librarians offer individualized support for your coursework and assignments and can help you work through a topic, develop an effective research strategy, pick the most useful resources and evaluate and cite your sources.

## DEVELOPMENTAL EDUCATION

Student success is a high priority at the College, and the College offers a variety of courses and services to prepare students for college-level work. These developmental courses and instructional interventions, including Supplemental Instruction, subject-area tutoring and refresher courses, work in tandem to prepare students for the challenges of college academics.

## ACHIEVING THE DREAM

Achieving the Dream: Community Colleges Count is a national initiative that, in part, seeks to successfully move students from developmental education to credit, college-level courses. Through its Achieving the Dream:

Community Colleges Count participation over the past several years, the College has strengthened its dedication to student access and success by improving developmental instruction, curricula and services. In 2011, the College was named a Leader College by Achieving the Dream for our work to support student success.

## TUTORIAL SERVICES

**Central Campus**, Blue Bell, College Hall 180 215-641-6452, lalcc@mc3.edu

**West Campus**, Pottstown, South Hall 159 610-718-1945, lalwest@mc3.edu

All Montgomery County Community College students are encouraged to use the resources available in Tutorial Services. Tutorial Services offers extensive peer, professional and paraprofessional face-to-face and online tutoring and learning support to students enrolled in the College's courses. Tutorial assistance, learning specialists and workshops are available weekly both in-person and online. This free service is available whenever school is in session.

## SUPPLEMENTAL INSTRUCTION

Supplemental Instruction (SI) is a program that offers peer-assisted study sessions for traditionally highly enrolled, low success rate college-level courses. Please contact jluddy@mc3.edu or call 215-461-1104 for more information.

## STUDENT SUCCESS INITIATIVES

**Central Campus**, Blue Bell
Student Success Center
College Hall, 215-641-6577

**West Campus**, Pottstown
Student Success Center
South Hall, 610-718-1906

College can be challenging and we're here to help! At Montgomery County Community College, we are committed to providing an academic environment that fosters student success. Every student deserves a high-quality, affordable and accessible education. The Student Success Initiatives Program strives to address the unique needs and concerns of all students in order to facilitate a successful transition from their high school, post-secondary or non-educational experiences into the college community. This intentional, comprehensive curricular and co-curricular initiative promotes an understanding and appreciation of a college education, and assists students with developing strategies and attitudes that will maximize academic success and prepare students to become life-long learners and responsible citizens and leaders. The College offers a number of programs and initiatives that are designed to help our students fulfill their academic goals.

### Welcome Month

Welcome Month is designed to ensure that students transition to the College successfully and learn about the resources available. The College extends its orientation program into the first month of classes; activities include workshops, sporting events, Student Club Fair and other student-oriented events.

### Peer Mentoring

The purpose of the Peer Mentoring Program is to increase a student's chance of academic and personal success in their first year of college by connecting them with successful upper level students who will assist them with their journey through college. Mentors help with unanswered questions, provide Blackboard and Student Self-Service tutoring, assist in navigating through the College processes and resources and provide campus tours and information. Program Goals:

1. Promote intellectual, social and moral development of students
2. Establish effective connections between upper-level students new students resulting in successful transitions, increased satisfaction and persistence of both groups
3. Improve communication between students and College staff

### Early Alert

The purpose of Early Alert is to enhance student success through online communication between faculty, academic advisors and students when there is concern about the student's academic performance and/or class attendance. Students receiving early alerts are strongly encouraged to follow up with faculty and academic advisors as well as seek support in our Tutorial Services Center.

## ACT 101 PROGRAM

ACT 101 is part of a state program called the Higher Education Equal Opportunity Act, which encourages students who may be educationally underprepared and financially disadvantaged to attend college. ACT 101 provides students with special support services to help them achieve and reach their highest potential. Students in the ACT 101 program are eligible for the following services; free tutoring, counseling, personal growth and study skills workshops, and social and cultural events.
In order to qualify for the ACT 101 program, students must meet the following requirements:

- Be a resident of Pennsylvania
- Have a potential for success
- Be educationally underprepared
- Qualify for financial aid or meet certain state-mandated income requirements

Students who want more information on the ACT 101 Program can indicate their interest by visiting the Student Success Center at either campus, or visit http://mc3.edu/student-resources/outreach or call:
Central Campus, 215-641-6660
West Campus, 610-718-1834

## KEYS (KEYSTONE EDUCATION YIELDS SUCCESS)

**Central Campus**, Blue Bell
Student Success Center
215-641-6330, 215-641-6662

**West Campus**, Pottstown
Student Success Center
South Hall, 610-718-1936, 215-641-6330

Let KEYS open the door to a brighter future for you and your family. You do the work and KEYS will help support your success. Keystone Education Yields Success (KEYS) has been developed by the PA Department of Human Services in response to growing research showing that individuals who earn a certificate or an associate's degree are better able to secure jobs with family-sustaining wages, benefits and opportunities for advancement. Montgomery County Community College KEYS students can enhance their chances of success through the KEYS Program. Our students are securing careers in the medical field, education, technology, business, hospitality and other high-demand occupations.

The KEYS program is designed to support TANF/Cash and SNAP/Food eligible students succeed in community college.

Eligible student may receive the following:

- KEYS Student Facilitators will connect you to relevant career, academic, financial aid and community resources
- Paid or reduced child care
- Paid books and school supplies up to $1,000
- Paid job-related professional fees and uniform costs, funding limited
- Paid Vocational Work Experience (VWE), in relation to your course of study, funding limited
- Paid transportation assistance (transPass, mileage, car repair, license, registration, inspection and more)
- Computer laptop loan program
- Referrals to community service agencies to support academic success and family stability

Contact KEYS staff for referral consideration from your local County Assistance Office, CAO.

### POWER PROGRAM

Lori Schreiber
Community Liason
215-461-1151
lschreib@mc3.edu

Lisa Barbiero
Program Advisor
215-641-6425
lbarbier@mc3.edu

The Power Program (Partnership on Work Enrichment and Readiness) is a career and educational exploration course for people in mental health recovery. This program is fully subsidized and allows participants the ability to earn two college credits upon completion.

In addition to the twice weekly class, participants are provided with individual advising to help develop a personalized career plan. A transportation stipend is available to eliminate any cost to the student. Some of the class topics highlighted in this program include career assessment, resume writing, study skills, time management, professionalism, success skills for college, public speaking, information about college financial aid, disability services and other college resources.

The class is open to individuals who have a mental health diagnosis and are interested in participating in college coursework that focuses on career development.

### NATIONAL HONOR SOCIETY

The College has a chapter of Phi Theta Kappa, the National Honor Society for community colleges. Phi Theta Kappa exists to recognize and encourage scholarship among students, to provide opportunity for development of leadership and service, to promote an intellectual climate for the exchange of ideas and provide stimulation for continuing academic excellence. The College's chapters are Alpha Kappa Zeta at the Central Campus which was chartered in 1984, and Beta Tau Lambda at West Campus, which was chartered in 2011. To be eligible for membership, students must:

- Maintain a 3.5 GPA or above
- Have earned a minimum of 12 credits from the College
- Be of good moral character and possess recognized qualities of leadership

Eligible students will receive an invitation to join once they have fulfilled the requirements. Contact the Student Leadership and Involvement Office on the Central and West campuses if you have any questions about joining Phi Theta Kappa.

### MINORITY STUDENT MENTORING INITIATIVE (MSMI)

If you identify as a minority student, you could benefit from the Minority Student Mentoring Initiative (MSMI) Program. MSMI is a campus mentoring resource for all minority students. If a student elected to identify as a minority student on his/her Admission Application or new-student Intake Form, he/she would be considered a MSMI participant. Eligible program participants will be offered an opportunity to be paired with an on-campus mentor who will challenge the student personally, academically and professionally. The mentor will support the student in working through hardships or obstacles as he/she matriculates, and will challenge the student to develop the mental toughness, academic discipline and organizational skills necessary to succeed. As a member, students will be invited to attend personal and professional development workshops, student conferences, and participate in community service initiatives. MSMI provides participants with:

- Mentoring relationships
- A sense of community
- Academic support
- Cultural activities and events
- A clear roadmap toward graduation
- Networking opportunities
- A plan for life after Montco

If you would like to learn more, email the Coordinator of Mentoring Services or call the Student Success Center at the contact information listed below:
Mentoring Services – MSMI@mc3.edu
Student Success Center – (215)641-6577

# STUDENT SERVICES

### ACADEMIC ADVISING

**Central Campus**, Blue Bell
Student Success Center, College Hall
215-641-6577
advising@mc3.edu

**West Campus**, Pottstown
Student Success Center, Room 151, South Hall
610-718-1906
advising@mc3.edu

Professional academic advisors are available in the Student Success Center on each campus to assist students with their advising needs. Academic advisors are assigned to students based on their program of study and will assist students in:

- Selecting a program of study that matches their career goals
- Clarifying challenges toward goal achievement and discussing potential solutions
- Identifying degree requirements and verifying progress toward graduation

- Developing an educational plan
- Following appropriate steps to transition to either the workforce or to another college

Advising services are available to all full-time and part-time students. Students are required to schedule an appointment to meet with their assigned advisor during their first semester and students are encouraged to meet with their advisor on a regular basis. Students are ultimately responsible for their course selections, as well as for the fulfillment of degree or certificate requirements.

## HEALTH AND WELLNESS SUPPORT

Throughout many phases of your life, you may encounter challenges that can have a negative effect on your emotional and physical health—and the many demands of juggling college classes, work and relationships can take a significant toll if not sufficiently addressed. Our academic counselors, located in the Student Success Center, are available to support your academic success and can guide you to appropriate local community resources for additional counseling services. We encourage you to utilize the many on-campus and off-campus resources.

### On-Campus Resources:

**MindKare Behavioral Health Kiosk** Located on the ground floors of College Hall and Parkhouse Hall, the MindKare Behavioral Health Kiosk uses an interactive touch screen display to provide individuals a quick and anonymous mental health screening. This assessment, which is also available online:

- Screens for common mental health disorders, such as depression, anxiety and substance abuse
- Gives an overview of the signs and symptoms of treatable behavioral health disorders
- Provides information and resources for quality, local treatment options

Visit screening.mentalhealthscreening.org/mc3 to learn more.

**Student Support and Referral Team**
The Student Support and Referral Team (SSRT) is a free, confidential referral service available to all students and faculty to connect you to healthcare professionals and additional community resources.

SSRT is stationed in the Student Success Center at Central Campus and West Campus. You can email SSRT at their secure, confidential address studentreferral@mc3.edu.
If you are having an emergency or crisis situation, dial 911 to get immediate assistance to your location.

## TRANSFER SERVICES

### TRANSFER PARTNERSHIPS

Our graduates are enthusiastically welcomed by four-year colleges and universities, both regionally and nationally. A variety of partnerships and agreements with four-year institutions have made it possible for students to maximize their experience and credits at the College before transferring to complete their bachelor's degree. Through our transfer partnerships, we have dual-admission relationships with over 20 four-year colleges in the area. When you graduate from Montgomery County Community College with an A.A. or A.S., A.F.A., and selected A.A.S. degrees and the required GPA, you are ensured admission to your intended four-year school if it is part of this program. We also design our curriculum tracks to meet the requirements of these schools, thus making it more feasible for your credits to transfer.

The College has formal partnership agreements with the following: Albright College, Alvernia University, Arcadia University, Bellevue University, Bloomsburg University, Cabrini University, Chestnut Hill College, Cheyney University, Delaware Valley University, DeSales University, Dongseo University (international), Drexel University, East Stroudsburg University, Eastern University, Gwynedd-Mercy University, Kutztown University, LaSalle University, Lehigh University, Messiah College, Neumann University, Peirce College, Penn State Abington, Philadelphia University's Accelerated Bachelor of Science Degree Completion (Evening) Program, Rosemont College, Saint Joseph's University, Shippensburg University, Strayer University, Temple University, Ursinus College, Villanova University's Bachelor of Interdisciplinary Studies Degree Program, West Chester University, Widener University and Wilmington University. We expect to add more partner schools in the future. Additionally, most Partnership Programs include the opportunity for:

- A waiver of the application fee for dual-admissions students at partner institutions
- Admission into a parallel bachelor's degree program with junior status
- Acceptance of the College's A.A. and A.S. core curriculum
- Scholarships/course discounts for Montgomery County Community College graduates with a specific GPA or higher who are included in the Dual Admissions or Letter of Intent program
- Meeting with advisors at partner institutions
- Attending events and meeting faculty and staff at partner institutions
- Attending regularly scheduled Partner Days and Evenings with representatives from partner schools

### PROGRAM-TO-PROGRAM TRANSFER AGREEMENTS

The College also has program-to-program transfer agreements or guides with several of our partner schools, as well as with other four-year institutions. These agreements guarantee students who graduate with an associate's degree the ability to transfer all of their credits to the specified four-year institution and the ability to graduate with their bachelor's degree in two full-time years. Students are encouraged to contact their advisor to discuss the program-to-program agreements.

In addition, the College has eleven programs that are TAOC (Transfer Articulation Oversight Committee) compliant. The TAOC was established under section 24 P.S. §20-2004-C of Article XX-C of the Public Institution Code of 1949. The committee reports to the Pennsylvania Department of Education. The programs that have become TAOC-approved include Business Administration, Computer Science, Criminal Justice, Education in the Early Years, Fine Arts, History, Mathematics, Mass Media, Psychology and Theatre. Students who graduate within any of these programs will be assured transfer as juniors into bachelor degree programs in similar fields of study at any of the 14 Pennsylvania State (PASSHE) universities. These include Bloomsburg University of Pennsylvania, California University of Pennsylvania, Cheyney University of Pennsylvania, Clarion University of Pennsylvania, East Stroudsburg University of Pennsylvania, Edinboro University of Pennsylvania, Indiana University of Pennsylvania, Kutztown University of Pennsylvania, Lock Haven University of Pennsylvania, Mansfield University of Pennsylvania, Millersville University of Pennsylvania, Shippensburg University of Pennsylvania, Slippery Rock University of Pennsylvania, and West Chester University of Pennsylvania. Additionally, Carlow University, Lackawanna College,

Neumann University, Pennsylvania College of Technology and Saint Francis University have also opted to participate in TAOC offerings. Students may learn more about TAOC offerings by contacting their advisor or by logging onto www.patrac.org.

## ASSISTANCE WITH TRANSFER PLANNING

Students planning to transfer to four-year institutions should become familiar with the transfer process during their freshman year. Early in their first year, they should begin gathering information on one or more colleges and carefully plan for transfer. Students who need help may seek assistance from our advisors and counselors in the Student Success Centers. Transfer is more difficult in some highly specialized majors, and may require strategic planning. Choosing a four-year institution and a program of study are important for successful transferability.

In addition to the Partnerships and Program-to-Program Agreements that benefit our students, the Student Success Center has developed Transfer Guides to describe how our courses fit into curricula offered by many area colleges. Transfer of credits should be a smooth process for students who carefully follow the guides and have earned grades of C or higher.

Four-year college representatives visit our campuses to meet with students for Transfer Fairs and Partner days and on designated evenings in the fall and spring. We also encourage students to use the resources available in the Student Success Center on either campus.

## THE UNIVERSITY CENTER

The University Center provides a pathway for students to continue their education without leaving the footprint of the campus. Choose from various bachelor's, master's or doctoral degree programs, as well as several certificate programs from some of the most highly recognized four-year institutions in our area. Classes are conveniently held at both of our campuses and offer an opportunity for potential tuition discounts. Call 610-718-1931 for more information.

### Albright College

- Bachelor of Science in Accounting (both campuses)
- Bachelor of Science in Business Administration (both campuses)
- Bachelor of Science in Crime and Justice (both campuses)
- Bachelor of Science in Applied Psychology and Organizational Behavior (both campuses)
- Bachelor of Science in Information Systems (both campuses)

### Cabrini University

- Master of Education (M.Ed.) Teaching and Learning (Central Campus)
- Early Elementary Cert. (PK-4) (Central Campus)
- ESL Cert. (Central Campus)
- Reading Specialist Cert. (Central Campus)
- Special Education Cert. (PK-8 or 7-12) (Central Campus)
- Innovative Leadership Principal Cert. (PK-12) (Central Campus)
- Urban Education (Central Campus)
- Bachelor of Science in Education w/ Early Childhood Cert. (PK-4) (Central Campus)

### Chestnut Hill College

- Bachelor of Science in Business Communications (Both Campuses)
- Bachelor of Science in Human Services (Both Campuses)
- Bachelor of Science in Social Gerontology (Both Campuses)
- Bachelor of Science in Liberal Studies (West Campus)
- Master of Science in Administration of Human Services (West Campus)

### Immaculata University

- Doctorate of Education in Higher Education (Central Campus)
- Master of Science in Nursing (Central Campus)
- Master of Science in Management and Leadership (Central Campus)
- Bachelor of Science in Health Care Management (Central Campus)
- Bachelor of Science in Allied Health (Central Campus)

## CAREER SERVICES

**Central Campus**, Blue Bell
Student Success Center, College Hall
215-641-6577, careerservices@mc3.edu

**West Campus**, Pottstown
Student Success Center, South Hall
610-718-1906, careerservices@mc3.edu

The Career Services Department is a comprehensive career counseling and resource center designed to engage students as active participants in their career development. We are committed to providing assistance to all MCCC students and alumni to help develop, evaluate and effectively initiate their career and educational goals. Services available include:

- Individual career counseling
- Personal and professional development
- Employment, internship and shadowing opportunities
- Career-related seminars and workshops
- Career fairs and networking events

## SERVICES FOR STUDENTS WITH DISABILITIES

**Central Campus**, Blue Bell
Disability Services Center, College Hall
215-641-6575, Disabilities@mc3.edu

**West Campus**, Pottstown
Student Success Center, South Hall
610-718-1853, westdisab@mc3.edu

Montgomery County Community College welcomes all qualified students with disabilities to participate in its educational programs, services and activities to the fullest extent possible. In compliance with Section 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act Amendments Act of 2008, the College will provide reasonable accommodations to ensure equal access to the College community.

Academic accommodations are determined on a case-by-case basis by the College's Disability Services, based upon the current functional impact of the student's condition in the educational setting. Students with disabilities may be eligible for academic accommodations, auxiliary aids, use of assistive technology and supportive and advocacy counseling. There are no additional fees for these services.

All students with disabilities who seek an accommodation have the responsibility to identify themselves to Disability Services. Students with disabilities need to provide recent and relevant documentation from a qualified professional to support the need for services and accommodations. They must also schedule an intake meeting with Disability Services and participate in an interactive process to establish eligibility for services. Students are responsible for providing documentation at their own expense in order to be considered for accommodations.

Refer to the Disability Services area of the College's website for the Documentation Guidelines.

Students are encouraged to make their needs known as soon as possible. For more information about services, eligibility and documentation requirements, contact the Director of Disability Services at Central Campus. Students attending West Campus should contact the Coordinator of Disability Services. Complete policies and procedures for students with disabilities are available on the College's website and from the Director and Coordinator of Disability Services.

## VETERANS' EDUCATIONAL BENEFITS

**Central Campus**, Blue Bell
Veterans Resource Center, 215-619-7307

**West Campus**, Pottstown
Veterans Resource Center, 610-718-1839
Veterans, National Guard/Reserve members, and eligible dependents of veterans may be entitled to educational benefits from the Department of Veterans Affairs (VA). If you have eligibility questions, call the VA Educational Hotline for Students at 1-888-442-4551. If you are using VA benefits for the first time or are transferring to Montgomery County Community College, you must apply online at **https://www.benefits.va.gov/gibill/apply.asp** for your Certificate of Eligibility (COE). You must have your COE and DD-214 (Chapter 35 and 33 Transfer of Entitlement do not need to provide a DD-214) on file prior to registering for classes at Montgomery County Community College if you want your courses certified for your respective VA educational benefits. The VA will only pay for the courses required to the completion of the approved degree or certificate program of education. VA will not pay for audited courses. Courses that are successfully completed may not be certified again for VA purposes if they are repeated. However, if a student fails a class, or if a program requires a higher grade that the one achieved in a particular class for successful completion, that class may be repeated and certified to VA again.

Montgomery County Community College currently complies with the requirements of 38 USC 3679(e). This means that

- MCCC's policy permits any covered individual to attend or participate in the course of education during the period beginning on the date on which the individual provides to the educational institution a certificate of eligibility for entitlement to educational assistance under chapter 31 or 33 (a "certificate of eligibility" can also include a "Statement of Benefits" obtained from the Department of Veterans Affairs' (VA) website e-Benefits, or a VA Form 28-1905 form for chapter 31 authorization purposes and ending on the earlier of the following dates:
  - The date on which payment from VA is made to the institution.
  - 90 days after the date the institution certified tuition and fees following the receipt of the certificate of eligibility.
- Montgomery County Community College will not impose any penalty, including the assessment of late fees, the denial of access to classes, libraries, or other institutional facilities, or the requirement that a covered individual borrow additional funds, on any covered individual because of the individual's inability to meet his or her financial obligations to the institution due to the delayed disbursement funding from VA under chapter 31 or 33.

Montgomery County Community College requires eligible Veterans and service members to provide one or combination of the following to adhere to the standards of 38 USC 3679 (e)

- Submit a certificate of eligibility for entitlement to educational assistance no later than the first day of a course of education.
- Submit a written request to use such entitlement, or provide additional information necessary to the proper certification of enrollment by the educational institution.
- Provide additional information necessary to the proper certification of enrollment by the educational institution.

Montgomery County Community College also supports Active Duty Service members who are eligible for Tuition Assistance (TA). National Guard members who are eligible for the Pennsylvania Educational Assistance Program (EAP) need to notify their Unit Educational Liaison to apply for your EAP to utilized at Montgomery County Community College.

If you would like to have your military or prior college transcripts evaluated please request an official copy to be sent to Montgomery County Community College, 340 DeKalb Pike, Blue Bell, PA 19422.

For those who served in the Army, Coast Guard, Marine Corps, or Navy go to **https://jst.doded.mil** to request your military transcript.

Air Force veterans go to **https://www.airuniversity.af.edu/Barnes/CCAF/** and click on the Transcripts link.

If you are transferring from another college or university, we will help you determine the documents required for the transfer and VA educational benefits certification process.

For additional information regarding VA education benefits, Pennsylvania's Educational Assistance Program (EAP) or Active Duty Tuition Assistance (TA) visit the Veterans Resource Center. You can also contact the VRC by e-mail: **Veterans@mc3.edu**, by phone: 215-204-1280 for the Central/Blue Bell Campus or 610-718-1839 for the West/Pottstown Campus.

## ENGLISH AS A SECOND LANGUAGE (ESL) ADVISING

**Central Campus**, Blue Bell
ESL/International Student Advisor
Student Success Center, College Hall
215-641-6577

The College offers a variety of courses and special support services for students who need to learn the English language. We encourage ESL students to contact our ESL/International Student Advisor (at the above location) for assistance throughout their college career.
The ESL/International Student Advisor will assist students in understanding test results, selecting ESL and other college courses based on these results and making a successful transition to the College. English and reading levels for ESL students include:

- Four semi-intensive beginner-level courses (ESL003, ESL004, ESL 005 and ESL 006), which introduce students to basic English vocabulary and pronunciation, and include practice in listening, speaking and writing
- Intermediate levels, ESL Basic Writing I and II (ESL010 and ESL 011), which prepare students for college-level English Composition I
- Vocabulary Development I and II (REA014 and REA017), which further increase students' English vocabulary and reading comprehension

- Oral/Aural Skills(ESL009), which develop listening and conversation skills

English as a Second Language Non-Credit Classes

A wide variety of high-quality non-credit ESL courses for adults and mature teens at all levels are available. You will study new vocabulary, improve your pronunciation, become familiar with American idioms and much more. If you wish to learn English or enhance your English writing and speaking skills, the ESL/International Student Advisor is available to meet with you at the Central Campus or you may speak with her by phone for assistance in selecting the right class for you. Classes are available weekday mornings, evenings and Saturdays. To make an appointment call 215-619-7396 or email ContinuingEducation@mc3.edu.

## HEALTH & WELLNESS

### Health & Personal Property Insurance

Students are strongly encouraged to obtain insurance coverage for personal illness, injury and/or loss of personal property by fire or theft while attending the College. The College does not assume liability for illnesses and/or injuries sustained while on College premises and/or during clinical rotations and other educational internships at off-campus sites. The College does not provide payment for medications, laboratory tests and other medical services related to such illnesses and/or injuries. Students are urged to obtain their own personal health insurance coverage.

Students may be eligible for health insurance coverage under a parent's or guardian's health plan, depending on age, dependent status and other available resources for healthcare coverage.

To assist students in need of health insurance and/or healthcare-related services, the College's Office of Health & Wellness provides resource information on some low-to-moderate cost individual health plan options, as well as several local health centers/clinics offering a variety of health care services at a reduced cost. (Note: These plans and health centers/clinics are not associated with the College.)

### Drug and Alcohol Prevention

The College's campuses are drug- and alcohol-free environments. In addition, the College implemented the Clean Air Policy in Fall 2007 to further reduce the use of tobacco products at all campus locations to support a healthy and safe environment for all who come to learn, work and take advantage of the many cultural events.
To support healthier lifestyle behaviors, the College has a strong alcohol and drug abuse awareness and prevention program and provides information on resources for tobacco cessation. Health-related information on tobacco addiction and the health risks associated with the use of illicit drugs and the abuse of alcohol are made available to students by the Office of Health & Wellness. Additional information is available during many of the free events held on campus, including health fairs, health screenings, fitness days and health awareness programs. Counselors in the Student Success Center and members of the Student Support & Referral Team (SSRT) are available on a confidential basis, to respond to students with issues related to drugs and alcohol as well as to connect students with College and community resources.

### SSRT: Student Support Referral Team

**Central Campus**, Blue Bell
Student Success Center, College Hall
215-641-6577
StudentReferral@mc3.edu

**West Campus**, Pottstown
Student Success Center, South Hall
610-718-1906
StudentReferral@mc3.edu

The Academic Counselors can connect you with helping professionals for issues related to:

- Stress
- Anxiety
- Anger
- Emotional distress
- Depression
- Eating disorders
- Abusive relationships
- Suicidal thoughts

This is a free, confidential referral service available to current students of the College. Students are encouraged to self-refer by visiting the Student Success Center during normal business hours, sending an email to SSRT at StudentReferral@mc3.edu, or calling the Student Success Center at either campus at the above numbers. Please note that this is not a hotline service. If you are having an emergency or crisis situation, dial 911 to get immediate assistance to your location.

## DENTAL HYGIENE CLINIC

**Central Campus,** Blue Bell Health
Science Center, Room 211, 215-641-6483
Fax 215-619-7171, http://mc3.edu/component/content/article/ 234-areas-of-study/health-sciences/dental-hygiene/8194-clinic

Since 1973, the Dental Hygiene Clinic on Central Campus has been providing the public with comprehensive preventive dental hygiene services. Services at this sophisticated dental facility include oral prophylaxis (teeth cleaning), initial periodontal therapy, x-rays, sealants, fluoride treatments and other procedures. Licensed dentists and dental hygiene faculty supervise all treatments. The Dental Hygiene Clinic operates September through May, by appointment. A nominal fee for service is charged to Montgomery County Community College students and employees.

## CHILD CARE SERVICES

**Central Campus**, Blue Bell
Debbie Ravacon
Director of The Children's Center
215-641-6618
dravacon@mc3.edu

The Children's Center at the Central Campus offers a high-quality child care and education program for children of students, faculty, staff and area residents. The Center boasts NAEYC accreditation as well as a Star 4 rating from PA Keystone Stars. The Center serves children ages two through five years, with operating hours from 7:30 a.m. to 5 p.m. For information, visit www.mc3.edu and search: Children's Center.

**West Campus**, Pottstown
YWCA Tri-County Area
315 King Street
Pottstown, PA 19464
610-323-1888

childcare@wcatricountyarea.org

Ready Set Grow Child Care operates with the belief that children learn best when their individuality is nurtured and recognized and when they are treated with respect and caring. The YWCA serves children 3 months to 5 years with operating hours from 6:30 a.m. to 6:00 p.m. Monday through Friday.

# ACADEMIC GRADING AND PROGRESSION POLICIES

### Graded Designations

| Grades | Quality Points |
|---|---|
| A | 4 |
| A- | 3.67 |
| B+ | 3.33 |
| B | 3 |
| B- | 2.67 |
| C+ | 2.33 |
| C | 2 |
| D | 1 |
| F | 0 |
| XF | Academic misconduct |
| FS | F stopped attending |
| NP | No pass |
| P | Pass |

### Non-Graded Designations

| Grades | Quality Points |
|---|---|
| AU | Audit |
| AT | Attended |
| CE | Credit by exam |
| CL | Credit for prior learning experience |
| I | Incomplete |
| M | Military Deployment |
| NC | No credit |
| NS | No show for attendance |
| W | Student initiated during withdrawal period |
| WEX | Withdrawal with approved excuse |

### Midterm Academic Progress*

| Grades | Quality Points |
|---|---|
| S | Satisfactory |
| U | Unsatisfactory |

* does not appear on transcript

## Grading System

The grading system at Montgomery County Community College is a plus/minus system with associated quality points. These quality points are used in the calculation of the cumulative grade point average (GPA) for college level courses. A student's cumulative grade point average is determined by dividing the number of credits attempted into the quality points earned. The use of a GPA calculator can assist in calculating the cumulative grade point average. Each instructor provides written explanation of the approved grading system in the course syllabus. Students are responsible for understanding the grading system.

## Note on Letter Grades

The lowest passing grade is "D." Students may repeat courses. The best grade earned will be used to calculate their GPA; however, all courses attempted and grades received appear on the transcript.

## Monitoring of Attendance and Student Progress

Instructors are required to complete attendance reporting after 20 percent of the course contact time has occurred — at the second week of the semester or at the conclusion of the second class meeting in an accelerated session. An Early Alert is automatically issued for any student not attending class(es), so that proactive intervention can be initiated by the student's academic advisor/counselor. Instructors report students who have attended class meetings using a code of "AT" (Attended), and students who have never attended using a code of "NS" (No Show). If the student began course attendance and subsequently stopped attending, the instructor would report the student as "AT" and enter a Last Date of Attendance (LDA). It is the student's responsibility to notify the College if they intend to withdraw from classes. Failure to attend class meetings or to pay tuition and fees does not constitute a withdrawal ("W"). The instructor, after consultation with the Division Dean, determines course reentry for a student after extended absence or lack of beginning attendance in the course. The College does not disburse financial aid to students who have been identified as ineligible through this procedure.

## Administrative Deregistration

Students are administratively deregistered for the purposes of dropping them from class rosters when they have been reported as a "NS" (No Show). Administrative deregistration is treated the same as a regular drop status as it relates to the student's GPA and course attempts. Instructors will assign an "FS" grade to a student who began attendance but subsequently stopped attending and did not withdraw.

## Midterm Academic Progression

At the midterm period of each semester/session, instructors are required to enter an indicator of student progress into the electronic grading system. An "S" is entered if the student is making satisfactory academic progress ( A, B or C grade); a "U" is entered if the student is attending classes and is not making satisfactory academic progress (a D or F grade). An Early Alert will be immediately entered for any student receiving a grade of "U," so that proactive intervention can be initiated by the student's academic advisor/counselor. At midterm, if the student has stopped attending, the instructor will assign a midterm grade of "U," enter a Last Date of Attendance (LDA) and a final grade of "FS."

## Repeating a Course

Students can repeat a course to earn a higher grade. After two course attempts, requests for the third must be approved by a Dean, Director or Advisor/Counselor.* A student who would like to request the possibility of a fourth course attempt must meet with the Provost or his/her designee for consideration. The College uses the best grade earned in the course to calculate the student's grade point average; however, the grade from each course attempt will appear on the student's transcript. It is important to note that all course withdrawals and audits count as attempts.

*Health career programs require the student to obtain the signature of the Program Director.

### Withdrawal from Courses

Students initiate the process of course withdrawal after consultation with the instructor and/or an academic advisor/counselor. After the Add/Drop period ends and prior to completion of 60 percent of the course time, a student wishing to withdraw must submit an official drop/add/withdrawal form. An official grade of "W" (Withdrawal) is assigned to the course. After completion of 60 percent of the course time and prior to 75 percent of the course time, the student must request and receive permission from the course instructor to withdraw from the course. The instructor completes an online Withdrawal Permission Form and indicates a final course status grade of "W" (Withdrawal). The College's Registration Calendar outlines specific dates associated with the withdrawal process that must be followed.

For Excused Withdrawal ("WEX") due to medical, catastrophic or other circumstances beyond the student's control, students can request withdrawal from a course during the semester after 75 percent of the course time with supporting documentation. Review of documentation for an Excused Withdrawal will occur by the Division Dean, Program Director or Instructor and a recommendation will be provided to the Provost's Office.

### Incomplete Grade

After 75 percent of the course time has been completed, and prior to the last class meeting, students with satisfactory academic standing who are unable to complete their coursework due to valid, unforeseen circumstances can seek an incomplete grade of "I" with the permission of the instructor. If the request is approved, the instructor outlines an agreement of the work the student must complete on the Incomplete Form. An Early Alert is submitted by the instructor to the student's academic advisor/counselor so student progress can be monitored. The deadline for completing the course requirements is no more than three months* after the final day of the semester in which the Incomplete grade was issued. An "I" grade (Incomplete) is changed to an "F" grade when the agreement of work on the Incomplete Form is not satisfied or when more than three months from the final day of the semester have elapsed. This grade cannot be a withdrawal ("W"). The College's Registration Calendar outlines specific dates associated with the incomplete grade process.

*If a course requirement requires longer than three months, for example, a performance-based assessment, then this deadline can be extended with the approval of the Dean or Program Director.

### Withdrawal for Military Deployment or Reassignment

The College will provide the following options for students who have been deployed or reassigned for military service in order to appropriately maintain the student's academic and financial records with Montgomery County Community College.

- During the Drop/Add registration period, with copies of the deployment orders, the Registrar may backdate the student's registration so that no charges are assessed for the term and no courses appear on an official transcript.
- After the drop/add period (Withdrawal Period), the affected student or student's spouse shall receive a grade of "M" on their official transcript for all classes they are unable to complete due to the military leave of absence. See http://www.mc3.edu/component/content/article/89-about-us/policies/aa-3/114-military. Without deployment orders the student must follow standard College withdrawal procedures. A retroactive appeal to have the courses and charges removed from the record can be initiated upon delivery of the required deployment orders.
- After the drop/add period (Withdrawal Period), the College can provide the student with an option to apply for an incomplete (I) grade with the course instructor. The incomplete grade (I) must be completed by the end of the semester following deployment. If the course is not completed and the student submitted a copy of the deployment orders prior to leaving, the incomplete grade (I) will be converted to a military withdrawal grade (M). If the student does not complete the requirements of the incomplete (I) grade and did not submit a copy of the deployment orders prior to leaving, the incomplete grade (I) will convert to a failing (F) grade. The student may appeal the grade and tuition upon return to the College with submission of the deployment orders.

### DETERMINATION OF GRADE POINT AVERAGE (GPA)

The total grade points earned for each course attempted are determined by multiplying the credit hours by the grade point. The student's Grade Point Average (GPA) is then calculated by dividing the total amount of grade points earned by the total amount of credit hours attempted. The GPA may range from 0.0 to 4.0.

| Course | Credit Hours | Grade | Points | Total Grade | Points |
|---|---|---|---|---|---|
| ENG 101 | 3 | B | 3 | 3 x 3.00 = | 9.00 |
| PSY 101 | 3 | F | 0 | 3 x 0.00 = | 0.00 |
| MAT 100 | 3 | C | 2 | 3 x 2.00 = | 6.00 |
| BIO 121 | 4 | D | 1 | 4 x 1.00 = | 4.00 |
| FRE 101 | 3 | A | 4 | 3 x 4.00 = | 12.00 |
| **TOTAL** | **16** | | | | **31.00** |

31 (total grade points) ÷ 16 (total credits attempted) = 1.93 + GPA

Credits attempted includecredits within the student's load for which grades of A, A-, B+, B, B-, C+, C, D, F are given. Credit for courses awarded CR, I, P, NP, CL, NG, W, TR, CE or AU, AW are not included in the GPA calculation. Courses with a course number below 100 are also not included in the GPA.

## GRADE REPORTS

Students must obtain their grade reports on Self-Service, the College's automated recordkeeping and reporting system that provides protected access to academic and financial records.

## GRADE APPEAL

In the interest of due process, the College provides an appeal process for a student who believes that a recorded final grade does not accurately reflect the performance in a course. The student must first attempt to resolve the grade with the course instructor. If unable to resolve the matter with the instructor, the student must complete the Student Information and Step One Section of the Grade Appeal form and request Division Dean's intervention. If unable to resolve the matter at the Division level, the Dean will complete Section Two of the Grade Appeal form and the Associate Vice President of Academic Affairs will convene a Committee to hear the grade appeal. See Policies and Procedures on the college website for details.

For the Grade Appeal Policy including the process and corresponding deadlines, refer to http://mc3.edu/about-us/policies/113.

## PROGRAM EVALUATIONS

### Student Success Centers

**Central Campus**

College Hall
215-641-6577
advising@mc3.edu

**West Campus**

South Hall
610-718-1906
advising@mc3.edu

The Program Evaluation is a personalized computer analysis of a student's progress toward graduation in a major. It includes courses taken at Montgomery County Community College, course equivalents for transferred courses from other colleges, general information about the program requirements, and a list of courses that do not apply to the selected program. We encourage students to review their Program Evaluations to monitor their academic progress, and to identify the coursework they have yet to complete in their current major.

In the event that a student chooses to request a course substitution in order to meet program requirements, a Request to Substitute a Course form is submitted together with supporting documentation. The request is forwarded electronically to the appropriate dean for the identified program after review by the student's assigned academic advisor. Students are notified via College email of either approval or denial of the request. The electronic Course Substitution form is found on the student portal under the Academic Affairs or Registration tab.

Students are encouraged to view and print their Program Evaluation at www.mc3.edu, accessing Student Self-Service and select Academics then View My Progress. Students may also see how their coursework applies to a different major by using the View a New Program feature of My Progress on Student Planning or by requesting a new audit from the offices listed above. Questions about the Program Evaluation may be answered in either Student Success Center.

## CHANGING A MAJOR

### Student Success Centers

**Central Campus, Blue Bell**

College Hall
advising@mc3.edu

**West Campus, Pottstown**

South Hall
advising@mc3.edu

Students who wish to change their programs of study or request a different academic advisor must complete a Change of Major form available online in the Student Portal.

## DISTINCTIONS FOR HIGH GRADES

The College awards distinctions to students in recognition of high academic achievement.

### Dean's List

The College recognizes the academic achievement of full-time students who have earned 12 or more cumulative credits. To receive Dean's List status, full-time students must have earned a GPA of 3.5 or above in the most recently completed semester, completed 12 or more credits and have not earned any F, NP or I grades or have been placed on Academic Warning for that semester. Developmental level courses are excluded in this computation.

### Dean's Commendation List

The College recognizes the academic achievement of part-time students who have earned 12 or more cumulative credits. To receive Dean's Commendation List status, part-time students must have earned a GPA of 3.5 or above in the most recently completed semester, completed 3 to 11 credits and have not earned any F, NP or I grades or have been placed on Academic Warning for that semester. Developmental level courses are excluded in this computation.

### Graduation Honors

To graduate from the College with an Honors distinction, an Associate Degree student must earn a cumulative GPA of:

- 3.25 to 3.49 for cum laude
- 3.50 to 3.74 for magna cum laude
- 3.75 to 4.00 for summa cum laude

Students who were issued an XF grade at any point during their academic career at the College are ineligible for graduation honors.

## ACADEMIC PROGRESSION

In an effort to increase the ability of students to reach their educational goals, the College has established academic milestones to monitor the continuum of progression toward graduation.

To graduate from the College, a student must fulfill all degree or certificate requirements and earn a cumulative Grade Point Average (GPA) of 2.0 or better. Acceptable progression toward graduation includes maintaining a cumulative GPA as outlined in the Academic Progress Table.

### Academic Warning

A student who earned a semester GPA less than 2.0 or who received an F, XF or NP grade in college-level courses or a D, F, XF or NP grade in developmental courses will be issued an Academic Warning unless he/she falls into another category as outlined in the Academic Progress Table.

### Academic Probation

A student who has attempted 12 credits or more will be placed on Academic Probation if the cumulative GPA falls within the range as outlined in the Academic Progress Table.

### Academic Suspension

The College will issue Academic Suspension to a student who has attempted 24 cumulative credits or more and meets the following: has semester GPA less than 2.0; has been on Academic Probation for at least three semesters since entering the College; and has a cumulative GPA within the range as outlined in the Academic Progress Table. See http://www.mc3.edu/about-us/policies/116.

## STUDENT ACADEMIC CODE OF ETHICS

In the pursuit of knowledge and scholarship, all members of the academic community at Montgomery County Community College must maintain a constant commitment to academic integrity. The College provides an environment that fosters critical thinking and judgment; and, in order to safeguard the integrity of the institution, we expect students to follow the policies of the College and the faculty. To fulfill their part of that commitment, students must adhere to an academic code of ethics by refraining from participation in acts of academic dishonesty, including plagiarism, cheating on examinations and assignments and aiding another student in committing an act of academic dishonesty.

By attending the College, students accept this Student Academic Code of Ethics. To review the entire Academic Code of Ethics and the consequences for non-adherence visit http://mc3.edu/about-us/policies/110.

## ACADEMIC DISCIPLINE

Students are expected to be well-motivated and constructive in their pursuit of learning. Attendance at the College is a privilege, not a right. Students, by the act of registration, concede to the College the right to require the withdrawal of any student at any time when necessary to safeguard the College's ideals of scholarship and character and to secure compliance with its regulations.

Each individual faculty member has the right to remove a student from class for reasons of academic discipline. When academic discipline problems cannot be satisfactorily resolved with the student, faculty member and division dean, the matter will be adjudicated by the Vice President of Academic Affairs. A written statement will be filed with the Vice President by the faculty member or student involved in the situation. The Vice President shall then meet with the faculty member and student(s) involved and shall decide what action, if any, will be taken.

If, after this meeting, any of the parties are not satisfied with the resulting decision, formal procedures follow guidelines developed by the Committee on Academic Progress.

Instances of non-academic student misconduct are the responsibility of the Dean of Student Affairs at Central Campus or the Assistant Vice President of Student Affairs at West Campus.

### ACADEMIC PROGRESS TABLE

| Cumulative Credits Attempted | GPA for Academic Suspension | GPA for Academic Probation | Minimum Acceptable Progress (Cumulative GPA) |
|---|---|---|---|
| 12-23 | — | 0.00 - 1.50 | 1.51 |
| 24-35 | 0.00 - 1.39 | 1.40 - 1.74 | 1.75 |
| 36-47 | 0.00 - 1.49 | 1.50 - 1.82 | 1.83 |
| 48-59 | 0.00 - 1.59 | 1.60 - 1.99 | 2.00 |
| 60+ | 0.00 - 1.69 | 1.70 - 1.99 | 2.00 |

# STUDENT RECORDS AND TRANSCRIPTS

## PRIVACY OF STUDENT RECORDS

**FAMILY EDUCATIONAL RIGHTS AND PRIVACY ACT (FERPA)**

Montgomery County Community College accords all the rights under the Family Educational Rights and Privacy Act of 1974 (the Act) to its students. The College collects, maintains, secures and destroys student records for the educational welfare and advancement of the students. No one outside the College shall have access to, nor will the College disclose any information from students' education records without the written consent of the students, except to personnel within the College, to officials of other institutions in which students seek to enroll, to persons or organizations providing students financial aid, to accrediting agencies carrying out their accreditation functions, to persons in compliance with a judicial order, to persons in an emergency in order to protect the health or safety of students or other persons, and to individuals and agencies permitted under the Act. The Act affords current and former attending and registered students of the College the right to access their education records.

### Notification of Rights under FERPA

The Family Educational Rights and Privacy Act (FERPA) affords students certain rights with respect to their education records. These rights include:

1. The right to inspect and review the student's education records within 45 days of the College receiving a request for access.Students should submit written requests for records to the Director of Student Records and Registration/Registrar. The Director of Student Records and Registration/Registrar will make arrangements for access and notify the student of the time and place where the records may be inspected. If the records are not maintained by the Director of Student Records and Registration/Registrar, that official shall advise the student of the correct official/department the student should expect to hear from within 15 business days.
2. The right to request the amendment of the student's education record that the student believes is inaccurate. Students may ask the College to amend a record that they believe is inaccurate. They should direct a written request to the Director of Student Records and Registration/Registrar clearly identifying the part of the record they want changed and specifying why it is inaccurate.
3. If the College decides not to amend the record as requested by the student, the College will notify the student of the decision within 15 days and will advise the student of his or her right to a hearing regarding the request for amendment. Additional information regarding the hearing procedures will be provided to the student when notified of the right to a hearing.
4. The right to consent to disclosures of personally identifiable information contained in the student's education records, except to the extent that FERPA authorizes disclosure without consent as indicated below:
    a. to school officials who have a legitimate educational interest in the record
    b. to officials of another school where the student seeks or intends to enroll, or where the student is already enrolled if the disclosure is for purposes related to the student's enrollment or transfer
    c. to authorized representatives of the U.S. Comptroller General, the U.S. Attorney General, the U.S. Secretary of Education, or State and local educational authorities, such as a state postsecondary authority that is responsible for supervising the College's state-supported education programs. Disclosures under this

provision may be made in connection with an audit or evaluation of federal- or state-supported education programs, or for the enforcement of or compliance with Federal legal requirements that relate to those programs. These entities may make further disclosures of Personally Identifiable Information to outside entities that are designated by them as their authorized representatives to conduct any audit, evaluation or enforcement or compliance activity on their behalf

d. in connection with a student's request for or receipt of financial aid, as necessary to determine the eligibility, amount or conditions of the financial aid or to enforce the terms and conditions of the aid
e. to organizations conducting certain studies for or on behalf of the College, or in order to (a) develop, validate or administer predictive tests; (b) administer student aid programs; or (c) improve instruction
f. to accrediting organizations to carry out their functions
g. to parents of an eligible student, if the student is a dependent, for IRS tax purposes
h. to comply with a judicial order or a lawfully issued subpoena.
i. to appropriate officials in connection with a health or safety emergency
j. as it relates to directory information, unless the student restricts directory information
k. to a victim of an alleged perpetrator of a crime of violence or a non-forcible sex offense, the disclosure may only include the final results of the disciplinary proceeding with respect to that alleged crime or offense, regardless of the finding
l. to the general public, the final results of a disciplinary proceeding, if the school determines the student is an alleged perpetrator of a crime of violence or non-forcible sex offense and the student has committed a violation of the College's rules or policies with respect to the allegation made against him or her
m. to the parents of a student regarding the student's violation of any federal, state, or local law, or of any rule or policy of the school, governing the use or possession of alcohol or a controlled substance if the school determines the student committed a disciplinary violation and the student is under the age of 21
n. to the student

5. The right to file a complaint with the U.S. Department of Education concerning alleged failures by the College to comply with the requirements of FERPA. 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, DC 20202-5901

### Notice for Directory Information

Within Montgomery County Community College, school officials who have been determined by the College to have legitimate educational interests may receive personally identifiable information from the student's education records without the student's consent. These school officials may include personnel employed by the College in an administrative, supervisory, academic, research or support staff position (including law enforcement unit personnel and health staff); a person or company with whom the College has contracted as its agent to provide service instead of using College employees or officials; or a student serving on an official committee such as a disciplinary or grievance committee. In addition, authorized representatives may receive personally identifiable information with respect to federal- or state-supported educational programs, in conducting any audit or evaluation, or any compliance or enforcement activity in connection with federal legal requirements that relate to these programs. The College may provide directory information in accordance with the provisions of the Act to include:

- Student's full name
- Address
- Electronic mail address
- Photograph
- Telephone listing
- Date of birth
- Major field of study
- Dates of attendance/enrollment
- Participation in officially recognized activities and sports
- Weight and height (members of athletic teams)
- Degrees, honors and awards received
- Most recent educational agency or institution attended
- Enrollment status (full-time or part-time)

Students may withhold directory information by notifying the Director of Records and Registration/Registrar in writing within three weeks after the first day of classes for the semester in which the withholding of directory information is to take effect. A student's requests for non- disclosure will be honored until the student requests its removal.

## TRANSCRIPTS

A transcript is a comprehensive record of your academic progress, including coursework, grades and degrees earned. Online requests for transcripts are fulfilled through the National Student Clearinghouse, a trusted source for secure transcript delivery. Transcripts cost $5 per copy. To order a transcript, visit https://www.mc3.edu/admissions/transferring/request-mccc-transcripts

## WHERE TO GO FOR MORE INFORMATION

In compliance with federal regulations, here is a list of key contacts for specific disclosure information.

### Rights under Family Education Rights and Privacy Act (FERPA)

Director of Records and Registration/Registrar Central Campus, 215-641-6562

### FFEL/Direct Loan Deferments for Peace Corps or Volunteer Services

Financial Aid, 215-641-6566

### Completion, Graduation and Transfer Out Rates

Institutional Research, 215-641-6674

**Campus Security Statistics**
Public Safety, 215-641-6605

# DEGREE REQUIREMENTS AND GRADUATION

## DEGREE AND CERTIFICATE REQUIREMENTS

All of the core classes and number of credits required in each discipline for the degrees and certificates offered by the College are listed in the "Core Curriculum and Degrees" section of this catalog and the sections for each academic division. Students should also work closely with advisors and counselors to ensure that they take the appropriate courses.

It is the student's responsibility to meet all requirements in the selected program of study, including any developmental level course requirements. Students may track their academic progress through Student Educational Planning on their myMC3 Student Portal.

To graduate, degree students must complete a minimum of 60 semester credits. Students who have earned credit through transfer and assessment of prior learning experiences must complete at least 25 percent of the required credits in order to earn a degree or certificate from Montgomery County Community College.

Diplomas, certificates and transcripts will not be released until all financial obligations of a student to the College have been met, including tuition and fees, parking tickets and Library/AV fines or fees.

The College reserves the right to graduate students who have completed all their program requirements.

## APPLICATION FOR GRADUATION

**Central Campus**, Blue Bell
Enrollment Services
College Hall 240
215-641-6551

**West Campus**, Pottstown
Enrollment Services
South Hall 151
610-718-1944

During their last semester at the College, students can indicate their intent to graduate by submitting an Application for Graduation on their myMC3 Student Portal. Students should refer to www.mc3.edu for deadlines.

The application does not need to be signed by academic departments however, students may wish to review their most recent degree audit with their advisor or the Student Success Center to ensure that they have met their degree requirements.

# SELECTING YOUR PROGRAM OF STUDY

## DEGREE AND CERTIFICATE PROGRAMS

The College meets the diverse educational and occupational needs of our students with a variety of degree and certificate options. To graduate, students must earn a cumulative GPA of at least 2.0 and fulfill all degree requirements of the program in which they are enrolled.

For more information about our graduation rates, the median debt of students who completed the program, and other important information, please visit our website at, www.mc3/gainfulemployment.

### Associate in Arts

Associate in Arts (AA) degrees are designed to provide the first two years of education for students who intend to transfer to a four-year institution. These programs are designed to give students broad, general background in subjects ranging from English and history to science and mathematics. Through electives, students may pursue individual interests while they are being exposed to their core curriculum.

### Associate in Fine Art

The Associate in Fine Art (AFA) curriculum provides the foundation studies and studio expertise that parallels the first two years of study at a four-year college. The program also provides students whose intention it is to seek employment after earning an associate's degree with the opportunity to develop their skills and produce a portfolio in the visual arts.

### Associate in Science

Associate in Science (AS) degrees are designed primarily for students who intend to transfer to a four-year institution. Most of the programs also prepare the student for immediate entrance into a career. Our AS programs provide a solid foundation in traditional liberal arts courses and specialty courses.

### Associate in Applied Science

Associate in Applied Science (AAS) degrees are designed to enable students to prepare for employment immediately upon graduation.

### Certificate Programs

The College's certificate programs are designed to provide education leading to entry-level employment. The certificate programs are generally discipline- intensive, containing few core curriculum courses; however, most certificate courses can be applied to a corresponding associate's degree program.

### Specialty Certificates

The College awards professional certificates to students who have completed at least 30 college credits and return to school to pursue special, intensive study in a specialized program consisting of at least 18 credit hours.

### Certificates of Completion

The College has designed short-term, job-ready certificate programs that can be completed in as little as one semester.

### Additional Degrees

Students who want to receive additional associate degrees from the College must complete at least 21 additional college-level credits per

degree and fulfill all of the course requirements for each degree as outlined in this catalog.

### Certificate Programs, Non-Credit

The College's non-credit certificate programs are designed to provide training in less than one year for entry-level high-demand occupations. Most of the certificate programs include preparation to take exams for industry certifications. Several of the programs include an internship or practicum. With successful completion of some programs, completed coursework can be articulated to count toward credit requirements for a credit certificate or degree program.

## MEETING THE REQUIREMENTS

Our requirements are recommended in the sense that we have structured them to provide students with specific courses of study to meet educational requirements elsewhere. Students planning to transfer to the junior class of a four-year institution are offered courses at Montgomery County Community College that parallel those offered in the freshman and sophomore years of most four-year colleges and universities. The College realizes, however, that our requirements will occasionally not accommodate the objectives of all students, even though our programs frequently allow electives; therefore, students may choose to substitute other courses if their selections are approved by the appropriate Division Dean or Program Director.

Similarly, students planning to transfer to four-year institutions are responsible for knowing the precise freshman and sophomore requirements of those institutions, so that they can plan their curriculum at the College accordingly.

## SELECTING YOUR COURSES: COURSE NUMBERING AND CREDITS

Much of the rest of this Catalog is devoted to the core curriculum requirements for the College's degrees, details on the programs and course requirements within each of the College's academic divisions and descriptions of each individual course.

To help you choose your courses, here is a guide to what their numbers and prefixes mean, as well as how the College calculates course credits:

### Deciphering a Course Number and Prefix

Courses are designated with a three-letter course prefix and three numbers. The three-letter course prefix is an abbreviation for the discipline — for example, NUR for Nursing. The three digits of the course number indicate the following:

- The first digit generally refers to class level/year, with 0 indicating below college level, 1 indicating freshman level and 2 indicating sophomore level.
- The second digit generally refers to the level within a discipline, where possible. The higher the number, the more advanced the course.
- The third digit refers, where appropriate, to sequences within specializations of the discipline. For example, 0 indicates a one-semester introductory or survey course in the discipline, and 1 and 2 indicate a basic two-course sequence. Numbers above 2 designate other advanced courses and/or sequences.

For example: EDU 100

EDU = Education course
1 = Freshman level
0 = Lowest-level course in discipline
0 = Introductory or survey course

### Numbers Representing Content Levels

- Courses numbered 1 to 19 are developmental; they have content similar to high school or below high school level. They include basic skill courses such as arithmetic, algebra, elementary reading and writing. They may not be applied toward the graduation credit requirements for a degree or certificate. However, students placing into these courses as a result of placement testing must complete each course with a grade of C or better in order to graduate with a degree or earn a certificate.
- Courses numbered 20 to 99 are specialized courses that have high school-level content but are not basic skill-level courses. They may not be applied toward graduation credit requirements for certificates or degrees.
- Courses numbered 100 to 199 have content at the college freshman level. Most of these courses require a high school-level background or equivalent in order for the student to receive maximum benefit and have a reasonable chance of succeeding in the course. These courses may apply toward graduation credit requirements of degrees and certificates.
- Courses numbered 200 to 299 have content at the college sophomore level. Most of these courses require that a student have a freshman-level background or equivalent in the discipline and/or related skill areas in order to receive maximum benefit and have a reasonable chance of succeeding in the course. These courses may apply toward graduation credit requirements for degrees and certificates.

## INTERNSHIPS AND INDEPENDENT STUDY

Each discipline may utilize internships and independent study. The faculty of each discipline, along with the Division Dean, determine the appropriateness of these classes for their students' curriculum needs.

### 198, 298 Cooperative Internships

These courses, available in a number of disciplines, provide students with an opportunity to integrate what they have learned in the classroom with valuable hands-on work experience in their field of study. Students work full-or part-time for a specified period of time (usually a minimum of 225 hours for three credits).
198 Cooperative Internship I
298 Cooperative Internship II

### 199, 299 Independent Study

Independent Study is a one-semester course that affords the student and instructor the flexibility to collaborate in creating an individualized plan of learning that builds upon previous course work within the discipline, expands the student's knowledge in an area of interest and/or promotes continued personal development. A contract for individualized learning is

developed collaboratively between the instructor and student and submitted to the Division Dean for consideration.

## HOW THE COLLEGE DETERMINES COURSE CREDITS

One College semester credit hour is a unit of coursework equivalent to 55 minutes of instruction per week, for 14 weeks of lecture or equivalent-type classes. It also assumes that students, on average, have a minimum of two hours of out-of-class study each week.

Not all courses are taught in a lecture format. Three commonly accepted semester-hour equivalents for laboratory and clinic instruction are:

- One semester-hour credit equals two hours of structured laboratory study weekly, which includes frequent tutorial or lecture-type interaction of a faculty member with students, and a minimum (on average) of one hour of out-of-lab study weekly. An example is computer science courses that have two lecture hours weekly, two lab hours weekly and three credits.
- One semester-hour credit equals three hours of structured laboratory study that includes less frequent interaction between the faculty member and students than the first example, with few out-of-lab assignments. Examples include biology, chemistry and physics courses that have three lecture hours weekly, three lab hours weekly and four credits.
- One semester hour equals usually not more than five hours of clinical time weekly, which includes some interaction between a faculty member and the student. Outside assignments may augment the clinic. Dental hygiene, medical laboratory technician, nursing, radiography and surgical technology courses fall into this category.

The three numbers following a course title indicate, in order, the credit hours for the course, the number of hours per week the class meets for lectures, and the number of hours per week spent in the laboratory.

For example: BIO 121 General Biology 1, 4-3-3
4 = four hours credit
3 = three hours weekly of lecture
3 = three hours weekly of lab

ADVANCED TECHNOLOGY

# MAJORS, DEGREES AND CERTIFICATES

Major codes are used during admission and when you declare a major. Note: Career programs are for students who plan to immediately enter the workforce. Transfer programs are for students who plan to transfer on to another educational institution.

| TWO-YEAR ASSOCIATE DEGREES | MAJOR CODE | DEGREE CODE |
|---|---|---|
| **Career Programs** | | |
| Accounting | AL | AAS |
| Baking and Pastry Arts | CUL.B | AAS |
| Biotechnology | BI | AAS |
| Computer Networking | | |
| Network Administration | CN.NADM | AAS |
| Cyber Security | CN.CYBS | AAS |
| Culinary Arts | CUL.A | AAS |
| Dental Hygiene (Selective Admission) | LIB-DH | AAS |
| Engineering Technology - | | |
| Electrical | ET.E | AAS |
| Mechanical | ET.M | AAS |
| Nanofabrication | ET.N | AAS |
| Health & Fitness Professional | PE.FIT | AAS |
| Health Services Management - | HS | AAS |
| Medical Coding | HS.MC | AAS |
| Medical Office Assistant | HS.MOA | AAS |
| Hospitality Management | HOS | AAS |
| Human Services - | MH | AAS |
| Addictions | MH.D&A | AAS |
| Child, Youth, and Family Services | MH.Y | AAS |
| Gerontology | MH.GER | AAS |
| Interactive Media | | |
| Web Development | IM.WDEV | AAS |
| Web Design | IM.WDES | AAS |
| Mobile Applications | IM.MAP | AAS |
| Game & Simulation Design | IM.EGD | AAS |
| Management | | |
| Management | MGT | AAS |
| Marketing | MGT.MKT | AAS |
| Office Management | MGT.OFM | AAS |
| Organizational Leadership | MGT.OLEA | AAS |
| Medical Laboratory Technician (Selective Admission) | ML | AAS |
| Nursing (Selective Admission) | NR | AAS |
| Radiography (Selective Admission) | RT | AAS |
| Physical Therapist Assistant (Selective Admission) | PTA | AAS |
| Sound Recording Music Technology | SRT | AAS |
| Surgical Technology (Selective Admission) | SR | AAS |

| TWO-YEAR ASSOCIATE DEGREES | MAJOR CODE | DEGREE CODE |
|---|---|---|
| **Transfer Programs** | | |
| Business Administration | BA | AS |
| Communication | ST | AA |
| Computer Science | SC | AS |
| Criminal Justice | PS | AS |
| Education in the Early Years - Birth through 4th Grade | EEY | AA |
| Education in the Middle Years - Fourth through Eighth Grade | EMY | AA |
| Engineering Science | EG | AS |
| Environmental Studies | EV | AS |
| Exercise Science and Wellness - | ESW | AS |
| Fine Art | FA.A | AFA |
| History | HIS | AA |
| Information Technology | IT | AS |
| Liberal Studies | LI | AA |
| Life Sciences | LSC | AS |
| Mass Media | | |
| Mass Media Production | COM.MP | AA |
| Mass Media Studies | COM.MS | AA |
| Mathematics | LM | AA |
| Music | MU | AA |
| Physical Sciences | LP | AS |
| Psychology | PSY | AS |
| Public Health | PBH | AS |
| Secondary Education | ES | AA |
| Theater Arts | THA | AA |

| CERTIFICATE PROGRAMS | MAJOR CODE | DEGREE CODE |
|---|---|---|
| **One-Year/Less (Career)** | | |
| Accounting | C.ACC | CRT |
| Cloud Computing | C.CLC | CRT |
| Computer Networking | C.PC | CRT |
| Cyber Security | C.CYBS | CRT |
| Culinary Arts | C.CULA | CRT |
| Baking & Pastry Arts | C.CULB | CRT |
| Addictions | CD | CRT |
| Gerontology | CG CC | CRT |
| Hospitality Management | C.HOS | CRT |
| Human Services | C.MH | CRT |
| Management | C.MGT | CRT |
| Marketing | C.MKT | CRT |
| Medical Assisting | C.MA. | CRT |
| Office Management | C.OFM | CRT |
| Organizational Leadership | C.OLEA | CRT |
| Personal Training | PTC | CRT |
| Software Engineering | C.SOFT | CRT |
| Web Design & Development: Design Concentration | C.DES | CRT |
| Web Design & Development: Developmental Concentration | C.DEV | CRT |

| SPECIALTY CERTIFICATES | MAJOR CODE | DEGREE CODE |
|---|---|---|
| Accounting | PA | SPC |
| Computer Information Systems | PI | SPC |
| Computer Networking | PN | SPC |
| Game Design | PG | SPC |
| Hospitality | PH | SPC |
| Marketing/Management | PM | SPC |
| Office Administration | PO | SPC |
| Public Relations | PPR | SPC |
| Software Engineering | PF | SPC |
| Web Development | PW | SPC |

| CERTIFICATE OF COMPLETION | MAJOR CODE | DEGREE CODE |
|---|---|---|
| **Short-Term (Job-Ready)** | | |
| Accounting with QuickBooks | CS.AQB | CC |
| Biotechnology and Biomanufacturing | CS.BIC | CC |
| Certified Bookkeeper | CS.CBK | CC |
| Entrepreneurship | C.ETP | CC |
| Honors International Business | CS.HIB | CC |
| GIS Systems Operation | CS.GIS | CC |
| Medical Coding | CS.MC | CC |
| Medical Office Assistant | CS.MOA | CC |
| Payroll Specialist | CS.PRS | CC |
| Phlebotomy | CS.PBT | CC |
| Professional Leadership | CS.PLEA | CC |
| Security Management | CS.SM | CC |

## NON-CREDIT WORKFORCE DEVELOPMENT CERTIFICATE PROGRAMS

### Career Programs

A+
Cisco Certified Network Associate (CCNA)
CCNA Security
CCNA Voice
CITRIX
Entrepreneurial Certificate
Medical Billing and Coding
Microsoft Certified Solutions Associate (MCSA)
Microsoft Certified Solutions Expert (MCSE)
Microsoft Office Specialist (MOS)
Municipal Police Basic Training Curriculum (ACT 120)
Notary Public Training and Renewal
Nurse Reactivation and Nurse Refresher
Pharmacy Technician
QuickBooks
ServSafe Training and Certification

# GENERAL EDUCATION CORE CURRICULUM

The General Education Core Curriculum offers students the opportunity to explore a range of classic academic subjects. It also enables them to develop the common skills, knowledge and values needed to be productive and prosperous in our ever-changing local and global environments.

Developed by Montco's faculty, the General Education Core Curriculum's six learning areas and competencies help students to communicate, understand, solve problems and value themselves and others. They create a solid educational foundation, providing students with the tools necessary for an informed, constructive future and a good quality of life. The Core fosters the intellectual habits and breadth of academic experiences that are the hallmark of an educated person.

## WHAT DOES THE GENERAL EDUCATION CORE CURRICULUM MEAN FOR STUDENTS?

All programs have been designed by the faculty to include the core requirements. Students will meet the core requirements by following the program as noted in the course catalog and on the College's website. Courses meeting the core goals are identified on the College's website and listed below. Students with questions about the program of study, possible course substitutions and transfers should meet with an advisor in the Student Success Center.

## COURSES MEETING GENERAL EDUCATION AREAS

### Aesthetic Sensibility

ART 111, ART 121, ART 161, ART 171, DAN 102, DAN 104, DAN 110, DAN 121, DAN 123, DAN 131, DAN 134, DAN 151, ENG 201, ENG 202, ENG 211, ENG 212, ENG 221, ENG 222, ENG 235, ENG 236, ENG 237, ENG 238, ENG 245, ENG 246, ENG 255, ENG 256, ENG 257, ENG 265, ENG 266, ENG 275, GEO 220, MUS 110, MUS 140, MUS 146, MUS 221, MUS 260, MUS 261, MUS 262, MUS 263, THA 105, THA 114

### Communication

Oral Communication
CMS 110, CMS 113, CMS 120, THA 105

Written Communication
CMS 125, CMS 225, ENG 101, ENG 102, ENG 115, ENG 117, MSP 230

### Cultural Awareness and Diversity

ANT 101, ANT 104, ANT 204, ANT 205, ART 101, ART 102, ART 103, ART 111, ART 121, ART 161, ART 171, BIO 115, CHI 101, CHI 102, CMS 115, ECO 117, EDU 245, ENG 212, ENG 222, ENG 246, ENG 255, ESW 206, ESW 207, ESW 255, FRE 101, FRE 102, GEO 110, GEO 130, GEO 207, GEO 235, GER 101, GER 102, HCP 120, HIS 101, HIS 102, HIS 122, HIS 203, HIS 205, HIS 214, HIS 218, HIS 220, HIS 234, HIS 235, HIS 250, HIS 260, HSW 105, IDS 115, IDS 116, ITA 101, ITA 102, JPN 101, JPN 102, MGT 111, MKT 111, PBH 101, PHI 101, POL 101, POL 124, PSY 137, PSY 255, SOC 101, SOC 105, SOC 224, SOC 230, SPA 101, SPA 102, SPA 230, THA 114

### Ethical Perspectives

ACC 150, BIO 115, CJS 205, CMS 115, CMS 202, ESW 255, GEO 235, HCP 120, HIS 101, HIS 102, HIS 205, HIS 214, HIS 218, HIS 234, HIS 235, HIS 260, HSW 105, IDS 116, MAS 114, MGT 111, MGT 210, MKT 111, MSP 200, PBH 101, PHI 100, PHI 101, PHI 115, PHI 120, PSY 255, SOC 105

### Reasoning

Quantitative Reasoning
ACC 110, MAT 103, MAT 106, MAT 131, MAT 140, MAT 188/189, MAT 190

Scientific Reasoning
AST 120, AST 121, BIO 120, BIO 121, BIO 140, CHE 121, CHE 131, CHE 151, GLG 115, GLG 120, GLG 121, GLG 125, GLG 151, PHY 115, PHY 121, PHY 151

### Technological Fluency

CIS 110, CIS 1101, CIS 111, CIS 155, GEO 210, GEO 220, OFM 101

Montgomery Count
Community Colleg

# BUSINESS

## ACCOUNTING (A.A.S.)

### Purpose

The Accounting program is designed to prepare the graduate for employment in an entry-level accounting position as a bookkeeper.

### Program Outcomes

- Create financial statements, performing each step in double entry accounting cycle in both a manual and computerized environment utilizing QuickBooks;
- Prepare all calculations, entries and reports for a complete payroll cycle;
- Evaluate financial statements as they effect the profitability, liquidity, and solvency of the business organization;
- Report accounting information relevant for managerial planning and decision making in both a manual and computerized environment utilizing QuickBooks.
- Apply the laws, regulations, and accounting practices pertaining to individual federal taxes.

Our 61- to 62-credit-hour program also teaches you critical thinking and problem-solving skills, traits valued in the business and financial worlds. Additionally, it gives you the practical knowledge needed to work as a bookkeeper. After successfully completing the program, you will receive an Associate of Applied Science degree in accounting. You also will be prepared to pass national certification exams to gain additional credentials that certify proficiency in payroll, bookkeeping, and QuickBooks skills and knowledge.

### Program Curriculum

**General Education Requirements**

ENG 101 - English Composition I....3
Elective - Aesthetic Sensibility....3
ENG 117 or ENG 102 - Writing for Business or English Composition II....3
CIS 110 - Computer Information Systems for Management....3
Elective - ....3
Elective - Scientific Reasoning....3 - 4

**Major Requirements**

ACC 110 - Business Mathematics....3
ACC 115 - Financial Accounting....4
ACC 116 - Managerial Accounting....3
ACC 117 - Payroll Accounting....3
ACC 118 - Professional Bookkeeping....3
ACC 150 - Legal Environment of Business....3
ACC 221 - Accounting Information Systems....3
ACC 241 - Tax Accounting....3
ACC Elective - ACC 211, ACC 230, or ACC 242....3
CIS 215 - Decision-Making Using Spreadsheets....3
ECO 110 or ECO 121 - Elements of Economics or Macroeconomics....3
Elective - ACC, ECO, MGT, MKT, OFM or ETP (except ETP 112)....3
MGT 111 - Principles of Management....3

**Electives**

Elective - Elective....3

### TOTAL PROGRAM CREDITS: 61-62

## ACCOUNTING (CERTIFICATE)

### Purpose

The Accounting Certificate program is designed to prepare students for a bookkeeping position in small- to medium-sized firms or as a payroll, accounts payable, or accounts receivable clerk in a larger firm. All of the courses can be applied toward an associate's degree in Accounting.

### Program Outcomes

- Create financial statements, performing each step in double-entry accounting cycle in both a manual and computerized environment utilizing QuickBooks;
- Apply concepts of internal control to business processes;
- Prepare all calculations, entries and reports for a complete payroll cycle;
- Report accounting information relevant for managerial planning decision-making in both a manual and computerized environment.

### Program Curriculum

ACC 110 - Business Mathematics....3
ACC 115 - Financial Accounting....4
ACC 116 - Managerial Accounting....3
ACC 117 - Payroll Accounting....3
ACC 118 - Professional Bookkeeping....3
ACC 221 - Accounting Information Systems....3
CIS 110 - Computer Information Systems for Management....3
CIS 215 - Decision-Making Using Spreadsheets....3
ENG 117 or any Oral Communication Elective - Writing for Business and Industry or Any Oral Communication Elective....3
MGT 111 - Principles of Management....3

### TOTAL PROGRAM CREDITS: 31

## ACCOUNTING WITH QUICKBOOKS

### Purpose

The Certificate program is designed to prepare the graduate for a bookkeeping position in a small to medium sized firm with additional skills in internal control and computerized accounting using QuickBooks software. All of the courses can be applied toward an Associate Degree in Accounting. Additionally, students completing the Accounting with QuickBooks Certificate program will be prepared to pass the Intuit QuickBooks Certified User exam.

### Program Outcomes

- Create financial statements, performing each step in double-entry accounting cycle in a computerized environment utilizing QuickBooks;
- Report accounting information relevant for managerial planning and decision-making in a computerized environment utilizing QuickBooks;
- Apply concepts of internal control to business processes

By the end of program, you will be prepared to take the Intuit QuickBooks Certified User exam.

### Program Curriculum

ACC 110 - Business Mathematics....3
ACC 115 - Financial Accounting....4
ACC 116 - Managerial Accounting....3
ACC 221 - Accounting Information Systems....3
CIS 110 - Computer Information Systems for Management....3

## TOTAL PROGRAM CREDITS: 16

## BUSINESS ADMINISTRATION (A.S.)

### Purpose

The Business Administration program is designed primarily for those students who plan to transfer to a four-year college or university and major in an area of business such as accounting, finance, international business, management, marketing, human resources management, information systems, etc.

### Program Outcomes

- Analyze the preparation of financial statements and managerial accounting reports, and their use to support decision-making by internal and external users;
- Analyze macroeconomic and microeconomic environments of business;
- Examine management theory and practices in the key functional areas within an organization in today's global business environment;
- Examine how marketing integrates with other functional areas within the organization as well as society as a whole;
- Apply relevant laws, regulations and ethical considerations to U.S. and international business activity for potential liability and legal protection and remedies.

The Business Administration program meets the Pennsylvania Department of Education's Transfer Agreement Oversight Committee (TAOC) for a seamless transfer to schools in the Pennsylvania State System of Higher Education (PASSHE). These include Kutztown, Millersville and Slippery Rock. Additionally, we have program-to-program transfer agreements with such schools as Arcadia, Cabrini, Chestnut Hill, Wilmington and Albright.

### Program Curriculum

**General Education Requirements**

ENG 101 - English Composition I....3
Elective - Technological Fluency....3
ENG 102 - English Composition II....3
Elective - Aesthetic Sensibility....3
CMS 110 or CMS 120 - Introduction to Speech Communication or Public Speaking....3
Elective - Scientific Reasoning....4
Elective - Cultural Awareness and Diversity....3

**Major Requirements**

ACC 115 - Financial Accounting....4
ACC 116 - Managerial Accounting....3
ACC 150 - Legal Environment of Business....3
ECO 121 - Macroeconomics....3
ECO 122 - Microeconomics....3
MAT 130 - Probability and Statistics....4
MAT 140 - Finite Mathematics for Business....3
MAT 142 - Calculus for Business....3
MGT 111 - Principles of Management....3
MKT 111 - Principles of Marketing....3

**Electives**

Elective - Elective....6

## TOTAL PROGRAM CREDITS: 60

## CERTIFIED BOOKKEEPER (CERTIFICATE OF COMPLETION)

### Purpose

This certificate is designed to prepare the graduate for a bookkeeping position in a small to medium sized firm. Career students, requiring more in-depth accounting skills, will gain solid technical knowledge and practical skills thereby substantially improving on-the-job performance and providing the skills for higher-level jobs. All of the courses can be applied toward an Associate Degree in Accounting. Additionally, students completing the Certified Bookkeeper Certificate program will be prepared to pass a national certification exam to obtain a Certified Bookkeeper (CB) designation. Students will also be prepared to pass the national certification exam to obtain the American Payroll Association's (APA) Fundamental Payroll Certification (FPC) designation.

### Program Outcomes

- Create financial statements, performing each step in double-entry accounting;
- Apply concepts of internal control to business processes;
- Prepare all calculations, entries and reports for a complete payroll cycle.

### Program Curriculum

ACC 110 - Business Mathematics....3
ACC 115 - Financial Accounting....4
ACC 117 - Payroll Accounting....3
ACC 118 - Professional Bookkeeping....3

## TOTAL PROGRAM CREDITS: 13

## ENTREPRENEURSHIP (CERTIFICATE OF COMPLETION)

### Purpose

Entrepreneurship Certificate Program is designed to prepare students to launch and/or grow a successful business, small or large, profit or nonprofit. Linking theory and practice, students will acquire the knowledge and skills that are essential to managing a viable business.

### Program Outcomes

- Assess and identify viable business opportunities to pursue;
- Demonstrate proficiency in fundamental accounting procedures for new or existing entrepreneurial ventures;
- Develop a practical Business Plan with realistic implementation capabilities;
- Demonstrate the proper soft skills of a business person, including the ability to communicate effectively, efficiently and professionally in written and/or oral presentations.

### Program Curriculum

ACC 105 - Survey of Accounting....3
ENG 117 - Writing for Business and Industry....3
ETP 110 - Entrepreneurial Essentials....3

ETP 113 - Entrepreneurial Business Plan.....3

## TOTAL PROGRAM CREDITS: 12

## MANAGEMENT (A.A.S)

### Purpose

The Management AAS degree program is designed to provide students with the foundation needed in order to develop competencies in managerial decision-making. Students are presented with a broad-based knowledge of the functional areas of management. Coursework focuses on theory and application in order to foster the essential skills that are needed to succeed in today's global business environment. Students will develop a keen understanding of business practices as well as learn how to become a more effective decision-maker, manager, and leader. Completing this degree program prepares graduates for the workforce in a wide range of careers in both the private and public sectors.

### Program Outcomes

- Apply managerial theory and practices to the key functional areas within an organization in today's global business environment;
- Examine the social, legal and ethical principles that guide appropriate and responsible managerial decision-making;
- Apply critical-thinking and analytical acumen in order to determine appropriate actions;
- Exhibit professional and proficient communication skills: verbal, written and interpersonal.

We've created this program for both new students and those already working in business. Upon graduation, you can transfer to a four-year institution to continue your education or pursue new employment opportunities. Management AAS classes are offered on campus as well as online.

### Program Curriculum

**General Education Requirements**

ENG 101 - English Composition I.....3
ENG 117 - Writing for Business and Industry.....3
OFM 101 - Business Software Essentials.....3
Elective - .....3
Elective - Aesthetic Sensibility.....3
Elective - Scientific Reasoning.....3-4

**Major Requirements**

ACC 105 - Survey of Accounting.....3
ACC 110 - Business Mathematics.....3
ACC 150 - Legal Environment of Business.....3
ECO 110 - Elements of Economics.....3
MGT 111 - Principles of Management.....3
MGT 210 - Ethical Decision-Making in Business.....3
MGT 295 - Business Management Capstone.....3
MGT Concentration - Management Concentration Courses.....12
MKT 111 - Principles of Marketing.....3
PSY 137 - Introduction to Organizational Psychology.....3
Elective - Elective.....3

## TOTAL PROGRAM CREDITS: 60

## MANAGEMENT (CERTIFICATE)

### Purpose

The Management Certificate program is designed to prepare students for employment in an entry level management position and/or enhance career opportunities. These positions include assistant office manager, junior department manager, management trainee, and other management opportunities. All of the courses can be applied towards an associate's degree in Management.

### Program Outcomes

- Exhibit professional and proficient communication skills: verbal, written and interpersonal;
- Apply fundamental knowledge of management concepts to function effectively in a global business environment;
- Apply learned management skills required to continue career or educational pursuits.

Should you decide to pursue an associate's degree in Management, your certificate credits can be applied to our Management AAS program. Our Management Certificate is a smart, cost-effective way to begin your management career.

### Program Curriculum

ACC 105, ENG 117, or MKT 111 - Survey of Accounting, or Writing for Business and Industry, or Principles of Marketing.....3
ACC 150 - Legal Environment of Business.....3
ECO 110 - Elements of Economics.....3
Elective - Open Elective.....3
ETP or MGT Elective - Entrepreneurship or Management Elective.....3
MGT 111 - Principles of Management.....3
MGT 131 - Human Resource Management.....3
MGT 210 - Ethical Decision-Making in Business.....3
MGT 221 - Supervision.....3
MGTor MKT Elective - Management or Marketing Elective.....3

## TOTAL PROGRAM CREDITS: 30

## MANAGEMENT: MARKETING CONCENTRATION (A.A.S.)

### Purpose

The Management AAS degree program is designed to provide students with the foundation needed in order to develop competencies in managerial decision-making. Students are presented with a broad-based knowledge of the functional areas of management. Coursework focuses on theory and application in order to foster the essential skills that are needed to succeed in today's global business environment. Students will develop a keen understanding of business practices as well as learn how to become a more effective decision-maker, manager, and leader. Completing this degree program prepares graduates for the workforce in a wide range of careers in both the private and public sectors.

### Program Outcomes

- Apply managerial theory and practices to the key functional areas within an organization in today's global business environment;
- Examine the social, legal and ethical principles that guide appropriate and responsible managerial decision-making;
- Apply critical-thinking and analytical acumen in order to determine appropriate actions;

- Exhibit professional and proficient communication skills: verbal, written and interpersonal.

We've created this program for both new students and those already employed in business. After graduation, you can transfer to a four-year institution to continue your education or pursue new employment opportunities. Management AAS classes are offered on campus as well as online.

### Program Curriculum

**General Education Requirements**

ENG 101 - English Composition I....3
ENG 102 or ENG 117 - English Composition II or Writing for Business and Industry....3
CIS 110 or OFM 101 - Computer Information Systems for Management or Business Software Essentials....3
Elective - ....3
Elective - Aesthetic Sensibility....3
Elective - Scientific Reasoning....4
Elective - Cultural Awareness and Diversity....3
MAT 106, MAT 130, MAT 131 or ACC 110 - Mathematics Applications, Probability and Statistics, Introduction to Statistics I or Business Mathematics....3 - 4

**Major Requirements**

ACC 150 or ACC 151 - Legal Environment of Business or Business Law I....3
Elective - ACC, ECO, ETP, MGT or MKT Course....3
Elective - MKT 198 Coop Internship Marketing I or CMS 125 Introduction to Public Relations....3
ETP 110 or ETP 113 - Entrepreneurial Essentials or Entrepreneurial Business Plan....3
MGT 111 - Principles of Management....3
MGT 210 - Ethical Decision-Making in Business....3
MKT 111 - Principles of Marketing....3
MKT 121 - Personal Sales Management....3
MKT 131 - Advertising and Promotion....3
MKT 211 - Digital Marketing....3

## TOTAL PROGRAM CREDITS: 61-63

## MANAGEMENT: OFFICE MANAGEMENT CONCENTRATION (A.A.S.)

### Purpose

The Management AAS degree program is designed to provide students with the foundation needed in order to develop competencies in managerial decision-making. Students are presented with a broad-based knowledge of the functional areas of management. Coursework focuses on theory and application in order to foster the essential skills that are needed to succeed in today's global business environment. Students will develop a keen understanding of business practices as well as learn how to become a more effective decision-maker, manager, and leader. Completing this degree program prepares graduates for the workforce in a wide range of careers in both the private and public sectors.

### Program Outcomes

- Apply managerial theory and practices to the key functional areas within an organization in today's global business environment;
- Examine the social, legal and ethical principles that guide appropriate and responsible managerial decision-making;
- Apply critical-thinking and analytical acumen in order to determine appropriate actions;
- Exhibit professional and proficient communication skills: verbal, written and interpersonal.

We've created this program for both new students and those already employed in business. Upon graduation, you can transfer to a four-year institution to continue your education or pursue new employment opportunities. We have program-to-program transfer agreements with such schools as Temple University, Southern New Hampshire University and Cabrini. Management AAS classes are offered on campus as well as online.

### Program Curriculum

**General Education Requirements**

ENG 101 - English Composition I....3
ENG 117 - Writing for Business and Industry....3
OFM 101 - Business Software Essentials....3
Elective - ....3
Elective - Aesthetic Sensibility....3
Elective - Scientific Reasoning....4

**Major Requirements**

ACC 105 - Survey of Accounting....3
ACC 110 - Business Mathematics....3
ACC 150 - Legal Environment of Business....3
ECO 110 - Elements of Economics....3
MGT 111 - Principles of Management....3
MGT 210 - Ethical Decision-Making in Business....3
MGT 295 - Business Management Capstone....3
MKT 111 - Principles of Marketing....3
OFM Concentration Courses - OFM Concentration Courses....12
PSY 137 - Introduction to Organizational Psychology....3
Elective - Elective....3

## TOTAL PROGRAM CREDITS: 60

## MANAGEMENT: ORGANIZATIONAL LEADERSHIP CONCENTRATION (A.A.S.)

### Purpose

The Management AAS degree program is designed to provide students with the foundation needed in order to develop competencies in managerial decision-making. Students are presented with a broad-based knowledge of the functional areas of management. Coursework focuses on theory and application in order to foster the essential skills that are needed to succeed in today's global business environment. Students will develop a keen understanding of business practices as well as learn how to become a more effective decision-maker, manager, and leader. Completing this degree program prepares graduates for the workforce in a wide range of careers in both the private and public sectors.

### Program Outcomes

- Apply managerial theory and practices to the key functional areas within an organization in today's global business environment;
- Examine the social, legal and ethical principles that guide appropriate and responsible managerial decision-making;
- Apply critical-thinking and analytical acumen in order to determine appropriate actions;
- Exhibit professional and proficient communication skills: verbal, written and interpersonal.

We've created this program for both new students and those already employed in business. Upon graduation, you can transfer to a four-year institution to continue your education or pursue new employment opportunities. Management AAS classes are offered on campus as well as online.

### Program Curriculum

**General Education Requirements**

ENG 101 - English Composition I....3
ENG 102 or ENG 117 - English Composition II or Writing for Business and Industry....3
CIS 110 or OFM 101 - Computer Information Systems for Management or Business Software Essentials....3
Elective - ....3
Elective - Aesthetic Sensibility....3
Elective - Scientific Reasoning....4
Elective - Cultural Awareness and Diversity....3
MAT 106, MAT 130, MAT 131 or ACC 110 - Mathematics Applications, Probability and Statistics, Introduction to Statistics I or Business Mathematics....3 - 4

**Major Requirements**

CMS 230 - Communication in Organizations....3
MGT 112 - Principles of Leadership....3
MGT 113 - Conflict Resolution and Negotiation....3
MGT 114 - Strategic Analytics for Leaders....3
MGT 210 - Ethical Decision-Making in Business....3
PSY 137 - Introduction to Organizational Psychology....3

**Electives**

Electives - Electives....9

## TOTAL PROGRAM CREDITS: 61-63

## MARKETING (CERTIFICATE)

### Purpose

The Marketing Certificate program is designed to prepare the student for employment in an entry level marketing position and/or enhance career opportunities. These areas include sales, customer service, advertising and promotion, public relations, purchasing, and distribution. All of the courses can be applied toward an associate's degree in Management.

### Program Outcomes

- Exhibit professional and proficient communication skills: verbal, written and interpersonal;
- Apply fundamental knowledge of marketing concepts to function effectively in a global business environment;
- Apply learned marketing skills required to continue career or educational pursuits.

We've created this program for both new students and those already employed in business. All of the Marketing Certificate coursework can be applied toward an associate's degree in Management.

### Program Curriculum

ACC 105, ENG 117, or MGT 111 - Survey of Accounting, Writing for Business and Industry, or Principles of Management....3
ACC 150 - Legal Environment of Business....3
CMS 125 - Introduction to Public Relations....3
Elective - Open Elective....3
MGT 210 - Ethical Decision Making in Business....3
MKT 111 - Principles of Marketing....3
MKT 121 - Personal Sales Management....3
MKT 131 - Advertising and Promotion....3
MKT 211 - Digital Marketing....3
MGT, MKT, or ETP Elective - Management, Marketing, or Entrepreneurship Elective....3

## TOTAL PROGRAM CREDITS: 30

## OFFICE MANAGEMENT (CERTIFICATE)

### Purpose

The Office Management Certificate program is designed to prepare the graduate for an administrative support position in an office environment as an administrative assistant, receptionist, customer service representative, front desk coordinator, or software trainer. All of the courses can be applied toward an associate's degree in Management.

### Program Outcomes

- Apply managerial theory and office procedures for diverse business environments;
- Demonstrate current computer and software skills to accomplish assigned tasks with efficiency and effectiveness;
- Utilize appropriate skills and techniques to organize, prioritize and complete tasks, and produce associated documents in a professional office environment.

Upon completing the Office Management Certificate program, you may take on such office roles as administrative assistant, receptionist, front desk coordinator or customer service representative. Should you want to continue your education, all of your courses can be applied toward an Associate degree in Management.

### Program Curriculum

ACC 105, ENG 117, or MKT 111 - Survey of Accounting, or Writing for Business and Industry, or Principles of Marketing....3
ACC 150 - Legal Environment of Business....3
MGT 111 - Principles of Management....3
MGT 210 - Ethical Decision Making in Business....3
OFM 101 - Business Software Essentials....3
OFM 110 - Microsoft Word Applications....3
OFM 243 - Integrated Software Applications....3
OFM or MGT Elective - Office Management or Management Elective....3
Elective - Open Elective....3
OFM 161 - Modern Office Management....3

## TOTAL PROGRAM CREDITS: 30

## ORGANIZATIONAL LEADERSHIP MANAGEMENT (CERTIFICATE)

### Purpose

The Organizational Leadership Certificate is designed to provide the student with essential tools needed to develop leadership skills necessary in today's global business environment. Emphasis will be placed on developing a working knowledge and understanding of improving work environments in organizations. Through experiential learning, students will gain knowledge of performance evaluation,

communication, conflict resolution, achievement and leadership. All of the courses can be applied toward an Associate Degree in Management.

### Program Outcomes

- Recommend solutions to leadership challenges based on a social, legal, ethical and economic foundation;
- Demonstrate ability to appropriately address conflict resolution challenges and negotiate effective solutions;
- Evaluate information to guide decision-making for enhanced organizational performance;
- Analyze the nature of group interaction and how it relates to effective participation and leadership in organizations.

Upon successfully completing the program, you will receive an Organizational Leadership Certificate. All your certificate coursework can be applied toward an Associate degree in Management.

### Program Curriculum

ACC 150 - Legal Environment of Business....3
CMS 230 - Communication in Organizations....3
Elective - Open Elective....3
ENG 117 - Writing for Business and Industry....3
MGT 111 - Principles of Management....3
MGT 112 - Principles of Leadership....3
MGT 113 - Conflict Resolution and Negotiation....3
MGT 114 - Strategic Analytics for Leaders....3
MGT 210 - Ethical Decision-Making in Business....3
PSY 137 - Introduction to Organizational Psychology....3

### TOTAL PROGRAM CREDITS: 30

## PAYROLL SPECIALIST

### Purpose

This certificate is designed to prepare the graduate for a payroll position in a small to medium sized firm. Career students, requiring more in-depth accounting skills, will gain solid technical knowledge and practical skills thereby substantially improving on-the-job performance and providing the skills for higher-level jobs. All of the courses can be applied toward an Associate Degree in Accounting. Additionally, students completing the Payroll Specialist Certificate program will be prepared to pass the national certification exam to obtain the American Payroll Association's (APA) Fundamental Payroll Certification (FPC) designation.

### Program Outcomes

- Create financial statements, performing each step in double-entry accounting
- Prepare all calculations, entries and reports for a complete payroll cycle
- Prepare quarterly and year-end payroll tax returns

When you receive your Certificate of Completion, you're ready to take the American Payroll Association's Fundamental Payroll Certification exam. If you are interested in further studies, you can apply your certificate credits toward:

- An Associate's degree in Accounting
- An Accounting Certificate
- The Accounting with QuickBooks Certificate of Completion
- The Certified Bookkeeper Certificate of Completion

### Program Curriculum

ACC 110 - Business Mathematics....3
ACC 115 - Financial Accounting....4
ACC 117 - Payroll Accounting....3

### TOTAL PROGRAM CREDITS: 10

## PROFESSIONAL LEADERSHIP (CERTIFICATE)

### Purpose

The Professional Leadership Certificate of Completion is designed to provide the student with essential tools needed to develop leadership skills necessary in today's global business environment. All of the courses can be applied toward an Associate Degree in Management.

### Program Outcomes

- Recommend solutions to leadership challenges based on a social, legal, ethical and economic foundation;
- Demonstrate ability to appropriately address conflict resolution challenges and negotiate effective solutions;
- Evaluate information to guide decision-making for enhanced organizational performance.

Along with increasing your leadership skills, you will earn nine credits in the certificate program. These credits can be applied toward an Associate degree in Management at Montco.

### Program Curriculum

MGT 112 - Principles of Leadership....3
MGT 113 - Conflict Resolution and Negotiation....3
MGT 114 - Strategic Analytics for Leaders....3

### TOTAL PROGRAM CREDITS: 9

# CREATIVE ARTS

## FINE ART (A.F.A.)

### Purpose

The Art program is designed for students planning to transfer to baccalaureate programs or professional schools preparing students for a B.F.A. degree. The curriculum parallels the foundation program of art schools or art programs at a four-year college. Students develop their skills while preparing a comprehensive portfolio. The program allows students to continue studies leading to careers in graphic communications, art education, and/or the fine arts.

### Program Outcomes

- Describe visual concepts and express them using appropriate vocabulary in written reviews and oral presentations;
- Examine and compare culturally diverse and historically significant examples of art;
- Analyze and evaluate works of art using descriptive analysis and observation skills to critique, argue, and defend one's work and works created by others;

- Solve problems in the creation of visual products employing the skills of problem identification, research and information gathering, analysis, generation of alternative solutions, and evaluating outcomes;
- Describe and respond to audiences and contexts that artistic solutions must address including recognizing the physical, cognitive, cultural, social, and individual factors that shape aesthetic decisions;
- Create and develop visual form incorporating principles of visual organization and composition, visual hierarchy, symbolic representation, aesthetics, and the construction of meaningful pieces;
- Create a portfolio of work applying the knowledge, techniques, and perceptual skills addressed in the studio.

Depending upon your interest, you can take courses in animation, ceramics, drawing, graphic design, illustration, painting, photography, printmaking or sculpture. You can also choose classes that easily transfer to a four-year college. Our beautiful art galleries at Central and West campuses feature exhibitions of students and artists of national renown.

### Program Curriculum

**General Education Requirements**

ENG 101 - English Composition I....3
ENG 102 - English Composition II....3
Elective - Oral & Written Communication....3
MAT 106 - Mathematics Applications....3
Elective - Cultural Awareness and Diversity....3
Elective - Scientific Reasoning....4

**Major Requirements**

ART 101 - Art History....3
ART 102 - Art History II....3
ART 103, ART 104, ART 107 or ART 108 - Art History: Modern Art, History of Graphic Design, Non-Western Art or History of Photography....3
ART 111 - Drawing I....3
ART 112 - Drawing I....3
ART 121 - Painting I....3
ART 130 - 2-D Design Principles....3
ART 131 - Color Theory....3
ART 138 or ART 180 - Digital Art I or Introduction to Visual Communication....3
ART 140 - 3-D Design Principles....3
Electives - Fine Art Studio....15

## TOTAL PROGRAM CREDITS: 64

## MASS MEDIA PRODUCTION (A.A.)

### Purpose

Graduates will be prepared to pursue continued study beyond the two-year AA degree or obtain entry-level positions in mass media communication. Examples of career paths in mass media communication include producers, writers, videographers, broadcast journalists, editors, recording engineers, film directors, reporters, web content managers, social media strategists, publicists, directors of communications, corporate Communication managers, ad agency executives, public relations managers, information managers and press secretaries. There are two concentrations: Media Studies and Media Production.

### Program Outcomes

- Apply effectively the essential communication skills, including reading, writing, speaking, listening and visual image creation;
- Explain the history, theory and practical applications of mass communication;
- Apply professional, legal, and ethical principles of communication to diverse audiences and contexts;
- Distinguish the various tasks and ongoing development requirements performed by communication professionals in a rapidly changing environment;
- Apply rhetorical analysis and media literacy skills to advance civic responsibility and an understanding of communication in a free society.

You will work independently and in small groups in the field and in our digital editing labs. You'll also work closely with experienced faculty to create professional content. After graduating, you may transfer to a four-year institution and continue your studies in television, radio, recording, film and emerging media. You may also enter the marketplace as a news writer, production assistant, camera operator and entry-level reporter.

### Program Curriculum

**General Education Requirements**

ENG 101 - English Composition I....3
ENG 102 - English Composition II....3
ENG 165 or ENG 238 - Journalism I or The Literary Vision of Film....3
CMS 120 - Public Speaking....3
MAT 106, MAT 130 or MAT 131 - Mathematics Applications, Probability and Statistics or Introduction to Statistics I....3 - 4
PSY 101 - Introduction to Psychology....3
Scientific Reasoning - Scientific Reasoning Elective....3 - 4
Elective - ANT 104, SOC 101, HIS 101, HIS 102, HIS 203, HIS 205 or POL 124....3
Elective - Any Literature, Music, Dance or Theatre course....3
Elective - ART 101, ART 102, ART 103, ART 104, ART 107, ART 108, ART 148, ART 151 or ART 155....3

**Major Requirements**

MSP 107 - Introduction to Video Production and Literacy....3
MSP 111 - Mass Media and Society....2
MSP 125 or MSP 126 - Introduction to Broadcast Writing or Introduction to Scriptwriting....3
MSP 200 - Ethics, Responsibility, Mass Media and the Law....3
MSP 291 - Mass Media Capstone....3
MSP or SRT Elective - MSP 225, MSP 230, MSP 235, MSP 268, MSP 278 or SRT 250....3
SRT 104 - Sound Recording Technology....3

**Electives**

Elective - Electives....9 - 11

## TOTAL PROGRAM CREDITS: 60-63

## MEDIA STUDIES (A.A.)

### Purpose

Graduates will be prepared to pursue continued study beyond the two-year AA degree or obtain entry-level positions in mass media communication. Examples of career paths in mass media communication include producers, writers, videographers, broadcast journalists, editors, recording engineers, film directors, reporters, web content managers,

social media strategists, publicists, directors of communications, corporate Communication managers, ad agency executives, public relations managers, information managers and press secretaries. There are two concentrations: Media Studies and Media Production.

### Program Outcomes

- Apply effectively the essential communication skills, including reading, writing, speaking, listening and visual image creation;
- Explain the history, theory and practical applications of mass communication;
- Apply professional, legal, and ethical principles of communication to diverse audiences and contexts;
- Distinguish the various tasks and ongoing development requirements performed by communication professionals in a rapidly changing environment;
- Apply rhetorical analysis and media literacy skills to advance civic responsibility and an understanding of communication in a free society.

### Program Curriculum

**General Education Requirements**

ENG 101 - English Composition I....3
ENG 102 - English Composition II....3
CMS 120 - Public Speaking....3
MAT 106, MAT 130 or MAT 131 - Mathematics Applications, Probability and Statistics or Introduction to Statistics I....3 - 4
PSY 101 - Introduction to Psychology....3
Scientific Reasoning - Scientific Reasoning Elective....3 - 4
Elective - ANT 104, SOC 101, HIS 101, HIS 102, HIS 203, HIS 205 or POL 124....3
ENG 165 or ENG 238 - Journalism I or The Literary Vision of Film....3
Elective - Any Literature, Music, Dance or Theatre Elective....3
Elective - ART 101, ART 102, ART 103, ART 104, ART 107, ART 108, ART 148, ART 151 or ART 155....3

**Major Requirements**

MSP 107 - Introduction to Video Production and Literacy....3
MSP 111 - Mass Media and Society....2
MSP 112 - Media Industries....3
MSP 200 - Ethics, Responsibility, Mass Media and the Law....3
MSP 291 - Communication Capstone....3
MSP Elective - MSP 125, MSP 210, MSP 211, MSP 213, MSP 215, MSP 216, MSP 217, MSP 225, MSP 230 or 235....3
MSP Elective - MSP 210, MSP 211, MSP 213, MSP 214, MSP 216 or MSP 217....3

**Electives**

Electives - Electives....9 - 11

### TOTAL PROGRAM CREDITS: 60-63

## MUSIC (A.A.)

### Purpose

The Music curriculum is designed for students planning to transfer to a baccalaureate program in Music. The curriculum provides both a liberal arts (core studies) background and music coursework comparable to the first two years at a four year institution.

### Program Outcomes

- Demonstrate proficiency at the intermediate level on either the guitar or the piano;
- Demonstrate an understanding of the basic principles of tonal harmony;
- Demonstrate functional proficiency in Aural Theory (ear training);
- Describe the musical and cultural characteristics of at least two periods of music history;
- Demonstrate proper use of basic hardware and software tools of music technology.

Opportunities for private lessons and access to private, state-of-the-art recording studios also exist.

Our graduates generally transfer to such four-year schools as Temple University, West Chester University and The University of the Arts. Many go on to become performers or music educators. Note that, to graduate, students must maintain a "C" or above in all MUS course

### Program Curriculum

**General Education Requirements**

ENG 101 - English Composition I....3
ENG 102 - English Composition II....3
Elective - ART 101, ART 102, HIS 101, HIS 102 or any language course....3
Quantitative Reasoning - Quantitative Reasoning Elective (Students may not take MAT 103 or MAT 108 to fulfill this goal)....3 - 4
Elective - CMS 110, CMS 120 or THA 105....3
Scientific Reasoning - Scientific ReasoningElective....4
Elective - ART, DAN, ENG or THA course....3

**Major Requirements**

Applied Electives - Guitar Class, Piano Class, Ensemble, or Private Lessons....2
Ensemble - Choir, Chamber Choir, Jazz Lab Band, Jazz Performance Ensemble, Wind Ensemble, Strings....1
Ensemble - Choir, Chamber Choir, Jazz Lab Band, Jazz Performance Ensemble, Wind Ensemble, Strings....1
Ensemble - Choir, Chamber Choir, Jazz Lab Band, Jazz Performance Ensemble, Wind Ensemble, Strings....1
Ensemble - Choir, Chamber Choir, Jazz Lab Band, Jazz Performance Ensemble, Wind Ensemble, Strings....1
MUS 140 - Introduction to Digital Music Technology....3
MUS 150 or MUS 170 - Guitar Class I or Piano Class I....1
MUS 151 or MUS 171 - Guitar Class II or Piano Class I....1
MUS 210, MUS 211, MUS 212, MUS 213 or MUS 214 - Music History for Majors (choose two courses)....6
MUS 221 - Music Theory I....3
MUS 222 - Music Theory II....3
MUS 231 - Aural Theory I....3
MUS 232 - Aural Theory II....3
MUS Elective - Students may not use MUS 110 or MUS 120....3

**Electives**

Electives - Electives....6

### TOTAL PROGRAM CREDITS: 60-61

## SOUND RECORDING AND MUSIC TECHNOLOGY (A.A.S.)

### Purpose

The Sound Recording and Music Technology A.A.S. curriculum is designed for students planning to obtain a two-year degree in Sound Recording

Technology, Music Production and Music Technology. The degree prepares students to obtain the following entry-level positions: sound technician, audio engineer, recording studio technician, sound engineer for animation and film, audio producer, music producer, digital audio editor, production manager, production assistant, theater sound designer, and multimedia developer for which both musical and technological knowledge are essential. The A.A.S. curriculum offers a comprehensive Background in sound recording, music production, and music technology expertise comparable to the first two years at a media conservatory.

### Program Outcomes

- Integrate knowledge and theory of recording industry, sound recording and music technology into productions;
- Use professional sound recording techniques and tools to record, engineer and edit music productions as well as conceive, plan, write, record and edit pieces, projects and production packages;
- Create a professional portfolio including résumé, reel, personal statement and other promotional materials in both print and online;
- Apply knowledge of guitar or piano, tonal harmony, and aural theory to a performance and through productions;
- Apply practical knowledge of terminology, process, procedures and use of current technology to entry-level employment in the recording industry and sound recording field.

### Program Curriculum

**General Education Requirements**

ENG 101 - English Composition I....3
Quantitative Reasoning - Quantitative Reasoning Elective....3 - 4
Scientific Reasoning - Scientific Reasoning Elective....3 - 4
CMS 110 or CMS 120 - Speech Communication or Public Speaking....3
Cultural Awareness and Diversity - Cultural Awareness and Diversity Elective....3

**Major Requirements**

Elective - Discipline History....3
ETP 110 - Entrepreneurial Essentials....3
MUS 110 - Music Appreciation....3
MUS 140 - Introduction to Digital Music Technology....3
MUS 141 - Digital Music Technology....3
MUS 150 or MUS 170 - Guitar Class I or Piano Class I....1
MUS 240 - The Art and Business of Songwriting....3
MUS 241 - The Business of Music....3
SRT 104 - Introduction to Sound Recording Technology....3
SRT 159 - Introduction to Music Production....3
SRT 250 - Sound Recording Technology I....3
SRT 256 - Sound Recording Technology II....3
SRT 259 - Music Production....3
SRT 297 - Sound Recording and Music Technology Internship....3
SRT 290 - Sound Recording and Music Technology Capstone....1
SRT or MUS Elective - SRT or MUS Elective....3
Workshop Elective - Workshop Elective....1
Workshop Elective - Workshop Elective....1

## TOTAL PROGRAM CREDITS: 61-63

## THEATRE ARTS (A.A.)

### Purpose

The Theatre Arts curriculum is designed for students planning to transfer to a baccalaureate program in Theater or related studies. The curriculum provides both a liberal arts (core studies) background and theater arts coursework comparable to the first two years at a four-year institution.

### Program Outcomes

- Demonstrate an understanding of the personal, social and aesthetic value of the art of theater;
- Demonstrate knowledge of basic, individual and ensemble acting skill;
- Analyze theater history and literature using research, critical thinking skills and performing arts vocabulary;
- Apply skills necessary for the planning, production, direction and evaluation a theatrical performance;
- Distinguish the roles of actor, director, playwright, designers, producers and other professionals involved in creating theater;
- Comprehend the engagement between artists and audience in the act of theater.

### Program Curriculum

**General Education Requirements**

ENG 101 - English Composition I....3
ENG 102 - English Composition II....3
Elective - English Literature: ENG 235, ENG 236, ENG 237 or ENG 275....3
Elective - HIS 101, HIS 102 or HIS 205....3
Cultural Awareness and Diversity - Cultural Awareness and Diversity Elective....3
Technological Fluency - Technological Fluency Elective....3
Quantitative Reasoning - Quantitative Reasoning Elective (MAT-103 may not be used to fulfill this elective)....3
Scientific Reasoning - Scientific Reasoning Elective....4
CMS 120 - Public Speaking....3
Elective - Any DAN or ESW course....2 - 3
Elective - Any ART, MSP or MUS course....3
Elective - Open Elective....3

**Major Requirements**

THA 105 - Introduction to Acting I: Improvisation and Fundamentals....3
THA 106 - Introduction to Acting II: Scene Study....3
THA 114 - Introduction to Theatre....3
THA 150 - Theatre Production Workshop I: Introduction to Stage Craft....3
THA 151 - Theatre Production Workshop II: Applied Stage Craft....3
THA 203 - Theatre Production Workshop III: Advanced Stage Craft....3
Electives - THA 201 Acting for the Cameria, THA 205 Directing: Creating World of Stage, THA 250 Acting Shakespeare, THA 252 Musical Theatre....6

## TOTAL PROGRAM CREDITS: 60-61

# CULINARY & HOSPITALITY

## BAKING AND PASTRY (CERTIFICATE)

### Purpose

Our certificate program prepares you for entry-level positions in the baking and pastry industry. Through hands-on instruction, you'll gain the fundamental food industry and management skills needed to thrive in this field.

### Program Outcomes

- Distinguish between, and successfully utilize a wide array of ingredients and baking methods to produce and/or plate, and critically analyze a variety of fundamental and contemporary baked goods, products and desserts;
- Demonstrate all food and beverage costing techniques related to profitable food service business operations;
- Reflectively practice proper ethical purchasing and procurement processes as it relates to the proper flow of goods for a successful food service operation;
- Demonstrate appropriate safety and sanitation practices, including safe food service equipment operation, as it relates to the hospitality industry;
- Demonstrate appropriate employability skills necessary for an entry-level position in the industry.

### Program Curriculum

**Semester 1**

CUL 105 - Safety and Sanitation....2
CUL 101 - Culinary Foundations....3
CUL 120 - Culinary Techniques....3
BPA 120 - Introduction to Baking & Pastry....3
CUL / BPA 198 - Culinary and Baking & Pastry Practicum I....1

**Semester 2**

BPA 124 - Introduction to Cakes....3
BPA 131 - Bread & Rolls....3
BPA 220 - Advanced Baking & Pastry....3
CUL / BPA 298A - Culinary and Baking & Pastry Practicum II....3

**Semester 3**

BPA 233 - Chocolates & Confections....3
BPA 254 - Tiered Cakes & Sugar Artistry....3
BPA 263 - Operations/Production....3
CUL / BPA 298B - Culinary and Baking & Pastry Practicum III....3

### TOTAL PROGRAM CREDITS: 36

## BAKING AND PASTRY ARTS (A.A.S.)

### Purpose

Our program prepares you for entry- to mid-level positions in the baking and pastry industry.

### Program Outcomes

- Distinguish between, and successfully utilize a wide array of ingredients and baking methods to produce and/or plate, and critically analyze a variety of fundamental and contemporary baked goods, products and desserts;
- Demonstrate all costing techniques related to profitable menu design and profitable food service business operations;
- Demonstrate computer business applications and point of sale system operations as it relates to the foodservice industry;
- Demonstrate the proper ethical purchasing and procurement processes as it relates to the proper flow of goods for a successful food service operation;
- Demonstrate appropriate safety and sanitation practices and safe food service equipment operation as it relates to the hospitality industry;
- Develop a business plan appropriate to their skills.

### Program Curriculum

**General Education Requirements**

ACC 110 - Business Mathematics....3
CMS 110 or CMS 120 - Speech Communication or Public Speaking....3
ENG 101 - English Composition I....3
ESW 206 or ESW 207 - Basic Nutrition or Food and Culture....3
OFM 101 - Business Software Essentials....3
Elective - Aesthetic Sensibility....3
Elective - Scientific Reasoning....3-4

**Major Requirements**

BPA 120 - Introduction to Baking andPastry....3
BPA 124 - Introduction to Cakes....3
BPA 131 - Bread & Rolls....3
BPA 198 - Baking & Pastry Arts Practicum I....1
BPA 220 - Advanced Baking & Pastry....3
BPA 233 - Chocolates and Confections....3
BPA 254 - Tiered Cakes & Sugar Artistry....3
BPA 263 - Bakery Production....3
BPA 298A - Baking&Pastry Arts Practicum II....3
BPA 298B - Baking & Pastry Arts Practicum III....3
CUL 101 - Culinary Foundations....3
CUL 105 - Safety and Sanitation....2
CUL 120 - Culinary Techniques....3
CUL 151 - Purchasing and Cost Control....3
CUL 170 - Management and Supervision....3
CUL 220 - Menu Planning....3
CUL 270 - Culinary Entrepreneurship....3

### TOTAL PROGRAM CREDITS: 69-70

## CULINARY ARTS (A.A.S.)

### Purpose

The Culinary Arts program prepares students for a wide variety of entry level to mid-level positions in the food service industry. It combines a foundation of culinary and management skills the industry demands, in addition to a curriculum that incorporates opportunities to learn and work in a student-operated restaurant. The program introduces students to the basic philosophies of the food service industry and offers the student a well-rounded academic experience that prepares the student for a successful career as a culinary professional.

### Program Outcomes

- Demonstrate proficient use of culinary terminology and classical cooking methods using a wide array of ingredients to design, produce, plate, and critically analyze a variety of classic, contemporary, regional and international dishes;
- Demonstrate all costing techniques related to profitable menu design and profitable food service business operations;
- Demonstrate computer business applications and point of sale system operations as it relates to the foodservice industry;
- Demonstrate the proper ethical purchasing and procurement processes as it relates to the proper flow of goods for a successful food service operation;
- Demonstrate appropriate safety and sanitation practices, and safe food service equipment operation as it relates to the hospitality industry;
- Develop a business plan appropriate to their skills.

### Program Curriculum

**General Education Requirements**

ACC 110 - Business Mathematics.....3
CMS 110 or CMS 120 - Speech Communication or Public Speaking.....3
Elective - Aesthetic Sensibility.....3
Elective - Scientific Reasoning.....3-4
ENG 101 - English Composition I.....3
ESW 206 or ESW 207 - Basic Nutrition or Food and Culture.....3
OFM 101 - Business Software Essentials.....3

**Major Requirements**

CUL 101 - Culinary Foundations.....3
CUL 105 - Safety and Sanitation.....2
CUL 120 - Introduction to Culinary Techniques.....3
CUL 122 - Advaned Culinary Techniques.....3
CUL 125 - American Regional Cuisine.....3
CUL 151 - Purchasing and Cost Control.....3
CUL 160 - Culinary Baking.....3
CUL 170 - Management and Supervision.....3
CUL 198 - Culinary Arts Practicum I.....1
CUL 220 - Menu Planning.....3
CUL 221 - Garde Manger.....3
CUL 250 - European Cuisines.....3
CUL 260 - Global Cuisines.....3
CUL 270 - Culinary Entrepreneurship.....3
CUL 282 - Restaurant Operations.....3
CUL 298A - Culinary Arts Practicum II.....3
CUL 298B - Culinary Arts Practicum III.....3

## TOTAL PROGRAM CREDITS: 69-70

## CULINARY ARTS (CERTIFICATE)

### Purpose

The Culinary Arts certificate prepares students for a wide variety of entry-level positions in the culinary arts industry. It combines a foundation of culinary and management skills the industry demands, in addition to a curriculum that incorporates opportunities to learn and work in a student operated restaurant. The curriculum introduces students to the basic fundamental skills and philosophies of the food service industry and helps prepare them for their career as foodservice professional Program outcomes.

### Program Outcomes

- Demonstrate proficient use of culinary terminology and classical cooking methods using a wide array of ingredients to design, produce, plate, and critically analyze a variety of classic, contemporary, regional and international dishes;
- Demonstrate all food and beverage costing techniques related to profitable food service business operations;
- Reflectively practice proper ethical purchasing and procurement processes as it relates to the proper flow of goods for a successful food service operation;
- Personally demonstrate appropriate safety and sanitation practices, including safe food service equipment operation, as it relates to the hospitality industry;
- Demonstrate appropriate employability skills necessary for an entry level position in the industry.

### Program Curriculum

**Semester 1**

CUL 105 - Safety and Sanitation.....2
CUL 101 - Culinary Foundations.....3
CUL 120 - Culinary Techniques.....3
CUL 122 - Advanced Culinary Techniques.....3
CUL / BPA 198 - Culinary and Baking and Pastry Practicum I.....1

**Semester 2**

CUL 160 - Culinary Baking.....3
CUL 221 - Garde Manger.....3
CUL 125 - American Regional.....3
CUL / BPA 298A - Culinary and Baking and Pastry Practicum II.....3

**Semester 3**

CUL 250 - European Cuisines.....3
CUL 260 - Global Cuisines.....3
CUL 282 - Restaurant Operations.....3
CUL / BPA 298B - Culinary and Baking and Pastry Practicum III.....3

## TOTAL PROGRAM CREDITS: 36

## TOURISM AND HOSPITALITY MANAGEMENT (A.A.S.)

### Purpose

The two-year tourism and hospitality management program prepares students for a wide variety of entry-level to mid-level leadership positions in the tourism and hospitality industry. The program introduces students to the basic philosophies of the tourism and hospitality industry and offers the student a well-rounded academic experience that prepares the student for a successful career as a tourism and hospitality professional. Upon completion of the program, graduates receive an Associate of Applied Science Degree.

### Program Outcomes

- Demonstrate the concepts and skills necessary to achieve guest service excellence for entry to mid-level leadership positions in convention and vistors bureaus, destination management companies, restaurants, parks, casinos, hotels and resorts;
- Use technology and sustainability practices to achieve operational efficiency in the tourism industry;
- Discuss the business of tourism and its impact locally, regionally, nationally, and globally;
- Connect ethical, legal, and inclusive leadership standards accepted in the tourism and hospitality industry;

- Exhibit social intelligence, innovation, and critical decision-making practices for the tourism and hospitality industry;
- Develop a professional career portfolio.

### Program Curriculum

**General Education Requirements**

ENG 101 - English Composition I....3
ENG 102 - English Composition II....3
ACC 110 or MAT 106 - Business Mathematics or Mathematics Applications....3
CMS 110 or CMS 120 - Speech Communication or Public Speaking....3
PSY 137 - Introduction to Organizational Psychology....3
Elective - Aesthetic Sensibility....3
Elective - Scientific Reasoning....3 - 4
Elective - Technological Fluency....3

**Major Requirements**

HOS 111 - Introduction to Hospitality Management....3
CUL 114 / HOS 114 - Food and Beverage Operations....3
HOS 160 - Meetings, Conventions, and Conference Management....3
HOS 170 - Tourism and Hospitality Sales....3
HOS 210 - Sustainable Hospitality and Tourism Management....3
HOS 222 - Nature, Sport, and Destination Tourism Management....3
HOS 230 - Entrepreneurship, Product, and Concept Development in the Tourism Industry....3
HOS 251 - Principles of Tourism, Hotel, and Casino Management....3
HOS 260 - Legal Issues in Tourism and Hospitality....3
HOS 270 - Innovation and Leadership in Tourism Management....3
HOS 297 - Cooperative Internship in Tourism Management....3

### TOTAL PROGRAM CREDITS: 60-61

# EDUCATION

## EDUCATION IN THE EARLY YEARS (A.A.)

Education in the Early Years: Birth through Fourth Grade is a program to prepare graduates for professional opportunities in early childhood education as teachers in child care settings, as professionals in family child care facilities, or as teachers in corporate child care. The program will also prepare graduates who want to pursue Bachelors' degrees for transfer to four-year colleges. Students who transfer with a grade point of average of 3.0 and pass the Preservice Academic Performance Assessment (PAPA) exams may be eligible to be admitted to an Education Program at a four- year institution, which could lead to PA certification to teach pre-kindergarten through fourth grade. The courses in this program include both general education courses as well as professional education courses related to the development and teaching of children through grade four. In the last semester of the program, students will student teach in an early childhood environment with an experienced teacher under the supervision of College faculty.

### Program Outcomes

- Identify typical and atypical milestones in child development;
- Assess the appropriateness of early literacy opportunities in early childhood environments;
- Create curricula and environments that are cognitively, physically and social-emotionally appropriate for children's ages and needs;
- Communicate effectively with young children, their parents, and peers;
- Design activities that promote positive school-family-community relationships;
- Collaborate with teachers to create learning opportunities that meet the needs of all students.

### Accreditation

The Education in the Early Years: Birth through Fourth Grade degree program at Montgomery County Community College has earned Accreditation by the Commission on Early Childhood Higher Education Programs of the National Association for the Education of Young Children, 1313 L Street NW, Suite 500, Washington DC 20005. (800) 424-2460 ext. 8007. The accreditation term runs from March 2018 until March 2025.

### Program Curriculum

**General Education Requirements**

ENG 101 - English Composition I....3
MAT 103 - Foundations of Mathematics I....3
HIS 203 or HIS 205 - History of U.S. to 1877 or History of U.S. from 1877....3
PSY 101 - Introduction to Psychology....3
CMS 110 or CMS 120 - Speech Communication or Public Speaking....3
Elective - Aesthetic Sensibility....3
MAT 104 or MAT 106 - Foundations of Mathematics II or Mathematics Applications....3
Elective - Scientific Reasoning....4

**Major Requirements**

EDU 100 - Introduction to Education....3
EDU 210 - Teaching Young Children....3
EDU 213 - Working with Children with Special Needs....3
EDU 225 - Guiding Children's Reading....3
EDU 228 - Literature in Early Childhood & Elementary Education....3
EDU 233 - Early Childhood Curriculum....3
EDU 240 - Teaching English Language Learners....3
EDU 245 - Connecting Families, Schools and Communities....3
EDU 250 - Student Teaching....6
EDU Elective - EDU 121, EDU 226, EDU 227 or EDU 229....3
PSY 200 - Child Psychology....3

### TOTAL PROGRAM CREDITS: 61

## EDUCATION IN THE MIDDLE YEARS (A.A.)

### Purpose

The Education in the Middle Years: Fourth Through Eighth Grade AA degree program prepares students for transfer to a four-year college in order to pursue a Pennsylvania Department of Education certification to teach in grades four through eight. Students will take several required education courses as well as general education courses. Prior to course selection, students meet with advisors to discuss transfer options to ensure that they select courses that are appropriate for their transfer institution.

### Program Outcomes

- Identify the roles, responsibilities, and characteristics of successful teachers;
- Determine his/her own motivations, desires, and interests pertaining to a teaching career in a middle school and explain why s/he has made the decision;

- Apply instructional strategies that effectively integrate technology use in the classroom;
- Identify the challenges that students from diverse communities and families may face and recognize the teacher's role in supporting all students in the classroom;
- Apply instructional strategies and identify ways to differentiate instruction for students that have special learning, physical or language differences.

### Clearances for Education Courses

In order for you to participate in certain education courses and to observe classrooms, tutor students, etc., you will need to have background checks done. So that you have your clearances when classes begin, you should apply early for these screenings.

### Program Curriculum

**General Education Requirements**

ENG 101 - English Composition I.....3
PSY 101 - Introduction to Psychology.....3
Elective - Cultural Awareness and Diversity.....3
ENG 102 - English Composition II.....3
Quantitative Reasoning - Quantitative Reasoning Electives (choose two - student may not take ACC 110 to fulfill this requirement).....6 - 8
CMS 110 or CMS 120 - Speech Communication or Public Speaking.....3
Elective - Aesthetic Sensibility.....3
Elective - Scientific Reasoning.....4

**Major Requirements**

EDU 100 - Introduction to Education.....3
EDU 120 - Teaching with Technology in Middle Years and Secondary Education.....3
EDU 213 - Working with Children with Special Needs.....3
EDU 240 - Teaching English Language Learners.....3
PSY 204 - Adolescent Psychology.....3
PSY 210 - Educational Psychology.....3

**Electives**

Electives - Electives.....15

### TOTAL PROGRAM CREDITS: 61-63

## SECONDARY EDUCATION (A.A.)

### Purpose

The Secondary Education AA degree program prepares students to transfer into a Secondary Education, Grades 7-12, program at a four-year college that, with passing scores on required state tests, will lead to certification in the Commonwealth of Pennsylvania. Students take several required education courses along with general education courses and are encouraged to choose a content area of academic focus. Prior to course selection, students meet with advisors to discuss transfer options to ensure that they select courses that are appropriate for their transfer institution.

### Program Outcomes

- Integrate the roles, responsibilities and characteristics of successful teachers into a personal educational philosophy;
- Apply instructional strategies that effectively integrate technology use in the classroom;
- Determine the challenges that students from diverse communities and families may face and the teacher's role in supporting all students in the classroom;
- Differentiate instruction for students that have special learning, physical or language differences.

### Program Curriculum

**General Education Requirements**

ENG 101 - English Composition I.....3
ENG 102 - English Composition II.....3
HIS 203 or HIS 205 - History of the U.S. to 1877 or History of the U.S. from 1877.....3
Elective - Quantitative Reasoning (choose two - student may not take ACC 110, MAT 103 or MAT 104 to fulfill this requirement).....6
CMS 110 or CMS 120 - Speech Communication or Public Speaking.....3
PSY 101 - Introduction to Psychology.....3
Elective - Aesthetic Sensibility.....3
Elective - Scientific Reasoning.....4

**Major Requirements**

EDU 100 - Introduction to Education.....3
EDU 120 - Teaching with Technology in Middle Years and Secondary Education.....3
EDU 213 - Working with Children with Special Needs.....3
EDU 240 - Teaching English Language Learners.....3
PSY 204 - Adolescent Psychology.....3
PSY 210 - Educational Psychology.....3

**Electives**

Electives - Electives.....15

### TOTAL PROGRAM CREDITS: 61-63

# ENGINEERING & TECHNOLOGY

## CLOUD COMPUTING (CERTIFICATE)

### Purpose

This certificate will introduce students to the various components of cloud computing. It will include Computer Networking, Data Storage and Storage Area Networks, Windows Server and Hyper V, Cloud essentials and services. Advanced virtualization technologies to include Citrix and VMware will also be covered. The Certificate will prepare students for careers in the rapidly growing Cloud Computing segment, and also prepare them for higher level specializations in this field. The Certificate will cover the objectives of the following industry certification examinations: Microsoft Windows Server and Hyper-V, CompTIA Cloud Essentials, Storage+ and Cloud+, EMC Proven Professional Information Storage Associate (EMCISA), VMware vSphere, Citrix XEN Desktop and Citrix XEN App, and Cisco Certified Entry Network Technician (CCENT).

Cloud Computing. It's the latest form of Internet-based computing and next wave of information technology jobs. Montco's Cloud Computing Certificate prepares you to enter the workforce confident that you have both the training and understanding to succeed in one of the hottest IT fields. Through hands-on instruction, you will practice skills in state-of-the art computer labs.

### Program Outcomes

- Design and configure local and wide area networks;
- Explain the concepts, components and deployment of cloud computing and provisioning;
- Explain concepts and components of Data Storage and storage design;
- Configure and deploy Microsoft Windows and Linux operating systems;
- Configure and deploy virtualization technologies;
- Develop a plan with strategies to pass the certifying exams.

Graduates are prepared to take appropriate certification exams, including:

- Microsoft Windows Server and Hype-V;
- CompTIA Cloud Essentials;
- Storage+ and Cloud+;
- EMC Proven Professional Information Storage Associate (EMCISA);
- VMware vSphere;
- Citrix XEN Desktop and Citrix XEN App;
- Cisco Certified Entry Network Technician (CCENT).

### Program Curriculum

CIS 141 - Introduction to Linux.....3
CIS 155 - PC Applications on Networks.....3
CIS 158 - Windows Server Administration and Support.....3
CIS 166 - Introduction to Cloud Computing.....3
CIS 167 - Introduction to Data Storage and Storage Area Networks.....3
CIS 168 - Data Centers and Cloud Storage.....3
CIS 170 - Introduction to Networks.....3
CIS 171 - Routing and Switching Essentials.....3
CIS 203 - VMware vSphere.....3
CIS 204 - Citrix XEN Desktop and XEN App.....3
CIS 205 - Windows Server Hyper-V.....3
CIS 206 - Cloud Services.....3
CIS 258 - Advanced Windows Server Adminstration and Support.....3

## TOTAL PROGRAM CREDITS: 39

## COMPUTER NETWORKING (CERTIFICATE)

### Purpose

Prepares graduates with knowledge and skills in the areas of networking, computer support and data communications. Graduates are eligible to take appropriate certification exams (such as A+, Network+, Cisco CCENT and Microsoft MTA). Graduates can expect to work as entry-level network engineers, administrators, or computer support technicians (although many employers require an associate's degree).

### Program Outcomes

- Analyze and solve computer hardware and software problems;
- Apply critical thinking, team building, and problem-solving skills to design and implement a local area network configuration;
- Describe OSI layers, their functionality, and maintain a LAN;
- Program and configure Cisco switches;
- Program and configure Cisco routers;
- Design, implement, evaluate and maintain a WAN.

### Program Curriculum

CIS 113 - PC Maintenance and Support.....3
CIS 141 - Introduction to Linux.....3
CIS 142 or CIS 172B - Linux Administration or Connecting Networks.....3
CIS 155, CIS 1101 or CIS 111 - PC Applications on Networks,Programming for Everyoneor Computer Science I: Programming and Concepts.....3
CIS 158 - Windows Server Administration and Support.....3
CIS 170 - Introduction to Networks.....3
CIS 171 - Routing and Switching Essentials.....3
CIS 172 - Scaling Networks.....3
CIS 257 - Network Planning, Project Management and Implementation.....3
CIS 258 - Advanced Windows Server Administration and Support.....3

## TOTAL PROGRAM CREDITS: 30

## COMPUTER NETWORKING - CYBER SECURITY (A.A.S.)

### Purpose

The Cyber Security program prepares graduates with knowledge and skills in computer and network security, ethical hacking, computer forensics, data networking and computer hardware and support. Graduates are eligible and prepared to take appropriate certification exams (such as A +, Network+, Microsoft MTA, Security+, Cisco CCENT, CCNA Security and EC-CEH) and can expect to work as entry-level network security technicians and engineers or computer support technicians. This program requires extensive hands-on work in computer labs featuring state-of the-art equipment.

### Program Outcomes

- Analyze and solve computer hardware and software problems;
- Apply critical thinking, team building and problem-solving skills to design, implement and maintain a local area network configuration;
- Describe the principles and components of cybersecurity;
- Use computer forensics to investigate cyberattacks;
- Implement ethical hacking to assess cybersecurity postures and vulnerabilities
- Design and implement secure networks.

Graduates are prepared to take appropriate certification exams, including:

- A+
- Network+
- Microsoft MTA
- Security+
- CISCO CCENT, CCNA Security
- EC-CEH

With Montco's Associate of Applied Science degree in Computer Networking-Cybersecurity you have the knowledge and skills needed to protect an organization's network, computers and data.

### Program Curriculum

**General Education Requirements**

ENG 101 - English Composition I.....3
ENG 117 or ENG 115 - Writing for Business and Industry or Writing for Technical Communication.....3
Elective - Quantitative Reasoning.....3 - 4
Elective - Scientific Reasoning.....3 - 4
Elective - Oral & Written Communication.....3
Elective - Cultural Awareness and Diversity.....3
Elective - Aesthetic Sensibility.....3

**Major Requirements**
CIS 1101 or CIS 111 - Programming for Everyoneor Computer Science I: Programming and Concepts....3
CIS 113 - PC Maintenance and Support....3
CIS 141 - Introduction to Linux....3
CIS 155 - PC Applications on Networks....3
CIS 158 - Windows Server Administration and Support....3
CIS 170 - Introduction to Networks....3
CIS 171 - Routing and Switching Essentials....3
CIS 207 - Introduction to Computer Forensics....3
CIS 208 - Implementing Network Security....3
CIS 209 - Ethical Hacking....3
CIS 245, CIS 166 or CIS 167 - Database Management Systems/SQL, Introduction to Cloud Computing or Introduction to Data Storage....3
CIS 257 - Network Planning, Project Management and Implementation....3
CIS 275 - Network Security Fundamentals....3

## TOTAL PROGRAM CREDITS: 60-62

## COMPUTER NETWORKING - NETWORK ADMINISTRATION - (A.A.S.)

### Purpose
The Network Administration Concentration of the Computer Networking AAS program prepares graduates with knowledge and skills in networking, computer support, and data communications. Graduates are prepared and eligible to take appropriate certification exams (such as A+, Network +, Microsoft MTA, Security+ and Cisco CCENT /CCNA) and can expect to work as entry-level network engineers, administrators, or computer support technicians. This program requires extensive hands-onwork in computer labs featuring state-of the-art equipment.

### Program Outcomes
- Analyze and solve computer hardware and software problems;
- Apply critical thinking, team building, and problem solving skills to design, implement, and maintain a local area network configuration;
- Program and configure Cisco switches and routers;
- Design, implement, and maintain a WAN.

Upon successfully completing the program, you will receive an associate degree. You also will leave Montco prepared to work as an entry-level network engineer, administrator or support technician.

### Program Curriculum
**General Education Requirements**
ENG 101 - English Composition I....3
Elective - Quantitative Reasoning....3
Elective - Scientific Reasoning....3 - 4
Elective - Oral & Written Communication....3
Elective - Cultural Awareness and Diversity....3
Elective - Aesthetic Sensibility....3

**Major Requirements**
CIS 113 - PC Maintenance and Support....3
CIS 155 - PC Applications on Networks....3
CIS 170 - Introduction to Networks....3
CIS 171 - Routing and Switching Essentials....3
CIS 1101 or CIS 111 - Programming for Everyoneor Computer Science I: Programming and Concepts....3
CIS 158 - Windows Server Administration and Support....3
CIS 141 - Introduction to Linux....3
CIS 258 - Advanced Windows Server Administration and Support....3
CIS 172 - Scaling Networks....3
CIS 172B - Connecting Networks....3
CIS 257 - Network Planning, Project Management and Implementation....3
CIS 142 - Linux Administration....3
CIS 245, CIS 166, CIS 275 or MGT 111 - Database Management Systems/SQL, Introduction to Cloud Computing, Network Security Fundamentals or Principles of Management....3

## TOTAL PROGRAM CREDITS: 60-62

## COMPUTER SCIENCE (A.S.)

### Purpose
The Computer Science program is designed primarily for those students who plan to transfer to a four-year institution and major in computer science.

### Program Outcomes
- Design solutions to quantitative problems by applying algorithm design;
- Design solutions to quantitative problems using programming support tools;
- Exhibit an ability to communicate effectively in a professional technical environment;
- Demonstrate an understanding of professional, ethical, legal, and security issues for programming professionals;
- Demonstrate knowledge of mathematical principles required for work in computer science;
- Construct program solutions using various data structures and testing techniques complete with supporting documentation and testing plans;
- Construct program solutions that include testing techniques, testing plans, and supporting documentation.

### Program Curriculum
**General Education Requirements**
ENG 101 - English Composition I....3
BIO 121, CHE 121 or PHY 121 - General Biology I, General Chemistry - Inorganic or General Physics I....4
BIO 122, CHE 122 or PHY 122 - General Biology II, General Chemistry - Organic or General Physics II....4
Elective - Choose one of the following: ART 101, ART 102, ART 103, ART 111, ART 121, DAN 101, DAN 102, DAN 103, DAN 110, DAN 121, DAN 123, DAN 131, DAN 134, DAN 251, MUS 110, MUS 112, MUS 113, MUS 114, THA 105....3
Elective - 200-Level LIT Course - Choose one of the following: ENG 201, ENG 202, ENG 211, ENG 212, ENG 221, ENG 222, ENG 235, ENG 236, ENG 237, ENG 238, ENG 245, ENG 246, ENG 248, ENG 255, ENG 256, ENG 257, ENG 265, ENG 266, ENG 275 or ENG 285....3
PSY 101 or SOC 101 - Introduction to Psychology or Introduction to Sociology....3
CMS 110 or CMS 120 - Speech Communication or Public Speaking....3
Elective - ANT 104, HIS 101, HIS 102, HIS 203 or HIS 205....3

**Major Requirements**
CIS 110 or CIS 155 - Computer Information Systems for Management or PC Application on Networks....3
CIS 111 - Computer Science I: Programming and Concepts....3

CIS 111B - Computer Science II: Object-Oriented Programming....3
CIS 112 - Computer Science III: Data Structures and Algorithms....3
CIS 126 - Computer Architecture and Organization....3
CIS 245 - Database Management Systems/SQL....3
MAT 125 - Discrete Mathematics....3
MAT 130 - Probability and Statistics....4
MAT 190 - Calculus and Analytical Geometry I....4
Elective - CIS....3

**Electives**
Elective - Elective....3

## TOTAL PROGRAM CREDITS: 61

## CYBER SECURITY (CERTIFICATE)

### Purpose
The Cyber Security Certificate prepares graduates with knowledge and skills in computer and network security, ethical hacking, computer forensics, data networking and computer hardware and support. Graduates are eligible and prepared to take appropriate certification exams (such as A +, Network+, Microsoft MTA, Security+, Cisco CCENT, CCNA Security and EC-CEH) and can expect to work as entry-level network security technicians and engineers or computer support technicians. This program requires extensive hands-on work in computer labs featuring state-of the-art equipment

### Program Outcomes
- Apply the principles and components of cyber security;
- Use computer forensics to investigate cyberattacks;
- Implement ethical hacking to assess cyber security postures and vulnerabilities;
- Design and implement secure networks;
- Design, implement and maintain a local area network;
- Analyze and solve computer hardware and software problems.

Graduates are prepared to take appropriate certification exams, including:
- A+
- Network+
- Microsoft MTA
- Security+
- CISCO CCENT, CCNA Security
- EC-CEH

With Montco's Cyber Security Certificate you are on your way to begin a career in cyber security. You also can continue your education and earn an Associate of Applied Science degree in Computer Networking-Cyber Security at Montco.

### Program Curriculum
CIS 113 - PC Maintenance and Support....3
CIS 141 - Introduction to Linux....3
CIS 155 - PC Applications on Networks....3
CIS 158 - Windows Server Administration and Support....3
CIS 170 - Introduction to Networks....3
CIS 171 - Routing and Switching Essentials....3
CIS 207 - Introduction to Computer Forensics....3
CIS 208 - Implementing Network Security....3
CIS 209 - Ethical Hacking....3
CIS 275 - Network Security Fundamentals....3

## TOTAL PROGRAM CREDITS: 30

## ELECTRICAL ENGINEERING SCIENCE (A.S.)

### Purpose
The Engineering Science program is a rigorous program of study designed to prepare students for transfer to four-year schools of Engineering. The curriculum prepares the student for advanced study in a variety of fields such as Electrical, Computer, Mechanical, Civil, Structural, and Architectural Engineering.

### Program Outcomes
- Analyze and interpret fundamental engineering problems;
- Apply the scientific method to derive solutions to fundamental engineering problems;
- Derive models for solution based on learned methodologies and principles;
- Apply computer-based analysis and solution software to engineering situations;
- Show evidence of an ability to function effectively on teams;
- Show evidence of an ability to communicate effectively.

### Program Curriculum
**General Education Requirements**
ENG 101 - English Composition I....3
ENG 102 - English Composition II....3
Elective - Oral & Written Communication....3
Elective - Cultural Awareness and Diversity....3
Elective - Aesthetic Sensibility....3

**Major Requirements**
CHE 151 - Principles of Chemistry I....4
EGR 102 - Introduction to Engineering....3
EGR 111 - Engineering Computations....3
EGR 115 - Engineering Graphics....3
EGR 210 - Digital Systems....4
EGR 211 - Linear Electrical Systems I....4
EGR 214 - Linear Electrical Systems II....4
MAT 190 - Calculus and Analytical Geometry I....4
MAT 201 - Calculus and Analytical Geometry II....4
MAT 202 - Calculus and Analytical Geometry III....4
MAT 223 - Differential Equations....4
PHY 151 - Principles of Physics I....4
PHY 152 - Principles of Physics II....4

## TOTAL PROGRAM CREDITS: 64

## ENGINEERING TECHNOLOGY - ELECTRICAL (A.A.S.)

### Purpose
The Engineering Technology Electrical Concentration is designed to prepare graduates for career positions as electrical engineering technicians in the advanced technology areas of electric circuits, instrumentation, and communications. The technician fills the role of applications-expert serving under engineers and technologists. A solid foundation in applied mathematics and physical science is necessary to enable the technician to communicate well in an engineering environment.

### Program Outcomes

- Analyze a student-created engineering model using appropriate general calculations;
- Design, model and develop concepts in a 3D solid modeling environment to address the industrial demands of today's technology;
- Apply theoretical attributes of electrical components to systems design;
- Identify and describe component and system-level problems in engineering using state-of-the-art testing equipment;
- Design and present a final project using all of the above engineering skills including good oral communication and technical writing ability.

### Program Curriculum

**General Education Requirements**

ENG 101 - English Composition I.....3
ENG 115 or ENG 117 - Writing for Technical Communication or Writing for Business and Industry.....3
Elective - Oral & Written Communication.....3
Elective - Cultural Awareness and Diversity.....3
Elective - Aesthetic Sensibility.....3

**Major Requirements**

EGR 111 - Engineering Computations.....3
EGR 115 - Engineering Graphics.....3
EGT 190 - Principles of Critical Thinking in Technology.....3
EGT 210 - Digital Circuits.....4
EGT 211 - AC/DC Circuits.....4
EGT 230 - Analog Circuits.....4
EGT 235 - Instrumentation and Control Systems.....4
EGT 240 - Communication Systems.....4
MAT 161 - Precalculus I.....4
MAT 162 - Precalculus II.....4
PHY 121 - General Physics I.....4
PHY 122 - General Physics II.....4

## TOTAL PROGRAM CREDITS: 60

## INFORMATION TECHNOLOGY (A.S.)

### Purpose

The Information Technology program is designed primarily for those students who plan to transfer to a four-year college or university and major in information technology. This program provides a broad overview of programming, networking, web development and database design.

### Program Outcomes

- Design solutions to quantitative problems by applying algorithm design using programming support tools;
- Exhibit an ability to communicate effectively in a professional technical environment;
- Examine professional, ethical, legal, and security issues for programming professionals;
- Create Web sites that incorporate the fundamental principles of visual design;
- Describe the Open Systems Interconnection Reference Model (OSI) layers and their functionality;
- Design and utilize databases.

After earning their associate degree, our students usually transfer to four-year colleges or universities to continue their studies in information technology.

### Program Curriculum

**General Education Requirements**

ENG 101 - English Composition I.....3
Elective - Cultural Awareness and Diversity.....3
Elective - Quantitative Reasoning.....3 - 4
CMS 110 OR CMS 120 - Speech Communication or Public Speaking.....3
Elective - Aesthetic Sensibility.....3
Elective - Mathematics Elective.....3
Elective - BIO 121, CHE 121 or PHY 121.....4
MGT 111 - Principles of Management.....3
Elective - ACC, ECO, MGT, or MKT.....3

**Major Requirements**

CIS 110 or CIS 155 - Computer Information Systems for Management or PC Applications on Networks.....3
CIS 111 - Computer Science I: Programming and Concepts.....3
CIS 111B - Computer Science II: Object-Oriented Programming.....3
CIS 114 - Web Design and Development.....3
CIS 151 - Systems Analysis and Design.....3
CIS 170 - Introduction to Networks.....3
CIS 215 - Decision Making Using Spreadsheets.....3
CIS 244 or CIS 245 - PC Database Management Systems or Database Management Systems/SQL.....3
CIS Elective - CIS Elective.....3
CIS Elective - CIS Elective.....3

**Electives**

Electives - Electives.....3

## TOTAL PROGRAM CREDITS: 61-62

## MECHANICAL ENGINEERING TECHNOLOGY (A.A.S.)

### Purpose

The Engineering Technology, Mechanical Concentration is designed to prepare graduates for career positions as mechanical engineering technicians in the advanced technology of mechanical structures and systems. The technician fills the role of applications-expert serving under engineers and technologists. A solid foundation in applied mathematics and physical science is necessary to enable the technician to communicate well in an engineering environment.

### Program Outcomes

- Identify and describe component and system-level engineering problems using state-of-the-art testing equipment;
- Design and develop concepts in a 3D solid modeling environment to address the industrial demands of today's technology;
- Analyze student-created engineering models using appropriate general calculations;
- Apply theoretical attributes of mechanical components to systems design;
- Create and present a final project using all of the above skills plus good oral communication and technical writing.

### Program Curriculum

**General Education Requirements**

ENG 101 - English Composition I.....3

ENG 115 or ENG 117 - Writing for Technical Communication or Writing for Business and Industry....3
Elective - Oral & Written Communication....3
Elective - Cultural Awareness and Diversity....3
Elective - Aesthetic Sensibility....3

**Major Requirements**
EGR 111 - Engineering Computations....3
EGR 115 - Engineering Graphics....3
EGT 190 - Principles of Critical Thinking in Technology....3
EGT 203 - Applied Statics....4
EGT 204 - Applied Dynamics....4
EGT 212 - Applied Fluid Dynamics....4
EGT 213 - Applied Strength of Materials....4
EGT 215 - Applied Thermodynamics....4
MAT 161 - Precalculus I....4
MAT 162 - Precalculus II....4
PHY 121 - General Physics I....4
PHY 122 - General Physics II....4

## TOTAL PROGRAM CREDITS: 60

## MECHANICAL ENGINEERING SCIENCE (A.S.)

### Purpose
The Engineering Science program is a rigorous program of study designed to prepare students for transfer to four-year schools of Engineering. The curriculum prepares the student for advanced study in a variety of fields such as Electrical, Computer, Mechanical, Civil, Structural, and Architectural Engineering.

### Program Outcomes
- Analyze and interpret fundamental engineering problems;
- Apply the scientific method to derive solutions to fundamental engineering problems;
- Derive models for solution based on learned methodologies and principles;
- Apply computer-based analysis and solution software to engineering situations;
- Show evidence of an ability to function effectively on teams;
- Show evidence of an ability to communicate effectively.

Montco has transfer agreements with many major universities. For example, Temple University allows you to transfer as a junior into a mechanical engineering or civil engineering major. How fantastic is that! Earn an associate degree in Science and then seamlessly transfer to Temple with only two years left for your bachelor's degree in engineering.

### Program Curriculum
**General Education Requirements**
ENG 101 - English Composition I....3
ENG 102 - English Composition II....3
Electives - Oral & Written Communication....3
Electives - Cultural Awareness and Diversity....3
Electives - Aesthetic Sensibility....3

**Major Requirements**
CHE 151 - Principles of Chemistry I....4
EGR 102 - Introduction to Engineering....3
EGR 111 - Engineering Computations....3
EGR 115 - Engineering Graphics....3
EGR 203 - Engineering Statics....3
EGR 204 - Engineering Dynamics....3
EGR 211 - Linear Electrical Systems I....4
EGR 213 - Mechanics of Materials....3
MAT 190 - Calculus I....4
MAT 201 - Calculus II....4
MAT 202 - Calculus III....4
MAT 223 - Differential Equations....4
PHY 151 - Principles of Physics I....4
PHY 152 - Principles of Physics II....4

## TOTAL PROGRAM CREDITS: 65

## MOBILE APPLICATIONS (A.A.S.)

### Purpose
Kick off a career in one of today's hottest technology fields with an Interactive Media-Mobile Applications degree from Montco. In our Mobile Applications Concentration you'll build the skills needed to become a mobile application developer, application analyst, mobile technology architect, and interface designer.

### Program Outcomes
- Demonstrate use of programming languages for mobile application;
- Design mobile user interfaces and applications.

After graduation, our students frequently transfer to four-year institutions offering interactive media studies. These include such universities as Temple, Drexel, Pennsylvania College of Technology, DeVry and Walden, among others.

### Program Curriculum
**General Education Requirements**
ENG 101 - English Composition I....3
Elective - Quantitative Reasoning....3 - 4
Elective - Cultural Awareness and Diversity....3
Elective - Oral & Written Communication....3
Elective - Aesthetic Sensibility....3
Elective - Scientific Reasoning....3 - 4

**Major Requirements**
CIS 111 - Computer Science I: Programming and Concepts....3
CIS 111B - Computer Science II: Object-Oriented Programming....3
CIS 114 - Web Design and Development....3
CIS 119 - User Interface/Experience Design....3
CIS 140 - Client Side Web Development....3
CIS 141 - Introduction to Linux....3
CIS 210 - Applied Software Development....3
CIS 216 - Interactive Media Capstone....3
CIS 238 - iPhone OS App Development....3
CIS 240 - Android App Development....3
CIS 245 - Database Management Systems/SQL....3
CIS 251 - Advanced Mobile Development....3
CIS/ART - Elective. Any 3-credit CIS course (except CIS 110 and CIS 155) or ART 135 or ART 148....3
CIS/ART - Elective. Any 3-credit CIS course (except CIS 110 and CIS 155) or ART 135 or ART 148....3

## TOTAL PROGRAM CREDITS: 60-62

## NANOFABRICATION ENGINEERING TECHNOLOGY (A.A.S.)

### Purpose

The Engineering Technology - Nanofabrication concentration is designed to prepare the graduate for employment as an entry-level nanofabrication technician. It also prepares the graduate for advanced study in nanofabrication techniques. Students learn to produce nanometer-level products as well as collect, process, and analyze data, improve process parameters, and general assist engineers in research, development and manufacture of the same.

### Program Outcomes

- Analyze a student-created engineering model using appropriate general calculations;
- Design, model and develop concepts in a 3D solids modeling environment to address the industrial demands of today's technology;
- Identify and describe the latest manufacturing technologies and processes encountered in the field of nanometer-level manufacturing;
- Identify and describe component and system-level problems in engineering using state-of-the-art testing equipment:
- Design and present a final project using all of the above engineering skills including good oral communication and technical writing ability.

Through our partnership with Penn State your final semester of classes on nanofabrication will be taught at the Penn State Center for Nanofabrication Education and Utilization.

### Program Curriculum

**General Education Requirements**

ENG 101 - English Composition I..... 3
ENG 115 or ENG 117 - Writing for Technical Communication or Writing for Business and Industry..... 3
Elective - Oral & Written Communication..... 3
Elective - Cultural Awareness and Diversity..... 3
Elective - Aesthetic Sensibility..... 3

**Major Requirements**

CHE 121 - General Chemistry - Inorganic..... 4
EGR 115 - Engineering Graphics..... 3
EGR 111 - Engineering Computations..... 3
EGT 190 - Principles of Critical Thinking in Technology..... 3
EGT 230 - Analog Circuits..... 4
ESC 211 - Material, Safety and Equipment Nanotech for Nanofabrication..... 3
ESC 212 - Basic Nanotechnology Processes..... 3
ESC 213 - Materials in Nanotechnology..... 3
ESC 214 - Patterning for Nanofabrication..... 3
ESC 215 - Materials Modification in Nanofabrication..... 3
ESC 216 - Characterization, Packaging, and Testing of Nanofabricated Structures..... 3
MAT 161 - Precalculus I..... 4
MAT 162 - Precalculus II..... 4
PHY 121 - General Physics I..... 4
PHY 122 - General Physics II..... 4

**TOTAL PROGRAM CREDITS: 66**

## SOFTWARE ENGINEERING (CERTIFICATE)

### Purpose

The Software Engineering Certificate is designed to prepare the graduate for employment as an entry-level computer programmer/software engineer, or to prepare the already experienced graduate to change her/his career direction.

### Program Outcomes

- Demonstrate the skills necessary to be employed as a computer programmer/software engineer;
- Demonstrate the knowledge and skills needed for further education and career advancement;
- Provide the technical core which can be applied to the  or  degree.

### Program Curriculum

CIS 111 - Computer Science I: Programming and Concepts..... 3
CIS 111B - Computer Science II: Object-Oriented Programming..... 3
CIS 112 - Computer Science III: Data Structures and Algorithms..... 3
CIS 114 - Web Design and Development..... 3
CIS 122 - Visual Basic..... 3
CIS 126 - Computer Architecture and Organization..... 3
CIS 151 - Systems Analysis and Design..... 3
CIS 235 - Object Oriented Programming in C++..... 3
CIS Electives - CIS Electives..... 6

**TOTAL PROGRAM CREDITS: 30**

## WEB DESIGN (A.A.S.)

### Purpose

Enter one of the hottest fields in technology today with an Interactive Media-Web Design associate degree from Montco.

### Program Outcomes

- Implement fundamental principles of typography, graphic and visual design;
- Use visual communication and imaging techniques for interactive web applications.

Classes take place in state-of-the-art computer labs at Central Campus in Blue Bell and/or West Campus in Pottstown. You can also take some classes online.

After graduation, our students frequently transfer to four-year institutions offering interactive media studies. These include such local or online universities as Temple, Drexel, Pennsylvania College of Technology, DeVry and Walden, among others.

### Program Curriculum

**General Education Requirements**

ENG 101 - English Composition I..... 3
Elective - Quantitative Reasoning..... 3 - 4
Elective - Cultural Awareness and Diversity..... 3
Elective - Oral & Written Communication..... 3
Elective - Aesthetic Sensibility..... 3
Elective - Scientific Reasoning..... 3 - 4

**Major Requirements**

ART 135 - Typography..... 3
ART 148 - Graphic Design Applications..... 3

ART 231 - Graphic Design I..... 3
ART 233 - Visual Design for the Web.....3
CIS 111 - Computer Science I: Programming and Concepts..... 3
CIS 111B - Computer Science II: Object-Oriented Programming..... 3
CIS 114 - Web Design and Development..... 3
CIS 141 - Introduction to Linux..... 3
CIS 119 - User Interface/Experience Design..... 3
CIS 140 - Client Side Web Development.....3
CIS 210 - Applied Software Development..... 3
CIS 216 - Interactive Media Capstone.....3
CIS 245 - Database Management Systems/SQL.....3
CIS/ART - Elective. Any 3-credit CIS course (except CIS 110 and CIS 155) or ART 135 or ART 148.....3

**TOTAL PROGRAM CREDITS: 60-62**

## WEB DESIGN (CERTIFICATE)

### Purpose

Jump into a creative, innovative career in web design with our Web Design and Development Certificate program. In our Design Concentration, you will build the skills needed to become a website designer, information architect and user experience designer.

### Program Curriculum

ART 130 - Two Dimensional Design Principles.....3
ART 135 - Typography.....3
ART 138 - Digital Art I..... 3
ART 148 - Computer Graphics I..... 3
ART 149 - Computer Graphics: Page Layout and Design..... 3
ART 233 - Visual Design for the Internet.....3
CIS 111 - Computer Science I: Programming and Concepts..... 3
CIS 111B - Computer Science II: Object-Oriented Programming..... 3
CIS 114 - Web Design and Development..... 3
CIS 140 - Client Side Web Development.....3

**TOTAL PROGRAM CREDITS: 30**

## WEB DEVELOPMENT (A.A.S.)

### Purpose

Enter one of the hottest fields in technology today with an Interactive Media-Web Development associate degree from Montco. In our Web Development Concentration, you will build the skills needed to become a web developer and programmer.

### Program Outcomes

- Develop secure, scalable, and standards compliant websites;
- Utilize databases to develop dynamic interactive websites and applications.

After graduation our students frequently transfer to four-year institutions offering interactive media studies. These include such local or online universities as Temple, Drexel, Pennsylvania College of Technology, DeVry and Walden, among others.

### Program Curriculum

**General Education Requirements**

ENG 101 - English Composition I.....3
Elective - Quantitative Reasoning..... 3 - 4
Elective - Cultural Awareness and Diversity..... 3
Elective - Oral & Written Communication.....3
Elective - Aesthetic Sensibility..... 3
Elective - Scientific Reasoning..... 3 - 4

**Major Requirements**

CIS 111 - Computer Science I: Programming and Concepts..... 3
CIS 111B - Computer Science II: Object-Oriented Programming..... 3
CIS 114 - Web Design and Development..... 3
CIS 119 - User Interface/Experience Design..... 3
CIS 140 - Client Side Web Development.....3
CIS 141 - Introduction to Linux..... 3
CIS 210 - Applied Software Development..... 3
CIS 212 - Advanced HTML and CSS..... 3
CIS 213 - Advanced Javascript.....3
CIS 216 - Interactive Media Capstone.....3
CIS 241 - Server Side Web Development..... 3
CIS 245 - Database Management Systems/SQL.....3
CIS/ART - Elective. Any 3-credit CIS course (except CIS 110 and CIS 155) or ART 135 or ART 148.....3
CIS/ART - Elective. Any 3-credit CIS course (except CIS 110 and CIS 155) or ART 135 or ART 148.....3

**TOTAL PROGRAM CREDITS: 60-62**

## WEB DEVELOPMENT (CERTIFICATE)

### Purpose

Bank on a future in web development with our Web Design and Development Certificate program. In our Development Concentration you'll build the skills needed to become a web developer and programmer.

### Program Outcomes

- Design and develop secure, scalable, and standards compliant websites that demonstrate modern web development and software engineering techniques;
- Design and utilize databases to develop interactive websites and applications;
- Demonstrate the fundamental principles of system administration;
- Plan and manage the administrative and business processes for software development;
- Display the foundational skills and professional practices necessary to succeed and grow in the web design and development field;
- Evaluate end-user needs and develop websites that adhere to usability and accessibility guidelines;
- Demonstrate the ability to work and communicate effectively with others in a team development environment.

### Program Curriculum

ART 148 - Computer Graphics I..... 3
CIS 111 - Computer Science I: Programming and Concepts..... 3
CIS 111B - Computer Science II: Object-Oriented Programming..... 3
CIS 114 - Web Design and Development..... 3
CIS 140 - Client Side Web Development.....3
CIS 141 or CIS 158 - Introduction to Linux or Windows Server Administration and Support.....3
CIS 151 - Systems Analysis and Design..... 3
CIS 155 - PC Applications for Networks.....3
CIS 241 - Server Side Web Development..... 3
CIS 245 - Database Management Systems/SQL.....3

**TOTAL PROGRAM CREDITS: 30**

# HEALTH

## DENTAL HYGIENE (A.A.S.)

### Purpose

The Dental Hygiene Program is designed to prepare graduates to become licensed dental hygienists capable of employment in private dental offices and alternative career settings to meet the preventive and therapeutic oral health care needs of the public. Students receive extensive clinical experience in the Central Campus' dental hygiene facility and participate in enrichment experiences at community based sites. Articulation agreements have been established with baccalaureate degree completion programs to maximize transfer of credits and simplify the admissions process.

### Program Outcomes

- Demonstrate basic knowledge of legal responsibilities and ethical considerations and apply those to dental hygiene care.
- Demonstrate the knowledge and skills needed to provide dental hygiene care which meet professional standards and licensing examination eligibility.
- Promote optimal oral health and disease prevention as related to general health and wellness for all patients.
- Contribute as an integral member of the healthcare team and assess, plan, implement and evaluate oral health programs for diverse population groups while promoting access to care.
- Value life-long learning and commitment to professional development.

### Accreditation

The program in dental hygiene is accredited by the Commission on Dental Accreditation and has been granted the accreditation status of "approval without reporting requirements." The Commission is a specialized accrediting body recognized by the United States Department of Education.

Commission on Dental Accreditation (CODA)
211 East Chicago Avenue
Chicago, Illinois 60611
phone: 312-440-2718
website: ada.org/en/coda

### Mission Statement

The mission of the Dental Hygiene Program is to develop ethical and competent dental hygiene practitioners capable of integrating the varied roles of the dental hygiene profession. The program will strive to provide high quality, affordable and accessible educational opportunities to meet the educational needs of its students, while serving the community.

All applicants seeking admission to the clinical component of the Dental Hygiene Program are required to submit a completed Petition for Dental Hygiene Program Admission to the Office of Admissions, Records and Registration.

### Program Curriculum

**General Education Requirements**

ENG 101 - English Composition I..... 3
Elective - Choose from: ENG 201, ENG 202, ENG 211, ENG 212, ENG 221 or ENG 222..... 3
PSY 101 - Introduction to Psychology..... 3
CMS 110 - Speech Communication..... 3
SOC 101 - Introduction to Sociology..... 3
ESW 206 - Basic Nutrition..... 3

**Major Requirements**

BIO 131 - Human Anatomy and Physiology I..... 4
BIO 132 - Human Anatomy and Physiology II..... 4
BIO 140 - Microbiology and Immunology..... 4
DHG 100 - Theory and Practice of Dental Hygiene I..... 4
DHG 111 - Dental Anatomy..... 2
DHG 155 - Dental Radiology..... 2
DHG 158 - Theory and Practice of Dental Hygiene II..... 5
DHG 159 - Histology and Pathology of Oral Tissues..... 3
DHG 161 - Periodontics I..... 2
DHG 220 - Theory and Practice of Dental Hygiene III..... 6
DHG 224 - Materials in Dentistry..... 2
DHG 225 - Oral Pharmacology..... 2
DHG 226 - Dental Pain Control..... 2
DHG 253 - Community Dentistry..... 2
DHG 258 - Theory and Practice of Dental Hygiene IV..... 6
DHG 261 - Periodontics II..... 2

**TOTAL PROGRAM CREDITS: 70**

## EXERCISE SCIENCE AND WELLNESS (A.S.)

### Purpose

The Exercise Science and Wellness A.S. program is designed to provide students a well designed plan of transfer to a four year college or university. By integrating a broad spectrum of general education and Exercise Science and Wellness courses and by offering the ability to focus study in three specific areas of concentration, the curriculum prepares the student for advanced study in a variety of fields such as Exercise Science, Kinesiology, Physical Education, Athletic Training, Sport and Fitness, and Recreational Management

### Program Outcomes

- Demonstrate proficiency in communicating health and wellness concepts;
- Apply knowledge of human anatomy and physiology, kinesiology, and exercise science to the field of health and wellness;
- Formulate a professional philosophy focused on a specific area within Exercise Science and Wellness;
- Prepare a plan for continuing education within Exercise Science and Wellness.

### Program Curriculum

**General Education Requirements**

ENG 101 - English Composition I..... 3
ENG 102 - English Composition II..... 3
MAT 106 or MAT 130 - Mathematics Applications or Probability and Statistics..... 3 - 4
BIO 121, BIO 151, CHE 121, CHE 151, PHY 115, or PHY 151 - General Biology I, Principles of Biology I, General Chemistry - Inorganic, Principles of Chemistry I, Technical Physics, or Principles of Physics I..... 4
Elective - Cultural Awareness and Diversity..... 3
Elective - Aesthetic Sensibility..... 3
PSY 101, PSY 136, PSY 137, PSY 206, PSY 210, or PSY 215 - Introduction to Psychology, Personality, Introduction to Organizational Psychology, Human Development/LifeSpan, Educational Psychology, or Abnormal Psychology..... 3

CMS 110, CMS 120 or THA 105 - Speech Communication, Public Speaking or Introduction to Acting I.....3

**Major Requirements**

BIO 129 or BIO 132 - Functional Human Anatomy and Physiology (Grade of "C" or better) or Human Anatomy and Physiology II.....4
ESW 102 - Introduction to Exercise Science, Wellness and Sport Studies.....3
ESW 206 - Basic Nutrition.....3
ESW 222 - Applied Kinesiology *(offered fall only)*.....3
ESW 224 - Exercise Physiology *(offered fall only)*.....4
ESW 228 - Trends in Exercise Science and Wellness (*offered spring only*).....2
ESW 245 - Safety and First Aid.....3
ESW Elective - ESW Elective.....2 - 3

**Electives**

Elective - Elective .....12-14

## TOTAL PROGRAM CREDITS: 61

## HEALTH AND FITNESS PROFESSIONAL (A.A.S.)

### Purpose

The Health and Fitness Professional program provides a comprehensive curriculum and educational experience for students who wish to enter the health and fitness field. The program provides the educational and experiential learning required to complete the American College of Sports Medicine (ACSM) Certified Personal Trainer Examination. During the final semester of the program, students will study for and take the ACSM Certified Personal Trainer Examination. Each student will earn and must maintain the American Heart Association certification in First Aid and AdultCardio Pulmonary Resuscitation. In addition to these certifications, the program provides the student with a strong theoretical base as well as practical experience via service learning and an experiential practicum in an educational fitness setting.

### Program Outcomes

- Assess physical fitness, including cardiorespiratory fitness, muscular strength, muscular endurance, flexibility and anthropometric measures in order to set goals and establish a baseline for program development.
- Educate clients using scientifically sound health and fitness information and resources to enhance client's knowledge base, program enjoyment, adherence and overall awareness of health and fitness related information.
- Apply behavior change theories to individuals across populations and across the lifespan.
- Design fitness plans based on client interview, risk stratification, and physical fitness assessments.
- Demonstrate proficiency in communicating health and wellness concepts.

During your final semester, you will complete an internship to gain practical knowledge and potential employment. You will also take the American College of Sports Medicine (ACSM) Certified Personal Trainer Examination to receive certification. After graduating, you can expect to find entry-level work in the fitness/health industry and in allied fields such as personal trainer, corporate wellness, YMCA, commercial recreation and fitness centers, recreational therapy and retirement homes and communities. You can also continue your education at a four-year institution.

### Program Curriculum

**General Education Requirements**

ENG 101 - English Composition I.....3
ENG 102, ENG 115 or ENG 117 - English Composition II, Writing for Technical Communication or Writing for Business and Industry.....3
Elective - Cultural Awareness and Diversity.....3
Elective - Aesthetic Sensibility.....3
MAT 106 or MAT 130 - Mathematics Applications or Probability and Statistics.....3 - 4
Elective - Oral & Written Communication.....3

**Major Requirements**

BIO 129 - Functional Human Anatomy and Physiology (Grade of "C" or better).....4
ESW 102 - Introduction to Exercise Science, Wellness, and Sport Studies.....3
ESW 146 - Conditioning, Weight Training, and Weight Management.....2
ESW 151 - Fundamentals of Functional Training.....2
ESW 206 - Basic Nutrition.....3
ESW 215 - Prevention and Care of Athletic Injury.....3
ESW 222 - Applied Kinesiology.....3
ESW 224 - Exercise Physiology.....4
ESW 226 - Assessment of Human Fitness.....3
ESW 227 - Exercise Programming for Healthy and Special Populations.....3
ESW 236 - Personal Health and Wellness.....3
ESW 245 - Safety and First Aid.....3
ESW 296 - Practicum in Exercise Science and Wellness.....4

**Electives**

Elective - Elective.....2 - 3

## TOTAL PROGRAM CREDITS: 60-62

## HEALTH SERVICES MANAGEMENT (A.A.S.)

### Purpose

The Health Services Management Associates in Applied Science (A.A.S.) degree provides the student with a broad, solid foundation for attaining an entry level clinical management position in a variety of health settings, including private and public practitioners' offices, hospitals, holistic health practices, long-term care facilities, and health and wellness centers. The student is prepared to use critical thinking in making relevant management decisions in today's dynamic and expanding health services environment

### Program Outcomes

- Demonstrate effective written communication skills appropriate to the health services management environment;
- Utilize critical thinking skills and ethical principles in managing business office situations including customer and personnel relationships;
- Apply business management principles and techniques to the dynamic and expanding health services environment.

After graduation, you can look forward to beginning entry-level, clinical management positions at hospitals, physicians' offices, long-term care facilities, health and wellness centers and holistic health practices. You can also use your degree as a stepping-stone to further education.

### Program Curriculum

**General Education Requirements**

CMS 110 or CMS 120 - Speech Communication or Public Speaking.....3
ENG 101 - English Composition I.....3
ENG 102, ENG 115 or ENG 117 - English Composition II, Writing for Technical Communication or Writing for Business and Industry.....3
OFM 101 - Business Software Essentials.....3
Elective - Aesthetic Sensibility.....3

**Major Requirements**

ACC 110 - Business Mathematics.....3
BIO 104/HCP-104/MAS-104 or BIO 130 - The Human Body in Health and Disease or Physiology or Introductory Anatomy and Physiology.....3-4
ESW 210 or ESW 236 - Holistic Health: Complementary and Alternative Health Practices or Personal Health and Wellness Education.....3
HCP 100 - Medical Office Technologies and the EHR.....3
HCP 114, HCP 120 or MGT 210 - Medical Law and Ethics for Health Care Professionals, Ethical Issues Affecting Consumers and the Health Care Professions or Ethical Decision Making in Business.....3
HCP 118 - Professional Essentials for a Healthcare Career.....3
HCP 224 - Medical Terminology.....3
MGT 111 - Principles of Management.....3
MGT 131 - Human Resources Management.....3
MGT 160 - Customer Relationship Management.....3
MGT 221 - Supervision.....3
PSY 137 - Introduction to Organizational Psychology.....3

**Electives**

Electives - Electives.....9

### TOTAL PROGRAM CREDITS: 60-62

## MEDICAL ASSISTING (CERTIFICATE)

### Purpose

The Medical Assisting Certificate Program is designed to prepare graduates who are proficient in all administrative and clinical competencies necessary to perform numerous jobs in physicians' offices, hospitals, or other health care facilities. The program integrates theory, laboratory simulations and a clinical practicum experience offered in a variety of community locations. The Medical Assisting Certificate Program is offered as a 3 continuous semester program. Students have three years from the date of initial enrollment in the program in which to complete all certificate requirements. Graduates of the certificate program are highly valued members of the health care delivery team who are qualified to complete the American Association of Medical Assistants (AAMA) certification examination for Certified Medical Assistants (CMA) and/or the American Medical Technologists (AMT) certification examination for Registered Medical Assistants (RMA).The Medical Assisting Certificate Program is accredited by the Commission on Accreditation of Allied Health Education Programs (www.caahep.org) upon the recommendation of the Medical Assisting Education Review Board (MAERB).

Commission on Accreditation of Allied Health Education Programs
25400 US Highway 19 North, Suite 158
Clearwater, FL 33763
(727) 210-2350
www.caahep.org

### Program Outcomes

- Demonstrate the knowledge base (cognitive), skills (psychomotor), behavior (affective), values, and competencies necessary to function as entry level Medical Assisting practitioners in accordance with nationally accepted standards of roles and functions;
- Utilize problem solving methods, critical thinking skills and interpersonal communication techniques as means of achieving personal and professional growth through competency demontration and credential attainment.

Additional information on advanced placement, student employment, transfer credits and credit for life experience, withdrawals and refunds can be obtained by contacting Kathleen Schreiner, Medical Assisting Program Director at 610-718-1812 or kschreiner@mc3.edu.

### Program Curriculum

HCP 224 - MedicalTerminoloy.....3
HCP 100 - Medical Office Technologies and the EHR.....3
HCP 114/MAS-114 - MedicalLaw and Ethics.....3
MAS 113 - Clinical Assisting I.....3
HCP 117/MAS-117 - Medical Office Administration.....4
MAS 123 - Clinical Assisting II Procedures.....3
MAS 121 - Laboratory Procedures in the Medical Office.....3
HCP 104/MAS-104/BIO-104 - The Human Body in Health and Disease.....3
MAS 130 - Medical Assisting Practicum.....6

### TOTAL PROGRAM CREDITS: 31

## MEDICAL CODING (CERTIFICATE)

### Purpose

This 18-credit Certificate of Completion provides students with the opportunity to concentrate study in Medical Coding and health services administrative practices and procedures. The student will develop the necessary job skills to attain success in an entry level coding position.Successful completion of the Medical Coding Certificate of Completion provides eligibility for the American Academy of Professional Coder's Certified Professional Coder (CPC) examination, and/or additional coding professional certifications (Certified Coding Associate (CCA®)/ Certified Coding Specialist (CCS®) based on the individual student's previous qualifications and background.

### Program Outcomes

- Use coding and classification systems in order to assign valid diagnostic and/or procedure codes for medical billing and reimbursement required by the Health Insurance Portability and Accountability Act (HIPAA) including the validation of coded clinical information;
- Apply coded data and health information in reimbursement and payment systems appropriate to manage care and all healthcare settings in accordance with relevant legal and compliance issues;
- Create, use, and maintain the Electronic Health Record (EHR) management systems.

Upon receiving the Medical Coding Certificate, you are eligible to take the American Academy of Professional Coder's Certified Professional Coder (CPC) exam. You may also pursue additional coding certificates.

Before entering the program, you must complete college placement tests in English, Mathematics and Reading and place above the developmental level in English and reading and at or above MAT 011.

### Program Curriculum

HCP 104/MAS-104/BIO-104 - The Human Body Health and Disease..... 3
HCP 224 - Medical Terminology..... 3
HCP 226 - Medical Coding I (1st 7 weeks).....3
HCP 227 - Medical Coding II (2nd 7 weeks)..... 3
HCP 230 - CPT Coding and Reimbursement Methods.....3

## TOTAL PROGRAM CREDITS: 15

## MEDICAL LABORATORY TECHNICIAN (A.A.S.)

### Purpose

The nationally accredited* Medical Laboratory Technician program is designed to prepare graduates for employment in hospitals, commercial laboratories, physician office laboratories, and pharmaceutical companies. Upon program completion, students are eligible to take national certification examinations. Medical laboratory technicians follow specific procedures to perform a variety of routine diagnostic tests on blood and other body fluids in chemistry, hematology, urinalysis, immunohematology, microbiology, and immunology. Thus, MLTs, in cooperation with other laboratory personnel, provide physicians with valuable information needed to care for patients.

The curriculum combines traditional college courses in the humanities and sciences with clinical courses. Campus facilities and area hospital and commercial laboratories provide an authentic environment where students practice basic procedures, learn interpersonal skills, study diseases, and relate laboratory medicine to other aspects of health care.

### Program Outcomes

- Collect and prepare clinical specimens for analysis;
- Operate laboratory instruments;
- Perform a variety of diagnostic analyses according to prescribed methodology;
- Monitor and assess the quality of data generated;
- Recognize problems which may occur during testing;
- Describe principles, reactions and reagents for each method studied;
- Relate test results to other patient information to the extent required for understanding the analyses;
- Demonstrate behavior and attitudes consistent with those of laboratory professionals.

The Medical Laboratory Technician Program is accredited by NAACLS, The National Accrediting Agency for Clinical Laboratory Sciences. 5600 N. River Rd.
Suite 720
Rosemont, IL 60018
phone: 733-714-8880
website: www.naacls.org

It is the mission of the MLT program to respond to the needs of the community by educating students to perform a wide variety of clinical laboratory procedures and prepare these students to perform competently as Medical Laboratory Technicians upon graduation.

### Special Admission Requirements

All applicants seeking admission to the Medical Laboratory Technician Program (MLT) are required to submit a completed online Petition for Admission to the Medical Laboratory Technician Program

### Program Curriculum

**General Education Requirements**

CMS 110 or CMS 120 - Speech Communication or Public Speaking.....3
ENG 101 - English Composition I.....3
Elective - Aesthetic Sensibility..... 3
SOC 101 - Introduction to Sociology..... 3

**Major Requirements**

BIO 130 - Introductory Anatomy and Physiology..... 4
BIO 141 - Clinical Microbiology I.....4
BIO 241 - Clinical Microbiology II.....4
BIT 124 - Molecular Techniques..... 2
CHE 131 - Chemistry for the Technologies I.....4
CHE 132 - Chemistry for the Technologies II.....4
HCP 120 - Ethical Issues Affecting Consumers and the Health Care Professions..... 3
MLT 110 - Introduction for the MLT.....4
MLT 123 - Immunohematology Lecture..... 2
MLT 124 - Immunohematology Lab..... 1
MLT 125 - Hematology Lecture.....2
MLT 126 - Hematology Lab.....1
MLT 233 - Clinical Chemistry Lecture.....3
MLT 234 - Clinical Chemistry Lab.....2
MLT 235 - Clinical Practicum in MLT 1.....3
MLT 244 - Professional Issues in MLT.....2
MLT 245 - Clinical Practicum in MLT II.....6
MLT 246 - MLT Seminar..... 1

## TOTAL PROGRAM CREDITS: 64

## MEDICAL OFFICE ASSISTANT (CERTIFICATE)

### Purpose

The two-semester, 19-credit Medical Office Assistant Certificate of Completion provides students with the opportunity to build a comprehensive foundation in administrative medical office assistant skills. Students will develop competency in the performance of medical office administrative procedures and develop the critical thinking skills required to seek employment and work effectively in the medical office environment. Successful completion of the Medical Office Assistant Certificate of Completion provides eligibility to complete a national Medical Office Assistant certification examination.

### Program Outcomes

- Perform administrative duties in a medical office environment;
- Develop critical thinking skills and use them to evaluate legal and ethical issues in the health care.
- Manage electronic health record (EHR) software and use computer applications in the medical office

Upon receiving the Medical Office Assistant Certificate of Completion, you may take the national Medical Office Assistant certification exam. This certificate can also be applied to the Health Services Management Degree.

Before entering the program, you must complete college placement tests in English, Mathematics and Reading and place above the developmental level in English and reading and at or above MAT 011.

### Program Curriculum

HCP 224 - Medical Terminology..... 3
HCP 114 - Medical Law and Ethics..... 3
HCP 100 - Medical Office Technologies and the EHR..... 3
HCP 117/MAS-117 - Medical Office Administration.....4

## TOTAL PROGRAM CREDITS: 13

## NURSING (A.A.S.)

### Program Outcomes

- Integrate critical thinking when incorporating knowledge from the sciences and humanities in the delivery of professional nursing care
- Utilize the nursing process in meeting the health care needs of individuals of diverse sociocultural identities across the lifespan;
- Implement the roles of the associate degree nurse in a variety of healthcare delivery systems;
- Demonstrate behaviors that reflect the values of nursing as a caring profession.

### Program Curriculum

**General Education Requirements**

ENG 101 - English Composition I.....3
ENG 102 - English Composition II.....3
MAT 106 - Mathematics Applications.....3
PSY 101 - Introduction to Psychology..... 3
PSY 206 - Human Development - A Life-Span Approach.....3
SOC 101 - Introduction to Sociology..... 3
Aesthetic Sensibility - Aesthetic Sensibility Elective.....3

**Major Requirements**

BIO 131 - Human Anatomy & Physiology I (minimum grade of "C" required).....4
BIO 132 - Human Anatomy & Physiology II (minimum grade of "C" required).....4
BIO 140 - Microbiology and Immunology.....4
NUR 050 - Nursing Role Transition (grade of "Pass" required receive credit for NUR 110; this course does not yield credits toward the degree).....3
NUR 106 - Concepts of Nursing (minimum grade of "C" required).....3
NUR 110 - Introduction to Nursing (minimum grade of "C" required)..... 8
NUR 112 - Nursing Care of Clients with Uncomplicated Health Care Needs (minimum grade of "C" required)..... 8
NUR 211 - Nursing Care of Clients with Complex Health Care Needs (minimum grade of "C" required)..... 8
NUR 212 - Nurse Management of Client Care (minimum grade of "C" required).....8
NUR 213 - Professional Issues in Nursing (minimum grade of "C" required).....2

### Accreditation

The Nursing Program is accredited by the Accreditation Commission for Education in Nursing (ACEN) and holds full approval from the Pennsylvania State Board of Nursing in Harrisburg, PA.

Accreditation Commission for Education in Nursing (ACEN)
3343 Peachtree Road NE
Suite 850
Atlanta, GA 30326
website: acenursing.org

The Nursing Program is on the Commonwealth of Pennsylvania's State Board of Nursing's Approved List of Professional Nursing Programs with FULL approval status.

Commonwealth of Pennsylvania's State Board of Nursing
P.O. Box 2649
Harrisburg, PA 17105-2649

## TOTAL PROGRAM CREDITS: 70

## PERSONAL TRAINING (CERTIFICATE)

### Purpose

The Personal Training Certificate program provides a comprehensive curriculum and educational experience for students who wish to enter the personal training field. The program provides the educational and experiential learning required to complete the American College of Sports Medicine (ACSM) Personal Trainer Examination. During the final semester of the program, students will sit for the ACSM Personal Trainer Examination. The program provides the student with a strong theoretical base as well as practical experience and a practicum in an educational fitness setting. Graduates of the Personal Training Certificate program will have the competencies and experience expected for employment in an entry-level personal training position. Upon successful completion of the Personal Training Certificate program, students also have the option to continue their education in this field.

### Program Curriculum

BIO 129 - Functional Human Anatomy and Physiology (grade of "C" or better).....4
ESW 146 - Weight Training, Conditioning, and Weight Control..... 2
ESW 206 - Basic Nutrition..... 3
ESW 222 - Applied Kinesiology (offered Fall only)..... 3
ESW 224 - Exercise Physiology (offered Fall only).....4
ESW 226 - Assessment of Human Fitness (offered Fall only)..... 3
ESW 151 - Fundamentals of Functional Training..... 2
ESW 227 - Exercise Programming for Healthy and Special Populations (offered Spring only).....3
ESW 236 - Personal Health and Wellness..... 3
ESW 296 - Practicumin Exercise Science and Wellness (offered Spring only)..... 4

## TOTAL PROGRAM CREDITS: 31

## PHLEBOTOMY (CERTIFICATE)

### Purpose

The one semester Phlebotomy Certificate of Completion program is designed to give the student instruction in the field of Phlebotomy. Phlebotomy technicians, who are members of the clinical laboratory team, are responsible for obtaining quality specimens for diagnostic laboratory testing. The specimens are analyzed which in turn aids the physician in the diagnosis, monitoring and treatment of the patient. Therefore, this makes the phlebotomist an important part ofthe healthcare team. Additionally, students are trained in adult Cardiopulmonary Resuscitation (CPR). The Phlebotomy program is approved by the National Accrediting Agency for Clinical Laboratory Sciences.* Persons successfully completing this course

are eligible to sit for the Phlebotomy Technician (PBT) examination given by the American Society for Clinical Pathology.

### Program Outcomes

- Learn the technical skills needed to competently and safely collect and handle blood specimens from a variety of patients;
- Develop good interpersonal skills and learn how to work well with others;
- Gain the knowledge needed to pass national certification exams.

### Program Curriculum

MLT 106 - Phlebotomy.....4

## TOTAL PROGRAM CREDITS: 4

## PHYSICAL THERAPIST ASSISTANT (A.A.S.)

### Purpose

The Physical Therapist Assistant Program provides a quality, comprehensive program of study that prepares ethical, competent entry-level physical therapist assistants (PTAs), who provide evidence-based interventions. This is accomplished through a supportive learning environment that integrates sequential instruction and full-time practical clinical experiences. Graduates are prepared to take the Physical Therapist Assistant National Physical Therapy Examination for State certification / licensure and to demonstrate values-based behavior while effectively and efficiently assisting physical therapists serving the diverse population of Montgomery County and surrounding communities. PTAs work under the direction and supervision of a physical therapist and are employed in such settings as hospitals, nursing homes, home health agencies, rehabilitation centers, school systems, sports medicine facilities, and private practices.

### Program Outcomes

- Demonstrate proficient entry-level knowledge and skills in safely, effectively and efficiently implementing a physical therapist established comprehensive plan of care;
- Adhere to the legal, ethical and professional regulations and standards that determine the scope of practice of physical therapy and perform physical therapy duties within the PTA scope of practice;
- Communicate effectively with sensitivity and awareness of individual differences with patients, families, colleagues, and other healthcare providers;
- Exhibit observable behaviors that indicate a commitment to PTA values-based behaviors.

At the end of the program you will be prepared to take the Physical Therapist Assistant National Physical Therapy Examination for state certification/licensure. You will also be able to demonstrate values-based behavior while effectively and efficiently assisting physical therapists who serve the diverse population of Montgomery County and surrounding communities. PTAs work under the direction and supervision of physical therapists. They are employed in such settings as hospitals, nursing homes, home health agencies, rehabilitation centers, school systems, sports medicine facilities and private practices.

### Accreditatioon

The Physical Therapist Assistant Program at Montgomery County Community College is accredited by the Commission on Accreditation in Physical Therapy Education (CAPTE):
Commission on Accreditation in Physical Therapy Education
1111 North Fairfax Street
Alexandria, VA, 22314
phone: 703-706-3245
email: accreditation@apta.org

### Program Curriculum

**Pre-Technical Phase**

**First Semester (summer or before)**

BIO 131 - Human Anatomy & Physiology I (1st 6 weeks).....4
ESW 151 - Fundamentals of Functional Training(1st 6 weeks).....2
BIO 132 - Human Anatomy & Physiology II (2nd 6 weeks).....4
MAT 106 - Math Applications (2nd 6 weeks).....3

**13 Credit Hours**

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**Second Semester (fall or before)**

ENG 101 - English Composition I.....3
ESW 222 - Applied Kinesiology (offered fall only).....3
ESW 224 - Exercise Physiology (offered fall only).....4
PHY 115 - Technical Physics.....4

**14 Credit Hours**

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**Third Semester (spring or before)**

ESW 215 - Prevention and Care of Athletic Injuries.....3
THA 105 - Introduction to Acting I: Improvisation and Fundamentals.....3
HCP 224 - Medical Terminology.....3
PSY 206 - Human Development – A Life-Span Approach.....3

**12 Credit Hours**

**Technical Phase**

**Technical Phase (Petition for Admission and program acceptance required)**

**Fourth Semester (summer)**

PTA 100 - Fundamentals of Physical Therapist Assisting and Data Collection (1st 7 weeks).....3
PTA 110 - Therapeutic Modalities in Physical Therapy (1st 7 weeks).....3
PTA 200 - Pathology & Rehabilitation of Orthopedic Conditions Across the Lifespan and Continuum of Care (2nd 7-week session).....5
PTA 201 - Physical Therapist Assistant Roles, Relationships and Responsibilities Seminar I (2nd 7-week session).....2

**13 Credit Hours**

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**Fifth Semester (fall)**

PTA 221 - Clinical Education I (1st 7-week session).....2
PTA 202 - Physical Therapist Assistant Roles, Relationships and Responsibilities Seminar II(1st 7-week session).....1
PTA 210 - Pathology & Rehabilitation of Neurological Conditions Across the Lifespan and Continuum of Care (2nd 7-week session).....5
PTA 220 - Pathology & Rehabilitation of Special Populations & Conditions Across the Lifespan and Continuum of Care (2nd 7-week session).....4

**12 Credit Hours**

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**Sixth Semester (spring)**

PTA 222 - Clinical Education II (1st 7 weeks).....2
PTA 203 - Physical Therapist Assistant Roles, Relationships and Responsibilities Seminar III (1st 7 weeks).....1
PTA 223 - Clinical Education III (2nd 7-week session).....2
PTA 204 - Physical Therapist Assistant Roles, Relationships and Responsibilities Seminar IV (2nd 7-week session).....1

**6 Credit Hours**

**Total Semester Hours Credit: 70**

Courses in the Physical Therapist Assistant Program Pre-Technical Phase and Technical Phase are listed in sequential order. All Pre-Technical courses must be completed before enrollment into the Technical Phase courses. The Pre-Technical courses BIO 131, BIO 132, PHY 115, ESW 222 and ESW 224 must be completed within five years before enrollment into the Technical Phase courses. The PTA Technical Phase is a twelve month, continuous phase consisting of three sequential semesters. Students are admitted to the Technical Phase Physical Therapist Assistant Program for the summer each year.

## TOTAL PROGRAM CREDITS: 70

## RADIOGRAPHY (A.A.S.)

### Purpose

The Radiography Program provides a comprehensive curriculum and educational experiences for students who wish to become integral members of the health care team. The program affords each student with educational opportunities that develop competence in critical thinking, technical skills and interpersonal communication necessary for the practice of diagnostic radiography. Competence is chieved through the integrated use of lecture, laboratory activities, small group presentations, research, and clinical education experiences. Students gain proficiency in the safe application of the principles of ionizing radiation in both diagnostic and fluoroscopic procedures. The Joint Review Committee on Education in Radiologic Technology (JRCERT), 20 N. Wacker Drive, Suite 2850, Chicago, IL 60602, accredits this program. Graduates are eligible to take the national certifying examination administered by the American Registry of Radiologic Technologists (ARRT).

### Program Outcomes

- Participate in lecture, laboratory activities, small group presentations, research, and clinical education experiences;
- Develop the critical thinking, technical and interpersonal communication skills needed for the practice of diagnostic radiography;
- Learn how to safely apply the principles of ionizing radiation in both diagnostic and fluoroscopic procedures.

Although more than 60 percent of all radiography jobs are in hospitals, you can also work in physician's offices, medical and diagnostic laboratories, including diagnostic imaging centers, and outpatient care centers. Employment of radiologic technologists is expected to increase 15 percent in the next decade–faster than average for all occupations.

Additional information on advanced placement tuition and fees, student employment, transfer credits and credit for life experience, withdrawals and refunds can be obtained by contacting the Student Success Center at studentsuccess@mc3.edu. Check the academic calendar for program dates.

### Program Curriculum

**General Education Requirements**

CMS 110 or CMS 120 - Speech Communication or Public Speaking.....3
ENG 101 - English Composition I.....3
ENG 115 - Writing for Technical Communication.....3
Quantitative Reasoning - Quantitative Reasoning Elective: MAT 100, MAT 106, or higher.....3
Cultural Awareness and Diversity - Cultural Awareness and Diversity Elective choose one: SOC 103, SOC 244, HIS 101, HIS 102 or PHI 120.....3
PSY 101 - Introduction to Psychology.....3

**Major Requirements**

BIO 131 - Anatomy and Physiology I.....4
BIO 132 - Anatomy and Physiology II.....4
RAD 100 - Introduction to Radiography.....3
RAD 102 - Radiographic Exposure and Technique I.....3
RAD 103 - Radiation Protection and Biology.....2
RAD 104 - Clinical Education I.....3
RAD 105 - Radiation Physics.....3
RAD 111 - Radiographic Procedures I.....3
RAD 113 - Principles of Digital Imaging.....3
RAD 114 - Clinical Education II.....3
RAD 121 - Radiographic Procedures II.....3
RAD 124 - Clinical Education III.....4
RAD 214 - Clinical Education IV.....4
RAD 221 - Radiographic Procedures III.....3
RAD 224 - Clinical Education V.....4
RAD 230 - Radiographic Pathology.....2
RAD 250 - Professional Issues in Radiography.....1

### Accreditation

The Radiography Associate of Applied Science degree 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
email: mail@jrcert.org
website: jrcert.org

Graduates are eligible to take the national certifying examination administered by the American Registry of Radiologic Technologists (ARRT).

### Special Admission Requirements

Students wishing to participate in the Radiography Program must present the required credentials, and are required to meet with an academic advisor prior to enrolling in RAD 100.

### Mission & Goals

The Associate in Applied Science degree in Radiography has a mission consistent with the mission of Montgomery County Community College. The program recognizes that students differ in their needs, interests, and aspirations. As a result, the program is organized to assist and prepare students for the level of technical competence required to become highly qualified and successful radiographers. The program will provide students with meaningful educational experiences.

## TOTAL PROGRAM CREDITS: 70

## SURGICAL TECHNOLOGY (A.A.S.)

### Purpose

The Surgical Technology AAS Program is designed to prepare graduates who function as a healthcare team member under the supervision of registered professional nurses or licensed physicians.Students learn to prepare the operating room, instruments, equipment and the patient for

surgical intervention as well as acquire surgical technology operating room skills essential to maintain optimal sterile technique. The Program integrates theory, laboratory simulations and clinical experiences to guide students in achieving surgical technology competence. Surgical Technology students are competitive within the job market through completion of the national certifying examination administered by The National Board of Surgical Technology and Surgical Assisting (NBSTSA) prior to graduation. Graduates seek employment in hospital operating rooms, Physician office procedure rooms, freestanding ambulatory units, delivery rooms, sterile processing areas, and acute critical care facilities. Many surgical technologists are directly employed by surgeons and may choose to specialize in certain types of surgery. Others become sale representatives for companies and manufacturers of surgical equipment and supplies. The Surgical Technology Program is fully accredited by The Commission on Accreditation of Allied Health Education Programs (CAAHEP).

Additional information regarding CAAHEP can be obtained by contacting the organization directly at 25400 U.S. Highway 19 North, Suite 158, Clearwater, FL 33763, telephone 727-210-2350, www.caahep.org.

### Program Outcomes

- Employ appropriate ethical and professional values when providing surgical technology services to diverse populations;
- Perform necessary activities to prepare patients for surgery utilizing the principles of aseptic technique, critical thinking, and problem solving in order to adapt to the changing surgical environment;
- Demonstrate the ability to prioritize and organize the surgical field, while considering the physiology and urgency of the patient care needs;
- Incorporate technical skills to assemble and operate instruments, equipment, and supplies for the delivery of patient care during all specialties of surgery;
- Integrate knowledge from the required courses within this program to the role of the surgical technologist in caring for diverse clients;
- Communicate clearly and effectively utilizing the most current research tools;
- Express a commitment to lifelong learning and continued professional development;
- Meet the minimum eligibility requirements for the national certifying examination administered by the NBSTSA.

### Program Curriculum

**General Education Requirements**

ENG 101 - English Composition I.....3
ENG 102, ENG 115, or ENG 117 - English Composition II, Writing for Technical Communication, or Writing for Business and Industry.....3
Elective - Oral & Written Communication.....3
Elective - Aesthetic Sensibility.....3
Elective - Cultural Awareness and Diversity.....3
SOC 244 - Sociology of Death and Dying.....3

**Major Requirements**

BIO 131 - Anatomy and Physiology I.....4
BIO 132 - Anatomy and Physiology II.....4
BIO 140 - Microbiology and Immunology.....4
SUR 105 - Surgical Technology I.....7
SUR 106 - Surgical Technology II.....8
SUR 205 - Surgical Technology III.....10
SUR 206 - Surgical Technology IV.....7

### Accreditation

The Surgical Technology Program is fully accredited by The Commission on Accreditation of Allied Health Education Programs (CAAHEP). Additional information regarding CAAHEP can be obtained by contacting the organization directly.

The Commission on Accreditation of Allied Health Education Programs
25400 U.S. Highway 19 North
Suite 158
Clearwater, FL 33763
phone:727-210-2350
website: caahep.org

### Special Admission Requirements

All applicants seeking admission to the Surgical Technology Program are required to present specific credentials matching programs admission guidelines. The Surgical Technology Program is a year-round, 16-month, continuous program consisting of four sequential semesters. Students are admitted to the Program in the fall each year.

### Program Mission

The mission of the Surgical Technology Program is congruent with the Mission and Philosophy statement of Montgomery County Community College. The Surgical Technology program is designed to prepare a competent entry-level surgical technologist in the cognitive (knowledge), psychomotor (skills), and affective (behavior) learning domains. Recognizing student varying educational and career goals, the Surgical Technology curriculum offers an Associate in Applied Science degree through courses that are sequentially structured to provide a logical, progressive pedagogical approach to the didactic and clinical study of surgical technology.

2017 Data: 5 students taking Exam / 4 students passing Exam / 1 students failing Exam / 80% pass rate.

### TOTAL PROGRAM CREDITS: 62

# LIBERAL STUDIES

## HISTORY (A.A.)

### Purpose

The College's History AA degree curriculum integrates a broad spectrum of courses in the social sciences and related disciplines to prepare students who wish to transfer to four-year colleges or universities to continue their study of history. The program is ideal for students who wish to pursue careers in education, law, Foreign Service, research, communication and information management, as well as for jobs in the Federal, state and local government and at historical sites. The program meets the competencies and requirements specified by the Pennsylvania Department of Education's Transfer Agreement Oversight Committee (TAOC) for seamless transfer to schools in the Pennsylvania State System of Higher Education (PASSHE). The College offers History courses at both its Central Campus in Blue Bell, West Campus in Pottstown, as well as online through its Virtual Campus.

### Program Outcomes

- Engage in historical inquiry, research and analysis;

- Craft historical narrative and argument through the use of primary and secondary historical evidence;
- Analyze historical topics, trends and issues;
- Apply historical knowledge to analyze contemporary geopolitical and social trends.

Upon earning your associate degree, you can work in federal, state and local government or at historical sites. You can also transfer to a four-year college to pursue such majors as education, history, social or library sciences, law, foreign service, journalism and information management. The program meets the requirements mandated by the Pennsylvania Department of Education's Transfer Agreement Oversight Committee (TAOC) for a seamless transfer to schools in the Pennsylvania State Systems of Higher Education (PASSHE).

### Program Curriculum

**General Education Requirements**

ENG 101 - English Composition I....3
PSY 101 - Introduction to Psychology....3
Elective - MAT 106, MAT 140 or MAT 190....3
Electives - Foreign Language....6
ANT 104 or SOC 101 - Introduction toCultural Anthropology or Introduction to Sociology....3
ENG 102 - English Composition II....3
CMS 120 - Public Speaking....3
Elective - BIO 121, CHE 121 or PHY 121....4
Elective - BIO 122, CHE 122 or PHY 122....4
Elective - Technological Fluency....3
Elective - Aesthetic Sensibility....3

**Major Requirements**

Elective - GEO 110, GEO 130 or GEO 135....3
Electives - History Electives....6
HIS 101 - History of Western Civilization I....3
HIS 102 or HIS 122 - History of Western Civilization II or World Civilizations II: From 1500....3
HIS 203 - History of the U.S. to 1877....3
HIS 205 - History of the U.S. from 1877....3
POL 101 or POL 124 - Introduction to Political Science or American National Government....3

### TOTAL PROGRAM CREDITS: 62

## LIBERAL STUDIES (A.A.)

### Purpose

The Liberal Studies program is designed primarily for those students who plan to transfer to a four-year institution but who remain undecided about a major.

### Program Outcomes

- Demonstrate written and spoken communication skills;
- Use mathematical concepts to solve problems and make decisions;
- Demonstrate technology skills essential for working and living in today's society;
- Demonstrate general knowledge across the broad categories of intellectual heritage, artistic expression, the natural and physical world, human behavior;
- Explain diverse perspectives, cultures and values;
- Use ethical perspectives to inform decisions.

### Program Curriculum

**General Education Requirements**

ENG 101 - English Composition I....3
ENG 102 - English Composition II....3
Elective - ....3
Elective - Quantitative Reasoning....3
Elective - Technological Fluency....3
Elective - Social Sciences Elective: choose from ECO 121, ECO 122, ESW 207, GEO 110, GEO 130, POL 101, POL 124, PSY 101, PSY 137 or SOC 101....3
HIS Elective - Western Civilization or U.S. History - HIS 101, HIS 102. HIS 203 or HIS 205....3
Elective - Scientific Reasoning....4
Elective - Aesthetic Sensibility....3
Elective - Cultural Awareness and Diversity....3
Elective - Ethical Perspectives....3

**Electives**

Electives - Electives....26 - 27

### TOTAL PROGRAM CREDITS: 60-61

# PUBLIC & SOCIAL SERVICES

## ADDICTIONS (A.A.S.)

### Purpose

The Associate of Applied Science (AAS) degree in Human Services is designed to prepare graduates for careers as human service professionals in mental health agencies, developmental disability programs, addictions programs, public and private schools for the disabled, and programs for the aging. Employment opportunities include case management, youth and family support professional, social services coordinator, residential counselor, behavioral management aid, addictions specialist, child advocate, juvenile court liaison, domestic violence liaison, home health aide, group home professional, crisis intervention specialist, community education coordinator, program coordinator, adult day care assistant or coordinator, life skills instructor, consumer advocate, social service aide, therapeutic recreation assistant, intake interviewer, community outreach worker, social work assistant, community action professional, halfway house coordinator, rehabilitation case professional, residential manager, and volunteer coordinator.

### Program Outcomes

- Demonstrate the knowledge and skills needed to work in direct service delivery in human service agencies and programs;
- Illustrate a clear understanding of human behavior in all age groups;
- Explain and apply appropriate skills necessary for a micro/macro perspective in human service delivery systems;
- Assess and summarize concepts of psychological and sociological theories necessary for intervention techniques.

### Accreditation

Our Human Services A.A.S. program is accredited by the Council for Standards in Human Service Education effective June 2018 through

June 2023. For further information view our student achievement indicators and the roles and responsibilities of our administration and faculty.

### Program Curriculum

**General Education Requirements**

ENG 101 - English Composition I.....3
ENG 102 - English Composition II.....3
Elective - Quantitative Reasoning.....3
Elective - Aesthetic Sensibility.....3
Elective - Scientific Reasoning.....4

**Major Requirements**

HSW 101 - Introduction to Human Services.....3
HSW 102 - Theories of Group Counseling.....3
HSW 105/SOC-105 - Social Policy and Ethics in Human Services.....3
HSW 130 or HSW 155 - Introduction to Youth and Family or Introduction to Aging.....3
HSW 160 - The Middle Years.....3
HSW 202 - Theories of Individual Counseling.....3
HSW 203/PSY-203 - Assessment and Documentation in Human Services.....3
HSW 205 - Volunteer Administration.....3
HSW 210 - Professional Development in Human Services.....3
HSW 211 - Human Services Practicum II.....6
HSW 220, HSW 250 or HSW 219 - Introduction to Adjunctive Therapies, Psychology of Aging or Drug and Alcohol Treatment Process.....3
PSY 101 - Introduction to Psychology.....3
PSY 215 - Abnormal Psychology.....3
PSY 217 - Drugs - Their Use and Abuse.....3
SOC 101 - Introduction to Sociology.....3

## TOTAL PROGRAM CREDITS: 64

## ADDICTIONS (CERTIFICATE)

### Purpose

The Drug and Alcohol Studies Certificate is designed for students who may not wish to pursue an associate degree in Human Services at this time, for students who have previously earned college degrees in other disciplines who may be contemplating a change of career or career focus, and for those working toward their CAC which is awarded by the Pennsylvania Certification Board (PCB)*.

This program is designed with enough flexibility to meet the needs of beginning students as well as those with more experience in the substance abuse field.

### Program Outcomes

- Understand human behavior across age groups;
- Select and apply psychological and sociological theories in intervention techniques;
- Explain and execute a micro/macro approach to the treatment and prevention of drug/alcohol abuse and addictions;
- Have the knowledge and skills needed to work in direct service at human service agencies.

During our two-semester program you will study social policies, theories of counseling and assessment techniques. You will also learn about drug and alcohol treatment plans and adjunctive therapies. Your coursework will prepare you for a human services practicum where you receive hands-on training at a community agency.

### Program Curriculum

ENG 101 - English Composition I.....3
HSW 101 - Introduction to Human Services and Helping Profession.....3
HSW 102 or HSW 202 - Theories of Counseling or Theories of Individual Counseling.....3
HSW 203 - Assessment and Documentation in Human Services.....3
HSW 205 - Volunteer Administration.....3
HSW 210 - Professional Development in Human Services.....3
HSW 211 - Human Services Practicum.....3
HSW 219 - The Drug and Alcohol Treatment Process.....3
HSW 220 - Introduction to Adjunctive Therapies.....3
PSY 217 - Drugs - Their Use and Abuse.....3
SOC 105 - Social Policy and Ethics in Human Services.....3

Please note that you may have to take placement tests prior to enrolling in certain courses.

The Human Services Program is transferrable to a number of area colleges. Substitutions must be approved by the Program Coordinator.

* The Pennsylvania Certification Board (PCB) certifies both addiction counselors and prevention specialists. Course work from the program may fulfill a portion of those PCB requirements. The PCB requires Certified Addictions Counselors to complete additional hours of continuing education and training for recertification. Selected courses from this HSW program may be used for part of this requirement. For further information regarding education requirements for recertification, contact PCB at 717-540-4455.

## TOTAL PROGRAM CREDITS: 36

## CHILD, YOUTH AND FAMILY SERVICES (A.A.S.)

### Purpose

The Associate of Applied Science (AAS) degree in Human Services is designed to prepare graduates for careers as human service professionals in mental health agencies, developmental disability programs, addictions programs, public and private schools for the disabled, and programs for the aging. Employment opportunities include case management, youth and family support professional, social services coordinator, residential counselor, behavioral management aid, addictions specialist, child advocate, juvenile court liaison, domestic violence liaison, home health aide, group home professional, crisis intervention specialist, community education coordinator, program coordinator, adult day care assistant or coordinator, life skills instructor, consumer advocate, social service aide, therapeutic recreation assistant, intake interviewer, community outreach worker, social work assistant, community action professional, halfway house coordinator, rehabilitation case professional, residential manager, and volunteer coordinator.

### Program Outcomes

- Demonstrate the knowledge and skills needed to work in direct service delivery in human service agencies and programs;
- Illustrate a clear understanding of human behavior in all age groups;
- Explain and apply appropriate skills necessary for a micro/macro perspective in human service delivery systems;
- Assess and summarize concepts of psychological and sociological theories necessary for intervention techniques.

### Accreditation

Our Human Services A.A.S. program is accredited by the Council for Standards in Human Service Education effective June 2018 through June 2023.

View our student achievement indicators and the roles and responsibilities of our administration and faculty.

### Program Curriculum

**General Education Requirements**

ENG 101 - English Composition I....3
ENG 102 - English Composition II....3
Elective - Quantitative Reasoning....3
Elective - Aesthetic Sensibility....3
Elective - Scientific Reasoning....4

**Major Requirements**

CJS 235 - The Juvenile Justice System....3
HSW 101 - Introduction to Human Services....3
HSW 102 - Theories of Group Counseling....3
HSW 105/SOC-105 - Social Policy and Ethics in Human Services....3
HSW 130 or HSW 155 - H Introduction to Youth and Family or Introduction to Aging....3
HSW 202 - Theories of Individual Counseling....3
HSW 203/PSY-203 - Assessment and Documentation in Human Services....3
HSW 205 - Volunteer Administration....3
HSW 210 - Professional Development in Human Services....3
HSW 211 - Human Services Practicum II....6
HSW 216/PSY-216 - Assessment Techniques for Child/Youth....3
HSW 220 - Introduction to Adjunctive Therapies....3
PSY 101 - Introduction to Psychology....3
PSY 215 - Abnormal Psychology....3
SOC 101 - Introduction to Sociology....3

## TOTAL PROGRAM CREDITS: 64

## CRIMINAL JUSTICE (A.S.)

### Purpose

The Criminal Justice Studies A.S. Program is a theory and knowledge based curriculum that offers comprehensive preparation for transfer to a four-year baccalaureate program in Criminal Justice, as well as a wide range of career options in the criminal justice system.

Many of our students either go on to, or come to us from, Act 120 municipal police training or Act 2 deputy sheriffs' training. Our graduates pursue careers in local law enforcement, the federal services, corrections, adult and juvenile probation and parole, court administration, and the private security sector.

Many of our graduates go on to attain four-year degrees in criminal justice or allied fields of study. Some pursue pre-law, law school, and eventual careers in the prosecutorial or criminal defense bars.

The Criminal Justice AS curriculum introduces students to the rewards of public service and to the personal satisfaction and honor that a career in public service can offer.

The curriculum also offers in-service professionals already in the field, an opportunity for further educational and professional growth.

### Program Outcomes

- Demonstrate an appreciation of and sensitivity toward the ethnic, racial and gender diversity of American society, and an understanding of how these values can be reflected and projected by the criminal justice system;
- Demonstrate a thorough understanding of the functions and roles of all major aspects of the United States criminal justice system in society;
- Demonstrate an appreciation of the cardinal concept of "due process of law" which constitutes the basic standards of fairness and decency that are necessary for the maintenance of free society and an understanding of the constitutional underpinnings, theory and structure of our body of criminal law, procedure, and the rules of evidence;
- Demonstrate a firm grasp of the constitutional constraints under which police and prosecutors must operate in a free society, and the reasoning behind these limitations;
- Identify and analyze the ethical issues that arise in each component of the criminal justice system.

Because Montco meets the requirements of the Pennsylvania Department of Education's Transfer Agreement Oversight Committee (TAOC), you can seamlessly transfer your credits to schools in the Pennsylvania State System of Higher Education (PASSHE). We will work with you to ensure success in whatever path you choose.

### Program Curriculum

**General Education Requirements**

CMS 110 or CMS 120 - Speech Communication or Public Speaking....3
ENG 101 - English Composition I....3
ENG 115 or ENG 102 - Writing for Technical Communication or English Composition II....3
MAT 106 - Mathematics Applications....3
Elective - Aesthetic Sensibility....3
Scientific Reasoning Elective - AST 120 or GLG 121 or PHY 120, BIO 121, CHE 121, CHE 151, PHY 21 or PHY 151....4

**Major Requirements**

CJS 100 - Introduction to Criminal Justice....3
CJS 105 - Criminal Law....3
CJS 107 - Criminal Procedure and Rules of Evidence....3
CJS 205 - Ethics and the American Criminal Justice System....3
CJS 220 - Criminology....3
CJS 235 - Introduction to Juvenile Justice System....3
CJS 240 - The Correctional Process....3
CJS Elective - CJS Elective....3
ESW 245 - Safety and First Aid....3
HIS 203 - History of the U.S. to 1877....3
HIS 205 - History of the U.S. from 1877....3
POL 124 - American National Government....3
SOC 101 - Introduction to Sociology....3

**Electives**

Elective - Elective....6

## TOTAL PROGRAM CREDITS: 64

## GERONTOLOGY (CERTIFICATE)

### Purpose

The Gerontology Certificate program is designed to prepare graduates for human services careers in programs, facilities, and agencies for the older adult. These include: administrator, activities director, adult day care provider, adult education teacher, case worker, consumer advocate, counselor, estate financial planner, family service consultant, geriatric mental health worker, gerontological social worker, human resource specialist, industrial gerontologist, insurance specialist, retirement home director, program planner, researcher, senior center manager, senior employment specialist, social service consultant, social security specialist, and volunteer coordinator.

### Program Outcomes

- Demonstrate all of the skills and knowledge needed to obtain entry level employment in an agency or facility for the older adult.

### Program Curriculum

ENG 101 - English Composition I..... 3
HSW 101 - Introduction to Human Services and Helping Profession..... 3
HSW 155 - Introduction to Aging..... 3
HSW 203 or PSY 203 - Assessment and Documentation in Human Services..... 3
HSW 205 - Volunteer Administration..... 3
HSW 206 - Hospice: Concepts and Skills..... 3
HSW 210 - Professional Development in Human Services..... 3
HSW 211 - Human Services Practicum..... 6
HSW 250 - Psychology of Aging..... 3
HSW 254 - Aging in American Society..... 3
SOC 105 - Social Policy and Ethics in Human Services..... 3

**TOTAL PROGRAM CREDITS: 36**

## GIS OPERATIONS (CERTIFICATE)

### Purpose

Fascinated by mapping and the capture, manipulation and analysis of geographic information, Consider earning a GIS Operations Certificate of Completion. In just three courses and nine credits you will learn how to operate geographic information systems (GIS) while using ESRI'scutting edge ArcGIS software.

### Program Outcomes

- Articulate in writing Geographic Information System (GIS) concepts, components, and requirements; and spatial analytic processes, cartographic design processes, and their results;
- Evaluate in writing various data sources' resolution, timeliness, availability and utility, and various map projections, map symbols, and GIS map products;
- Geo-code street addresses and latitude/longitude coordinates, and demonstrate knowledge of other geo-coding systems including Universal Transverse Mercator, State Plane Coordinate Systems, U.S. Public Lands Survey, and image geo-referencing;
- Predict local risks and resources by conducting geographic analysis through selection by location, intersection and union overlays, cluster analysis, absolute and relative distance measures, and surface interpolation in GIS;
- Apply "best" design standards for a variety of map symbols, through the design, compilation, and production of thematic maps that are physiologically accessible and psychologically meaningful.

By the end of the program, you will not only have a certificate but also an electronic portfolio of your mastery of GIS.

### Program Curriculum

GEO 210 - Introduction to GIS..... 3
GEO 220 - Map Design in GIS..... 3
GEO 230 - GIS Applications Workshop..... 3

**TOTAL PROGRAM CREDITS: 9**

## HUMAN SERVICES (A.A.S.)

### Purpose

The Associate of Applied Science Degree in Human Services is designed to prepare graduates for careers as human service professionals in mental health agencies, developmental disability programs, addictions programs, public and private schools for the disabled, and programs for the aging.

Employment opportunities include case management, youth and family support professional, social services coordinator, residential counselor, behavioral management aid, addictions specialist, child advocate, juvenile court liaison, domestic violence liaison, home health aide, group home professional, crisis intervention specialist, community education coordinator, program coordinator, adult day care assistant or coordinator, life skills instructor, consumer advocate, social service aide, therapeutic recreation assistant, intake interviewer, community outreach worker, social work assistant, community action professional, halfway house coordinator, rehabilitation case professional, residential manager, and volunteer coordinator.

### Program Outcomes

- Demonstrate the knowledge and skills needed to work in direct service delivery in human service agencies and programs;
- Illustrate a clear understanding of human behavior in all age groups;
- Explain and apply appropriate skills necessary for a micro/macro perspective in human service delivery systems;
- Assess and summarize concepts of psychological and sociological theories necessary for intervention techniques.

Depending upon your interests, you may pursue a concentration in Addictions, Gerontology or Children, Youth and Family Services.

Human Services courses are offered through accelerated, online, hybrid and traditional classroom formats. The Human Services Program is a career program designed for easy transfer to local colleges and universities for bachelor's and/or master's degree programs.

### Accreditation

Our Human Services A.A.S. program is accredited by the Council for Standards in Human Service Education effective June 2018 through June 2023.

For additional information, view our student achievement indicators and the roles and responsibilities of our administration and faculty.

### Program Curriculum

**General Education Requirements**

ENG 101 - English Composition I..... 3
ENG 102 - English Composition II..... 3
Elective - Quantitative Reasoning..... 3

Elective - Aesthetic Sensibility..... 3
Elective - Scientific Reasoning.....4

**Major Requirements**
HSW 101 - Introduction to Human Services..... 3
HSW 102 - Theories of Group Counseling..... 3
HSW 105 or SOC 105 - Social Policy and Ethics in Human Services.....3
HSW 130 or HSW 155 - Introduction to Youth and Family or Introduction to Aging.....3
HSW 160, PSY 217, HSW 216 or HSW 254 - The Middle Years, Drug-Use and Abuse, Assessment Techniques for Child/Youth or Aging in the U.S.....3
HSW 202 - Theories of Individual Counseling..... 3
HSW 203 or PSY 203 - Assessment and Documentation in Human Services..... 3
HSW 205 - Volunteer Administration.....3
HSW 206, HSW 220, PSY 217 or PSY 206 - Hospice, Introduction to Adjunctive Therapies, Drug-Use and Abuse or Lifespan Development.....3
HSW 210 - Professional Development in Human Services.....3
HSW 211 - Human Services Practicum II..... 6
HSW 220, HSW 250 or HSW 219 - Introduction to Adjunctive Therapies, Psychology of Aging or Drug and Alcohol Treatment Process.....3
PSY 101 - Introduction to Psychology..... 3
PSY 215 - Abnormal Psychology.....3
SOC 101 - Introduction to Sociology..... 3

## TOTAL PROGRAM CREDITS: 64

## HUMAN SERVICES (CERTIFICATE)

### Purpose
The Certificate in Human Services is designed to prepare graduates for entry-level human services careers in a variety of community settings. The certificate provides sufficient flexibility to meet the needs of beginning students as well as those working in the human services field.

### Program Outcomes
- Demonstrate the knowledge and skills needed to work in direct service delivery in human service agencies and programs;
- Illustrate a clear understanding of human behavior in all age groups;
- Explain and apply appropriate skills necessary for a micro/macro perspective in human service delivery systems;
- Assess and summarize concepts of psychological and sociological theories necessary for intervention techniques.

Our program is set up to educate both new students and those already working in the human services field. Note that you may have to take a placement test before enrolling in some courses. Please see the college catalog for placement testing guidelines.

### Program Curriculum
ENG 101 - English Composition I..... 3
HSW 101 - Introduction to Human Services and Helping Profession.....3
HSW 102 or HSW 202 - Theories of Group Counseling or Theories of Individual Counseling..... 3
HSW 203 or PSY 203 - Assessment and Documentation in Human Services..... 3
HSW 205 - Volunteer Administration.....3
HSW 210 - Professional Development in Human Services.....3
HSW 211 - Human Services Practicum..... 6
PSY 101 - Introduction to Psychology..... 3
SOC 101 - Introduction to Sociology..... 3
SOC 105 - Social Policy and Ethics in Human Services.....3

Note: Students may have to take placement tests prior to enrolling in some of the courses above. Please see College Catalog for placement testing guidelines.

## TOTAL PROGRAM CREDITS: 36

## HUMAN SERVICES - GERONTOLOGY (A.A.S.)

### Purpose
The Associate of Applied Science (AAS) degree in Human Services is designed to prepare graduates for careers as human service professionals in mental health agencies, developmental disability programs, addictions programs, public and private schools for the disabled, and programs for the aging. Employment opportunities include case management, youth and family support professional, social services coordinator, residential counselor, behavioral management aid, addictions specialist, child advocate, juvenile court liaison, domestic violence liaison, home health aide, group home professional, crisis intervention specialist, community education coordinator, program coordinator, adult day care assistant or coordinator, life skills instructor, consumer advocate, social service aide, therapeutic recreation assistant, intake interviewer, community outreach worker, social work assistant, community action professional, halfway house coordinator, rehabilitation case professional, residential manager, and volunteer coordinator.

### Program Outcomes
- Demonstrate the knowledge and skills needed to work in direct service delivery in human service agencies and programs;
- Illustrate a clear understanding of human behavior in all age groups;
- Explain and apply appropriate skills necessary for a micro/macro perspective in human service delivery systems;
- Assess and summarize concepts of psychological and sociological theories necessary for intervention techniques.

### Accreditation
Our Human Services A.A.S. program is accredited by the Council for Standards in Human Service Education effective June 2018 through June 2023.
For further information, view our student achievement indicators and the roles and responsibilities of our administration and faculty.

### Program Curriculum
**General Education Requirements**
ENG 101 - English Composition I.....3
ENG 102 - English Composition II.....3
Elective - Quantitative Reasoning.....3
Elective - Aesthetic Sensibility..... 3
Elective - Scientific Reasoning.....4

**Major Requirements**
HSW 101 - Introduction to Human Services..... 3
HSW 102 - Theories of Group Counseling..... 3
HSW 105 or SOC 105 - Social Policy and Ethics in Human Services.....3
HSW 155 - Introduction to Aging..... 3
HSW 160, PSY 217, HSW 216 or HSW 254 - The Middle Years, Drug-Use and Abuse, Assessment Techniques for Child/Youth or Aging in the U.S.....3
HSW 202 - Theories of Individual Counseling..... 3

HSW 203 or PSY 203 - Assessment and Documentation in Human Services....3
HSW 205 - Volunteer Administration....3
HSW 206 - Hospice: Concepts and Skills....3
HSW 210 - Professional Development in Human Services....3
HSW 211 - Human Services Practicum II....6
HSW 250 or PSY 250 - Psychology of Aging: Helping Skills....3
PSY 101 - Introduction to Psychology....3
PSY 215 - Abnormal Psychology....3
SOC 101 - Introduction to Sociology....3

**TOTAL PROGRAM CREDITS: 64**

## PSYCHOLOGY (A.S.)

### Purpose

The Psychology A.S. program is designed to prepare students for transfer to a four-year college or university as a psychology major. By integrating a broad spectrum of courses in psychology and other disciplines, the curriculum prepares students for continued study in preparation for advanced degrees and a variety of careers.

### Program Outcomes

- Evaluate research methods and conclusions derived from that research;
- Apply psychological knowledge (concepts, theories, and research) to self-understanding and problem-solving;
- Differentiate the contributions of culture, individual experience, physiology, and development that may influence human behavior and experience;
- Apply the key assumptions of the major theoretical frameworks in psychology to the understanding of human behavior.

Montco's range of classes in psychology, social sciences and the liberal arts enables you to transfer seamlessly to a four-year institution. With a foundation in psychology you can pursue an array of advanced degrees and careers. Talk to an advisor to learn more about careers in psychology.

To accommodate our students' schedules, we offer this program's coursework at Montco's Central and West campuses as well as online.

### Program Curriculum

**General Education Requirements**

ENG 101 - English Composition I....3
ENG 102 - English Composition II....3
HIS 101 - History of Western Civilization I....3
HIS 102 - History of Western Civilization II....3
MAT 106 - Mathematics Applications....3
Elective - Technological Fluency....3
SOC 101 or ANT 104 - Introduction to Sociology or Cultural Anthropology....3
CMS 110 or CMS 120 - Speech Communication or Public Speaking....3
BIO 120 or BIO 121 - Concepts of Biology or General Biology I....4
Elective - Foreign Language Elective....3
Elective - Aesthetic Sensibility....3

**Major Requirements**

Electives - PSY Electives....9
MAT 130 - Probability and Statistics....4
POL 124 - American National Government....3
PSY 101 - Introduction to Psychology....3
PSY 206 - Human Development....3
PSY 215 - Abnormal Psychology....3
PSY 231 - Research Methods in Psychology....3

**TOTAL PROGRAM CREDITS: 63**

## PUBLIC HEALTH (A.S.)

### Purpose

This transfer program is designed to prepare students with the solid foundation necessary for successful advancement of study in public health particularly as it relates to the roles of health educator and health administrator. Applying population perspectives, students examine social, environmental, and behavioral determinants of health in the prevention and control of disease.

### Program Outcomes

- Apply public health principles to public health related issues;
- Analyze how the perspectives and values held by diverse individuals, communities, and cultures impact health behaviors, health decisions, and health practices;
- Analyze the ethical problems, ambiguities, controversies, and assumptions in public health practices, systems, and policies;
- Prepare a plan for continuing education within Public Health.

### Program Curriculum

**General Education Requirements**

CMS 110 or CMS 120 - Speech Communication or Public Speaking....3
ENG 101 - English Composition I....3
ENG 102 - English Composition II....3
MAT 106 - Mathematics Applications....3
Technological Fluency - Technological Fluency Elective....3
Aesthetic Sensibility - Aesthetic Sensibility Elective....3

**Major Requirements**

BIO 115 - Environmental Biology....3
BIO 121 - General Biology I....4
ESW 206 - Basic Nutrition....3
ESW 236 - Personal Health and Wellness....3
MAT 131 - Introduction to Statistics I....3
PBH 101 - Introduction to Public Health....3
PBH 102 - Communication in Public Health....3
PBH 200 - Public Health Education....3
PBH 201 - Public Health Administration and U.S. Healthcare System....3
PBH 202 - Environmental Health....3
SOC 101 - Introduction to Sociology....3
SOC 103 - Social Problems....3

**Electives**

Electives - Electives....6

**TOTAL PROGRAM CREDITS: 61**

# SCIENCE & MATH

## BIOTECHNOLOGY (A.A.S.)

### Purpose

The program is designed to prepare students through rigorous study for employment in entry-level positions available at biotechnology and pharmaceutical companies, as well as research and quality control laboratories. The areas for career opportunities include but are not limited to basic research in a drug discovery or an academic environment, manufacturing, and clinical development. The program is intended to build upon basic principles of biology and chemistry acquired at the high school and early college level. Graduates are prepared for positions as biotechnology, laboratory or biomanufacturing technicians. With advising, graduates may also transfer into 4-year Biotechnology, Biochemistry or Biomedical programs.

### Program Outcomes

- Demonstrate a theoretical and practical (i.e., hands-on) knowledge of state-of-the-art tools used in biotechnology laboratories, including molecular and cellular biological techniques and use of various laboratory instrumentation;
- Demonstrate an understanding of the biotechnology process, from identification of a molecule involved in a disease process to the end-stage marketing of a product;
- Demonstrate thorough knowledge of the biotechnology manufacturing process;
- Demonstrate potential for teamwork, and good oral and written communication skills;
- Demonstrate familiarity with the types of career opportunities available in the biotechnology industry.

### Program Curriculum (Transfer Pathway)

**General Education Requirements**

ENG 101 - English Composition I....3
ENG 102 - English Composition II....3
MAT 161 - Pre-Calculus I....4
CMS 120 - Public Speaking....3
MAT 130 or MAT 131 - Probability and Statistics or Introduction to Statistics I....3 - 4
Elective - Aesthetic Sensibility....3
Elective - Cultural Awareness and Diversity....3

**Major Requirements**

BIO 151 - Principles of Biology I....4
BIO 152 - Principles of Biology II....4
BIT 120 - Introduction to Biotechnology....4
BIT 123 - Techniques and Instrumentation for Biotechnology....4
BIT 220 - Biotechnology Research....4
BIT 232 - Biomanufacturing....4
CHE 151 - Principles of Chemistry I....4
CHE 152 - Principles of Chemistry II....4
CHE 261 - Organic Chemistry I....4
CHE 262` - Organic Chemistry II or Lab Science Elective....4

### Program Curriculum (Career-Ready Pathway)

**General Education Requirements**

ENG 101 - English Composition I....3
ENG 115 - Writing for Technical Communication....3
MAT 100 - Intermediate Algebra....3
CMS 120 - Public Speaking....3
MAT 130 or MAT 131 - Probability and Statistics or Introduction to Statistics I....3 - 4
Elective - Aesthetic Sensibility....3
Elective - Cultural Awareness and Diversity....3

**Major Requirements**

BIO 121 - General Biology I....4
BIO 140 - Microbiology and Immunology....4
BIT 120 - Introduction to Biotechnology....4
BIT 123 - Techniques and Instrumentation for Biotechnology....4
BIT 220 - Biotechnology Research....4
BIT 232 - Biomanufacturing....4
CHE 131 - Chemistry for Technology I....4
CHE 132 - Chemistry for Technology II....4

**Electives**

Elective - Biotechnology Internship or Laboratory Science Elective....4-6
Elective - Laboratory Science Elective....4

### TOTAL PROGRAM CREDITS: 64-66

## BIOTECHNOLOGY AND BIOMANUFACTURING (CERTIFICATE)

### Program Outcomes

- Demonstrate a theoretical and practical (i.e., hands-on) knowledge of state-of-the-art techniques and processes used in biotechnology and biomanufacturing laboratories, including use of various laboratory instrumentation used in research and discovery and biopharmaceutical process development and manufacturing;
- Explain the biotechnology process and design an experiment based on scientific literature that supports the steps of the biopharmaceutical development and manufacture process from identification of a molecule involved in a disease process to the end-stage marketing of a product;
- Evaluate manufacturing practices for compliances with current Good Manufacturing Practices and good Laboratory Practices industry standards;
- Compare and contrast the different operational units that make up a biotechnology company and the career opportunities available within these units.

After successfully finishing this two-semester program, you'll receive a Certificate of Completion and be ready to apply for employment. If you want to learn new, in-demand lab skills or update your current skills for a career in biotechnology, our Biotechnology and Biomanufacturing program is an economical alternative to a master's degree. Recent graduates are employed in local companies and academic research labs in jobs such as Research Assistant, senior scientist, Research Technician, QA Associate, Scientific Writer and lab Automation Scientist.

### Program Curriculum

BIT 120, BIO 121 or CHE 131 - Introduction to Biotechnology, General Biology I, or Chemistry for Technology I....4
BIT 123 - Techniques and Instrumentation for Biotechnology....4
BIT 220 - Biotechnology Research....4
BIT 232 - Biomanufacturing....4

### TOTAL PROGRAM CREDITS: 16

## ENVIRONMENTAL STUDIES (A.S.)

### Purpose

The Environmental Studies A.S. program is designed to prepare students for transfer to a four-year college or university. By integrating a broad spectrum of natural science and social science courses, the curriculum prepares students for advanced study and a variety of careers.

### Program Outcomes

- Use established scientific standards and methods to install, calibrate, and manipulate basic laboratory and field equipment;
- Use established scientific standards and methods to collect, analyze, and interpret environmental data;
- Use established scientific standards and methods to hypothesize, communicate, and critique environmental forecasts;
- Analyze the sustainability of systems within an ecosystem.

At the end of the program you can easily transfer to a four-year institution and continue your environmental studies. You will also be prepared to major in such fields as environmental engineering, habitat biology, public policy or GIS.

### Program Curriculum

**General Education Requirements**

ENG 101 - English Composition I....3
ENG 102, ENG 115 or GLG 151 - English Composition II, Writing for Technical Communication or Physical Geology....3 - 4
CMS 110 or CMS 120 - Speech Communication or Public Speaking....3
Elective - Aesthetic Sensibility....3
GEO 130 - Cultural Geography....3
GEO 210 or GEO 220 - Introduction to GIS or Map Design in GIS....3
GLG 115 - Environmental Geology....4
MAT 130 - Probability and Statistics....4

**Major Requirements**

BIO 115 - Environmental Biology....3
BIO 121 or BIO 151 - General Biology I or Principles of Biology I....4
BIO 122 or BIO 152 - General Biology II or Principles of Biology II....4
BIO 256 - Ecology....4
CHE 121 or CHE 151 - General Chemistry I or Principles of Chemistry I....4
CHE 122 or CHE 152 - General Chemistry II or Principles of Chemistry II....4
ESW 245 - Safety and First Aid....3
GLG 125 - Climate Change....4
MAT 161 - Precalculus I....4
MAT 162 - Precalculus II....4

## TOTAL PROGRAM CREDITS: 64-65

## LIFE SCIENCES (A.S.)

### Purpose

The Life Sciences (AS) program is designed to prepare students for transfer to a variety of programs at a four-year college or university. The curriculum prepares the student for future study in a variety of fields on the Traditional Life Science Concentration, such as general biology, microbiology, organismalbiology, molecular biology, biochemistry, neuroscience, environmental science, agriculture, biology education, etc., and on the Biomedical Science Concentration such as cytotechnology, medical laboratory science, nuclear medicine, physical therapy, occupational therapy, etc.

### Program Outcomes

- Explain basic biological and chemical concepts;
- Evaluate issues in the life sciences that are of importance to organisms and/or the biosphere;
- Apply the scientific method to a range of life sciences;
- Utilize appropriate scientific techniques and technology for experimentation and data collection;
- Collect, analyze, and report scientific data in an ethical manner.

Upon graduating from the Life Sciences program, our students transfer to such four-year institutions as Thomas Jefferson and Penn State University. We make transferring as seamless as possible and encourage you to speak to your advisor or a college counselor about this process.

### Program Curriculum

**General Education Requirements**

ENG 101 - English Composition I....3
CMS 120 - Public Speaking....3
Elective - Cultural Awareness and Diversity....3
Elective - Aesthetic Sensibility....3
Elective - Technological Fluency....3
Elective - Ethical Perspectives....3

**Major Requirements**

BIO 151 - Principles of Biology I....4
BIO 152 - Principles of Biology II....4
CHE 151 - Principles of Chemistry I....4
CHE 152 - Principles of Chemistry II....4
Elective - Biology Lab Science (BIO-131, BIO 140, BIO 256 or BIO 260) - select two courses....8
Elective - Lab Science (CHE-261, PHY 151, GLG 151, or BIT) - select two courses....8
MAT 130 - Probability and Statistics....4
MAT 190 - Calculus and Analytical Geometry I....4

**Electives**

Elective - General Elective or Science Elective....3 - 4

## TOTAL PROGRAM CREDITS: 61

## BIOMEDICAL LIFE SCIENCES

### Purpose

The Biomedical Life Sciences (AS) program is designed to prepare students for transfer to a variety of programs at four-year colleges or universities. The curriculum prepares the student for future study in fields such as cytotechnology, medical laboratory science, nuclear medicine, physical therapy, and occupational therapy.

### Program Outcomes

- Explain basic biological and chemical concepts;
- Evaluate issues in the life sciences that are of importance to organisms and/or the biosphere;
- Apply the scientific method to a range of life sciences;
- Utilize appropriate scientific techniques and technology for experimentation and data collection;

- Collect, analyze, and report scientific data in an ethical manner.

### Program Curriculum

**General Education Requirements**

ENG 101 - English Composition I....3
CMS 120 - Public Speaking....3
Elective - Cultural Awareness and Diversity....3
Elective - Aesthetic Sensibility....3
Elective - Technological Fluency....3
Elective - Ethical Perspectives....3

**Major Requirements**

BIO 131 - Anatomy and Physiology I....4
BIO 132 - Anatyomy and Physiology II....4
BIO 140 - Microbiology and Immunology....4
BIO 151 or BIO 121 - Principles of Biology I or General Biology I....4
CHE 151 or CHE 121 - Principles of Chemistry I or General Chemistry Inorganic....4
CHE 152 or CHE 122 - Principles of Chemistry II or General Chemistry II....4
Elective - Biology Lab Science (BIO-131, BIO 140, BIO 256 or BIO 260) - select two courses....8
Elective - Lab Science (CHE-261, PHY 151, GLG 151, or BIT) - select two courses....8
MAT 130 - Probability and Statistics....4
MAT 190 - Calculus and Analytical Geometry I....4

**Electives**

Elective - General Elective or Science Elective....3 - 4

## MATHEMATICS (A.A.)

### Purpose

The Mathematics Program is designed to meet the transfer requirements of four-year colleges and universities for the many disciplines that require a strong Mathematics background. These disciplines include: Computer and Information Science; Business and Economics; Science and Engineering; Statistics, Actuarial Science and Operations Research; Mathematics and Education; Medicine and Law.

### Program Outcomes

- Differentiate algebraic and trigonometric functions;
- Integrate exponential, logarithmic, inverse trigonometric and hyperbolic functions;
- Differentiate vector valued functions;
- Use mathematical modeling;
- Find a matrix P that will orthogonally diagonalize a symmetric matrix A (MAT-220); **or**
- Solve a nonhomogeneous linear differential equation by the method of variation of parameters (MAT-223).

After graduating, our students often transfer to four-year institutions to major in such fields as computer and information science, engineering, statistics, actuarial science, business, economics and mathematics. Thanks to Montco's compliance with the Pennsylvania Department of Education's Transfer Agreement Oversight Committee (TAOC), you can easily transfer to schools in the Pennsylvania State System of Higher Education (PASSHE).

### Program Curriculum

**General Education Requirements**

ENG 101 - English Composition I....3
CMS 110 or CMS 120 - Speech Communication or Public Speaking....3
Elective - ANT 104, HIS 101, HIS 102, HIS 203, HIS 205, POL 124 or SOC 101....3
ENG 102 - English Composition II....3
Electives
(choose two) - Aesthetic Sensibility....6
ECO 121 or ECO 122 - Macroeconomics or Microeconomics....3

**Major Requirements**

CIS 111 - Computer Science I: Programming and Concepts....3
CIS 111B - Computer Science II: Object-Oriented Programming....3
MAT 190 - Calculus and Analytical Geometry I....4
MAT 201 - Calculus and Analytical Geometry II....4
MAT 202 - Calculus and Analytical Geometry III....4
MAT 211 - Foundations of Mathematical Proof....3
MAT 220 or MAT 223 - Linear Algebra or Differential Equations....4
PHY 151 - Principles of Physics I....4
PHY 152 - Principles of Physics II....4

**Electives**

Electives - Electives....6 - 7

### TOTAL PROGRAM CREDITS: 60-61

## PHYSICAL SCIENCES (A.S.)

### Purpose

The Physical Sciences program provides a strong mathematics and science background for transfer to a four-year college or university.The curriculum prepares students for study leading to a bachelor's degree in a variety of fields, including chemistry, geology, and physics. It is also a first step toward a graduate degree in medical sciences.

### Program Outcomes

- Prepare for and conduct scientific experiments;
- Use and understand basic instrumentation;
- Analyze and interpret scientific data;
- Demonstrate an extensive problem-solving capability.

Our Physical Sciences curriculum prepares you to transfer to a four-year institution and major in such fields as chemistry or physics. It also provides a solid foundation for future studies in health sciences, medicine and chemical engineering.

### Program Curriculum

**General Education Requirements**

ENG 101 - English Composition I....3
ENG 102 - English Composition II....3
Elective - Technological Fluency....3
Elective - Ethical Perspectives....3
Elective - Aesthetic Sensibility....3
Elective - Oral & Written Communication....3
Elective - Cultural Awareness and Diversity....3

**Major Requirements**

CHE 151 or PHY 151 - Principles of Chemistry I or Principles of Physics I....4

CHE 152 or PHY 152 - Principles of Chemistry II or Principles of Physics II..... 4
CHE 261 or ScienceElective - Organic Chemistry I or AST, BIO, CHE, GLG, MAT, or PHY Course..... 4
CHE 262 or Science Elective - Organic Chemistry II or Science Elective..... 4
MAT 190 - Calculus and Analytical Geometry I..... 4
MAT 201 - Calculus and Analytical Geometry II..... 4

**Electives**
Electives - Electives..... 11-12

## TOTAL PROGRAM CREDITS: 61

# COURSE DESCRIPTIONS

Insofar as possible, all courses offered by the College during the 2019-20 semesters are described on the following pages. However, since the College is responsive to the actual needs of its students, some listed courses may not be offered if there is insufficient enrollment; others may be added at the discretion of the Vice-President of Academic Affairs and Provost if requested by a sufficient number of students. Courses are listed by code and number under departmental headings; courses under 100 are developmental courses, and course hours are not credited toward a degree. In some instances, students will be advised to enroll in such fundamental courses. Students are cautioned to pay particular attention to the pre-requisites needed for enrollment in certain advanced courses. Unless the Pre-requisite(s) for these courses have been fulfilled, students will not be permitted to register for the courses. The following letter code, along with a number, is used by the College to designate course descriptions.

**ACC** - ACCOUNTING
**ANT** - ANTHROPOLOGY
**ART** - ART
**ASL** - AMERICAN SIGN LANGUAGE
**AST** - ASTRONOMY
**BIO** - BIOLOGY
**BIT** - BIOTECHNOLOGY
**BPA** - BAKING & PASTRY ARTS
**CHE** - CHEMISTRY
**CHI** - CHINESE
**CIS** - COMPUTER & INFO SYST
**CJS** - CRIMINAL JUSTICE
**CMS** - COMMUNICATION STUDIES
**COU** - COUNSELING
**CUL** - CULINARY ARTS
**DAN** - DANCE
**DHG** - DENTAL HYGIENE
**ECO** - ECONOMICS
**EDU** - EDUCATION
**EGR** - ENGINEERING SCIENCE
**EGT** - ENGINEERING TECHNOLOGY
**EMP** - EMERGENCY MANAGEMENT PLANNING
**ENG** - ENGLISH
**ESC** - NANOFABRICATION
**ESL** - ENGLISH/SECOND LANG
**ESW** - EXERCISE SCIENCE AND WELLNESS
**ETP** - ENTREPRENEURSHIP
**FRE** - FRENCH
**FSC** - FIRE SCIENCE
**GEO** - GEOGRAPHY
**GER** - GERMAN
**GLG** - GEOLOGY
**HCP** - HEALTH CARE PROFESSIONS
**HIS** - HISTORY
**HON** - HONORS
**HOS** - HOSPITALITY MANAGEMENT
**HSW** - HUMAN SERVICES
**IDS** - INTERDISCIPLINARY
**ITA** - ITALIAN
**JPN** - JAPANESE
**MAS** - MEDICAL ASSISTING
**MGT** - MANAGEMENT
**MKT** - MARKETING
**MLT** - MEDICAL LAB TECH
**MSP** - MASS MEDIA STUDIES & PRODUCTN
**MUS** - MUSIC
**NUR** - NURSING
**OFM** - OFFICE MANAGEMENT
**PBH** - PUBLIC HEALTH
**PHI** - PHILOSOPHY
**PHY** - PHYSICS
**POL** - POLITICAL SCIENCE
**PSY** - PSYCHOLOGY
**PTA** - PHYSICAL THERAPIST ASSISTANT
**RAD** - RADIOGRAPHY
**REA** - READING/STUDY SKILLS
**SCS** - STRATEGIES FOR COLLEGE SUCCESS
**SOC** - SOCIOLOGY
**SPA** - SPANISH
**SRT** - SOUND RECORDING TECHNOLOGY
**SUR** - SURGICAL TECHNOLOGY
**THA** - THEATRE

## PREREQUISITES*

A Prerequisite is a condition or requirement which must be met before enrolling in a course. students are not permitted to enroll in a course without first satisfying the Prerequisite(s). Courses requiring Prerequisite(s) are so noted in the College Catalog and course schedules. Requests for the waiver of Prerequisites are considered by Division Deans

* While the College ensures that all students registering for courses satisfy Prerequisites, it is the students ultimate responsibility to ensure Pre-requisites are met. The College reserves the right to de-register students that are inappropriately registered for courses in which Pre-requisites are not met. All students are therefore encouraged to speak with an advisor prior to registration.

## CO-REQUISITES**

A Co-requisite is a condition or requirement-usually another College course-which must be prior to or while enrolling in a course.

** The registration system does not monitor whether students enroll for Co-requisites. It is the responsibility of the student to be aware of any Co-requisite coursework, and register accordingly.

## CONCURRENT**

A concurrent course is a condition or requirement – usually another College course – which must be taken while enrolled in a course.

** The registration system does not monitor whether students enroll for concurrent requirements.. It is the responsibility of the student to be aware of any concurrent coursework, and register accordingly.

## COURSE CREDIT NUMBERING

The three numbers following (to the right) of the course titles indicate: (a) the credit hours for the course, (b) the hours per week the class meets,

and (c) the number of laboratory hours per week. For example, CHE 121 General Chemistry I, 4-3-3 has four hours credit, three hours of lecture and three hours of laboratory per week during a semester.

## ACCOUNTING

**ACC 105 SURVEY OF ACCOUNTING.....3-3-0**
Students will develop an understanding of the basic concepts and processes of financial and managerial accounting. Students will learn to interpret accounting information and reports from the perspective of managers, investors, and other business stakeholders. (Business majors planning to transfer may not substitute this course for ACC 115 - Financial Accounting, or ACC 116 - Managerial Accounting.)
**Prerequisites:**
REA 011 - Fundamentals of College Reading or REA 017 - Vocabulary and Reading Comprehension Development II

**ACC 110 BUSINESS MATHEMATICS.....3-3-0**
This course is designed for business non-transfer students. Students will expand literacy and skills in business mathematical topics such as bank reconciliations, equations, trade and cash discounts, simple and compound interest, present value, mortgages, stocks, and business statistics.
**Prerequisites:**
MAT 011 - Beginning Algebra or MAT 011B - Beginning Algebra with Review of Arithmetic with a minimum grade of C

**ACC 115 FINANCIAL ACCOUNTING.....4-4-0**
Students will develop literacy and skills in the application of the basic principles of financial accounting including accounting principles and practices, accounting journals and ledgers for recording business transactions, and application of the accounting cycle for service and merchandising enterprises from analysis of business transactions through preparation and evaluation of the income statement, balance sheet and statement of cash flows.
**Prerequisites:**
REA 011 - Fundamentals of College Reading or REA 017 - Vocabulary and Reading Comprehension Development II
ENG 010A - Basic Writing or ENG 011 - Basic Writing II or ESL 011 - Basic Writing II
MAT 011 - Beginning Algebra or MAT 011B - Beginning Algebra with Review of Arithmetic

**ACC 116 MANAGERIAL ACCOUNTING.....3-3-0**
Students will develop literacy and skills in the application of the basic principles of managerial accounting including the preparation of manufacturing financial statements. Students will apply various costing systems including job order, process, activity based and variable costing, cost-volume-profit analysis, budgeting, and management decision making.
**Prerequisites:**
ACC 115 - Financial Accounting with a minimum grade of C

**ACC 117 PAYROLL ACCOUNTING.....3-3-0**
Students will develop literacy and skills in the application of the principles of payroll accounting including the calculation of salaries and wages, federal, state, Social Security, Medicare and unemployment taxes including matching employer taxes. Students will prepare the necessary payroll entries and produce quarterly and year-end tax returns. This course is designed to prepare students to pass the national certification exam and to obtain the American Payroll Association's (APA) Fundamental Payroll Certification (FPC) designation.
**Prerequisites:**
ACC 115 - Financial Accounting or both ACC 111 - Accounting Principles I and ACC 112 - Accounting Principles II, with a minimum grade of C

**ACC 118 PROFESSIONAL BOOKKEEPING.....3-3-0**
Students will expand literacy and skills in the application of the basic principles covered in Financial Accounting (ACC115) using accounting software technology. Course topics include and emphasis placed on the specialized applications of the principles of financial accounting including adjusting journal entries, depreciation, inventory cost flow methods, correction of accounting errors, internal controls and fraud prevention. This course is designed to prepare students to pass a national certification exam and to obtain a certified bookkeeper designation.
**Prerequisites:**
ACC 115 - Financial Accounting or both ACC 111 - Accounting Principles I and ACC 112 - Accounting Principles II, with a minimum grade of C
**Corequisites:**
ACC 117 - Payroll Accounting. May be taken prior or during course.

**ACC 120 FORENSIC ACCOUNTING.....3-3-0**
Forensic Accounting is the application of accounting methods and financial techniques to assist in the adjudication of legal disputes and the solving financial crimes. The course includes the discussion of criminal statues relating to financial crimes, fraud detection, investigation, and prevention, techniques used in solving financial crimes, interviewing, rules of evidence, sources of information, forensic accounting procedures, money laundering, embezzlement, bankruptcy fraud and criminal conspiracy.
**Prerequisites:**
ACC 115 - Financial Accounting or both ACC 111 - Accounting Principles I and ACC 112 - Accounting Principles II, with a minimum grade of C

**ACC 150 LEGAL ENVIRONMENT OF BUSINESS.....3-3-0**
Students study the regulatory environment in which business operates and the political, social, and economic forces behind and evolution of the forms and types of law that govern disputes and transactions between individuals (including business organizations). The Constitutional foundation of law and the role played by administrative agencies in regulating business activity are studied including remedies in and out of court. Issues of crimes, torts, contracts, property, business organizations, consumer rights, employment, intellectual property rights, and international transactions will be discussed.

**ACC 198 COOP INTERNSHIP-ACCOUNTING I.....3-0-15**
This course consists of employment in a college-approved organization to enable the student to gain insight into an accounting organization. The course requires an optimum of 15 hours per week supervised and coordinated by a faculty member. Students are rated by the employer on their job performance. **This course is subject to a course fee.**
**Prerequisites:**
ACC 116 - Managerial Accounting, ACC 117 - Payroll Accounting, OR ACC 118 - Professional Bookkeeping and permission of the coordinator

**ACC 211 INTERMEDIATE ACCOUNTING I.....3-3-0**
Students will learn Generally Accepted Accounting Principles as applied to current and non-current assets, fixed assets (property, plant & equipment), intangible assets, and related income statement accounts (i.e. bad debt expense, cost of sale, depreciation expense, and amortization expense) and the time value of money.
**Prerequisites:**
ACC 116 - Managerial Accounting or ACC 112 - Advanced Accounting II with a minimum grade of C may be substituted

**ACC 221 ACCOUNTING INFORMATION SYSTEMS.....3-3-0**
Students learn the principles of accounting information systems. Students will document business processes, reviewing source documents, information processing, and reports generated. The principles of internal control will be applied to business systems and information technology. In a hands-on environment, students will learn the design and function of a computerized accounting information system. Using QuickBooks accounting software, students will create a company file, enter transaction data, generate management reports and financial statements, and complete the year-end closing process. This course is designed to prepare students to pass the Intuit QuickBooks Certified User exam.
**Prerequisites:**
ACC 116 - Managerial Accounting with a minimum grade of C
CIS 110 - Information Systems for Management with Computer Applications

**ACC 230 COST ACCOUNTING.....3-3-0**
Students study the accounting concepts and reports needed by managers to plan operations, control activities, and make decisions. Students learn what kind of information is needed, where this information can be obtained, and how to present this information for use by managers in a variety of reporting formats. Included in the course are cost behavior and Cost-Volume-Profit analysis, job-order, process, activity-based, and variable cost accounting systems, budgeting, standard costs and variances, responsibility accounting, incremental analysis, and capital budgeting.
**Prerequisites:**
ACC 116 - Managerial Accounting or ACC 112 - Accounting Principles II with a minimum grade of C may be substituted

**ACC 241 TAX ACCOUNTING.....3-3-0**
Students learn the laws, regulations, and accounting practices pertaining to individual Federal taxes. Students will analyze gross income, exclusions, business expenses, depreciation, itemized deductions, capital gains, sales of personal residences, exemptions, and filing status. Relevant forms will be discussed.
**Prerequisites:**
ACC 116 - Managerial Accounting or ACC 112 - Accounting Principles II with a minimum grade of C may be substituted

**ACC 242 FEDERAL CORPORATE TAXATION.....3-3-0**
Students study the laws and regulations relating to federal taxation of corporations and other entities including an analysis of corporate distributions, S corporations, partnerships, estates, trusts, and retirement plans.

## ANTHROPOLOGY

**ANT 100 INTRO TO PHYSICAL ANTHROPOLOGY.....3-3-0**
This course explores the evolutionary emergence of man, and the implications and characteristics of human physical diversity as a basis for an understanding of man as a physical organism.

**ANT 101 INTRODUCTION TO ARCHAEOLOGY.....3-3-0**
This course examines the theory and history of archaeological methods in the field of professional archaeology. A primary objective of the course is to foster an understanding of humanity's common cultural heritage and the shared responsibility people all have in understanding and preserving this cultural heritage. Students will investigate the advent of agriculture and the formation of cities and states and explore a comprehensive overview of prehistoric societies from Asia to the Americas.
**Prerequisites:**
ENG 010A - Basic Writing or ENG 011 - Basic Writing II or ESL 011 - Basic Writing II
REA 011 - Fundamentals of College Reading or REA 017 - Vocabulary and Reading Comprehension Development II

**ANT 104 INTRO TO CULTURAL ANTHROPOLOGY.....3-3-0**
This course examines the unique nature of culture and its role in the determination of human behavior. It also explores the relationship of kinship, political, economic, religious, and other institutions within cultural systems, with a particular emphasis upon the operation of these institutions in non-Western societies.

**ANT 104H INTRO TO CULTURAL ANTHROPOLOGY HONORS.....3-3-0**
This course examines the unique nature of culture and its role in the determination of human behavior. It also explores the relationship of kinship, political, economic, religious, and other institutions within cultural systems, with a particular emphasis upon the operation of these institutions in non-Western societies. This Honors course fosters high-achieving students' growth towards learning outcomes such as: critical reading and artistic literacy; forming judgments based on evidence; clear, persuasive research writing; oral presentation; and articulate reflection on personal growth. Honors courses are more likely to utilize student-driven active learning, emphasizing exploration and discovery, rather than the acquisition of specific knowledge; faculty might provide projects with no pre-determined conclusion, but with real-world application.

**ANT 120 ARCHAEOLOGY FIELD SCHOOL..... 3-0-8**
In this course students will participate in an archaeological research project. They will gain knowledge about basic archaeology skills and hands-on experience in archaeological methods, learn about research design, and develop their analytical skills through the collection, recording, and interpretation of diverse kinds of data. Civic engagement is an important aspect of this course as it involves partnerships with local organizations and community members. Students will be interpreting their findings and sharing them with members of the research team and the general public. There will be additional, optional opportunities for field trips and special lectures. **This course is subject to a course fee.**

**ANT 121 ARCHAEOLOGY FIELD SCHOOL II..... 3-0-8**
This course is a continuation of ANT 120 Archaeology Field School. In this course students will participate in an archaeological research project. They will gain hands-on experience in archaeological methods and apply research and analytical skills through the collection, recording, and interpretation of diverse kinds of data. Emphasis will be placed on processing, curating, and analyzing archaeological data. Civic engagement is an important aspect of this course as it involves partnerships with local organizations and community members. Students will be interpreting their findings and sharing them with members of the research team and the general public. There will be additional, optional opportunities for field trips and special lectures. **This course is subject to a course fee.**
**Prerequisites:**
ANT 120 - Archaeology Field School

**ANT 204 MAGIC, RELIGION AND WITCHCRAFT.....3-3-0**
This course is a cross-cultural survey of religious beliefs and practices. The course will examine a broad range of religious activities, rituals, and behaviors from an anthropological perspective. Students will apply this perspective in independent analyses of religious rituals in a community or culture other than that with which they are familiar. The course is comparative in nature and will focus on the practice of religious activities rather than specific religious dogma.
**Prerequisites:**
ENG 011 - Basic Writing II

**ANT 205 ENVIRONMENTAL ANTHROPOLOGY..... 3-3-0**
Environmental anthropology explores human cultures and societies as they both adapt to their environment as well as transform it. This course studies the history and theoretical underpinnings of environmental anthropology as a sub-field within the discipline of anthropology. Students will apply the concepts of ecosystem sustainability and indigenous knowledge as a component of society. Students will also personally engage with environmental problems through independent research, field trips, and/or service learning.
**Prerequisites:**
ENG 011 - Basic Writing II

## ART

**ART 101 ART HISTORY: CAVE PAINTING TO PRE-RENAISSANCE. 3-3-0**
A survey of Western visual arts and architecture from the earliest examples of cave painting and sculpture to the beginning of the Renaissance in Europe in the 15th century. Masterworks in painting, sculpture and architecture are examined as individual aesthetic works and in relationship to their historical and social contexts. Comparative study of diverse civilizations will be explored through the works of great visual artists and architects offering students a broader perspective of human experience throughout the historical periods covered.
**Prerequisites:**
ENG 010A - Basic Writing or ENG 011 - Basic Writing II or ESL 011 - Basic Writing II with a minimum grade of C
REA 011 - Fundamentals of College Reading or REA 017 - Vocabulary and Reading Comprehension Development II with a minimum grade of C

**ART 102 ART HISTORY: PRE-RENAISSANCE TO IMPRESSIONISM.....3-3-0**
A survey of Western visual arts and architecture from the Renaissance to the Industrial Revolution. Significant individual artists will be studied and their works will be examined both aesthetically and in relationship to the historical and social contexts in which they were created. Comparative study of diverse cultural and societal conditions will be examined through the works of great visual artists and architects offering students a broader perspective of human experience throughout the historical periods covered.
**Prerequisites:**
ENG 010A - Basic Writing or ENG 011 - Basic Writing II or ESL 011 - Basic Writing II with a minimum grade of C
REA 011 - Fundamentals of College Reading or REA 017 - Vocabulary and Reading Comprehension Development II with a minimum grade of C

**ART 103 ART HISTORY: MODERN ART.....3-3-0**
An investigation of modern change and diversity as reflected in the art and architecture of Europe and America from the Industrial Revolution to the present. The response of artists to new technologies and the advancement of mass media will be examined both aesthetically and in relationship to the historical, social, and technological contexts in which they were created. Post-Impressionism, Fauvism, Cubism, Constructivism, Dada, Surrealism, Abstract Expressionism, Pop Art, Minimalism, and Neo-Expressionism are among the styles addressed in the course. Comparative study of evolving social contexts will be examined through individual works and artists offering students a broader perspective of human experience throughout Industrial, Post-Industrial and Information Ages.
**Prerequisites:**
ENG 010A - Basic Writing or ENG 011 - Basic Writing II or ESL 011 - Basic Writing II with a minimum grade of C
REA 011 - Fundamentals of College Reading or REA 017 - Vocabulary and Reading Comprehension Development II with a minimum grade of C

**ART 104 HISTORY OF GRAPHIC DESIGN..... 3-3-0**
A survey of visual communication from the earliest written language through contemporary graphic design. Emphasis will be placed on the developments in graphic design from the Industrial Revolution to the present. Modern graphic design in mass communication will be examined in relation to the broader cultural, social, and technological contexts in which they were created. The Arts and Crafts movement, Art Nouveau, Bauhaus, de Stijl and Constructivism, Art Deco, and Post-Modernism will be covered. Comparative study of graphic design in relation to the arts and other manifestations of human intellectual achievement in the rapidly changing social and technological landscape of the twentieth century will be examined.
**Prerequisites:**
ENG 010A - Basic Writing or ENG 011 - Basic Writing II or ESL 011 - Basic Writing II with a minimum grade of C
REA 011 - Fundamentals of College Reading or REA 017 - Vocabulary and Reading Comprehension Development II with a minimum grade of C

**ART 111 DRAWING I..... 3-2-2**
An introduction to drawing in a variety of media including charcoal, conté crayon, pencil, and ink. Students will draw a variety of subjects including still life, landscapes and life models. Emphasis will be placed on developing an understanding of developing line and tone, composition, gesture, anatomy, basic perspective, and other perceptual concepts. Studio work will be augmented by critiques, discussions, and demonstrations. Please note: This course requires working from the nude figure. Participation is required in all sessions working from a live, nude model. Please consult with your advisor to choose another Art course if you are unable to commit to paint/draw from a nude model, of either gender, for any reason. **This course is subject to a course fee.**
**Prerequisites:**
ENG 010A - Basic Writing or ENG 011 - Basic Writing II or ESL 011 - Basic Writing II with a minimum grade of C
REA 011 - Fundamentals of College Reading or REA 017 - Vocabulary and Reading Comprehension Development II with a minimum grade of C

**ART 112 DRAWING II.....3-2-2**
A study of drawing in different media stressing draftsmanship and creative interpretation. Special emphasis will be placed on understanding the figure and portraiture. In addition to studio work, group discussions and critiques will be provided. Please note: This course requires working from the nude figure. Participation is required in all sessions working from a live, nude model. Please consult with your advisor to choose another Art course if you are unable to commit to paint/draw from a nude model of either gender, for any reason. **This course is subject to a course fee.**
**Prerequisites:**
ART 111 - Drawing I

**ART 121 PAINTING I..... 3-2-2**
An introduction to painting. Students will paint a variety of subjects utilizing representation and abstraction. Emphasis will be placed on developing an understanding of the physical properties of paint and its mediums, application techniques, and color mixing. Students will develop an understanding of line and tone, composition, perspective, and other perceptual concepts. Studio work will be augmented by critiques, discussions, and demonstrations. Please note: This course may require working from the nude figure. Participation is required in all sessions working from a live, nude model. Please consult with your advisor to choose another Art course if you are unable to commit to paint/draw from a nude model, of either gender, for any reason. **This course is subject to a course fee.**
**Prerequisites:**
ENG 010A - Basic Writing or ENG 011 - Basic Writing II or ESL 011 - Basic Writing II with a minimum grade of C
REA 011 - Fundamentals of College Reading or REA 017 - Vocabulary and Reading Comprehension Development II with a minimum grade of C

**ART 122 PAINTING II..... 3-2-2**
An intense study of the use of oil and/or acrylics in painting from still life, landscape and figure. In addition to studio work, there will be demonstrations, group discussions and critiques. Please note: Students are required to draw/paint nude models of both genders in this course. Participation is required in all life drawing/painting sessions. Please consult with your advisor to choose another Art course if you are unable to commit to participation in life drawing/painting for any reason. **This course is subject to a course fee.**
**Prerequisites:**
ART 121- Painting I

**ART 130 TWO-DIMENSIONAL DESIGN..... 3-2-2**
An introduction to a wide range of artistic concepts and the efficient and practical use of graphic materials and tools. The course is intended to develop practical patterns from solving two-dimensional problems through lectures, demonstrations, and studio work. **This course is subject to a course fee.**

**ART 131 COLOR THEORY.....3-2-2**
This course is an exploration of the physical and psychological properties of color. Students will develop a foundation for working with color as a means of expression. Students will build a color vocabulary and investigate the use of color as a visual element of communication. Creative problem solving through conceptualization, research, technical execution and presentation will be emphasized. **This course is subject to a course fee.**
**Prerequisites:**
ART 130 - Two-Dimensional Design Principles
ENG 010A - Basic Writing or ENG 011 - Basic Writing II or ESL 011 - Basic Writing II
REA 011 - Fundamentals of College Reading or REA 017 - Vocabulary and Reading Comprehension Development II

**ART 138 DIGITAL ART I.....3-2-2**
This course serves as an introduction to digital imaging techniques intended for Fine Art majors providing a means for them to expand the scope of their work. Students will become familiar with a range of software applications and techniques. The fundamentals of computer-based imaging will be introduced while challenging the students imagination and expanding their creative skills. Students who successfully complete this course will develop a portfolio of work demonstrating a working knowledge of the perceptual skills and techniques addressed in the studio. **This course is subject to a course fee.**
**Prerequisites:**
ART 111 - Drawing I and ART 130 - Two-Dimensional Design Principles

**ART 139 DIGITAL ART II.....3-2-2**
This course serves as an advanced course in digital imaging for fine artists. Students will work on creating digital images for both print and electronic media. Emphasis will be placed on creating high-end Giclée prints using a variety of professional output options and media. Students who complete this course will develop a portfolio of work demonstrating a working knowledge of the perceptual skills and techniques addressed in the studio. **This course is subject to a course fee.**
**Prerequisites:**
ART 138- Digital Imaging I

**ART 140 3-D DESIGN PRINCIPLES..... 3-2-2**
A continuation of the study of design principles with emphasis given to three dimensional forms and structures. The course is intended to develop the skills and knowledge necessary to produce creative and practical solutions used in resolving sculptural, architectural, and other three dimensional problems through lectures, demonstrations, and studio work. **This course is subject to a course fee.**
**Prerequisites:**
ART 130 - Two Dimensional Design

**ART 151 PHOTOGRAPHY I..... 3-2-2**
This is a basic course in black and white still photography. The photographic process, from exposing and developing film to making and mounting the print for presentation, will be taught. The camera will be used to explore and discover the visual world; with the goal of using the photographic image as a means of expression. Information obtained in this course can be applied to all branches of photography. **This course is subject to a course fee.**

**ART 152 PHOTOGRAPHY II..... 3-2-2**
This course emphasizes the development of a "critical eye" and the use of photography as a form of self-expression. Advanced camera, darkroom, and editing techniques will be explored. Individual projects will be pursued to develop a cohesive visual idea. **This course is subject to a course fee.**
**Prerequisites:**
ART 151 - Photography I

**ART 155 DIGITAL PHOTOGRAPHY I..... 3-2-2**
An introduction to digital photography and the techniques of computer-based photographic manipulation. This studio course will stress the relationship between traditional photography and darkroom techniques, and the use of imaging software and development of animation and multimedia techniques while also incorporating work in traditional media. Advanced computer-based imaging will be explored while challenging the students' imagination and expanding their creative skills. **This course is subject to a course fee.**
**Prerequisites:**
ENG 010A - Basic Writing or ENG 011 - Basic Writing II or ESL 011 - Basic Writing II with a minimum grade of C
REA 011 - Fundamentals of College Reading or REA 017 - Vocabulary and Reading Comprehension Development II with a minimum grade of C

**ART 156 DIGITAL PHOTOGRAPHY II..... 3-2-2**
Students create new photographic works in a digital environment, developing effective and nondestructive workflows for image editing, sorting, and organizing. Students will learn advanced digital retouching techniques and explore the capabilities of the electronic darkroom. Investigating creative and technical skills such as Camera RAW processing, students will acquire skills in advanced tonal and color correcting, and local image adjustments using selection and masking techniques. Studio lighting for portraits and commercial product photography will also be addressed. **This course is subject to a course fee.**
**Prerequisites:**
ART 155 - Digital Photography I
ENG 010A - Basic Writing or ENG 011 - Basic Writing II or ESL 011 - Basic Writing II with a minimum grade of C
REA 011 - Fundamentals of College Reading or REA 017 - Vocabulary and Reading Comprehension Development II with a minimum grade of C

**ART 161 CERAMICS I..... 3-2-2**
An introduction to the historical, cultural, scientific, creative, and expressive basis of ceramics. Students will learn various construction and decorative techniques used in the hand forming of stoneware clay through a series of assignments and exercises designed to develop each student's potential for personal expression and creativity. **This course is subject to a course fee.**
**Prerequisites:**
ENG 010A - Basic Writing or ENG 011 - Basic Writing II or ESL 011 - Basic Writing II with a minimum grade of C
REA 011 - Fundamentals of College Reading or REA 017 - Vocabulary and Reading Comprehension Development II with a minimum grade of C

**ART 171 PRINTMAKING I..... 3-2-2**
An introduction to relief and intaglio printmaking techniques. Studio work and instruction in a variety of techniques with an emphasis on developing an understanding of plate making and fine art printing. Studio work will be augmented by critiques, discussions, and demonstrations. **This course is subject to a course fee.**

**ART 180 INTRODUCTION TO VISUAL COMMUNICATION..... 3-2-2**
Course covers the fundamental principles of design and how these are applied in effective communication. It explores the media and tools used in imaging and graphic design, and how these tools are integrated into the design process. Topics include conceptual design, symbols, critical thinking, practical design and how design relates to industry, human perception and the visual process, and the history of visual communication from the symbols of the prehistoric man to contemporary design. **This course is subject to a course fee.**
**Prerequisites:**
REA 011 - Fundamentals of College Reading or REA 017 - Vocabulary and Reading Comprehension Development II with a minimum grade of C
ENG 010A - Basic Writing or ENG 011 - Basic Writing II or ESL 011 - Basic Writing II with a minimum grade of C

**ART 182 TYPOGRAPHY..... 3-2-2**
A study of the fine art and craft of typography. Students will explore the history and evolution of type, noted typographers, the shape and function of letterforms, and letters, words and sentences as an integral element of communication and graphic design problem solving. **This course is subject to a course fee.**
**Prerequisites:**
ART 180 - Introduction to Visual Communication
ENG 010A - Basic Writing or ENG 011 - Basic Writing II or ESL 011 - Basic Writing II
REA 011 - Fundamentals of College Reading or REA 017 - Vocabulary and Reading Comprehension Development II

**ART 211 DRAWING III..... 3-2-2**
A comprehensive study in the art of color drawing. A variety of media will be used to explore color in various drawing situations, including figure drawing, portraiture, still life, landscape and non-figurative works. Please note: This course requires working from the nude figure. Participation is required in all sessions working from a live, nude model. Please consult with your advisor to choose another Art course if you are unable to commit to paint/draw from a nude model of either gender, for any reason. **This course is subject to a course fee.**
**Prerequisites:**
ART 112 - Drawing II

**ART 213 PASTELS..... 3-2-2**
This course is designed to introduce students to the medium of pastel with a strong focus on color theory. There will be demonstrations on techniques and discussions on various types of pastels and pastel papers that can be employed by the artist in realizing his/her vision. The course will concentrate on the fundamentals of art, such as composition, with an emphasis on self-expression. Students who complete this course will develop a portfolio of work demonstrating a working knowledge of the perceptual skills and techniques addressed in the studio. **This course is subject to a course fee.**
**Prerequisites:**
ART 112 - Drawing II

**ART 221 PAINTING III..... 3-2-2**
A continuation of Painting II emphasizing creativity and experimentation in solving a variety of advanced problems. Extensive studio work. Please note: Students are required to draw/paint nude models of both genders in this course. Participation is required in all life drawing/painting sessions. Please consult with your advisor to choose another Art course if you are unable to commit to participation in life drawing/painting for any reason. **This course is subject to a course fee.**
**Prerequisites:**
ART 122 - Painting II

**ART 222 WATERCOLOR PAINTING..... 3-2-2**
An introduction to watercolor, this course has been designed to focus on the basic technical aspects of watercolor, including the study of color as it applies to this medium. Coursework will include exercises in color layering, and the various techniques of application. Once a solid foundation of skills is established, students will work from still life, landscape and figurative subjects. Emphasis will be placed on successful development of technique as well as individual expression. This course is subject to a course fee. Please note: Students are required to draw/paint nude models of both genders in this course. Participation is required in all life drawing/painting sessions. Please consult with your advisor to choose another Art course if you are unable to commit to participation in life drawing/painting for any reason. **This course is subject to a course fee.**
**Prerequisites:**
ART 111 - Drawing I

**ART 224 PAINTING IN THE LANDSCAPE..... 3-2-2**
A course designed to provide the student with the opportunity to experience the joy of plein air painting, whether it is urban, suburban, or rural landscape. Working directly with the instructor, the student will learn to enjoy the sights, sounds and smells that contribute to the overall appreciation of the subject landscape. **This course is subject to a course fee.**
**Prerequisites:**
ART 121 - Painting I

**ART 238 ANIMATION I..... 3-2-2**
This course is an introduction to the fundamental principles of animation. Conceptual skills related to timing, rhythm and motion are developed through exercises in drawn animation, with a progression to the introduction of basic digital animation tools. An emphasis will be placed on the development of personal style and solid craftsmanship in execution. An overview of the history of animation and professional working methods will be introduced. Screenings of complete shorts and/or excerpts of feature-length commercial and independent animation will be presented for evaluation and discussion. **This course is subject to a course fee.**
**Prerequisites:**
ART 111 - Drawing I

**ART 240 ANIMATION II..... 3-2-2**
This course is a continuation of studies in drawn and digitally produced animation introduced in Animation I. Concepts and skills related to timing, rhythm and motion are further developed through projects designed to build proficiency in technical aspects of animation while challenging students' imagination in the development of a personal aesthetic. An emphasis will be placed on narrative and/or conceptual content and solid craftsmanship in execution. Topics in animation history and professional working methods will be explored, with relevant screenings of complete shorts and/or excerpts of feature-length commercial and independent animation presented for evaluation and discussion. **This course is subject to a course fee.**
**Prerequisites:**
ART 238 - Animation I

**ART 245 SCULPTURE: CLAY MODELING.....3-2-2**
Beginning modeling in clay where studies are made from three-dimensional objects and skills are developed to render them realistically in clay. The student is also introduced to the process of abstraction. **This course is subject to a course fee.**

**ART 247 SCULPTURE II..... 3-2-2**
Advanced problems in sculpture with emphasis on sophisticated conceptual investigation where specialization in ideas, directions, and techniques is encouraged. Selected areas including modeling, foundry, welding, carving and other forms of fabrication and forming may be developed in depth. **This course is subject to a course fee.**
**Prerequisites:**
Any 3D Art Course (ART 140 3-D Design Principles, ART 141 3-D Design/Materials and Techniques, ART 143 Jewelry Design I, ART 145 Introductory Woodworking, ART 161 Ceramics I, ART 245 Sculpture: Clay Modeling, ART 246 Sculptural Fab & Mold Making, ART 261 Ceramics II, ART 262 Ceramics III, ART 265 Salt-Glazed Pottery, ART 266 Raku Pottery, ART 267 Kiln Building)

**ART 261 CERAMICS II..... 3-2-2**
A course intended to develop and extend clay-forming skills introduced in Ceramics I through various assignments. Handforming techniques will be explored singly and in conjunction with one another. Also an introduction to glaze chemistry will be made to initiate experimental testing on glaze bodies. **This course is subject to a course fee.**
**Prerequisites:**
ART 161 - Ceramics I

**ART 262 CERAMICS III..... 3-2-2**
A course intended to develop and extend clay-forming skills introduced in Ceramics I through various assignments. Hand forming techniques will be explored singly and in conjunction with one another. Also an introduction to glaze chemistry will be made to initiate experimental testing on glaze bodies. **This course is subject to a course fee.**
**Prerequisites:**
ART 261 - Ceramics II

**ART 265 SALT-GLAZED POTTERY.....3-2-2**
This course will explore the historical development as well as the contemporary techniques in salt glazing stoneware pottery. Assignments will involve students in the various approaches to this ceramic technique, from slip glaze application to fuming the kiln. **This course is subject to a course fee.**
**Prerequisites:**
ART 161 - Ceramics I

**ART 266 CERAMICS: RAKU POTTERY.....3-2-2**
Although the historical context of raku pottery will be explained, the contemporary approach to the medium will be pursued. Slip glaze techniques and glaze application will be explored as well as the effects of pre- and post-reduction firing of the raku vessels. Clay and glaze making will be covered and the design and construction of a raku vessels. **This course is subject to a course fee.**
**Prerequisites:**
ART 161 - Ceramics I

**ART 271 PRINTMAKING II.....3-2-2**
A continuation of ART 171 with the emphasis placed on the further development of skills learned in the introductory class. New media to be covered will include intaglio, collagraphy, and lithography. Studio work and instruction. **This course is subject to a course fee.**
**Prerequisites:**
ART 171 - Printmaking I

**ART 272 PRINTMAKING III.....3-2-2**
This course is designed to continue the exploration of skills involved in the art of developing fine prints. The course will include demonstrations of techniques and lectures on concepts inherent in the graphic arts. **This course is subject to a course fee.**
**Prerequisites:**
ART 271 - Printmaking II

**ART 280 GRAPHIC DESIGN I.....3-2-2**
Explorations in the art of visual communication. Students will learn to communicate effectively and creatively using type and image to solve real-world communications problems. This class will use the latest versions of graphic design software applications and incoming students are expected to have a working knowledge of these programs. **This course is subject to a course fee.**
**Prerequisites:**
ART 180 - Introduction to Visual Communication and ART 182 - Typography

**ART 281 GRAPHIC DESIGN II.....3-2-2**
Advanced problem solving in graphic design with an emphasis placed on developing an understanding of the production process and the business of design. Projects will include: corporate and product identity, packaging, poster design, and book design. **This course is subject to a course fee.**
**Prerequisites:**
ART 280 Graphic Design I

**ART 285 ILLUSTRATION I..... 3-2-2**
A special study in illustration techniques intended to develop both the drawing and design skills needed to work in commercial art. Students will become familiar with a wide range of materials and techniques. The fundamentals of illustration will be explored while challenging the students' imagination and expanding their creative skills. The primary emphasis will be placed on introducing new media and techniques while developing the students' skills in finding creative solutions to visual problems. **This course is subject to a course fee.**
**Prerequisites:**
ART 111 - Drawing I or ART 130 - Two Dimensional Design Principles

**ART 286 ILLUSTRATION II..... 3-2-2**
A special study in illustration techniques intended to develop both the drawing and design skills needed to work in commercial art. Students will become familiar with a wide range of materials and techniques. The fundamentals of illustration will be explored while challenging the students' imagination and expanding their creative skills. The primary emphasis will be placed on introducing new media and techniques while developing the students' skills in finding creative solutions to visual problems. **This course is subject to a course fee.**
**Prerequisites:**
ART 285 - Illustration I

**ART 289 PORTFOLIO WORKSHOP..... 3-2-2**
A "capstone" course for Fine Art majors in which the student prepares for entry into the job market or for continuing their education. Emphasis will be placed on creating digital portfolios for different devices and the web. Students will also learn traditional portfolio presentation techniques, self-promotion and marketing, and the standards and practices of professional artists. **This course is subject to a course fee.**
**Prerequisites:**
Any 200-level ART course

## AMERICAN SIGN LANGUAGE

**ASL 101 AMERICAN SIGN LANGUAGE I.....3-3-0**
In this introductory course of American sign language, students will develop a fundamental vocabulary and knowledge of grammar structures needed to help them communicate effectively. This course will also introduce students to deaf culture in the United States.

**ASL 102 AMERICAN SIGN LANGUAGE II.....3-3-0**
In this American Sign Language course students will build on the fundamental vocabulary and knowledge of grammar structures studied in ASL 101. Students will further develop gestural expressive skills needed to help them communicate effectively. This course will also further explore the deaf culture in the United States.
**Prerequisites:**
ASL 101 - Introduction to American Sign Language I with a minimum grade of "C"

## ASTRONOMY

**AST 120 INTRO TO ASTRONOMY..... 4-3-3**
Introduction to Astronomy is a one-semester college-level course in basic astronomy. The course may be used as a laboratory science elective with basic algebraic applications. The course explores a broad range astronomical concepts and principles in ten major areas: understanding the sky, apparent motions of the planets and the sun, telescopes and accompanying technology, basic structure and behavior of atoms, origin and analysis of light, origin of the solar system, internal structure and behavior of the sun, lifecycle of all stellar classes, origin and structure of galaxies, and cosmology. Throughout the course, emphasis is placed on the implementation of the scientific method, the evidence that astronomers use to support their conclusions, and the importance of astronomy. (Night-time observing is required). **This course is subject to a course fee.**
**Prerequisites:**
ENG 010A - Basic Writing or ENG 011 - Basic Writing II or ESL 011 - Basic Writing II with a minimum grade of C within 5 years
MAT 011 - Beginning Algebra or MAT 011B - Beginning Algebra with Review of Arithmetic with a minimum grade of C within 5 years

**AST 121 ASTROBIOLOGY.....4-3-3**
Astrobiology uses a multidisciplinary and scientific approach to analyze and assess the theories regarding the evolution of life elsewhere in the universe. While strong emphasis is placed on the astronomical/astrophysical aspects of astrobiology, the course introduces, discusses, and integrates aspects from multiple disciplines (chemistry, biology, geology, and earth sciences) to achieve an overall understanding of the definition of life and evolution. A secondary focus of the course is to develop a firm understanding of the scientific method such that students who complete the course can appreciate the scientific process, build scientific reasoning skills that are applicable beyond this course, and develop basic laboratory skills. **This course is subject to a course fee.**
**Prerequisites:**
ENG 010A - Basic Writing or ENG 011 - Basic Writing II or ESL 011 - Basic Writing II with a minimum grade of C within 5 years
MAT 011 - Beginning Algebra or MAT 011B - Beginning Algebra with Review of Arithmetic with a minimum grade of C within 5 years

**AST 130 ASTROPHYSICAL RESEARCH TECHNIQUES.....3-2-2**
Research in Astronomy is a one-semester college-level course concerned with a study of the techniques required in making and reducing astronomical observations. This course will focus on methods of modern data collection, reduction, and analysis using a telescope, CCD detector, and filter system. The students will be required to carry out individual as well as group observing projects on a specialized topic in astronomy using a remote robotic telescope located in Utah.
**Prerequisites:**
AST 120/PHY120/GLG 121 - Introduction to Astronomy with a minimum grade of C within 5 years

## BIOLOGY

**BIO 103 INTRO TO HUMAN ANATOMY & PHYSIO.....3-3-0**
This course is a non-laboratory descriptive study of the structure and function of the human body, using a systems approach.
**Prerequisites:**
MAT 010 - Fundamentals of Arithmetic or MAT 010B - Review of the Fundamentals of Arithmetic
ENG 010A - Basic Writing or ENG 011 - Basic Writing II or ESL 011 - Basic Writing II
REA 011 - Fundamentals of College Reading or REA 017 - Vocabulary and Reading Comprehension Development II

**BIO 104 HUMAN BODY IN HEALTH AND DISEASE..... 3-3-0**
This introductory course provides students with the essentials of anatomy, the basic functions of the human body and the effects of disease using a systems approach. The normal structural organization and processes of each body system, common diseases, clinical applications, treatments and diagnostic procedures will be examined.
**Prerequisites:**
ENG 010A - Basic Writing or ENG 011 - Basic Writing II or ESL 011 - Basic Writing II
REA 011 - Fundamentals of College Reading or ESL/REA 017 - Vocabulary and Reading Comprehension Development II

**BIO 115 ENVIRONMENTAL BIOLOGY..... 3-3-0**
This course is designed to explore three aspects of the environment: the interacting components of the environment apart from humans, the impact of humans and contemporary cultures on the environment, and local pollution problems and possible solutions.

**BIO 115H ENVIRONMENTAL BIOLOGY HONORS.....3-3-0**
This course is designed to explore three aspects of the environment: the interacting components of the environment apart from humans, the impact of humans and contemporary cultures on the environment, and local pollution problems and possible solutions. This Honors course fosters high-achieving students' growth towards learning outcomes such as: problem solving, often with creative approaches; critical reading or original data analysis; forming judgments based on evidence, often from integrative learning; clear, persuasive research writing; oral presentation; and articulate reflection on personal growth. Honors courses are more likely to utilize student-driven active learning, emphasizing exploration and discovery, rather than the acquisition of specific knowledge; faculty might provide projects with no pre-determined conclusion, but with real-world application.

**BIO 120 CONCEPTS OF BIOLOGY.....4-3-3**
A terminal lab-science for non-science majors who desire only one-semester of biology. Topics include a discussion of the fundamental and contemporary issues regarding biological chemistry, cell biology, genetics and the different forms of life. The material is discussed in the context of the principles of evolution and the biology of ecosystems. This course does not satisfy the prerequisites for BIO 131. **This course is subject to a course fee.**

**BIO 120H CONCEPTS OF BIOLOGY HONORS.....4-3-3**
A terminal lab-science for non-science majors who desire only one-semester of Biology. Topics include a discussion of the fundamentals and contemporary issues regarding biological chemistry, cell biology, genetics and the different forms of life. The material is discussed in the context of the principles of evolution and the biology of ecosystems. This course does not satisfy the prerequisites for BIO 131. This course is subject to a course fee. Refer to http://mc3.edu/adm-fin-aid/paying/tuition/course-f ees for current rates. This Honors course fosters high-achieving students' growth towards learning outcomes such as: problem solving, often with creative approaches; critical reading or original data analysis; forming judgments based on evidence, often from integrative learning; oral presentation; and articulate reflection on personal growth. Honors courses are more likely to utilize student-driven active learning, emphasizing exploration and discovery, rather than the acquisition of specific knowledge; faculty might provide projects with no pre-determined conclusion, but with real-world application.

**BIO 121 GENERAL BIOLOGY I.....4-3-3**
A study of the unifying principles which govern the operation of all living things; including biological chemistry, energy, metabolism, cell biology and genetics. This course is designed for allied health science majors, biotechnology, A.A.S. majors and other students desiring or requiring this course, a BIO 121/122 sequence or progression to BIO 151. **This course is subject to a course fee.**
**Prerequisites:**
ENG 011 - Basic Writing II
REA 011 - Fundamentals of College Reading
MAT 011 - Beginning Algebra

**BIO 121H GENERAL BIOLOGY I HONORS.....4-3-3**
A study of the unifying principles which govern the operation of all living things; including biological chemistry, energy, metabolism, cell biology and genetics. This course is designed for allied health science majors, biotechnology, A.A.S. majors and other students desiring or requiring this course, a BIO 121/122 sequence or progression to BIO 151. **This course is subject to a course fee.** This Honors course fosters high-achieving students' growth towards learning outcomes such as: problem solving, often with creative approaches; critical reading or original data analysis; forming judgments based on evidence, often from integrative learning; oral presentation; and articulate reflection on personal growth. Honors courses are more likely to utilize student-driven active learning, emphasizing exploration and discovery, rather than the acquisition of specific knowledge; faculty might provide projects with no pre-determined conclusion, but with real-world application.
**Prerequisites:**
ENG 011 - Basic Writing II
REA 011 - Fundamentals of College Reading
MAT 011 - Beginning Algebra

**BIO 122 GENERAL BIOLOGY II.....4-3-3**
An emphasis is placed on evolution as it applies to the development, adaptation and taxonomy of organisms. The kingdoms of organisms are discussed in terms of their structure, function, reproduction and adaptation. **This course is subject to a course fee.**
**Prerequisites:**
BIO 121 - General Biology I

**BIO 129 FUNCTIONAL HUMAN ANATOMY & PHYSIOLOGY.....4-3-3**
This course provides a background in human anatomy and physiology, with emphasis being placed on the skeletal, muscular, cardiovascular, and respiratory systems. This course is oriented towards students in Exercise Science and Wellness degree programs. Dissection of preserved animal tissue is required. **This course is subject to a course fee.**
**Prerequisites:**
MAT 011 - Beginning Algebra or MAT 011B - Beginning Algebra with Review of Arithmetic
ENG 010A - Basic Writing or ENG 011 - Basic Writing II or ESL 011 - Basic Writing II
REA 011 - Fundamentals of College Reading or REA 017 - Vocabulary and Reading Comprehension Development II

**BIO 130 INTRODUCTORY TO ANATOMY & PHYSIOLOGY.....4-3-3**
This course is a one semester laboratory course, in which the structure and function of the eleven basic human systems is studied with more emphasis placed on the circulatory, endocrine, urinary, and respiratory systems. Oriented toward students in the MLT program. Dissection of preserved animal material is required. **This course is subject to a course fee.**

**BIO 131 HUMAN ANATOMY & PHYSIOLOGY I.....4-3-3**
A course employing a systems approach to the structure and function of the human body. Emphasis will be placed on biological chemistry, the cell, the skeletal, muscular, nervous and integument systems. Appropriate, relevant laboratory experiences will be employed to supplement and/or reinforce the lecture material. Dissection of preserved animal material is required. **This course is subject to a course fee.**
**Prerequisites:**
BIO 121 - General Biology I or BIO 151 - Principles of Biology I with a minimum grade of C within 5 years, or a passing score on the MCCC Biology Placement Test.
High School Chemistry, CHE 121 - General Chemistry - Inorganic, CHE 131 - Chemistry for Technology I, or CHE 151 - Principles of Chemistry I with a minimum grade of C within 5 years

**BIO 132 HUMAN ANATOMY & PHYSIOLOGY II.....4-3-3**
A continuation of BIO 131 with study of the normal structure and function of the human body, with pathological applications where relevant. Systems covered include cardiovascular, lymphatic, respiratory, digestive, urinary, endocrine and reproductive systems. **This course is subject to a course fee.**
**Prerequisites:**
BIO 131 - Human Anatomy & Physiology I with a minimum grade of C within 5 years

**BIO 140 MICROBIOLOGY AND IMMUNOLOGY.....4-3-3**
A study of microorganisms and their relationship to infectious disease in humans. The biology of microorganisms; infection and pathogenesis; resistance and immunity. For Allied Health specialties and Science majors. (Laboratory/lecture format). **This course is subject to a course fee.**
**Prerequisites:**
BIO 121 - General Biology I or with a minimum grade of C within 5 years, or a passing score on the MCCC Biology Placement Test.
High School Chemistry, CHE 121 - General Chemistry - Inorganic, CHE 131 - Chemistry for Technology I, or CHE 151 - Principles of Chemistry I with a minimum grade of C within 5 years

**BIO 141 CLINICAL MICROBIOLOGY I.....4-3-3**
BIO 141 is the first part of a two part Medical Microbiology course for MLT students. It examines the microbial world with emphasis on the morphology and biological properties of bacteria and their relationship to man and the clinical laboratory. It enables the student to understand how infectious disease is spread, how bacteria are isolated and identified, how microbes are controlled and the nature and use of antibiotics. The procedures used in the identification of medically important bacteria are stressed. **This course is subject to a course fee.**
**Prerequisites:**
CHE 131 - Chemistry for Technology I or CHE 151 - Principles of Chemistry I with a minimum grade of C
BIO 121 - General Biology I, BIO 130 - Introductory Anatomy and Physiology, or BIO 151 - Principles of Biology I with a minimum grade of C

**BIO 151 PRINCIPLES OF BIOLOGY I.....4-3-3**
An introduction to the study of life as it applies to all organisms. Primary emphasis is given to biological chemistry, energy & metabolism, cell structure & function, cell reproduction and the classical and molecular aspects of genetics. Laboratory requires hands on experiments related to the course content. **This course is subject to a course fee.**
**Prerequisites:**
BIO 121 - General Biology I with a minimum grade of C within 5 years
High School Chemistry, CHE 121 - General Chemistry - Inorganic, CHE 131 - Chemistry for Technology I, or CHE 151 - Principles of Chemistry I with a minimum grade of C within 5 years

**BIO 152 PRINCIPLES OF BIOLOGY II.....4-3-3**
Emphasis is placed on the diversity of life from an evolutionary and ecological perspective. Domains, super groups and kingdoms are discussed from the standpoint of structure, function, metabolism, reproduction, development and evolutionary adaptation. Taxa are compared and contrasted with one another and as they relate to development and ecosystem biology. **This course is subject to a course fee.**
**Prerequisites:**
BIO 151 - Principles of Biology I with a minimum grade of C

**BIO 241 CLINICAL MICROBIOLOGY II.....4-3-3**
A course that introduces Immunology, Virology, Mycology, and Parasitology as well as the immunological basis of serological tests and their uses in the diagnosis of infectious and non-infectious diseases. For students of Medical Laboratory Technology. (Laboratory/lecture format) **This course is subject to a course fee.**
**Prerequisites:**
BIO 141 - Clinical Microbiology I with a minimum grade of C

**BIO 256 ECOLOGY.....4-3-3**
This course provides students with a 4-credit lab science focusing on the interactions of organisms with their biotic and abiotic environments. It will include an overview of the various components of population, community and ecosystem-level interactions, a broad survey of the major terrestrial and aquatic biomes of the world, both local and biosphere-level anthropogenic effects, and restoration ecology. Labs will reinforce important classroom concepts and will include both computer-based mathematical models of species interactions and in-field experiences to acquaint students with the diversity of ecosystem types and ecological processes. **This course is subject to a course fee.**
**Prerequisites:**
BIO 152 - Principles of Biology II or both BIO 122 - General Biology II and BIO 115 - Environmental Biology

**BIO 260 GENETICS.....4-3-3**
A study of the basic principles and problems of classical, biochemical, and molecular genetics; including Mendelian inheritance, chromosomes, mutation, linkage mapping, DNA structure, gene expression and an introduction to recombinant DNA technology. Laboratory experiments provide an introduction to genetics and molecular biology; including studies of inheritance using organisms such as Drosophila, cloning, gel electrophoresis and the polymerase chain reaction. **This course is subject to a course fee.**
**Prerequisites:**
BIO 152 - Principles of Biology II with a minimum grade of C
CHE 151 - Principles of Chemistry I with a minimum grade of C

## BIOTECHNOLOGY

**BIT 120 INTRODUCTION TO BIOTECHNOLOGY.....4-2-3**
This course is designed to acquaint students with the field of biotechnology. Topics will include a history of the biopharmaceutical industry, the drug discovery and development processes, medical biotechnology, forensics and bioremediation. Students will learn basic techniques and instrumentation used in biotechnology labs and the fundamentals of recombinant DNA technology. Issues that impact both the industry and the general population such as the regulation of the pharmaceutical industry, stem cell research, GMO's and bioethics will be examined in this course. **This course is subject to a course fee.**
**Prerequisites:**
ENG 011 - Basic Writing II or ESL 011 - ESL Basic Writing II
REA 011 - Fundamentals of College Reading or REA 017 - Vocabulary and Reading Comprehensive Development II
MAT 011 Beginning Algebra
College Biology or High School Biology (College preparatory or higher) with in the last 5 years

**BIT 123 BASIC TECHNIQUES AND INSTRUMENTATION IN BIOTECHNOLOGY.....4-2-3**
This course will allow students to gain theoretical and practical, hands-on knowledge of the operation, maintenance and calibration of commonly used and specialized laboratory instrumentation. Laboratory procedures will include solution preparation, aseptic technique, protein separations and assays, electrophoresis and recombinant DNA technology. The students be introduced to the concept of working with good laboratory practices as they pertain to documentation and record keeping. Discussion and implementation of laboratory safety policies will be key components to the entire course. **This course is subject to a course fee.**
**Prerequisites:**
CHE 131 - Chemistry for Technology I or CHE 151 - Principles of Chemistry I (for students intending to transfer)
**Corequisites:**
BIT 120 - Introduction to Biotechnology. May be taken prior or during course.

**BIT 124 MOLECULAR TECHNIQUES.....2-1-2**
This course is designed to introduce students to the areas of medical biotechnology and molecular diagnostics. Students will learn the theory behind these areas and will practice molecular techniques used in medical laboratories. **This course is subject to a course fee.**
**Prerequisites:**
BIO 141 - Clinical Microbiology I with a minimum grade of C
**Corequisites:**
MLT 235 - Clinical Practicum in MLT I. May be taken prior or during course.

**BIT 220 BIOTECHNOLOGY RESEARCH..... 4-3-3**
This course provides a foundation for the principles of molecular genetics as they apply to research performed in the biotechnology industry. Lectures topics will include transcription, translation, cell cycle regulation and protein expression as they pertain to both prokaryotic and eukaryotic gene regulation. The laboratory will give hands on exposure to recombinant DNA technology such as cloning techniques (restriction digests, pcr, plasmid design, purification and gel electrophoresis), protein purification, ELISA and bacterial and mammalian cell culture. **This course is subject to a course fee.**
**Prerequisites:**
BIT 120 - Introduction to Biotechnology, and BIT 123 - Basic Techniques and Instrumentation for Biotechnology with minimum grade of C

**BIT 232 BIOMANUFACTURING..... 4-3-3**
The course provides a solid foundation in the biomanufacturing process of biopharmaceuticals, including producing them under current Good Manufacturing Practices. Students use bacteria, mammalian, and/or yeast cells to produce human proteins using the tools of manufacturing, such as upstream and downstream procedures and quality control of protein production. **This course is subject to a course fee.**
**Prerequisites:**
BIT 123 - Basic Techniques and Instrumentation in Biotechnology

**BIT 298 BIOTECHNOLOGY INTERNSHIP.....6-1-15**
In this course, the student will work under the guidance of a mentor at a local pharmaceutical or biotechnology company (or, if appropriate, an academic or clinical setting) to gain expertise in a research or manufacturing laboratory setting. The course will allow the student not only to gain a first hand work experience at the sponsoring institution but also allow him/her to make contacts necessary for gaining future employment. The lecture portion of this course will consist of topics related to the particular student internships occurring in the present semester. The students will learn to use and evaluate computer based genome databases. Other topics to be covered in the course include resume writing, networking and interviewing skills necessary for the biotechnology industry. Mock job interviews will be conducted with the students. **This course is subject to a course fee.**
**Prerequisites:**
BIT 120 - Introduction to Biotechnology, BIT 123 - Basic Techniques and Instrumentation for Biotechnology and BIT 220 - Biotechnology Research. GPA of at least a 2.5 for all science courses Permission of the biotechnology coordinator Availability of an internship position Internship pre-test or screening by the instructor Fulfillment of any additional selection criteria imposed by the sponsoring institution

## BAKING & PASTRY ARTS

**BPA 120 INTRODUCTION TO BAKING AND PASTRY..... 3-1-4**
This course presents the basic principles of baking for foodservice establishments. This is a foundations course which includes terms, equipment and an introduction to the basic mechanics of the pastry kitchen. Topics covered include the identification, production, and evaluation of quick breads, cookies, macarons, meringues, pate a choux, pastry cream and pies. Sanitary practices and compliance with laws and ordinances of the Department of Health are enforced. Students are required to have a professional chef's uniform to participate in class according to departmental uniform policies. **This course is subject to a course fee.**
**Prerequisites:**
CUL 120 - Introduction to Culinary Techniques

**BPA 124 INTRODUCTION TO CAKES..... 3-1-4**
This course provides an introduction to the fundamentals of cake production, assembly, and basic finishing techniques. Topics covered include cake layers, fillings, buttercreams & icings, as well as basic decorating techniques. Sanitary practices and compliance with laws and ordinances of the Department of Health are enforced. Students are required to have a professional chef's uniform to participate in class according to departmental uniform policies. **This course is subject to a course fee.**
**Prerequisites:**
BPA 220 - Advanced Baking & Pastry

**BPA 131 BREADS & ROLLS..... 3-1-4**
This course presents the principles of bread production for hotel, restaurant and industrial food catering establishments. Students will learn the basic techniques of mixing, shaping, baking, and storage of breads and rolls. They will learn a variety of traditional fermentation techniques while looking to develop basic taste and flavor components in their products. Students will learn how to produce specialty breads from a variety of world cultures along with seasonal specialty breads. Sanitary practices and compliance with laws and ordinances of the Department of Health are enforced. Students are required to have a professional chef's uniform to participate in class according to departmental uniform policies. **This course is subject to a course fee.**
**Prerequisites:**
BPA 124 - Introduction to Cakes

**BPA 198 BAKING & PASTRY PRACTICUM I.....1-0-2**
This course is the introductory component of the Culinary Arts Institute practicum experience. Students are required to select a college approved practicum site, perform 30 hours of practical learning and provide documentation upon completion to the Culinary Resource Specialist or assigned Faculty. Students are required to maintain the standards of the Culinary Arts Institute while representing the program at their host site. Sanitary practices and compliance with laws and ordinances of the Department of Health are enforced. Students are required to have a professional chef's uniform to participate in class according to departmental uniform policies. **This course is subject to a course fee.**

**BPA 220 ADVANCED BAKING & PASTRY..... 3-1-4**
This course provides an introduction to advanced baking & pastry techniques and builds upon basic baking techniques from Intro to Baking & Pastry. Topics covered include Custards, Mousse, Bavarian Cream, Ice Cream & Sorbet, Soufflés, Petit Four Glace, and Puff Pastry. Sanitary practices and compliance with laws and ordinances of the Department of Health are enforced. Students are required to have a professional chef's uniform to participate in class according to departmental uniform policies. **This course is subject to a course fee.**
**Prerequisites:**
BPA 120 - Introduction to Baking & Pastry

**BPA 233 CHOCOLATES AND CONFECTIONS.....3-1-4**
This course presents the principles of chocolates and confections. Topics covered include the identification, proper usage of chocolate, tempering, and evaluation of chocolates and confections using both hand dipped and molded techniques. Students will also learn the basics of chocolate showpiece techniques. Sanitary practices and compliance with laws and ordinances of the Department of Health are enforced. Students are required to have a professional chef's uniform to participate in class according to departmental uniform policies. **This course is subject to a course fee.**
**Prerequisites:**
BPA 124 - Introduction to Cakes

**BPA 240 RETAIL BAKERY OPERATIONS..... 4-2-8**
In this live learning lab students execute fundamental baking skills learned in previous classes. In an on-campus retail bakery café environment, students practice the skills of controlling inventory, analyzing sales, and operating a complete bakery. Students prepare, display, and present savory items, pastry products, and signature baked goods according to Montgomery County Health Codes, and all rules will be adhered to per compliance. In this working lab students will experience the realities of producing various quantities, customer demands, and front of the house operations of an actual bakery café. Students are required to have a professional chef's uniform to participate in class according to departmental uniform policies. Students are also required to complete an additional 120 hours worked in the industry or at campus events which will account for 10% of the student's grade. **This course is subject to a course fee.**
**Prerequisites:**
CUL 102 - Hospitality Fundamentals and CUL 114 - Food & Beverage Operations.
Current ServSafe Certificate Required
BPA 131 - Breads and Rolls

**BPA 253 PLATED DESSERTS & MODERN TRENDS.....3-1-4**
This course provides an introduction to the art of plated desserts and nutritional needs. Students will prepare the different categories of plated desserts including hot, cold, chocolate, fruit, nut, custard and frozen. Students will also prepare various sauces, garnishes and be introduced to modern techniques and trends. Sanitary practices and compliance with laws and ordinances of the Department of Health are enforced. Students are required to have a professional chef's uniform to participate in class according to departmental uniform policies. **This course is subject to a course fee.**
**Prerequisites:**
BPA 233 - Chocolates & Confections

**BPA 254 TIERED CAKES & SUGAR ARTISTRY..... 3-1-4**
This course covers the advanced preparation and decoration of themed & tiered celebration cakes and showpieces. Students will use various mediums such as rolled fondant, gum paste, pastillage, and cooked sugar. Students will learn how to design and construct tiered cakes and showpieces. Students will learn the importance of time management and proper costing of items. Sanitary practices and compliance with laws and ordinances of the Department of Health are enforced. Students are required to have a professional chef's uniform to participate in class according to departmental uniform policies. **This course is subject to a course fee.**
**Prerequisites:**
BPA 233 - Chocolates & Confections

**BPA 263 BAKERY PRODUCTION..... 3-1-4**
This course provides an introduction to large volume production and plated desserts. Students will learn proper and efficient production of various baked goods based on large batch production. Students will also be introduced to plated desserts and various plating techniques. Sanitary practices and compliance with laws and ordinances of the Department of Health are enforced. Students are required to have a professional chef's uniform to participate in class according to departmental uniform policies. **This course is subject to a course fee.**
**Prerequisites:**
BPA 131 Breads & Rolls

**BPA 298A BAKING & PASTRY PRACTICUM II..... 3-0-6**
This course is the second component of the Culinary Arts Institute practicum experience. Students are required to select a college approved practicum site or remain at their previously designated site, and perform 90 hours minimum of practical learning and provide documentation upon completion to the Culinary Resource Specialist or assigned Faculty. Students are required to maintain the standards of the Culinary Arts Institute while representing the program at their host site. Sanitary practices and compliance with laws and ordinances of the Department of Health are enforced. Students are required to have a professional chef's uniform to participate in class according to departmental uniform policies. **This course is subject to a course fee.**
**Prerequisites:**
BPA 198 - Baking & Pastry Practicum I

**BPA 298B BAKING & PASTRY PRACTICUM III..... 3-0-6**
This course is the final component of the Culinary Arts Institute practicum experience. Students are required to select a college approved practicum site or remain at their previously designated site, and perform 90 hours minimum of practical learning and provide documentation upon completion to the Culinary Resource Specialist or assigned Faculty. Students are required to maintain the standards of the Culinary Arts Institute while representing the program at their host site. Sanitary practices and compliance with laws and ordinances of the Department of Health are enforced. Students are required to have a professional chef's uniform to participate in class according to departmental uniform policies. **This course is subject to a course fee.**
**Prerequisites:**
BPA 298A - Baking & Pastry Practicum II

## CHEMISTRY

**CHE 121 GENERAL CHEMISTRY - INORGANIC.....4-3-3**
The course is designed to acquaint liberal arts majors with certain fundamental facts, principles, and techniques of chemistry with a view toward their application in modern life. Emphasis is placed on the scientific approach. This course is acceptable preparation for admission into Dental Hygiene, Nursing and MLT programs. **This course is subject to a course fee.**
**Prerequisites:**
Students must have successfully completed or tested out of One year high school Algebra, or MAT 011 - Beginning Algebra, or MAT 011B - Beginning Algebra with Review of Arithmetic

**CHE 122 GENERAL CHEMISTRY - ORGANIC.....4-3-3**
This course emphasizes introductory Organic Chemistry and Biochemistry. The examination of the structure and reactivity of the major Organic and Biological classes of compounds will include an exploration of industrial and consumer oriented applications. This course is most appropriate for students with a background of basic Inorganic Chemistry and an interest in expanding their view of fundamental Chemistry or establishing a firm foundation for further study involving Biology or Allied Health coursework. This course is acceptable preparation for admission into Dental Hygiene and Nursing programs, and is also a continuation of CHE 121. **This course is subject to a course fee.**
**Prerequisites:**
High school Chemistry or CHE 121 - General Chemistry I
Students must have successfully completed or tested out of One year high school Algebra, or MAT 011 - Beginning Algebra, or MAT 011B - Beginning Algebra with Review of Arithmetic

**CHE 131 CHEMISTRY FOR TECHNOLOGY I..... 4-3-3**
A general course in physical-inorganic and organic chemistry. Emphasis will be placed on the theoretical and descriptive attributes of chemistry, so as to form a sound basis for the understanding of the analytical and biological chemistry and their application to technology. Laboratory experiments will be performed so as to facilitate an understanding of the chemical principles and experimental techniques developed in the program. **This course is subject to a course fee.**
**Prerequisites:**
High School Chemistry or CHE 121 - General Chemistry I

**CHE 132 CHEMISTRY FOR TECHNOLOGY II..... 4-3-3**
This course will present a brief overview of Nuclear Chemistry. The major portion of the semester will involve a survey of introductory Organic and Biochemistry. Topics will include the nomenclature, structure, physical properties, and chemical reactions of the major classes of Organic and Biological compounds. **This course is subject to a course fee.**
**Prerequisites:**
CHE 131 - Chemistry for Technology I

**CHE 151 PRINCIPLES OF CHEMISTRY I.....4-3-3**
This course is a study of the fundamentals of general chemistry for the science major. An emphasis is placed on atomic structure, molecular structure, bonding, periodic law, reactions and weight relations, gases, thermochemistry and an introduction to organic chemistry. The laboratory includes experiments from topics discussed in lecture. **This course is subject to a course fee.**
**Prerequisites:**
High school Chemistry within the last 5 years or CHE 121 - General Chemistry - Inorganic
**Corequisites:**
MAT 161 - Precalculus I or MAT 170 - College Algebra and Trigonometry. May be taken prior or during course.

**CHE 152 PRINCIPLES OF CHEMISTRY II.....4-3-3**
This course is a continuation of CHE 151. The topics covered are: intermolecular forces, solutions, kinetics, equilibria, electrochemistry, introductory thermodynamics, and nuclear chemistry. The laboratory includes labs in these areas with emphasis on acid-base titration. **This course is subject to a course fee.**
**Prerequisites:**
CHE 151 - Principles of Chemistry I

**CHE 261 ORGANIC CHEMISTRY I.....4-3-3**
This course covers the nomenclature, structure, properties and reactions of many important classes of organic compounds. Stereochemistry, reaction mechanism and syntheses are stressed. The laboratory demonstrates basic techniques and syntheses discussed during lecture. **This course is subject to a course fee.**
**Prerequisites:**
CHE 151 - Principles of Chemistry I and CHE 152 - Principles of Chemistry II

**CHE 262 ORGANIC CHEMISTRY II.....4-3-3**
This course is a continuation of CHE 261 and covers the nomenclature, structure, properties and reactions of many important classes of organic compounds including arenes, alcohols, ethers, epoxides, thiols, sulfides, aldehydes, ketones, carboxylic acids, nitriles, carboxylic acid derivatives, amines, carbohydrates, amino acids and lipids. Stereochemistry, reaction mechanisms, syntheses and spectroscopy are stressed. The laboratory demonstrates syntheses discussed during lecture. **This course is subject to a course fee.**
**Prerequisites:**
CHE 261 - Organic Chemistry I

## CHINESE

**CHI 101 ELEMENTARY MANDARIN CHINESE I.....3-3-0**
Elementary Mandarin Chinese I is an introduction to the Mandarin language. Students will learn to master basic communicative situations in Mandarin Chinese at a mid-novice level. The systematic training in speaking, listening, writing, and reading, reinforced by the use of authentic audio and video material, will create competence and confidence in expressing in Mandarin Chinese. In addition, students will learn about the various cultures in Mandarin Chinese speaking countries.
**Prerequisites:**
REA 011 - Fundamentals of College Reading or REA 017 - Vocabulary and Reading Comprehension Development II
ENG 010A - Basic Writing or ENG 011 - Basic Writing II or ESL 011 - Basic Writing II

**CHI 102 ELEMENTARY MANDARIN CHINESE II.....3-3-0**
Elementary Mandarin Chinese II is the continuation of Elementary Mandarin Chinese I. Students will continue to master basic communicative situations in Mandarin Chinese at a high novice level. The systematic training in speaking, listening, writing, and reading, reinforced by the use of authentic audio and video material, will enhance competence and confidence in expressing in Mandarin Chinese. In addition, students will identify the linguistic and cultural diversity of Chinese speaking countries.
**Prerequisites:**
CHI 101 - Elementary Mandarin Chinese I

## COMPUTER & INFO SYST

**CIS 100 INTRODUCTION TO PC'S.....1-1-0**
This course includes an overview of personal computer operations and applications. The PC will be used for hands-on experience with personal computer operations and Windows, word processing, electronic spreadsheets, and the Internet. The course assumes no previous knowledge of personal computers. This course may be taken on a Pass/No Pass (P/NP) basis only. The grade will not affect grade point average.

**CIS 106 INTRODUCTION TO THE INTERNET..... 1-1-0**
This course introduces the student to the structure of and use of the Internet worldwide computer network. Resources discussed will include Archie, File Transfer Protocol (FTP), Gophers, Listserv, Telnet, Usenet, Wais, and the World Wide Web (WWW), etc. Electronic mail (e-mail) facility, various means of accessing the Internet, and "netiquette" issues surrounding the appropriate use of such networks will be discussed. Considerable hands-on experience will be provided. (This course may be taken on a Pass/No Pass (P/NP) basis only. The grade will not affect grade point average.)
**Prerequisites:**
CIS 100 - Introduction to Personal Computers

**CIS 108 INTRODUCTION TO WEB PAGE DESIGN..... 1-1-0**
This course introduces students to the fundamentals of World Wide Web home page design using the Hypertext Markup Language (HTML) and a simple HTML editor. Students will have extensive hands-on experience creating HTML tags, links, and incorporating images. Design elements will also be considered.
**Prerequisites:**
CIS 100 - Introduction to Personal Computers and CIS 106 - Introduction to the Internet

**CIS 110 COMPUTER INFORMATION SYSTEMS FOR MANAGEMENT..... 3-2-2**
This course introduces non-computer science majors to the fundamentals of computer hardware and software and their integration into management information systems. Specific software topics will include word processing, spreadsheet, presentation, database management and operating systems. Using these skills, students will solve problems that they will most likely encounter in a digital world. Additional topics will include computer hardware analysis, electronic communications, the Internet, computer networking, social implications of computing and other current computer topics.

**CIS 1101 PROGRAMMING FOR EVERYONE.....3-2-2**
The course exposes students with no computing background to key concepts of programming, logical thinking and modern technical fluency. Students develop the essential concepts of logic, design, and problem-solving skills pertinent to their discipline. Students will apply these skills by developing projects and writing programs using tools designed for students with no prior programming experience. The emphasis of the course is to learn concepts and techniques that are common to most programming languages and to gain exposure to concepts required for technically fluent citizens. This course is appropriate for non-information technology majors.

**CIS 111 COMPUTER SCIENCE I: PROGRAMMING/CONCEPT..... 3-2-2**
This course introduces students to fundamental techniques, concepts and vocabulary of procedural programming and computer science. Emphasis is placed on programming in a high-level computer language such as Java or C++. This is the first course for computer majors.
**Prerequisites:**
ENG 010A - Basic Writing or ENG 011 - Basic Writing II or ESL 011 - Basic Writing II with a minimum grade of C
REA 011 - Fundamentals of College Reading or REA 017 - Vocabulary and Reading Comprehension Development II with a minimum grade of C
MAT 011 - Beginning Algebra or MAT 011B - Beginning Algebra with Review of Arithmetic with a minimum grade of C

**CIS 111B COMP. SCI. II: OBJECT-ORIENTED PROGRAM.....3-2-2**
This course introduces students to the object-oriented programming paradigm and focuses on the definition and use of classes and the fundamentals of object-oriented design. It is designed for students that already have a firm foundation in procedural programming concepts. A high-level programming language such as Java or C++ is used. This is the second course for computer majors.
**Prerequisites:**
CIS 111 - Computer Science I: Programming and Concepts with a minimum grade of C or equivalent experience in procedural programming techniques

**CIS 112 COMP. SCI. III: DATA STRUC. & ALGORITHM..... 3-2-2**
Building on the concepts learned in CIS 111B, the fundamental concepts of data structures and algorithms are explored. This course will apply software engineering techniques to the design and implementation of programs that manipulate complex data structures. Effective software engineering methods are stressed as well as developing good programming style. A high-level compiler language such as Java or C++ will be used. This is the third course for computer majors.
**Prerequisites:**
CIS 111B - Computer Science II: Object-Oriented Programming with a minimum grade of C

**CIS 113 PC MAINTENANCE AND SUPPORT..... 3-2-2**
Students develop the necessary skills to support personal computers by solving common PC hardware and software problems. Students will learn to install and maintain a variety of processors, operating systems, and applications. Successful completion of the course prepares students for the A+ Certification examination sponsored by the Computing Technology Industry Association.

**CIS 114 WEB DESIGN AND DEVELOPMENT.....3-2-2**
This hands-on course introduces students to the fundamental skills required to build a modern and standards compliant Web site. A specific focus is placed on usability design and the use of HTML and CSS standards to create positive user experiences across a variety of devices and browsers. Students will learn the tools and skills necessary to build, organize, and maintain Web sites while following industry best practices in interface design and usability.
**Prerequisites:**
ENG 010A - Basic Writing or ENG 011 - Basic Writing II or ESL 011 - Basic Writing II
REA 011 - Fundamentals of College Reading or REA 017 - Vocabulary and Reading Comprehension Development II

**CIS 119 USER INTERFACE/EXPERIENCE DESIGN..... 3-2-2**
This course will teach a student the knowledge and skills required to design and create cohesive and consistent user experiences and simple functional interface design with a focus on maximizing productivity and user satisfaction. Students will learn about interface elements that anticipate what users might need to do and use them to facilitate actions that help with task completion, efficiency, and satisfaction
**Prerequisites:**
CIS 114 - Web Design and Development

**CIS 120 TEACHING WITH TECHNOLOGY IN MIDDLE YEARS AND SECONDARY EDUCATION..... 3-3-0**
This course will give students the opportunities to explore, utilize, evaluate, and integrate technology into their classrooms and curriculum. Students will be involved in many aspects of this integration, including lesson plan writing and unit designing. Students will develop the skills for enriching their classrooms with various types of technology. This course focuses on technology integration for grades 5-12 classrooms.

**CIS 121 TEACHING WITH TECHNOLOGY IN EARLY CHILDHOOD.. 3-3-0**
This course focuses on technology integration for PreK-4th grade classrooms. Students will explore, utilize, evaluate, and integrate technology into their classrooms and curriculum. Students will be involved in many aspects of this integration, including lesson plan writing and unit designing. Students will develop the skills for enriching their classrooms with various types of technology.

**CIS 122 VISUAL BASIC..... 3-2-2**
This is a comprehensive course in using Visual BASIC to implement Windows programming concepts. These include usage of Window's controls, icons, bit maps, DLLs, VBXs, OLE, DDE, and memory allocation. The course teaches the considerations of custom installation, structured programming, problem solving, the uses of Visual BASIC as a system prototyping tool, and the uses of Visual BASIC for live systems development.
**Prerequisites:**
CIS 111 - Computer Science I: Programming and Concepts

**CIS 126 COMPUTER ARCHITECTURE & ORGANIZATION..... 3-2-2**
This course is designed to explore how a computing system works and introduces the student to the organization and architecture of computer systems using the Assembly programming language. Computer Science students will gain insight into the functional components of a computer system. Topics covered will include digital logic, data representation, interfacing and I/O strategies, memory architecture, a computer's functional organization, and multiprocessing. The importance of CPU clock speed, cache size, bus organization, and number of core processors will also be discussed
**Prerequisites:**
CIS 111 - Computer Science I: Programming and Concepts with a minimum grade of C

**CIS 140 CLIENT-SIDE WEB DEVELOPMENT.....3-2-2**
Students will learn the Javascript programming language and how to use Javascript to build dynamic web sites that take advantage of modern Web browser features. Topics will include the Document Object Model (DOM), XML and JSON data formats, Hypertext Transfer Protocol (HTTP) and the XMLHttpRequest object. Students will learn how to combine these and other technologies to build Ajax applications.
**Prerequisites:**
CIS 111B - Computer Science II: Object-Oriented Programming and CIS 114 - Web Design and Development

**CIS 141 INTRODUCTION TO LINUX.....3-2-2**
This course is designed to provide students with a fundamental knowledge of the conventions, techniques, and terminology of the Linux Operating System. Students will learn the skills necessary to utilize, administer, and install Linux in both networked and desktop environments. The objectives of this course will align with a major Linux professional certification.

**CIS 142 LINUX ADMINISTRATION..... 3-2-2**
This course provides extended knowledge of the Linux Operating System. Advanced features and benefits of these operating systems including system administration, networking, configuration, communications, and control will be studied. Students will participate in complex laboratory assignments. The objectives of this course will align with a major industry certification exam.
**Prerequisites:**
CIS 141 - Introduction to Linux

**CIS 151 SYSTEMS ANALYSIS AND DESIGN..... 3-2-2**
This course reviews and applies traditional (life cycle) systems development methodologies implemented by project teams and including reporting responsibility to a systems development steering committee. The life cycle followed incorporates an initial investigation, a feasibility study, systems analysis, systems design, technical design, program specification, and implementation planning.
**Prerequisites:**
CIS 111 - Computer Science I: Programming and Concepts

**CIS 155 PC APPLICATIONS ON NETWORKS.....3-2-2**
This course will provide an overview of several applications software packages available to use on a local area network. Software covered will include DOS, spreadsheet, word processing, data base, windows, file management, performance tuning, and virus detection software. The impact of running this software on a network will be emphasized.

**CIS 158 WINDOWS SERVER ADMINISTRATION & SUPPORT.....3-2-2**
This course provides the student with the knowledge and skills necessary to perform day-to-day administrative tasks in a single or multiple domain Microsoft Windows Server based network. Students will learn how to implement system security, create users, establish network printing, backup system data and manage system resources. This course will also include topics on installation, configuration and troubleshooting in a Microsoft Windows environment using the most current version of the Server and Client operating systems. Virtualization of Student Servers will be employed throughout this course.
**Corequisites:**
CIS 155 - PC Applications on Networks and CIS 170 - Introduction to Networks (Cisco Semester 1), or equivalent experience. May be taken prior or during course.

**CIS 166 INTRODUCTION TO CLOUD COMPUTING.....3-2-2**
This course introduces the evolution, architecture, structure, functions, components, and models of Cloud computing. Students will learn about computing principles and concepts involved and what it means from a business and technical perspective. The course will also cover the objectives of the CompTIA Cloud Essentials certification examination.

**CIS 167 INTRODUCTION TO DATA STORAGE AND STORAGE AREA NETWORKS.....3-2-2**
This course will teach a student the knowledge and skills required to configure basic storage networks to include archive, backup, and restoration technologies. Students will also learn about the fundamentals of business continuity, application workload, system integration, and storage/system administration, while performing basic troubleshooting on connectivity issues and referencing documentation. The course will also cover the objectives of the CompTIA Storage + certification examination.

**CIS 168 DATA CENTERS AND CLOUD STORAGE.....3-2-2**
This course will teach a student about the components and functioning of a data center and the components of modern information storage infrastructure, including virtual data storage environments. The course will provide comprehensive learning of storage technology and prepares a student to learn advanced concepts, technologies, and products. A student will learn about the architectures, features, and benefits of Intelligent Storage Systems; storage networking technologies and the increasingly critical area of information security in the emerging field of cloud computing.
**Prerequisites:**
CIS 166 - Introduction to Cloud Computing

**CIS 170 INTRODUCTION TO NETWORKS (CISCO SEMESTER 1)....3-2-2**
This course introduces the architecture, structure, functions, components, and models of the Internet and other computer networks. The principles and structure of IP addressing and the fundamentals of Ethernet concepts, media, and operations are introduced to provide a foundation for the curriculum. By the end of the course, students will be able to build simple LANs, perform basic configurations for routers and switches, and implement IP addressing schemes.
**Corequisites:**
MAT 100 - Intermediate Algebra, or MAT 103 - Foundations of Math, or MAT 106 - Math Applications, or MAT 131 - Introduction to Statistics, or MAT 140 - Finite Mathematics for Business, or MAT 188/189 - Calculus with Review of Function, or MAT 190 - Calculus and Analytic Geometry. May be taken prior or during course.

**CIS 171 ROUTING AND SWITCH (CISCO EXPLORATION SEMESTER 2)..... 3-2-2**
This course describes the architecture, components, and operations of routers and switches in a small network. Students learn how to configure a router and a switch for basic functionality. By the end of this course, students will be able to configure and troubleshoot routers and switches and resolve common issues with RIPv1, RIPv2, single-area and multi-area OSPF, virtual LANs, and inter-VLAN routing in both IPv4 and IPv6 networks.
**Prerequisites:**
CIS 170 - Introduction to Networks (Cisco Semester 1) or have completed Cisco CCNA 1 from any Cisco Academy

**CIS 172 SCALING NETWORKS (CISCO SEMESTER 3)..... 3-3-2**
This course describes the architecture, components, and operations of routers and switches in a larger and more complex network. Students learn how to configure routers and switches for advanced functionality and are able to configure and troubleshoot routers and switches and resolve common issues with OSPF, EIGRP, STP, and VTP in both IPv4 and IPv6 networks. They will also develop the knowledge and skills needed to implement DHCP and DNS operations in a network.
**Prerequisites:**
CIS 170 - Introduction to Networks (Cisco Semester 1)

**CIS 172B CONNECTING NETWORK CISCO SEMESTER 4.....3-3-2**
This course discusses the WAN technologies and network services required by converged applications in a complex network. The course enables students to understand the selection criteria of network devices and WAN technologies to meet network requirements. Students learn how to configure and troubleshoot network devices and resolve common issues with data link protocols. Students will also develop the knowledge and skills needed to implement IPSec and virtual private network (VPN) operations in a complex network.
**Prerequisites:**
CIS 172 - Scaling Networks (Cisco Semester 3) or Cisco Exploration Semesters 3 from any Cisco Academy

**CIS 176 GAME DESIGN PRACTICE AND THEORY..... 3-2-2**
This course introduces the fundamental techniques, concepts, and vocabulary of electronic game and simulation development. Students will explore the historical, social, and cultural effects of electronic games while applying modern game design and development methodologies and principles to create their own game.
**Prerequisites:**
MAT 100 - Intermediate Algebra or MAT 100B - Intermediate Algebra & Review or MAT 115 - Applied Algebra/Trigonometry I with a minimum grade of C. Placement score information can be found on the ACT335 document linked to the online course description.

**CIS 177 INTRODUCTION TO 3D MODELING..... 3-2-2**
This course introduces the fundamental techniques, concepts, and vocabulary of 2D and 3D art development for electronic games and simulations. Students will use 2D and 3D development tools and apply appropriate design methodologies and principles to create graphic images. Students will be introduced to 3D game engine technology and the process of importing and manipulating art objects using popular game engines and graphics tools.

**CIS 184 WEB ANIMATION (FLASH MX)..... 1-1-0**
Macromedia Flash is a widely used vector art and animation software tool for developing and delivering low-bandwidth animations, presentations and movies. Students will learn the basic skills necessary to create simple graphic and text animations to be published on the web.
**Prerequisites:**
CIS 106 - Introduction to the Internet or CIS 108 - Introduction to Web Page Design

**CIS 203 VMWARE VSPHERE..... 3-2-2**
This hands-on virtualization training course will explore the installation, configuration, and management of VMware vSphere; consisting of the VMware vSphere ESXi Server and the VMware vCenter Server. Completion of this course satisfies the prerequisite for taking the VMware Certified Professional examination.
**Prerequisites:**
CIS 158 - Windows Server Administration and Support

**CIS 204 CITRIX XENDESKTOP AND XENAPP.....3-2-2**
This course provides the foundation necessary for administrators to effectively centralize and manage desktops and applications in the datacenter and deliver them as a service to users anywhere. Students will learn how to select a desktop delivery model, build proof-of-concept and production XenDesktop environments. Citrix XenApp will provide the foundation necessary for administrators to effectively centralize and manage applications. This course also provides instruction on building a Provisioning services farm to enable single-image desktop management and host virtual machines using Citrix XenClient. The course will cover the objectives of the Citrix Certified Administrator for XenDesktop and XenApp certification examinations.
**Prerequisites:**
CIS 203 - VMware vSphere

**CIS 205 MICROSOFT WINDOWS SERVER HYPER-V.....3-2-2**
This course provides students with the knowledge and skills to configure and administer Hyper-V in Windows Server 2012. Students will learn the history of virtualization as it pertains to Microsoft technologies and the features of Hyper-V in Windows Server. The course will end with a project on the design and configuration of a virtualized local area network for a small business. This course covers the objectives of the Microsoft Hyper-V certification examination.
**Prerequisites:**
CIS 158 - Windows Server Administration and Support

**CIS 206 CLOUD SERVICES.....3-2-2**
This course will teach a student the knowledge and skills required to implement, maintain, and deliver cloud technologies and infrastructures (e.g. server, network, storage, and virtualization technologies), and to understand aspects of IT security and use of industry best practices related to cloud implementations and the application of virtualization. Various models of cloud services and deployments will be discussed. The course will include the objectives of the CompTIA Cloud + certification examination.
**Prerequisites:**
CIS 166 - Introduction to Cloud Computing

**CIS 207 INTRODUCTION TO COMPUTER FORENSICS..... 3-2-2**
This course will teach a student the knowledge and skills required to identify, track, and prevent cybercrimes. Students will also learn about the cyber security and investigation techniques, safeguarding of information and enhancing network and data security, while performing basic troubleshooting to identify and establish steps to prevent future attacks. The course will also cover the objectives of the EC-Council Computer Hacking Investigator (CHFI) certification examination.
**Corequisites:**
CIS 275 - Network Security Fundamentals. May be taken prior or during course.

**CIS 208 IMPLEMENTING NETWORK SECURITY.....3-2-2**
This course will teach a student the knowledge and skills required to design, configure, maintain and audit network security. Students will also focus on advanced router features being used for perimeter defense, firewalls, intrusion prevention and learn about securing switches and the process of authentication, authorization and accounting. This course will prepare a student for cyber security jobs and to take the CCNA Security certification examination and get the NSA CNSS 4011 recognition.
**Prerequisites:**
CIS 171 - Routing and Switching Essentials (Cisco Semester 2)

**CIS 209 ETHICAL HACKING..... 3-2-2**
This course will teach a student the knowledge and skills required to look for weaknesses and vulnerabilities in the computer systems and networks with a view to enhance defense against cyber-attacks. Students will also learn about Information System Security, Trojans, Viruses and Worms and understand the concepts of Cryptography and learn the steps to implement security controls to detect and prevent cyber-attacks. The course will also cover the objectives of the EC-Council Certified Ethical Hacker (CEH) certification examination.
**Prerequisites:**
CIS 275 - Network Security Fundamentals

**CIS 210 APPLIED SOFTWARE DEVELOPMENT.....3-2-2**
This course will teach a student the knowledge and skills required to develop software applications that meet the real needs of users and business organizations. They will develop the ability to identify, evaluate and review processes that would lead to optimum desirable methodologies that are functional and appropriate. Students will learn to successfully bring products to life using effective tools for the development, modification, debugging, testing and verification of software design.
**Prerequisites:**
CIS 111 - Programming Concepts

**CIS 212 ADVANCED HTML AND CSS..... 3-2-2**
This course will provide advanced knowledge of Hyper Text Markup Language (HTML) and Cascading Style Sheets (CSS) to include the breadth of information needed to start creating the next generation of HTML websites by covering the full new HTML ecosystem and the associated Application Program Interfaces (API) that complement the core HTML language. The extended usage of CSS that is required for proficiency in all core aspects of modern website creation and security of web applications will also be covered. These skills and knowledge can lead to jobs like front-end engineer or designer, designer/developer, User Interface or app designer, web editor, web project manager and small web business owner.
**Prerequisites:**
CIS 114 - Web Design and Development

**CIS 213 ADVANCED JAVASCRIPT.....3-2-2**
This course will teach a student the advanced knowledge and skills required to create modern, dynamic, interactive web sites using advanced toolsets sets. Students will learn on how to define modules and build templates; define custom directives, implement client-side services that interact with web servers and build dynamic browser views to provide rich user interaction and create custom services you can easily reuse.
**Prerequisites:**
CIS 140 - Client-Side Web Development

**CIS 214 ADVANCED 3D MODELING.....3-2-2**
This course provides the student with an advanced understanding of 3D graphic creation and modeling. Students will learn advanced techniques of rendering, texturing, and lighting on both characters and structures. Students will create a comprehensive class project incorporating the techniques taught throughout the semester. Students will also engage with the practices of the wider 3D entertainment industry to develop specific skills and a personal work flow for 3D modelling and texturing. Current industry standard application software will be used.
**Prerequisites:**
CIS 177 - Introduction to 3D Modelling

**CIS 215 DECISION MAKING USING SPREADSHEETS.....3-2-2**
This course provides additional experience using Microsoft Excel as a productive decision-making tool. Topics covered will include macro programming, advanced printing features, data base management, internal functions, and graphing.
**Prerequisites:**
CIS 110 - Information Systems for Management with Computer Applications or CIS 155 - PC Applications on Networks

**CIS 216 INTERACTIVE MEDIA CAPSTONE.....3-2-2**
This final capstone course will bring together students from all concentrations of the Interactive Media program to work in teams to design and build a significant project over the course of the semester. Students will learn about collecting user requirements, project management and team organization, processes and tools for building interactive media projects with a team, testing, product promotion and distribution, and follow-up support for a shipped product. Students will create websites, apps and games that will be put on the web and/or mobile app stores for free or sale, using industry standard tools and procedures. Students will also work on building a portfolio of their own work and defining a strategy to advance their career post course.
**Prerequisites:**
CIS 140 - Client-Side Web Development or CIS 177 - Introduction to 3D Modeling or CIS 238 - iPhone OS Application Development or CIS 240 - Android Application Development or ART 135 - Typography

**CIS 231 PROJECT MANAGEMENT.....3-3-0**
This course will introduce students to key aspects of contemporary project management. Through hands-on exercises and case studies, students will learn the project planning process in detail, culminating in the creation of a baseline plan and budget using a state-of-the-art project management tool. Topics addressed will be project scope and objectives, deliverables, milestones, tasks, work breakdown structure, responsibility and authority, project network, critical path analysis, costs, resource allocation, and auditing.
**Prerequisites:**
CIS 110 - Information Systems for Management with Computer Applications
MGT 111 - Principles of Management or equivalent business experience

**CIS 235 OBJECT ORIENTED PROG. IN C++.....3-2-2**
This course will teach students C++. Emphasis will be placed on object oriented programming and design, programmer defined data types (objects), object derivation, polymorphism, function overloading, object based abstract data structures (linked lists, stacks, collections), and event oriented program control.
**Prerequisites:**
CIS 111 - Computer Science I: Programming and Concepts

**CIS 238 IPHONE OS APPLICATION DEVELOPMENT.....3-2-2**
This is a comprehensive course on how to develop applications for Apple's iPhone, iPod touch, and iPad. Students will learn how to utilize the iPhone SDK, Objective-C programming language, and the standard Apple development tools Xcode, Interface Builder, and Instruments to build applications for distribution via the iTunes App Store. Although students may use the College's Macintosh labs to complete their course work, it is highly recommended that students have access to an Intel-based Macintosh to complete work outside of class. An iPhone, iPod touch, or iPad is not required for the course but is also recommended.
**Prerequisites:**
CIS 111B - Computer Science II: Object-Oriented Programming with a minimum grade of C
Experience with C or C++ programming (Recommended)

**CIS 240 ANDROID APPLICATION DEVELOPMENT.....3-2-2**
This is a comprehensive course on how to develop applications for Android phones and tablets targeted for business needs. Students will learn how to utilize the Android SDK with the Java programming language using standard Java development tools to build applications for distribution via the Android Market. Students will learn how to design mobile interfaces and how to apply mobile technology to solve common business needs. Although students may use the College's computer labs to complete their course work, it is highly recommended that students have access to an Android device or virtual machine to complete work outside of class. An Android device is not required for the course.
**Prerequisites:**
CIS 111B - Computer Science II: Object-Oriented Programming with a minimum grade of C, or prior object-oriented programming experience and permission of the instructor

**CIS 241 SERVER-SIDE WEB DEVELOPMENT.....3-2-2**
This course will teach students how to develop dynamic web sites using server-side technologies such as ASP.Net with VB.Net. The architecture of ASP.Net and the range of applications that can be developed using Microsoft's Visual Studio will be discussed. Gaining hands-on experience with VB.Net as it is used for writing WEB based applications for processing form data, accessing files on the server, and reading and writing to databases. Students will learn the capabilities of ASP.Net, the .Net Framework, and VB.Net in developing WEB based applications and web services.
**Prerequisites:**
CIS 140 - Client-Side Web Development and CIS 111B - Computer Science II: Object-Oriented Programming
**Corequisites:**
CIS 245 - Database Management Systems Using SQL. May be taken prior or during course.

**CIS 244 PC DATABASE MANAGEMENT SYSTEMS..... 3-2-2**
This course is designed to introduce the student to the concepts involved in designing and using a database management system on the personal computer. Topics to be covered in the course will include discussions of various types of database structures and manipulations of the database through the database language.
**Prerequisites:**
CIS 110 - Information Systems for Management with Computer Applications or CIS 155 - PC Applications on Networks

**CIS 245 DATABASE MANAGEMENT SYS. /SQL.....3-2-2**
This course is designed to introduce the student to the concepts involved in designing and using a database management system. Topics to be considered in the course will include discussions of various types of database structures, manipulations of a database structure through applications, query techniques, and an investigation into a database language.
**Prerequisites:**
CIS 111 - Computer Science I: Programming and Concepts or CIS 1101 - Introduction to Problem Solving and Programming

**CIS 250 SQL SERVER PROGRAMMING.....3-2-2**
This course will introduce students to relational database management and development on the SQL Server platform. Although an overview of database design and optimization will be presented the main topics pertain to developing databases on SQL Server software. The Transact-SQL language, querying and modifying data, indexing, optimization of data, joins and user defined functions (UDF) will be explored.
**Prerequisites:**
CIS 244 - PC Database Management Systems or CIS 245 - Database Management Systems Using SQL with a minimum grade of C

**CIS 251 ADVANCED MOBILE DEVELOPMENT.....3-2-2**
This course will build on the basic iOS and Android app courses and focus on key advanced topics relevant across implementation platforms. Students will be introduced to advanced Android development concepts such as advanced user interfaces, app designing techniques, real time app development and location services; and iOS development to include advanced objective-C and Swift programming skills, geo positioning, and rich gesture based UI handling. Security of the mobile environment and business models will also be discussed.
**Prerequisites:**
CIS 238 - iPhone Application Development and CIS 240 - Android Application Development

**CIS 257 NETWORK PLANNING, PROJECT MANAGEMENT AND IMPLEMENTATION.....3-2-2**
This course will provide a final capstone project experience on planning, implementing and managing a Local Area Network using Microsoft Server Administration and CISCO routing skills. The course will also introduce students to key aspects of project management such as defining the project scope, identifying deliverables, establishing timelines and evaluating project cost. Additional topics will include a comparison of Microsoft Server to other network operating systems as well as an industry site visit to interview a Network Administrator
**Prerequisites:**
CIS 171 - Routing and Switching Essentials (Cisco Semester 2) and CIS 141 - Introduction to Linux and CIS 158 - Windows Server Administration and Support

**CIS 258 ADVANCED WINDOWS SER ADMINISTRATION/SUPP..... 3-2-2**
This course provides the students with the knowledge and skills necessary to install, configure, manage, and support a Windows infrastructure. Students will learn advanced deployment and configuration concepts, including the implementation of: Domain Name System (DNS), Dynamic Host Configuration Protocol (DHCP), Windows Internet Naming Service (WINS), network security, Remote Access Services (RAS), Internet Authentication Server (IAS), and Remote Installation Services (RIS). In addition, students will learn how to install, manage, configure and administer Windows Server 2008 R2/Windows 7 Active Directory. Virtualization of Student Servers will be employed throughout this course.
**Prerequisites:**
CIS 158 - Windows Server Administration and Support

**CIS 275 NETWORK SECURITY FUNDAMENTALS.....3-2-2**
This course will introduce students to the basic elements of establishing a secure network, including security objectives, security architecture, security models and security layers. Students will analyze what elements contribute to high quality risk management, network security policy, and security training. This course focuses on the five security keys: Confidentiality, Integrity, Availability, Accountability, and Auditability. Successful completion of this course prepares students to take appropriate industry certifications in the security field.
**Prerequisites:**
CIS 170 - Introduction to Networks (Cisco Semester 1)

**CIS 276 GAME & SIMULATION PROGRAMMING FOUNDATIONS....3-2-2**
This course introduces students to the necessary mathematical techniques and physical modeling principles for electronic game and simulation development. Students will learn mathematical tools underlying the development of gaming software algorithms. They will use a range of software products to implement these algorithms and modeling methods.
**Prerequisites:**
CIS 111B - Computer Science II: Object-Oriented Programming with a minimum grade of C

## CRIMINAL JUSTICE

**CJS 100 INTRODUCTION TO CRIMINAL JUSTICE.....3-3-0**
The course introduces the student to the American system of criminal justice. Its growth and development will be examined with emphasis placed on the various subsystems of the criminal justice system (substantive and procedural criminal law; police, prosecution, defense, courts, institutional and community corrections; and the juvenile justice system). Additionally, contemporary issues that challenge the functional efficiency and effectiveness of the criminal justice system will be addressed. Students will learn the terminology of the field, have the opportunity to evaluate personal attitudes and values regarding crime and responses to crime.

**CJS 105 CRIMINAL LAW..... 3-3-0**
An introduction to the origins and functions of the substantive criminal law of Pennsylvania; a survey and analysis of the elements of major offenses in common law and under modern penal codes, and the available defenses; a consideration and discussion of leading judicial interpretation of penal codes and criminal law.

**CJS 107 CRIMINAL PROCEDURE & RULES OF EVIDENCE.....3-3-0**
This course provides an in-depth exploration of the laws and constitutional cases governing criminal procedure in the American criminal justice system. The course focuses on the "police phase" of the criminal process, including custody and seizures, arrests, interrogation, identification procedures. It also provides a survey of the rules of evidence in criminal proceedings, their origins and history, the use of both direct and circumstantial evidence in proving guilt or innocence, witness reliability, hearsay, and the use of inference. The course also highlights both procedural and evidentiary rules governing the investigative and prosecutorial phases of law enforcement, including the role of investigating grand juries, and the defense and police misconduct aspects of entrapment.
**Prerequisites:**
CJS 100 - Introduction to Criminal Justice and CJS 105 - Criminal Law

**CJS 120 FORENSIC ACCOUNTING..... 3-3-0**
Forensic Accounting is the application of accounting methods and financial techniques to assist in solving economic-based crimes. The course includes the discussion of criminal statues relating to financial crimes, fraud investigation and prevention, techniques used in solving financial crimes, interviewing, rules of evidence, sources of information,forensic accounting procedures, and current issues in financial investigations.
**Prerequisites:**
ACC 115 - Financial Accounting or both ACC 111 - Accounting Principles I and ACC 112 - Accounting Principles II, with a minimum grade of C

**CJS 200 CRIMINAL INVESTIGATION.....3-3-0**
The theory of investigation, conduct at crime scenes, the collection, handling and preservation of criminal evidence and other criminal investigation practices and procedures, discussion of scientific aids and their uses in investigation; preparation of cases, emphasizing methods and problems of information and interrogation.
**Prerequisites:**
CJS 100 - Introduction to Criminal Justice

**CJS 201 INTRODUCTION TO CRIMINAL FORENSICS (CRIMINALISTICS).....4-3-1**
This course will familiarize students with the basic principles and uses of forensic science in the context of the American criminal justice systems. Forensic science, which is the study and application of science to legal processes, will be related to the collection, examination, evaluation and interpretation of evidence. The field of forensics encompasses many areas in both the physical and social sciences. This course will focus on the application of modern science to physical evidence collection, preservation, and analysis, which, if properly utilized, can be crucial in the resolution of social and legal disputes. This course will review and illustrate through actual laboratory demonstration, basic applications and methodologies in the biological, physical, and behavioral sciences to questions of evidence and law.
**Prerequisites:**
CJS 100 - CJS 100 - Introduction to Criminal Justice
CHE or BIO lab course (Recommended)

**CJS 205 ETHICS & AMERICAN CRIMINAL JUSTICE SYSTEM.....3-3-0**
"Ethics and the American Criminal Justice System" presents an introduction to the ethical issues arising in the law, to the methodology by which ethical deliberations are resolved, and to the personal-societal implications of decision-making. The course will focus upon the judicial system as an institution, the legal system philosophy, criminality, liability, corrections, the role of law enforcement and current legal issues.
**Prerequisites:**
CJS 100 - Introduction to Criminal Justice

**CJS 220 CRIMINOLOGY..... 3-3-0**
A study of crime and delinquency patterns, their causes, and remedial measures, emphasizing social, economic, and psychological forces involved in the shaping of criminal behavior. The role of law enforcement and the functioning of treatment and punishment models will also be discussed.
**Prerequisites:**
CJS 100 - Introduction to Criminal Justice

**CJS 235 INTRODUCTION TO JUVENILE JUSTICE SYSTEM..... 3-3-0**
This course introduces the student to the origins and development of the juvenile justice system in the United States. Students will study the juvenile justice system and child welfare systems from historical, legal, and institutional perspectives. Students will become familiar with the substantive law of Pennsylvania in terms of delinquency and child abuse with some international comparisons. Problems and theories of delinquency, interdisciplinary communication and diversion of selected juvenile offenders from the formal justice system will be explored. Each component of the system: police, courts, probation and community corrections are analyzed and recommendations for improvement are considered. The community and the schools and their role in delinquency prevention will be covered. Lastly, there will be a study of the nature, magnitude, and social location of youth crime; analysis of causal theories, and an overview of programs aimed at delinquency prevention and control.
**Prerequisites:**
CJS 100 - Introduction to Criminal Justice

**CJS 240 THE CORRECTIONAL PROCESS..... 3-3-0**
The concept, rationale, and administration of the adult correctional institution will be the focal point in this introductory course dealing with the American correctional process. Probation and parole and the role each plays in the total penal system will also be examined. The course will conclude with a look at what appears to be future alternatives in dealing with the offender in society.
**Prerequisites:**
CJS 100 - Introduction to Criminal Justice

**CJS 250 TERRORISM & COUNTER-TERRORISM..... 3-3-0**
Terrorism in the 21st century is a global phenomenon. This course is designed to provide a comprehensive and interdisciplinary survey of the history, theory, and modern-day political manifestations of terrorism and counter-terrorism. Terrorism will be evaluated in terms of its underlying cultural, economic, political, and psychological root causes. Effective counteraction and profiling requires empathetic explorations and analyses by students into causes and mind-sets. Counter-terrorism strategies and attics will also be examined specifically in light of the legal and procedural safeguards that are fundamental to the maintenance of liberal democratic social and political values.
**Prerequisites:**
A passing grade in at least one introductory level course in any of the following: Anthropology, Criminal Justice Studies, Economics, Geography, History, Political Science, Psychology or Sociology

**CJS 251 INTRODUCTION TO HOMELAND SECURITY.....3-3-0**
This course will introduce students to the key vocabulary and concepts of homeland security. The course will cover the essential structures, functions, accountabilities, and working relationships of the principal governmental agencies charged with homeland security duties and missions, and will include an in-depth survey of the principal directorates and sub-agencies within the U.S. Department of Homeland Security. The course will cover the evolution of homeland security as a concept, in its historical context, and students will be introduced to the body of federal, state, and local law, as well as international law, impacting the homeland security mission. Special attention will be devoted to key provisions of the USA PATRIOT Act of 2001, the Homeland Security Act of 2002, and the Emergency Management Reform Act of 2006. The course will survey and examine from an "all hazards" standpoint, the most critical natural and man-made threats confronting homeland security, and students will be introduced to the still-evolving "National Strategy for Homeland Security" as statement of unified federal policy.

**CJS 252 INTELLIGENCE ANALYSIS & SECURITY MANAGEMENT. 3-3-0**
This course examines intelligence analysis and its indispensable relationship to the prevention and mitigation of terrorist attacks, other kinds of man-made disasters, and natural disasters. The course explores key public and private-sector vulnerabilities in our national defense and homeland security infrastructures from an intelligence and counter-intelligence standpoint. Students will be exposed to and will discuss substantive management issues regarding the U.S. and international intelligence communities and how their roles and operations support the homeland security endeavor.
**Prerequisites:**
CJS 251 - Introduction to Homeland Security

**CJS 253 TRANSPORTATION AND BORDER SECURITY.....3-3-0**
This course provides an in-depth view of modern border and transportation security. Specific topics of study will include security for ships and seaports; aircraft and airports; trains, ground transportation, and their related terminals; commercial trucking; pipelines and power transmission; bridges and tunnels; and major border-crossing control points. Existing and emergent technologies needed to detect terrorists, their weapons, and inherent vulnerabilities in infrastructure, will be a special emphasis of the course, along with discussion of the legal, economic, political, and cultural aspects of transportation safety and border security.
**Prerequisites:**
CJS 251 - Introduction to Homeland Security

**CJS 255 ORGANIZED CRIME.....3-3-0**
This course examines the problem of organized crime (OC) from an interdisciplinary perspective, including a series of key legal, law enforcement and social issues, with a focus on American OC and enterprise crime in comparative perspective. Topics will include: the concept and definition of OC; a range of theoretical perspectives on OC; the relationship between white collar, criminal organized crime, enterprise crime and non-criminal economic activity; historical origins; ethnic connections; international linkages; models of organized crime; major organized crime groups; major organized criminal activities; emerging organized criminal activities; the relationship of OC to public corruption; strategies for combating organized crime; and the future outlook.
**Prerequisites:**
CJS 100 - Introduction to Criminal Justice or SOC 101 - Introduction to Sociology

**CJS 260 SPECIAL STUDIES IN CRIM JUST.....3-3-0**
This course will explore topics and areas within the American criminal justice system. Subject matter and topics will vary from each semester and reflect an in-depth study of the specific issues being examined. A seminar approach will be employed.
**Prerequisites:**
CJS 100 - Introduction to Criminal Justice

**CJS 265 PUBLIC SAFETY TECHNOLOGY.....3-3-0**
This course will focus on current themes in public safety technology, to include such topics as: Computer Aided Dispatch, basic ideas of mobile radio technology, mobile data/mobile computer capabilities and functionality, public safety applications for Global Positioning technology, as well as emerging trends that will appear in the Public Safety arena in the next 3 to 5 years. An overview of standards governing communications systems, dispatchers, and other areas of public safety technology will also be covered. Topics will be covered at a non-technical level to provide the student with an overview and understanding of the technology rather than an in-depth examination of just a few specific items. Lectures will include live demonstrations of devices to reinforce key concepts and promote greater understanding. Students will prepare a summary paper in small groups on an emerging idea in public safety technology, based upon original research.
**Prerequisites:**
CJS 100 - Introduction to Criminal Justice or EMP 100 - Emergency Planning or FSC 100 - Introduction to Fire Science

**CJS 270 POLICE DEPT. ORGANIZATION & MANAGEMENT.....3-3-0**
An introduction to concepts of organization and management as they relate to law enforcement. Topics include principles of structure, process, policy and procedure, communication and authority, division of work and organizational controls, the human element in the organization, and informal interaction in the context of bureaucracy. The course will deal with the history of policing in relation to organizational theory and practical innovation. It will explore the responsibilities of the police manager from the standpoint of the design and regulation of internal systems and procedures, the management of human resources, the management of capital plant and equipment, the budgetary and planning processes, functioning as part of a larger municipal bureaucracy, and inter-agency cooperation and coordination.
**Prerequisites:**
CJS 100 - Introduction to Criminal Justice

**CJS 275 ADMINISTERING THE BUSINESS OF SECURITY.....3-3-0**
This course offers students an understanding of the role of management within a security organization. It describes techniques and offers practical methods that will help students achieve effective security department management. During the course students will examine the following issues and topics: individual roles of security management personnel; policies and procedures; current computer applications that can help all aspects of the security function; the importance of security statistics; and how to 'sell' the importance of the security function to senior management.

## COMMUNICATION STUDIES

**CMS 110 SPEECH COMMUNICATION..... 3-3-0**
A human performance course designed to improve oral communication skills in public speaking, group process, and interpersonal situations. Communication theory will be presented and practice will be provided with audience/situation analysis, organizational strategies, critical listening and thinking, and use of ethical principles and evidence in the preparation and delivery of informative and persuasive speeches, participation in decision-making groups, and analysis of interpersonal relationships. The incorporation of research from credible sources into all communication contexts, with a specific emphasis on public communication, will be emphasized.
Search Keyword: Speech

**Prerequisites:**
Students must have successfully completed or tested out of ENG 010A - Basic Writing,ENG 011 - Basic Writing II, or ESL 011 - Basic Writing II.
Students must have successfully completed or tested out of REA 011 - Fundamentals of College Reading or REA 017 - Vocabulary & Reading Comprehension Development II
Successful completion of ESL 009 is required for students who place into ESL courses

**CMS 113 VOICE AND ARTICULATION..... 3-3-0**
This course is designed for students in communication-intensive careers such as theater, broadcasting, sales, or teaching, as well as those in the English Second Language (ESL) Program to help them improve their vocal skills. Exercises and techniques to improve English pronunciation and articulation, vocal projection, rhythm and fluid delivery, projection, and resonance, will be taught. The International Phonetic Alphabet will also be covered. Application and practice will be required.
Search Keyword: Speech

**Prerequisites:**
Students must have successfully completed or tested out of ENG 010A - Basic Writing or ENG 011 - Basic Writing II or REA 011 - Fundamentals of College Reading or ESL - 009 English as a Second Lang: Oral

**CMS 115 INTERPERSONAL COMMUNICATION.....3-3-0**
Although we regularly engage in interpersonal communication in our daily lives, we seldom stop to reflect on those interactions. In this course we will examine theories, concepts, and research associated with interpersonal communication and their applications for ethical and effective interaction in personal and professional settings. Emphasis is placed on the communication process, perception, listening, self concept and self disclosure, gender and cultural differences, verbal and nonverbal communication, conflict, power, and relationship development and dissolution. Class activities, discussions, readings and assignments are designed to develop communication skills necessary for interpersonal effectiveness and competency.
Search Keyword: Speech

**Prerequisites:**
ENG 010A - Basic Writing or ENG 011 - Basic Writing II or ESL 011 - Basic Writing II and ESL 009 - English as a Second Language: Oral for students who place into ESL courses
REA 011 - Fundamentals of College Reading or REA 017 - Vocabulary and Reading Comprehension Development II

**CMS 120 PUBLIC SPEAKING.....3-3-0**
A human performance course which focuses upon the theory, practice, and criticism of different types of informative and persuasive speeches. Emphasis will be placed on strategies of audience analysis, organizational methods, and the use of ethical principles in speech preparation and delivery. Presentation of speeches that identify and analyze current societal needs will lead to student action that will help alleviate at least one of those needs.
Search Keyword: Speech

**Prerequisites:**
ENG 010A - Basic Writing or ENG 011 - Basic Writing II or ESL 011 - Basic Writing II and ESL 009 - English as a Second Language: Oral for students who place into ESL courses
REA 011 - Fundamentals of College Reading or REA 017 - Vocabulary and Reading Comprehension Development II

**CMS 120H PUBLIC SPEAKING HONORS..... 3-3-0**
A human performance course which focuses upon the theory, practice, and criticism of different types of informative and persuasive speeches. Emphasis will be placed on strategies of audience analysis, organizational methods, and the use of ethical principles in speech preparation and delivery. Presentation of speeches that identify and analyze current societal needs will lead to student action that will help alleviate at least one of those needs.
This Honors course fosters high-achieving students' growth towards learning outcomes such as: problem solving, often with creative approaches; critical reading, artistic literacy, or original data analysis; forming judgments based on evidence, often from alternative modes of inquiry or integrative learning; clear, persuasive oral presentation; and articulate reflection on personal growth. Honors courses are more likely to utilize student-driven active learning, emphasizing exploration and discovery, rather than the acquisition of specific knowledge; faculty might provide projects with no pre-determined conclusion, but with real-world application.
Search Keyword: Speech

**Prerequisites:**
ENG 010A - Basic Writing or ENG 011 - Basic Writing II or ESL 011 - Basic Writing II and ESL 009 - English as a Second Language: Oral for students who place into ESL courses
REA 011 - Fundamentals of College Reading or REA 017 - Vocabulary and Reading Comprehension Development II

**CMS 125 INTRODUCTION TO PUBLIC RELATIONS.....3-3-0**
Students will learn basic concepts necessary to understand what public relations is and how it is practiced in a variety of settings. The course will begin with an examination of the theoretical and conceptual framework that supports the field of public relations. Students will then have an opportunity to apply theory to practice by helping a campus organization accomplish a public relations goal. Specific emphasis will be placed on the four step public relations process.
Search Keyword: Speech

**Prerequisites:**
ENG 101 - English Composition I
CMS 110 - Speech Communication or CMS 120 - Public Speaking

**CMS 202 PERSUASION..... 3-3-0**
This course examines theories and techniques associated with persuasion, ranging from those centered on interpersonal settings to those featured in mass mediated campaigns. The effects of persuasive messages on attitudes, opinions, values and behaviors will be considered from the perspective of consumers and practitioners. Both oral and written persuasion will be studied with the goal of engaging students in the role that persuasive messages play in their lives.
Search Keyword: Speech

**Prerequisites:**
CMS 110 - Speech Communication or CMS 120 -Public Speaking
ENG 101 - English Composition I

**CMS 225 WRITING FOR PUBLIC RELATIONS CAMPAIGNS.....3-3-0**
Students will receive instruction and writing practice designed to develop professional writing skills used by entry-level public relations practitioners. The course emphasizes the different approaches required for specific audiences and media, beginning with a review of the four-step public relations process. Students will then have an opportunity to practice their writing skills by designing a public relations campaign for a campus or community organization in a service-learning project.
Search Keyword: Speech

**Prerequisites:**
CMS 125 - Introduction to Public Relations

**CMS 230 COMMUNICATION IN ORGANIZATIONS.....3-3-0**
A human performance course which introduces and builds the communication skills necessary for working within business and professional settings. Emphasis will be placed on developing a working knowledge of theory and improving skills for interviewing, working in groups and teams, and presentational speaking. This course is suggested for students in business and communication as well as members of the community who are involved in organizations.
Search Keyword: Speech

**Prerequisites:**
ENG 010A - Basic Writing or ENG 011 - Basic Writing II or ESL 011 - Basic Writing II and ESL 009 - English as a Second Language: Oral for students who place into ESL courses
REA 011 - Fundamentals of College Reading or REA 017 - Vocabulary and Reading Comprehension Development II

## COUNSELING

**COU 121 PSYCHOLOGY OF CAREER DEVELOPMENT..... 2-2-0**
This course is designed to give students practical ideas and methods as well as theoretical concepts for developing career plans and making satisfying vocational decisions. Through a variety of classroom activities, students learn more about themselves, what career fields may help them find fulfillment, and how to enter and progress in these fields.

## CULINARY ARTS

**CUL 101 CULINARY FOUNDATIONS.....3-3-0**
This course introduces students to the Food Service Industry. Students will learn about common terms, kitchen essentials, techniques, basic mechanics and time management in the modern kitchen. Students will investigate kitchen ingredients such as herbs, spices, dairy products, grains, fruit, vegetables and fats as well as our role as culinarians and proper nutrition. Students will also practice reading and writing standardized recipes utilizing kitchen math as well as recipe scaling and costing. Students will apply previous knowledge of sanitary practices and compliance with laws and ordinances of the Department of Health. Students are required to follow CAI professional dress policies to participate in class. **This course is subject to a course fee.**
**Prerequisites:**
CUL 105 - Safety & Sanitation

**CUL 102 HOSPITALITY FUNDAMENTALS.....3-3-0**
This course provides the basics of food sanitation and safety including microorganisms found in food borne illness, proper sanitation procedures, temperature affects and proper food handling. This course also presents the professional careers in the hospitality & food service industries, and will be presented with a variety of career possibilities. Students will learn how to prepare a career outline, resume, personal portfolio, and prepare for a professional job interview. As part of the course, students must pass the ServSafe certification exam from the National Restaurant Association (NRA). Students are required to follow CAI professional dress policies to participate in class. **This course is subject to a course fee.**

**CUL 105 SAFETY & SANITATION.....2-2-0**
This course provides an overview of the issues relating to the standards of food safety and sanitation within the hospitality industry. Specific topics include microorganisms, employee training, equipment purchasing, integrated pest management, cleaning and sanitizing, and other related subjects. Students prepare for, and take an industry recognized food safety and sanitation manager certification test. As part of the course, students must pass the ServSafe certification exam from the National Restaurant Association (NRA). Students are required to follow CAI professional dress policies to participate in class.

**CUL 114 FOOD & BEVERAGE OPERATIONS.....3-3-0**
This course will introduce students to proper operating procedures for the front of the house and as it relates to other areas of a hospitality establishment. The course stresses the importance of front of the house experiences and as it relates to the overall success of the operation. During the course, students will learn about customer service, front of the house operations, career opportunities, table service styles, various beverage categories, service, and applicable laws.

**CUL 120 INTRODUCTION TO CULINARY TECHNIQUES.....3-1-4**
This course presents the basic principles of food preparation for the food service and hospitality industry. This class is a foundation course and topics covered include mis en place, knife skills, stocks, sauces, soups, vegetables, legumes, proteins and cooking techniques. In addition, students will practice reading and writing recipe cards, food and kitchen safety and sanitation. Sanitary practices and compliance with laws and ordinances of the Department of Health are enforced. Students are required to have a professional chef's uniform to participate in class according to departmental uniform policies. **This course is subject to a course fee.**
**Prerequisites:**
CUL 101 - Culinary Foundations

**CUL 122 ADVANCED CULINARY TECHNIQUES.....3-1-4**
This course provides laboratory experience for enhancing student skills in the fundamental concepts, advanced techniques of professional cookery. Emphasis is placed on practical experiences including recipe conversion, measurements, terminology, classical knife cuts, safe food/equipment handling, flavorings/seasonings, stocks/sauces/soups, and related topics. Students are also introduced to the fabrication of meat, poultry and fish and common cuts associated with menu creation. Upon completion, students should be able to demonstrate competency of the professional cooking skills used in the foodservice industry. **This course is subject to a course fee.**
**Prerequisites:**
CUL 120 - Introduction to Culinary Techniques

**CUL 125 AMERICAN REGIONAL CUISINE.....3-1-4**
This course presents the principles of traditional dishes of various cuisines and related terminology throughout the United States. This class builds upon the basics and utilizes advanced techniques to proceed into the culinary traditions and practices of the different regions in our country. Ingredients, flavor profiles, preparations and techniques of each region will be analyzed. Students will have the opportunity to prepare, taste and present dishes from each regional cuisine. Sanitary practices and compliance with laws and ordinances of the Department of Health are enforced. Students are required to have a professional chef's uniform to participate in class according to departmental uniform policies. **This course is subject to a course fee.**
**Prerequisites:**
CUL 221 - Garde Manger

**CUL 151 PURCHASING & COST CONTROL.....3-3-0**
This course is designed to give the students a background in basic techniques of purchasing and costing in the hospitality industry. This course stresses the importance of purchasing and costing as it relates to the hospitality industry. The course details the flow of goods, including inventory, forecasting, purchase specifications, product yield, purchasing, receiving, storing, inventory control, and issuing of food and beverage. Students will also practice bid sheets, food and sales cost, profit and loss statements and food and labor cost analysis. Students are required to follow CAI professional dress policies to participate in class. **This course is subject to a course fee.**
**Prerequisites:**
CUL 101 - Culinary Foundations

**CUL 160 BAKING & PASTRY FOR CULINARIANS.....3-1-4**
This course covers the fundamentals of baking and pastry arts, which include terminology, technology, equipment, measurement, and formula conversions. Different classical mixing methods along with standard recipe adherence principles, bakery sanitation, and product storage is discussed. Topics covered include the identification, production, and evaluation of quick breads, cookies, pies, pate a choux, yeast bread, cakes, and plated desserts. Sanitary practices and compliance with laws and ordinances of the Department of Health are enforced. Students are required to have a professional chef's uniform to participate in class according to departmental uniform policies. **This course is subject to a course fee.**
**Prerequisites:**
CUL 120 - Advanced Culinary Techniques

**CUL 170 MANAGEMENT & SUPERVISION..... 3-3-0**
This course introduces the importance of management within the hospitality industry. Students will learn leadership styles, communication skills and proper management documents. Current management issues, stress management, professional ethics and labor laws are discussed to prepare students to become successful leaders within the hospitality industry. Students are required to follow CAI professional dress policies to participate in class. **This course is subject to a course fee.**
**Prerequisites:**
CUL 105 - Safety and Sanitation

**CUL 198 CULINARY PRACTICUM I..... 1-0-2**
This course is the introductory component of the Culinary Arts Institute practicum experience. Students are required to select a college approved practicum site, perform 30 hours of practical learning and provide documentation upon completion to the Culinary Resource Specialist or assigned Faculty. Students are required to maintain the standards of the Culinary Arts Institute while representing the program at their host site. Sanitary practices and compliance with laws and ordinances of the Department of Health are enforced. Students are required to have a professional chef's uniform to participate in class according to departmental uniform policies. **This course is subject to a course fee.**

**CUL 220 MENU PLANNING..... 3-3-0**
This course will introduce students into the art of menu writing. Topics include menu layout, design, development, descriptions, government regulations, pricing, sales mix, and management. Students will analyze different types of menus based on concept, cost, design and efficiency. Students are required to follow CAI professional dress policies to participate in class. **This course is subject to a course fee.**
**Prerequisites:**
CUL 151 - Purchasing & Cost Control

**CUL 221 GARDE MANGER..... 3-1-4**
This course presents the basic principles of Garde Manger for hotel, restaurant and industrial food catering establishments. Topics covered include charcuterie and preservation techniques found in various cultures, hors d'oeuvre and canapés, decorative centerpieces, cheese identification, additional cold food items and discussion and research of modern buffet displays. Sanitary practices and compliance with laws and ordinances of the Department of Health are enforced. Students are required to have a professional chef's uniform to participate in class according to departmental uniform policies. **This course is subject to a course fee.**
**Prerequisites:**
CUL 122 - Advanced Culinary Techniques

**CUL 250 EUROPEAN CUISINES..... 3-1-4**
This course presents the principles of traditional dishes of cuisines throughout the continent of Europe. Ingredients, flavor profiles, preparations, and techniques of each cuisine will be analyzed. Students will have the opportunity to prepare, taste, and analyze dishes from each cuisine. Sanitary practices and compliance with laws and ordinances of the Department of Health are enforced. Students are required to have a professional chef's uniform to participate in class according to departmental uniform policies. **This course is subject to a course fee.**
**Prerequisites:**
CUL 125 - American Regional Cuisine

**CUL 260 GLOBAL CUISINES..... 3-1-4**
This course presents the principles of traditional dishes of cuisines from around the globe. Ingredients, flavor profiles, preparations, and techniques of each cuisine will be analyzed. Students will have the opportunity to prepare, taste, and analyze dishes from each cuisine. Sanitary practices and compliance with laws and ordinances of the Department of Health are enforced. Students are required to have a professional chef's uniform to participate in class according to departmental uniform policies. **This course is subject to a course fee.**
**Prerequisites:**
CUL 125 - American Regional Cuisine

**CUL 261 CLASSICAL & MODERN TECHNIQUES.....3-1-4**
This course presents the various cuisines and techniques of the world's most prominent chefs through the ages. The different chef's style, substance and quality will be explored, including plating techniques and presentation. Students will gain insight into the history and evolution of cuisine as an art form and attain inspiration for future study. Sanitary practices and compliance with laws and ordinances of the Department of Health are enforced. Students are required to have a professional chef's uniform to participate in class according to departmental uniform policies. **This course is subject to a course fee.**
**Prerequisites:**
CUL 250 - European Cuisines

**CUL 270 CULINARY ENTREPRENEURSHIP..... 3-3-0**
This course introduces students to concept development and business plan writing. Students will complete a business plan and market analysis based on real life scenarios. Topics include forms of business ownership, concept development, menu analysis, inventory, staffing, marketing and financials. There will be research of food industry success and failure examples of restaurants and concepts. Profit and loss statements will also be taught and researched. This class is an accumulation of business foundations to succeed within the hospitality & food service industries. Students are required to follow CAI professional dress policies to participate in class. **This course is subject to a course fee.**
**Prerequisites:**
CUL 220 - Menu Planning

**CUL 282 RESTAURANT OPERATIONS.....3-1-4**
This course presents the principles of restaurant operations for culinary arts students. This hands on course will involve production for the public for the college's restaurant entities enforcing practical skills with public evaluation. Additionally students will learn and execute dining room service skills and will interact directly with retail guests. Students will be executing full menu production. Also, the etiquette of an open kitchen live learning lab will allow students to understand the mechanics of full production restaurant operations, from menu development to final turnout. Sanitary practices and compliance with laws and ordinances of the Department of Health are enforced. Students are required to have a professional chef's uniform and front of the house uniform to participate in class according to departmental uniform policies. **This course is subject to a course fee.**
**Prerequisites:**
CUL 125 - American Regional Cuisine

**CUL 298A CULINARY PRACTICUM II.....3-0-6**
This course is the second component of the Culinary Arts Institute practicum experience. Students are required to select a college approved practicum site or remain at their previously designated site, and perform 90 hours minimum of practical learning and provide documentation upon completion to the Culinary Resource Specialist or assigned Faculty. Students are required to maintain the standards of the Culinary Arts Institute while representing the program at their host site. Sanitary practices and compliance with laws and ordinances of the Department of Health are enforced. Students are required to have a professional chef's uniform to participate in class according to departmental uniform policies. **This course is subject to a course fee.**
**Prerequisites:**
CUL 198 - Culinary Practicum I

**CUL 298B CULINARY PRACTICUM III.....3-0-6**
This course is the final component of the Culinary Arts Institute practicum experience. Students are required to select a college approved practicum site or remain at their previously designated site, and perform 90 hours minimum of practical learning and provide documentation upon completion to the Culinary Resource Specialist or assigned Faculty. Students are required to maintain the standards of the Culinary Arts Institute while representing the program at their host site. Sanitary practices and compliance with laws and ordinances of the Department of Health are enforced. Students are required to have a professional chef's uniform to participate in class according to departmental uniform policies. **This course is subject to a course fee.**
**Prerequisites:**
CUL 298A - Culinary Practicum II

## DANCE

**DAN 101 INTRODUCTION TO DANCE STUDIES..... 3-3-0**
This course provides an introduction to the study of dance at the college level. The course is designed for dance majors or anyone with a serious interest in pursuing dance studies. The course focuses on the development and care of the dancer's instrument. Students will learn and practice the fundamental principles of correct dance technique common to Western dance forms. The course addresses practical concerns of dance training including: injury prevention, cardiorespiratory fitness and endurance, strength training, stretching for flexibility, diet and nutrition, and caring for the dancing body.
**Prerequisites:**
ENG 010A - Basic Writing or ENG 011 - Basic Writing II or ESL 011 - Basic Writing II with a minimum grade of C
REA 011 - Fundamentals of College Reading or REA 017 - Vocabulary and Reading Comprehension Development II with a minimum grade of C

**DAN 102 FUNDAMENTALS OF MODERN DANCE I.....3-3-0**
This course provides an introduction to the principles and practice of modern dance. Ongoing dance technique classes will incorporate aspects of modern and postmodern dance, dance improvisation, Bartenieff Fundamentals, Pilates mat work, and stretching and relaxation techniques. Through these movement experiences, students will develop their technical dance skills, learn basic concepts of dance design, and further their understanding and cultivation of the body as an instrument of expression. The course will provide a basis for understanding the aesthetic principles of modern dance through movement experiences, critical viewing and analysis of masterworks of modern dance choreography, and class discussions. The class will attend one or more live dance performances.
**Prerequisites:**
ENG 010 - Basic Writing I or ESL 010 - Basic Writing I
REA 011 - Fundamentals of College Reading or REA 017 - Vocabulary and Reading Comprehension Development II

**DAN 103 FUNDAMENTALS OF MODERN DANCE II.....3-3-0**
This course is a continuation of DAN 102 Fundamentals of Modern Dance I. Students consolidate and refine their skills as they continue the study and practice of modern dance at the elementary level. The class will attend one or more live dance performances.
**Prerequisites:**
DAN 102 - Fundamentals of Modern Dance I with a minimum grade of C

**DAN 104 MODERN DANCE I.....3-1-4**
This course is a continuation of DAN 103 and is designed to advance the student to the intermediate level of modern dance technique. Students will continue to refine their skills as they increase their movement vocabularies. Warm-up exercises, center and traveling combinations will increase in complexity. The course includes anatomical information of particular importance to sound modern dance technique. The class will attend one or more live dance performances. **This course is subject to a course fee.**

**DAN 110 INTRODUCTION TO DANCE AS ART IN AMERICA.....3-3-0**
This course offers the basis for understanding, appreciating, and participating in dance as an art form. It provides an overview of dance as artistic expression in 20th and 21st century America, with attention given to the artistic and cultural influences that have shaped American concert dance. Students will examine the work of major figures in American concert dance including Isadora Duncan, Doris Humphrey, Martha Graham, José Limón, Katherine Dunham, George Balanchine, Alvin Ailey, Merce Cunningham, Yvonne Rainer, Steve Paxton, and Bill T. Jones. In this course, students will view, discuss, and analyze significant choreographic works in class. The class will attend a live dance performance and write about their experiences.
**Prerequisites:**
ENG 010A - Basic Writing or ENG 011 - Basic Writing II or ESL 011 - Basic Writing II
REA 011 - Fundamentals of College Reading or REA 017 - Vocabulary and Reading Comprehension Development II

**DAN 121 FUNDAMENTALS OF BALLET I.....3-3-0**
This course provides an introduction to the theory, practice, and aesthetic foundations of classical ballet. Students will learn the foundations of classical ballet technique emphasizing correct body placement. The class will include exercises at the barre, center work, simple turns, jumps, and traveling movements. The course will include an overview of ballet history.
**Prerequisites:**
ENG 010 - Basic Writing I or ESL 010 - Basic Writing I
REA 011 - Fundamentals of College Reading or REA 017 - Vocabulary and Reading Comprehension Development II

**DAN 122 FUNDAMENTALS OF BALLET II.....3-3-0**
This course is a continuation of DAN 121 Fundamentals Ballet I. Students consolidate and refine their skills as they continue the study and practice of classical ballet at the elementary level. The class will include exercises at the barre, center work, turns, jumps, and traveling movements.
**Prerequisites:**
DAN 121 - Fundamentals of Ballet I with a minimum grade of C

**DAN 123 BALLET I.....3-1-4**
This course is a continuation of DAN 122 and is designed to advance the student to the intermediate level of classical ballet technique. Students will continue to refine their skills as they increase their vocabulary of classical ballet steps. Exercises at the barre, center work, and traveling combinations will increase in complexity. The course includes basic anatomical information of particular importance to sound ballet technique. **This course is subject to a course fee.**

**DAN 131 FUNDAMENTALS OF JAZZ DANCE I.....3-3-0**
This course provides an introduction to the practice, aesthetics, and historical foundations of jazz dance. Classes will include center warm-up exercises and floor stretches, simple turns, jumps, and traveling movements, and more complex center combinations. The course will include an overview of jazz dance history.
**Prerequisites:**
REA 010 - Elements of Reading or REA 017 - Vocabulary and Reading Comprehension Development II
ENG 010 - Basic Writing I or ESL 010 - Basic Writing I

**DAN 132 FUNDAMENTALS OF JAZZ DANCE II.....3-3-0**
This course is a continuation of DAN 131 Fundamentals of Jazz Dance I. Students consolidate and refine their skills as they continue the study and practice of jazz dance at the elementary level.
**Prerequisites:**
DAN 131 - Fundamentals of Jazz Dance I with a minimum grade of C

**DAN 134 FUNDAMENTALS OF HIP HOP DANCE I.....3-3-0**
This course provides an introduction to the theory, practice, aesthetics, and historical foundations of hip hop dance. Students will explore the roots of funk and hip hop dance in the social fabric of African, Caribbean, and Afro-Latin cultures while examining reinventions of ragtime, swing, and rock n' roll throughout the 20th century in America. Students will experience hip hop's manifestations across media by viewing dance films, listening to music, and reading essays and books. Historical and philosophical perspectives will be integrated into movement activities. Through movement, students will be introduced to the basic Laban principles of time, space, energy and the kinesphere. Students will explore personal, social, and cultural dynamics of race and the diversity of hip hop culture in the United States as well as political, social, and economic issues in hip hop abroad.
**Prerequisites:**
ENG 010 - Basic Writing I or ESL 010 - Basic Writing I
REA 010 - Elements of Reading or REA 017 - Vocabulary and Reading Comprehension Development II

**DAN 135 FUNDAMENTALS OF HIP HOP DANCE II.....3-3-0**
This course is a continuation of DAN 134 Fundamentals of Hip Hop Dance I. Students consolidate and refine their skills as they continue the study and practice of hip hop dance at the elementary level.
**Prerequisites:**
DAN 134 - Fundamentals of Hip Hop Dance I with a minimum grade of C

**DAN 151 DANCE IMPROVISATION.....3-1-2**
This course is designed to help students discover and develop their creative movement potential. Through guided movement exercises, the class will explore the basic movement elements of space, time, weight, and flow and the spontaneous use of movement through structured improvisations derived from movement concepts, games, imagery, media sources, chance procedures, and various improvisational practices.
**Prerequisites:**
ENG 010A - Basic Writing I or ESL 010 - Basic Writing I
Students must have successfully completed or tested out of REA 011 - Fundamentals of College Reading or REA 017 - Vocabulary and Reading Comprehension Development II

**DAN 155 DANCE PERFORMANCE ENSEMBLE I..... 1-3-2**
This course introduces students to the process of preparing for and presenting a dance concert. Each student will choreograph and/or perform at least one dance for public performance. Students will be introduced to the basics of dance production including costume selection, concepts of lighting design, use of sets and props, and stage makeup for dance. Students will be required to participate in rehearsals and performances outside of class time. Previous dance experience is expected. **This course is subject to a course fee.**

**DAN 156 DANCE PERFORMANCE ENSEMBLE II..... 1-3-2**
This course introduces students to the process of preparing for and presenting a dance concert. Each student will choreograph one group dance and perform at least two dances for public performance. Students will be introduced to the basics of dance production including costume selection, concepts of lighting design, use of sets and props, creating and disseminating publicity materials, and stage makeup for dance. Students will be required to participate in rehearsals and performances outside of class time. Previous dance experience is expected. **This course is subject to a course fee.**
**Prerequisites:**
DAN 155 - Dance Performance Ensemble with a minimum grade of C

**DAN 157 DANCE PERFORMANCE ENSEMBLE III..... 1-3-2**
This course introduces students to the process of preparing for and presenting a dance concert. Each student will choreograph a solo and perform at least two dances for public performance. Students will be introduced to the basics of dance production including costume selection, concepts of lighting design, use of sets and props, creating the program booklet, and stage makeup for dance. Students will be required to participate in rehearsals and performances outside of class time. Previous dance experience is expected. **This course is subject to a course fee.**
**Prerequisites:**
DAN 156 - Dance Performance Ensemble with a minimum grade of C

**DAN 158 DANCE PERFORMANCE ENSEMBLE IV.....1-3-2**
This course introduces students to the process of preparing for and presenting a dance concert. Each student will choreograph at least one dance and perform at least two dances for public performance. Students will be introduced to the basics of dance production including costume selection, concepts of lighting design, use of sets and props, publicity, and stage makeup for dance. Students will be required to participate in rehearsals and performances outside of class time. Previous dance experience is expected. **This course is subject to a course fee.**

**DAN 161 DANCE REPERTORY & PERFORMANCE I.....3-3-0**
This course provides students with a structured rehearsal and performing experience. Students will learn one or more dances and perform for at least one public performance during the semester. Repertory will vary each semester. Students will be required to participate in performances and workshops and to attend at least one dance performance outside of class time. Previous dance experience is expected.
**Prerequisites:**
Permission of instructor

**DAN 162 DANCE REPERTORY & PERFORMANCE II.....3-3-0**
This course provides students with a structured rehearsal and performing experience. Students will learn one or more dances and perform for at least one public performance during the semester. Repertory will vary each semester. Students will be required to participate in performances and workshops and to attend at least one dance performance outside of class time. Previous dance experience is expected.
**Prerequisites:**
DAN 104 - Modern Dance I
**Corequisites:**
A dance technique course. May be taken prior or during course.

**DAN 163 DANCE REPERTORY & PERFORMANCE III.....3-3-0**
This course provides students with a structured rehearsal and performing experience. Students will learn one or more dances and perform for at least one public performance during the semester. Repertory will vary each semester. Students will be required to participate in performances and workshops and to attend at least one dance performance outside of class time. Previous dance experience is expected.
**Prerequisites:**
DAN 104 - Modern Dance I
**Corequisites:**
A dance technique course. May be taken prior or during course.

**DAN 164 DANCE REPERTORY AND PERFORMANCE IV..... 3-3-0**
This course provides students with a structured rehearsal and performing experience. Students will learn one or more dances and perform for at least one public performance during the semester. Repertory will vary each semester. Students will be required to participate in performances and workshops and to attend at least one dance performance outside of class time. Previous dance experience is expected.
**Prerequisites:**
DAN 163 - Dance Repertory and Performance III
**Corequisites:**
A dance technique course. May be taken prior or during course.

**DAN 204 MODERN DANCE II..... 3-1-4**
This course is a continuation of DAN 104. Students refine their skills and advance their technique as they continue the study and practice of modern dance at the intermediate level. The class will attend one or more live dance performances. **This course is subject to a course fee.**
**Prerequisites:**
DAN 104 - Modern Dance I with a minimum grade of C

**DAN 205 MODERN DANCE III..... 3-1-4**
This course is a continuation of DAN 204. Students continue to refine their skills and increase their strength, flexibility, and stamina as they advance their technique through the continued study and practice of modern dance at the intermediate level. The class will attend one or more live dance performances. **This course is subject to a course fee.**
**Prerequisites:**
DAN 204 - Modern Dance II with a minimum grade of C

**DAN 206 MODERN DANCE IV.....3-1-4**
This course is a continuation of DAN 205. Students continue to refine their skills and increase their strength, flexibility, and stamina as they advance their technique through the continued study and practice of modern dance at the intermediate level. The class will attend one or more live dance performances. **This course is subject to a course fee.**
**Prerequisites:**
DAN 205 - Modern Dance III with a minimum grade of C

**DAN 223 BALLET II.....3-1-4**
This course is a continuation of DAN 123. Students refine their skills and advance their technique as they continue the study and practice of classical ballet at the intermediate level. **This course is subject to a course fee.**
**Prerequisites:**
DAN 123 - Ballet I with a minimum grade of C

**DAN 224 BALLET III.....3-1-4**
This course is a continuation of DAN 223. Students continue to refine their skills and increase their strength, flexibility, and stamina as they advance their technique through the continued study and practice of classical ballet at the intermediate level. **This course is subject to a course fee.**
**Prerequisites:**
DAN 223 - Ballet II with a minimum grade of C

**DAN 225 BALLET IV..... 3-1-4**
This course is a continuation of DAN 224. Students continue to increase their proficiency in classical ballet technique as they hone their movement skills, increase their physical capacity, and refine their skills of artistic expression through the continued study and practice of classical ballet at the intermediate level. **This course is subject to a course fee.**
**Prerequisites:**
DAN 224 Ballet III with a minimum grade of C

**DAN 251 DANCE COMPOSITION.....3-3-0**
This course provides an immersion into the creative act of choreography. Through short in-class assignments and extensive work outside of class, students will investigate both form and content in choreography. Students will create and perform solo and group studies based on choreographic problems.

## DENTAL HYGIENE

**DHG 100 THEORY AND PRACTICE OF DENTAL HYGIENE I.....4-3-6**
A course designed to introduce the dental hygiene student to the profession of dental hygiene, theories and rationales for basic dental hygiene care procedures and prevention of disease, ethical principles, infection control, risk factors for oral disease and treatment planning. Practical application of fundamental concepts and skills are applied in the clinical setting on student partners with emphasis on workplace safety, hazards management, ergonomics, assessment and instrumentation. **This course is subject to a course fee.**
**Prerequisites:**
MAT 011 - Beginning Algebra or MAT 011B - Beginning Algebra with Review of Arithmetic with a minimum grade of C
**Corequisites:**
DHG 111 - Dental Anatomy. May be taken prior or during course.
DHG 155 - Dental Radiology. May be taken prior or during course.

**DHG 111 DENTAL ANATOMY..... 2-2-0**
This course is designed to familiarize the dental hygiene student with all phases of dental anatomy. Topics of study include gross anatomy, nomenclature, eruption sequence, morphology and physiology of the oral structures with emphasis on the primary and permanent dentitions, occlusion, an overview of the temporomandibular joint, and anomalies of the oral structures. The coronal structure and root morphology for individual teeth will be addressed and related to direct patient care procedures.
**Prerequisites:**
MAT 011 - Beginning Algebra or MAT 011B - Beginning Algebra with Review of Arithmetic
ENG 010A - Basic Writing or ENG 011 - Basic Writing II or ESL 011 - Basic Writing II
REA 011 - Fundamentals of College Reading or REA 017 - Vocabulary and Reading Comprehension Development II
**Corequisites:**
DHG 100 - Theory and Practice of Dental Hygiene I. May be taken prior or during course.
DHG 155 - Dental Radiology. May be taken prior or during course.

**DHG 155 DENTAL RADIOLOGY.....2-1-3**
This course enables the dental hygiene student to acquire the knowledge, skills and attitudes necessary to produce dental radiographs of diagnostic quality with minimum patient exposure to radiation. Topics of study include the principles of radiation physics, radiation biology, radiation safety, radiographic technique, patient management, quality assurance, patient selection criteria, mounting and evaluation, recognition of anatomic landmarks and common radiographic findings and alternate imaging modalities. A laboratory component provides the student with the opportunity to learn and practice radiology skills on simulation manikins in preparation for operating competently in the clinic environment. **This course is subject to a course fee.**
**Prerequisites:**
MAT 011 - Beginning Algebra or MAT 011B - Beginning Algebra with Review of Arithmetic
ENG 010A - Basic Writing or ENG 011 - Basic Writing II or ESL 011 - Basic Writing II
REA 011 - Fundamentals of College Reading or REA 017 - Vocabulary and Reading Comprehension Development II
**Corequisites:**
DHG 100 - Theory and Practice of Dental Hygiene I. May be taken prior or during course.
DHG 111 - Dental Anatomy. May be taken prior or during course.

**DHG 158 THEORY AND PRACTICE OF DENTAL HYGIENE II.....5-2-12**
This course is designed to provide the dental hygiene student with the opportunity to expand knowledge and experience in planning and providing oral health services. Topics include nutritional counseling, instrumentation, prevention education and communication, desensitization, tobacco cessation, ethics as well as the hygienist's role in dental specialties. Focus is placed on the student's development of skills in communication and treatment of patients through the lifespan as well as functioning in clinic in an effective and efficient manner. Students provide educational and clinical services with an emphasis on comprehensive care for child and adult clients at the Central Campus dental hygiene clinic. **This course is subject to a course fee.**
**Prerequisites:**
DHG 100 - Theory and Practice of Dental Hygiene I, DHG 111 - Dental Anatomy, and DHG 155 - Dental Radiology
**Corequisites:**
DHG 159 - Histology and Pathology of the Oral Tissues. May be taken prior or during course.
DHG 161 - Periodontics I. May be taken prior or during course.

**DHG 159 HISTOLOGY AND PATHOLOGY OF ORAL TISSUES.....3-3-0**
This course presents the development and microscopic anatomy of the cells, tissues and organs of the oral cavity. Building on the concepts of general histology and embryology, the nature of disease is addressed with respect to etiology, mechanism of disease formation and the body's response to injury. The clinical presentation of basic disease processes that affect the oral cavity and the clinical and histological recognition of oral neoplasia are emphasized.
**Prerequisites:**
DHG - 100 Theory and Practice of Dental Hygiene I, DHG 111 - Dental Anatomy, and DHG - 155 Dental Radiology
**Corequisites:**
DHG 158 - Theory and Practice of Dental Hygiene II. May be taken prior or during course.
DHG 161 - Periodontics I. May be taken prior or during course.

**DHG 161 PERIODONTICS I..... 2-2-0**
This course covers the study of the microscopic and clinical aspects of the normal and diseased periodontal tissues. Utilizing the knowledge of normal tissues, the student will learn to recognize the changes that occur in periodontal disease at the clinical and microscopic level. Students will apply this background knowledge to classify periodontal disease using the American Academy of Periodontology Classification System.
**Prerequisites:**
DHG 100 - Theory and Practice of Dental Hygiene I, DHG 111 - Dental Anatomy, DHG 155 - Dental Radiology
**Corequisites:**
DHG 158 - Theory and Practice of Dental Hygiene II. May be taken prior or during course.

**DHG 220 THEORY AND PRACTICE OF DENTAL HYGIENE III.....6-2-20**
This course introduces the student to the general pathology and physiology of relevant diseases and conditions that may present in the clinical setting. Discussion includes the methods of treatment and the oral health impact of the disease or treatment. The recognition and management of medical emergencies will also be examined. Special emphasis will be given to diseases and conditions of importance in clinical dentistry. Further, this course is designed to broaden the students' abilities to integrate basic, dental and psychosocial sciences in evaluating, planning, and implementing a comprehensive dental hygiene treatment plan for varied patient populations. This course is subject to a course fee. **This course is subject to a course fee.**
**Prerequisites:**
DHG 224 - Materials in Dentistry and DHG 226 - Dental Pain Control
**Corequisites:**
DHG 225 - Oral Pharmacology. May be taken prior or during course.
DHG 261 - Periodontics II. May be taken prior or during course.

**DHG 224 MATERIALS IN DENTISTRY..... 2-1-3**
This course is designed to provide students with a survey of dental materials and procedures, their reasons for use, proper technique and dental application. The scope of study includes gypsum products, impression materials, dental cements, amalgam, synthetic resins, nightguard vital bleaching, athletic mouthguards, prosthetics, refinishing and polishing of restorations, pit and fissure sealants, digital photography and advanced instrumentation. Laboratory sessions provide students with hands-on experience with selected dental material procedures and instrumentation. **This course is subject to a course fee.**
**Prerequisites:**
DHG 158 - Theory and Practice of Central Hygiene II, DHG 159 - Histology and Pathology Oral Tissues, DHG 161 - Periodontics I
BIO 132 Human Anatomy and Physiology

**DHG 225 ORAL PHARMACOLOGY..... 2-2-0**
The course introduces the student to the general principles of applied pharmacology, including: drug action, interaction, adverse reactions, handling, and prescription writing. Drugs for management of medical diseases and conditions are examined as they affect the clinical practice of dental hygiene. Drugs utilized in dentistry are examined as to how they may alter dental treatment. Stressed is the pharmacology related to medical and dental emergencies.
**Prerequisites:**
DHG 224 - Materials in Dentistry and DHG 226 - Dental Pain Control
**Corequisites:**
DHG 220 - Theory and Practice of Dental Hygiene III. May be taken prior or during course.
261 - Periodontics II. May be taken prior or during course.

**DHG 226 DENTAL PAIN CONTROL..... 2-1-2**
The course is a study of the basic and current concepts in the administration of local dental anesthetics. Topics examined include the mechanism of action, local and systemic effects, tissue diffusion and toxicity of anesthetic agents used in dentistry. Patient assessment including medical considerations, apprehension and pain threshold will be evaluated for determining the indications and contraindications of dental pain control. Selection of appropriate anesthetic agents and proper administration techniques will be emphasized. The pharmacology, principles of nitrous oxide-oxygen analgesia administration, patient considerations and legal issues will be discussed. Anatomical considerations for the administration of local anesthesia are reviewed. **This course is subject to a course fee.**
**Prerequisites:**
DHG 158 - Theory and Practice of Dental Hygiene II
**Corequisites:**
DHG 224 - Materials in Dentistry. May be taken prior or during course.

**DHG 253 COMMUNITY DENTISTRY.....2-2-0**
This course is designed to introduce the student dental hygienist to the knowledge and skills necessary to promote oral health in the community. Topics include an overview of public health and its relationship to community dental health, epidemiology and prevention of oral disease, factors affecting the delivery, financing and utilization of dental services, planning community dental programs, and basic research and statistical concepts. Students will apply course content to assess, design, implement and evaluate a community dental health program.
**Prerequisites:**
DHG 261 - Periodontics II, DHG 226 - Dental Pain Control, DHG 220 - Theory and Practice of Dental Hygiene III, and DHG 225 - Oral Pharmacology
**Corequisites:**
DHG 258 - Theory and Practice of Dental Hygiene IV. May be taken prior or during course.

**DHG 258 THEORY AND PRACTICE OF DENTAL HYGIENE IV.....6-2-20**
This course is designed to prepare students to make the transition into dental hygiene practice. Emphasis is placed on new technologies in oral health care, genetic risk factors for periodontal diseases, periodontal disease as a potential risk factor for systemic diseases, ethical and legal considerations in clinical practice, career options, and current issues in dental hygiene. **This course is subject to a course fee.**
**Prerequisites:**
DHG 261 - Periodontics II, DHG 226 - Dental Pain Control, DHG 220 - Theory and Practice of Dental Hygiene III, and DHG 225 - Oral Pharmacology
**Corequisites:**
DHG 253 - Community Dentistry. May be taken prior or during course.

**DHG 261 PERIODONTICS II..... 2-2-0**
The major emphasis of this course is on treatment planning (intraoral photographs, periodontal charting, occlusal analysis, patient education) and therapy (pain control, chemotherapeutic agents, site specific drug therapy, host modulation drug therapy, periodontal surgery, periodontal packs, sutures) of the periodontal patient.
**Prerequisites:**
DHG 158 - Theory and Practice of Dental Hygiene II, DHG 159 - Histology and Pathology of Oral Tissues, and DHG 161 - Periodontics I
**Corequisites:**
DHG 220 - Theory and Practice of Dental Hygiene III. May be taken prior or during course.
DHG 225 - Oral Pharmacology. May be taken prior or during course.

## ECONOMICS

**ECO 110 ELEMENTS OF ECONOMICS.....3-3-0**
Students will develop economic literacy in both macroeconomics (business cycles, inflation, unemployment, etc.) and microeconomics (markets, competition, poverty, pollution, etc.). Business majors planning to transfer may not substitute this course for ECO 121 Macroeconomics or ECO 122 Microeconomics.
**Prerequisites:**
MAT 010 - Fundamentals of Arithmetic or MAT 010B - Review of the Fundamentals of Arithmetic

**ECO 111 PERSONAL FINANCE.....3-3-0**
Students will learn the management of personal finances, and how to solve personal financial problems. Topics include saving, borrowing, purchasing life, health and property insurance, social security, home buying, buying stocks and bonds, and estate planning.

**ECO 115 PRINCIPLES OF PERSONAL INVESTING.....3-3-0**
Students learn both a conceptual and applied approach to personal investments. Financial theory is used as a practical guide to understanding the workings of financial markets. Topics include the investment risk/return relationship, debt and equity instruments, sources of investment information, efficient markets, managing your portfolio, and investment companies.

**ECO 117 INTRODUCTION TO ENVIRONMENTAL ECONOMICS..... 3-3-0**
Students will learn how managing natural resources while maintaining a healthy environment presents a significant challenge in a capitalistic economy. Students will apply economic tools and principles to environmental policy making. The course integrates analysis of current economic policy, examination of human impact on the planet, ethical decision-making, and development of sustainable policy recommendations with the constraint of scarce resources in a market economy. Topics include water and air pollution, energy, climate change, national parks, and human health issues.
**Prerequisites:**
MAT 011 - Beginning Algebra or MAT 011B - Beginning Algebra with Review of Arithmetic
ENG 010A - Basic Writing or ENG 011 - Basic Writing II or ESL 011 - Basic Writing II
REA 011 - Fundamentals of College Reading or REA 017 - Vocabulary and Reading Comprehension Development II

**ECO 121 MACROECONOMICS.....3-3-0**
Students are introduced to the basic economic problem, the study of economics, and the American capitalist market system. Macroeconomic topics discussed are the business cycle, inflation, unemployment, economic growth, and government policies for stability and growth.
**Prerequisites:**
ENG 010A - Basic Writing or ENG 011 - Basic Writing II or ESL 011 - Basic Writing II
MAT 011 - Beginning Algebra or MAT 011B - Beginning Algebra with Review of Arithmetic

**ECO 121H MACROECONOMICS HONORS..... 3-3-0**
Students are introduced to the basic economic problem, the study of economics, and the American capitalist market system. Macroeconomic topics discussed are the business cycle, inflation, unemployment, economic growth, and government policies for stability and growth. This Honors course fosters high-achieving students' growth towards learning outcomes such as: problem solving, often with creative approaches; critical reading and original data analysis; forming judgments based on evidence, often from alternative modes of inquiry or integrative learning; clear, persuasive research writing; oral presentation; and articulate reflection on personal growth. Honors courses are more likely to utilize student-driven active learning, emphasizing exploration and discovery, rather than the acquisition of specific knowledge; faculty might provide projects with no pre-determined conclusion, but with real-world application.
**Prerequisites:**
ENG 010A - Basic Writing or ENG 011 - Basic Writing II or ESL 011 - Basic Writing II
MAT 011 - Beginning Algebra or MAT 011B - Beginning Algebra with Review of Arithmetic

**ECO 122 MICROECONOMICS..... 3-3-0**
Students are introduced to the American capitalist market system. Microeconomic topics discussed are markets, pricing, competition, and resource allocation both domestically and internationally. Also discussed are government policies directed at solving problems in these areas.
**Prerequisites:**
ECO 110 - Elements of Economics or ECO 121 - Macroeconomics

**ECO 130 ECONOMICS OF GLOBALIZATION.....3-3-0**
Students investigate the forces shaping the global economy including the principles of global economics that drive international trade (comparative advantage, tariff/non-tariff barriers, and trade history), international finance (balance of trade and exchange rates), international capital and labor flows, and world-wide economic development. Also studied will be the international organizations created to facilitate global economic integration.
**Prerequisites:**
ECO 110 - Elements of Economics or ECO 121 - Macroeconomics or ECO 121H - Macroeconomics Honors or ECO 122 - Microeconomics
MAT 011 - Beginning Algebra or MAT 011B - Beginning Algebra with Review of Arithmetic

**ECO 211 PRINCIPLES OF FINANCE.....3-3-0**
Students analyze financial systems, financial investments, and business finance. Topics include money, banking and financial markets, Federal Reserve operations and policy, saving and investing, interest rate determination, securities markets, and business financial data and analysis. The course provides an overview of the field of finance for those seeking an introduction to the principles of financial analysis or for the non-finance business major.
**Prerequisites:**
ACC 115 - Financial Accounting
ECO 110 - Elements of Economics or ECO 121 - Macroeconomics or ECO 121H - Macroeconomics Honors

**ECO 221 MONEY & BANKING..... 3-3-0**
Students will analyze the American financial system. Topics discussed are financial markets, monetary theory and policy, organization and control of the banking system, bank functions and operations, and the operation of the Federal Reserve System
**Prerequisites:**
ECO 121 - Macroeconomics or ECO 121H - Macroeconomics Honors and ECO 122 - Microeconomics

## EDUCATION

**EDU 100 INTRODUCTION TO EDUCATION.....3-3-0**
Introduction to Education gives prospective teachers a proper introduction to the field of education. There is a strong emphasis on present-day practices, issues, and theories while also exploring ethics and educational history. While in class, students will participate in various instructional strategies both individually and in group settings. In addition, students will gain educational perspective while engaging in observations in an early childhood, elementary, or secondary school setting.

**EDU 120 TEACHING WITH TECHNOLOGY IN MIDDLE YEARS AND SECONDARY EDUCATION..... 3-3-0**
This course will give students the opportunities to explore, utilize, evaluate, and integrate technology into their classrooms and curriculum. Students will be involved in many aspects of this integration, including lesson plan writing and unit designing. Students will develop the skills for enriching their classrooms with various types of technology. This course focuses on technology integration for grades 5-12 classrooms.

**EDU 121 TEACHING WITH TECHNOLOGY IN EARLY CHILDHOOD 3-3-0**
This course focuses on technology integration for PreK-4th grade classrooms. Students will explore, utilize, evaluate, and integrate technology into their classrooms and curriculum. Students will be involved in many aspects of this integration, including lesson plan writing and unit designing. Students will develop the skills for enriching their classrooms with various types of technology.

**EDU 210 TEACHING YOUNG CHILDREN: AN INTRODUCTION TO EARLY CHILDHOOD EDUCATION..... 3-3-0**
Teaching Young Children: An Introduction to Early Childhood Education is an introduction to the field of early childhood education. It provides a broad overview of the history, philosophy and theories of development as they relate to current best teaching practices. Students will examine the teacher's role in creating responsive, multicultural, and inclusive environments for young children, as well as the importance of play in the learning process. The development of observation skills, combined with practical experience, will aid the student in documentation of young children's thinking and behavior during the Child Study. Health and safety in the early childhood environment, basic classroom management strategies, and communication skills will also be discussed. Throughout the course, students' discovery of who they are in the lives of children will assist in the process of becoming early childhood professionals.

**EDU 213 WORKING WITH CHILDREN WITH SPECIAL NEEDS..... 3-3-0**
Working with Children with Special Needs is an introductory course that provides students with an overview of the historical perspective as well as current issues and practices related to special education. Students will learn about laws that affect students with special needs and the classification of exceptionalities identified by the laws. Students will acquire knowledge of definitions, terminology, and assessment tools that relate to special education. The focus will be on the types of accommodations and adaptation that a teacher should make to support students with special needs to ensure their success. Each student will be assigned to a public school special education classroom for the purpose of gaining a first-hand knowledge of the current state of the art of special education. Students will engage in observation hours during this course.
**Corequisites:**
EDU 100 - Introduction to Education. May be taken prior or during course.

**EDU 225 GUIDING CHILDREN'S READING DEVELOPMENT.....3-3-0**
In Guiding Children's Reading Development, students will learn how language arts skills (reading, writing, speaking, and listening) develop in young children from birth to fourth grade. Students will develop an understanding of their roles as teachers in supporting language arts development. All aspects of skill development, comprehension, and assessment will be addressed.
**Prerequisites:**
EDU 100 - Introduction to Education

**EDU 226 ART FOR YOUNG CHILDREN..... 3-3-0**
Art for Young Children focuses on the importance of artistic experiences in the early childhood classroom. The course is grounded in a comprehensive approach to art education instruction based on the four core disciplines of art making, art criticism, art history, and aesthetics. The concept of creativity is thoroughly examined and applied to projects made by the students. Students will recognize and identify the artistic elements that will help them communicate with young children.

**EDU 227 TEACHING MATHEMATICS TO CHILDREN..... 3-3-0**
Teaching Mathematics to Children presents teaching techniques and materials used in contemporary pre-school/elementary mathematics programs. Students will learn ways to focus instruction on helping children understand and utilize mathematics effectively, think critically, and enforce mathematical standards throughout lessons. The mathematical content of this course is presented within the context of teaching.

**EDU 228 LITERATURE IN EARLY CHILDHOOD AND ELEMENTARY EDUCATION..... 3-3-0**
Literature in Early Childhood and Elementary Education includes a comprehensive examination of children's literature, including a variety of genres, authors, and illustrators. Students will examine authors' literary styles and techniques and learn how to include children's literature in every content area of the curriculum. In addition, students will become familiar with literary elements and authors' uses of them in order to achieve a specific purpose. They will develop skills in the use of storytelling and dramatization. Students will learn how to assess the quality and appropriateness of children's literature for various ages.
**Prerequisites:**
EDU 100 - Introduction to Education

**EDU 233 EARLY CHILDHOOD CURRICULUM..... 3-3-0**
Early Childhood Curriculum is a comprehensive course that addresses all aspects of teaching to young children. Students will explore approaches for educating infant/toddler, preschool, pre-kindergarten, and kindergarten students. Throughout the course, students will be engaged in lesson planning for individual activities and a thematic unit. Students will be exposed to various approaches to curriculum with an emphasis on play. Students will be expected to implement appropriate curricular strategies in an early childhood program. This course must be taken concurrently with EDU 250 (Student Teaching)
**Corequisites:**
EDU 250 - Student Teaching

**EDU 240 TEACHING ENGLISH LANGUAGE LEARNERS.....3-3-0**
Teaching English Language Learners enables students to better meet the challenge of educating English Language Learners in the inclusive classroom. This course will emphasize differentiating instruction for English Language Learners, strategies and materials needed to educate English Language Learners, second language acquisition, cultural sensitivity, challenges for English Language Learners in content area classes, and Pennsylvania Language Proficiency Standards for English Learners. This course also addresses PA teaching certification guidelines, as specified in Chapter 49-2.
**Prerequisites:**
ENG 010A - Basic Writing or ENG 011 - Basic Writing II or ESL 011 - Basic Writing II
REA 011 - Fundamentals of College Reading or REA 017 - Vocabulary and Reading Comprehension Development II

**EDU 245 CONNECTING FAMILIES, SCHOOLS AND COMMUNITIES..... 3-3-0**
Connecting Families, Schools, and Communities explores the concept of family, beginning with an understanding of their own families. Students will also explore diverse family structures, communication styles, parenting styles, family roles, and community engagement. Students will learn how to create meaningful relationships with families in order to enhance learning opportunities for children. In addition, students will investigate community organizations that support families and schools in order to develop community connections and be able to provide information to families. Finally, students will investigate and simulate family/teacher conferences in order to prepare them for that aspect of family/teacher communication.
**Prerequisites:**
ENG 010A - Basic Writing or ESL 010 - ESL Basic Writing I
REA*010 - Elements of Reading or REA*014 - Vocabulary and Reading Comprehension Development I

**EDU 250 STUDENT TEACHING.....6-15-0**
Student Teaching provides significant field experience for students in the Education in the Early Years Program: Birth through Fourth Grade program. It acts as a capstone course for this program. Students spend 15 hours per week observing, planning and implementing their lesson plans in an early childhood classroom under the daily supervision of an experienced teacher. Students also construct and complete a full professional portfolio. A faculty member from the College oversees the entire placement, including arranging for the placement, orienting the on-site teacher and director, observing the student teacher on a regular basis, and providing feedback to the student teacher based on the observations. A student will not be placed in a center/school at which he/she is currently employed, and therefore a student can not be paid for any services conducted during the student teaching course time (M-F, 9:00-12:00). Transportation is the responsibility of the student. A student can only meet the student teaching requirements if he/she is placed in a center/school This course is taken at the end of the program in conjunction with EDU 233, Early Childhood Curriculum. Students need permission of a faculty member or advisor before registering for student teaching. A student must get permission to register for EDU 250 from a student teacher supervisor or Education advisor. **This course is subject to a course fee.**
**Prerequisites:**
All required courses in the Education in the Early Years Program: Birth through Fourth Grade
**Corequisites:**
EDU 233- Early Childhood Curriculum and Administration

## ENGINEERING SCIENCE

**EGR 102 INTRODUCTION TO ENGINEERING.....3-2-2**
This course provides solid foundation of skills to solve engineering problems. Students demonstrate problem solving techniques with spreadsheets, dimensions and units; use modeling techniques and interpret validity of experimental results. Students design projects on multi-discipline teams. The course introduces professional and societal issues appropriate to engineering. Various forms of technical communication are emphasized.
**Prerequisites:**
MAT 011 - Beginning Algebra or MAT 011B - Beginning Algebra with Review of Arithmetic
REA 011 - Fundamentals of College Reading or REA 017 - Vocabulary and Reading Comprehension Development II

**EGR 111 ENGINEERING COMPUTATIONS.....3-2-2**
In engineering environments, it is critical to recognize when and how a computer can assist in the analysis of a problem. This course will introduce the key concepts of good programming practice and show how computer programming directly relates to solving engineering problems. Multiple programming environments are used, each one emphasizing the same core concepts, yet customized to support a specific category of engineering problem application. **This course is subject to a course fee.**
**Prerequisites:**
MAT 100 - Intermediate Algebra or MAT 100B - Intermediate Algebra & Review

**EGR 115 ENGINEERING GRAPHICS..... 3-2-2**
This course covers the basics of 3-Dimensional Solid Modeling design from conception through to final product production. Drawing, dimensioning, and tolerancing techniques are discussed as well as fitment and scaling. Solutions to 3D problems and spatial analysis through descriptive geometry are also analyzed. **This course is subject to a course fee.**
**Prerequisites:**
MAT 100 - Intermediate Algebra or MAT 100B - Intermediate Algebra & Review

**EGR 203 ENGINEERING STATICS..... 3-2-2**
This course describes the mechanical behavior of materials and systems in equilibrium using Newton's laws of motion. Students will learn the principles of force and moment equilibrium, construction and analysis of free-body diagrams, understanding distributed forces, friction, and structural response. **This course is subject to a course fee.**
**Prerequisites:**
EGR 111 - Engineering Computations and EGR 115 - Engineering Graphics
MAT 190 - Calculus and Analytic Geometry I
PHY 151 - Principles of Physics I

**EGR 204 ENGINEERING DYNAMICS.....3-2-2**
This course is a vector approach to the study of the rectilinear and curvilinear motion of particles and rigid bodies as described by rectangular, polar, and path coordinates and the study of the forces that produce such motion as described through the application of Newton's second law of motion, work-energy relationships, and impulse and momentum principles, including rigid body rotation and relative motion. **This course is subject to a course fee.**
**Prerequisites:**
EGR 203 - Engineering Statics
**Corequisites:**
MAT 201 - Calculus and Analytic Geometry II. May be taken prior or during course.

**EGR 210 DIGITAL SYSTEMS.....4-3-3**
This course introduces the fundamentals of digital systems design. It is designed as a foundation course for those pursuing studies leading to a degree in electrical, electronics or computer engineering. **This course is subject to a course fee.**
**Prerequisites:**
EGR 111 - Engineering Computations

**EGR 211 LINEAR ELECTRICAL SYSTEMS I.....4-3-3**
This course covers the fundamental laws and procedures of electric circuit analysis including Kirchhoff's laws, superposition, and Thevenin's and Norton's theorems. Elementary transients, sinusoidal steady-state analysis, impedance, power transfer and operational amplifiers are covered. **This course is subject to a course fee.**
**Prerequisites:**
EGR 111 - Engineering Computations
MAT 190 - Calculus and Analytic Geometry I
**Corequisites:**
MAT 201 - Calculus and Analytic Geometry II. May be taken prior or during course.
PHY 152 - Principles of Physics II. May be taken prior or during course.

**EGR 213 MECHANICS OF MATERIALS.....3-2-2**
This course covers the deformation of beams and shafts using energy methods and structural analysis, the analysis of stress and strain, stress-strain relations, shear and moment diagrams, stress and strain transformations, failure criteria and elementary plasticity. **This course is subject to a course fee.**
**Prerequisites:**
EGR 203 - Engineering Statics
MAT 201 - Calculus and Analytic Geometry II

**EGR 214 LINEAR ELECTRICAL SYSTEMS II.....4-3-3**
This course introduces the concepts of linear systems theory as applied to electrical networks, AC steady state analysis, frequency response, two-port models, Fourier series, and Laplace transforms. **This course is subject to a course fee.**
**Prerequisites:**
EGR 211 - Linear Electrical Systems I
MAT 201 - Calculus and Analytic Geometry II
PHY 152 - Principles of Physics II

**EGR 291 ENGINEERING RESEARCH I.....3-2-2**
This course provides the student with an introductory research experience focused on a specific topic in engineering. Utilizing the scientific method, students will conduct literature reviews, design and execute experiments, collect and analyze data, and report out on results through technical reports and presentations. Students will learn best practices in experimental design, data collection, and laboratory notebook maintenance. **This course is subject to a course fee.**
**Prerequisites:**
MAT 011 - Beginning Algebra or MAT 011B - Beginning Algebra with Review of Arithmetic with a minimum grade of C. Placement score information can be found on the ACT335 document linked to the online course description.

**EGR 292 ENGINEERING RESEARCH II.....3-2-2**
This course provides students with an additional research experience building upon work performed in EGR 291, Engineering Research I. Students may continue projects or initiate new ones. Utilizing the scientific method, students will conduct more advanced literature reviews, and play a leadership role in the design and execution of experiments, data collection/analysis, and reporting of results through technical reports and presentations. Students will continue to hone best practices in experimental design, data collection, and laboratory notebook maintenance. **This course is subject to a course fee.**
**Prerequisites:**
EGR 291 - Engineering Research I with a minimum grade of C

## ENGINEERING TECHNOLOGY

**EGT 190 PRINCIPLES/CRITICAL THINK. IN TECHNOLOGY.....3-3-0**
The primary aim of this course is to teach students how to apply standards of critical thinking to everyday problem solving situations in order to succeed in a rapidly changing world. Critical thinking standards are studied and applied to a variety of everyday situations to develop fact-finding and sound questioning skills in order to more effectively assess and find solutions to problem situations. Developing critical thinking behavior will improve the ability for the technology student to trouble-shoot systems. Business students will benefit by doing more efficient cost/benefit analysis and students of other disciplines will find learning how to think more critically a tremendous asset to their lives.

**EGT 203 APPLIED STATICS.....4-3-3**
This course covers Newtons first law as applied to particles and rigid bodies. Topics include the study of elementary, analytical and practical applications of the principles and physical concepts of statics. **This course is subject to a course fee.**
**Prerequisites:**
EGT 190 - Principles of Critical Thinking in Technology
MAT 161 - Precalculus I
High School Physics or PHY 121 - General Physics I
**Corequisites:**
MAT 162 - Precalculus II. May be taken prior or during course.

**EGT 204 APPLIED DYNAMICS.....4-3-3**
This course covers topics on kinematics, work-energy equations, and impulse-momentum theory as they apply to rigid bodies, with an emphasis on engineering situations. Students will also be introduced to vibration theory. **This course is subject to a course fee.**
**Prerequisites:**
EGT 190 - Principles of Critical Thinking in Technology
MAT 162 - Precalculus II
PHY 121 - General Physics I

**EGT 210 DIGITAL CIRCUITS..... 4-3-3**
This course introduces the student to basic digital circuit design and analysis with an emphasis on applications. The course is taught in a laboratory-oriented environment and incorporates a design-of-experiments approach to fabrication and test of a variety of digital circuits. Interactive computer-based instructional systems reinforce the material covered in class. **This course is subject to a course fee.**
**Prerequisites:**
EGT 190 - Principles of Critical Thinking in Technology
MAT 161 - Precalculus I
PHY 121- General Physics I and PHY 122 - General Physics II

**EGT 211 AC/DC CIRCUITS..... 4-3-3**
This course covers advanced principles of passive DC and AC electrical circuits. The DC network is initially introduced to provide a solid understanding of the relationships of multiple current and voltage supply configurations in multi-loop circuits. The single-phase sinusoidal AC network is then introduced followed by multi-phase AC networks. Basic filtering networks and transformer theory are also covered. Substantial laboratory-based activities are included to reinforce and validate the circuit theory. A basic background in college-level general physics II is required as well as a working knowledge of complex-number mathematics, simultaneous equations, and basic trigonometry to enroll in this course. **This course is subject to a course fee.**
**Prerequisites:**
EGT 190 - Principles of Critical Thinking in Technology
MAT 162 - Precalculus II
PHY 122 - General Physics II

**EGT 212 APPLIED FLUID MECHANICS.....4-3-3**
This course covers topics in fundamental fluid mechanics theory including fluid properties, static fluids, kinematics of fluids, and the general energy equation. Applied topics include power requirements of hydraulic and turbo machinery, steady incompressible flow in pressure conduits, and flow measurements. **This course is subject to a course fee.**
**Prerequisites:**
EGT 190 - Principles of Critical Thinking in Technology
MAT 162 - Precalculus II
PHY 121 - General Physics I and PHY 122 - General Physics II

**EGT 213 APPLIED STRENGTH OF MATERIALS.....4-3-3**
This course is an intensive study of the mechanical properties of materials used in engineering. Topics covered include stress-strain relationships, shear and moment diagrams, design of beams and columns, welded connections, pressure vessels, stress concentrations, and material properties. **This course is subject to a course fee.**
**Prerequisites:**
EGT 203 - Applied Statics
MAT 162 - Precalculus II

**EGT 215 APPLIED THERMODYNAMICS..... 4-3-3**
This course introduces the student to the fundamental heat transfer equations for conduction, convection, and radiation and heat exchanger design. Topics will also include instruction on fundamental concepts of the first and second laws of thermodynamics and their applications to engineering systems. All lecture material presented in class will be reinforced by in-class laboratory experiences. **This course is subject to a course fee.**
**Prerequisites:**
EGT 190 - Principle of Critical Thinking in Technology
MAT 162 - Precalculus II

**EGT 230 ANALOG CIRCUITS.....4-3-3**
This course introduces the student to the implementation of commercially available solid-state devices and linear integrated circuits in analog electronic systems. The course is taught in a laboratory-oriented environment and incorporates a design-of-experiments approach to fabrication and test of a variety of communication systems. Interactive computer-based instructional system provides hands on training. **This course is subject to a course fee.**
**Prerequisites:**
EGT 190 - Principles of Critical Thinking in Technology
PHY 122 - General Physics II
MAT 162 - Precalculus II

**EGT 235 INSTRUMENTATION & CONTROLS.....4-3-3**
This course provides the student the opportunity to investigate the selection and use of automated control devices and their associated input and output interfaces to measure operating characteristics in both electrical and mechanical systems. The student will work with programmable logic equipment as well as electromechanical devices and design actual processes that will then be monitored and feedback controlled. A design-of-experiments approach to learning is incorporated into the course. **This course is subject to a course fee.**
**Prerequisites:**
EGT 190 - Principles of Critical Thinking in Technology
PHY 121 - General Physics I and PHY 122 - General Physics II
MAT 162 - Precalculus II
EGR 111 - Engineering Computations

**EGT 240 COMMUNICATION SYSTEMS..... 4-3-3**
This course introduces the student to the principles of analogue and digital data transmission by way of RF, microwave, wire, and fiber- optic technology associated with the transmission and reception of data. Wired and wireless LAN, cellular, satellite, radio, and microwave transmission are discussed and reinforced. This course is taught in a laboratory- oriented environment and incorporates a design-of-experiments approach to fabrication and test of a variety of communication systems. Interactive computer-based instructional systems reinforce the material covered in class. **This course is subject to a course fee.**
**Prerequisites:**
EGT 210 - Digital Devices
MAT 162 - Precalculus II
EGR 111 - Engineering Computations

## EMERGENCY MANAGEMENT PLANNING

**EMP 100 EMERGENCY PLANNING..... 3-3-0**
This course will introduce the student to the concepts of Emergency and Crisis Planning. The course provides a conceptual overview of planning as a means to anticipate, prevent, prepare for, respond to, and recover from any incident. The course will analyze the planning process in its constituent parts, such as hazard analysis, resource assessment, plan development, coordination with others, and plan implementation, training, and education. Students will work in an interactive program to establish a planning process for companies or municipalities. Students will learn from actual case experiences, and will sharpen their understanding and relevant skills.

**EMP 110 INCIDENT MANAGEMENT..... 3-3-0**
This course is designed to provide the student with an overview of the 'Incident Command' - 'Unified Command' Structure. Students will analyze incident management from various perspectives, including those of local fire departments, in industrial settings, and through the use of case studies such as the Oklahoma City bombing. Students will work interactively to prepare for future roles and responsibilities as those charged with a management role in incident command, control or mitigation. Moreover, the student will learn from the experiences of others, sharpening their understanding and skills relative to the dimensions of emergency incident management.

**EMP 120 SEARCH & RESCUE..... 3-3-0**
This is a skills-based course that will provide the student with practical knowledge concerning the general responsibilities, skills, abilities, and equipment needed by those involved in search and rescue efforts. The course will also provide the student with practical exercises and search missions where they will be required to utilize the proper equipment and methods. The content of the course includes topics in three major areas: survival, support, and search and rescue. The course will afford the opportunity to discuss and investigate the role of search and rescue in relation to incident management as well as the roles and responsibilities of search and rescue leaders. Students will learn from the experiences of others through actual case analysis.

**EMP 200 SEMINAR IN EMERGENCY MANAGEMENT..... 1-1-0**
This course will provide the student with a forum for discussion of the basic need for emergency management, emergency planning and incident management. This course will also offer an overview of the roles and responsibilities of the Incident Safety Officer in preparation for a series of response drills to implement student knowledge in these areas. In addition, a functional exercise utilizing advanced interactive simulation software will be conducted to confirm the course outcomes and test student competencies.
**Prerequisites:**
EMP 100 - Emergency Planning and EMP 110 - Incident Management

**EMP 210 LEADERSHIP & INFLUENCE IN EMERG RESPONSE..... 3-3-0**
This course is intended to serve as a 4th semester capstone course in the EMP Program. It will provide the student with an overview of the theories and concepts of leadership development, as well as to inculcate higher-order leadership skills and competencies. The course will examine leadership from a 'core values' approach, systems (chain of command) approach, a functional approach, and a skills approach (motivation, supervision and communications). Students will study the process approach by looking at leadership as a process of influencing an organization or group to achieve desired ends.
**Prerequisites:**
EMP 100 - Emergency Planning and EMP 110 - Incident Management

**EMP 250 TERRORISM & COUNTER-TERRORISM..... 3-3-0**
Terrorism in the 21st century is a global phenomenon. This course is designed to provide a comprehensive and interdisciplinary survey of the history, theory, and modern-day political manifestations of terrorism and counter-terrorism. Terrorism will be evaluated in terms of its underlying cultural, economic, political, and psychological root causes. Effective counteraction and profiling requires empathetic explorations and analyses by students into causes and mind-sets. Counter-terrorism strategies and tactics will also be examined specifically in light of the legal and procedural safeguards that are fundamental to the maintenance of liberal democratic social and political values.
**Prerequisites:**
A passing grade in at least one introductory level course in any of the following: Anthropology, Criminal Justice Studies, Economics, Geography, History, Political Science, Psychology or Sociology

**EMP 265 PUBLIC SAFETY TECHNOLOGY..... 3-3-0**
This course will focus on current themes in public safety technology, to include such topics as: Computer Aided Dispatch, basic ideas of mobile radio technology, mobile data/mobile computer capabilities and functionality, public safety applications for Global Positioning technology, as well as emerging trends that will appear in the Public Safety arena in the next 3 to 5 years. An overview of standards governing communications systems, dispatchers, and other areas of public safety technology will also be covered. Topics will be covered at a non-technical level to provide the student with an overview and understanding of the technology rather than an in-depth examination of just a few specific items. Lectures will include live demonstrations of devices to reinforce key concepts and promote greater understanding. Students will prepare a summary paper in small groups on an emerging idea in public safety technology, based upon original research.
**Prerequisites:**
CJS 100 - Introduction to Criminal Justice or EMP 100 - Emergency Planning or FSC 100 - Introduction to Fire Science, or permission of instructor or director

## ENGLISH

**ENG 010A BASIC WRITING.....0-6-0**
ENG 010A uses writing and reading to focus on grammar, sentence structure, paragraph development, fundamental English usage, and intensive paragraph writing. The course is required of all students whose scores on the placement test indicate a need for intensive review of basic writing skills. ENG 010A may also be taken as a refresher course. This precollege level course cannot be used to fulfill a degree requirement nor is it calculated in a student's Grade Point Average (GPA); however, the credits billed will be applied towards a student's financial aid enrollment status and enrollment status reported to the National Student Clearinghouse.
**Prerequisites:**
Placement test score of 0 or 1

**ENG 011 BASIC WRITING II..... 0-3-0**
ENG 011 emphasizes sentence structure, paragraph development, fundamental English usage, and intensive paragraph writing. The course is required of all students whose scores on the placement test indicate a need for intensive review of basic writing skills. ENG 011 may also be taken as a refresher course. This precollege level course cannot be used to fulfill a degree requirement nor is it calculated in a student's Grade Point Average (GPA); however, the credits billed will be applied towards a student's financial aid enrollment status and enrollment status reported to the National Student Clearinghouse.
**Prerequisites:**
ENG 010 - Basic Writing I OR ENG 010A - Basic Writing with a minimum grade of C, or English Placement Test score of 2 or 3

**ENG 101 ENGLISH COMPOSITION I..... 3-3-0**
ENG 101 is based on the premise that critical thinking generates clear writing. In this course, the student learns to read critically, a skill that involves distinguishing central ideas from supporting material and identifying an author's purpose, assumptions, attitudes, and biases. Additionally, the student in ENG 101 learns a writing process that involves generating ideas, drafting, composing, revising, and editing. The student also learns to locate, use, and accurately reference various sources of information.
**Prerequisites:**
ENG 010A - Basic Writing or ENG 011 - Basic Writing II or ESL 011 - Basic Writing II with a minimum grade of C
REA 011 - Fundamentals of College Reading or REA 017 - Vocabulary and Reading Comprehension Development II with a minimum grade of C

**ENG 101H ENGLISH COMPOSITION I HONORS..... 3-3-0**
ENG 101 is based on the premise that critical thinking generates clear writing. In this course, the student learns to read critically, a skill that involves distinguishing central ideas from supporting material and identifying an author's purpose, assumptions, attitudes, and biases. Additionally, the student in ENG 101 learns a writing process that involves generating ideas, drafting, composing, revising, and editing. The student also learns to locate, use, and accurately reference various sources of information. This Honors course fosters high-achieving students' growth towards learning outcomes such as: problem solving, often with creative approaches; critical reading; forming judgments based on evidence, often from integrative learning; clear, persuasive research writing; oral presentation; and articulate reflection on personal growth. Honors courses are more likely to utilize student-driven active learning, emphasizing exploration and discovery, rather than the acquisition of specific knowledge; faculty might provide projects with no pre-determined conclusion, but with real-world application.
**Prerequisites:**
ENG 010A - Basic Writing or ENG 011 - Basic Writing II or ESL 011 - Basic Writing II with a minimum grade of C
REA 011 - Fundamentals of College Reading or REA 017 - Vocabulary and Reading Comprehension Development II with a minimum grade of C

**ENG 102 ENGLISH COMPOSITION II..... 3-3-0**
ENG 102 focuses on writing the college-level research paper and develops each student's mastery of communication, information literacy, and analytic skills with emphasis placed on research and documentation methods. Students use writing, reading, listening, and observations skills to understand, organize, receive, and convey information. Using research gleaned from diverse sources, students employ logic, reasoning, and analysis to craft effective essays.
**Prerequisites:**
ENG 101 - English Composition II with a minimum grade of C, or equivalent

**ENG 102H ENGLISH COMPOSITION II HONORS..... 3-3-0**
ENG 102 focuses on writing the college-level research paper and develops each student's mastery of communication, information literacy, and analytic skills with emphasis placed on research and documentation methods. Students use writing, reading, listening, and observations skills to understand, organize, receive, and convey information. Using research gleaned from diverse sources, students employ logic, reasoning, and analysis to craft effective essays. This Honors course fosters high-achieving students' growth towards learning outcomes such as: problem solving, often with creative approaches; critical reading; forming judgments based on evidence, often from integrative learning; clear, persuasive research writing; oral presentation; and articulate reflection on personal growth. Honors courses are more likely to utilize student-driven active learning, emphasizing exploration and discovery, rather than the acquisition of specific knowledge; faculty might provide projects with no pre-determined conclusion, but with real-world application.
**Prerequisites:**
ENG 101 - English Composition I with a minimum grade of C, or equivalent

**ENG 115 WRITING FOR TECHNICAL COMMUNIC..... 3-3-0**
Writing for Technical Communication entails the application of writing skills taught in ENG 101 and research skills. It teaches how to do on-the-job writing. It concentrates on special and practical forms of communication, letters and memos, the summary, the critique, the report, the article, and the technical speech. In addition, the course adapts formal English to the style of the technical or specialized writer.
**Prerequisites:**
ENG 101 - English Composition I with a minimum grade of C

**ENG 117 WRITING FOR BUSINESS/INDUSTRY.....3-3-0**
Writing for Business and industry entails the study of the principles of general business communication for people in business and industry or students planning a career in business. The course includes intensive study of the mechanics, form, style, and content of business letters, memos, reports, proposals, and evaluations.

**ENG 165 JOURNALISM I.....3-3-0**
ENG 165 introduces students to the art of journalistic writing. In this course, the student learns to present news in an objective and responsible manner, a skill that involves recognizing newsworthy events, organizing information, pitching articles to news editors, writing articles suitable for publication, and submitting properly formatted copy to news outlets, both traditional print and online. The student also learns to locate, use, and accurately reference various sources of information, both online and through interview and observation.
**Prerequisites:**
ENG 101 - English Composition I with minimum grade of C

**ENG 201 SURVEY OF ENGLISH LITERATURE 1.....3-3-0**
This course is a chronological survey of English literature from the beginnings through the Neoclassical Period. The emphasis is on major writers, whose works are studied for their literary value and in their historical and philosophical contexts.
**Prerequisites:**
ENG 101 - English Composition I with minimum grade of C

**ENG 202 SURVEY OF ENGLISH LITERATURE 2.....3-3-0**
This course is a chronological survey of English literature from the Romantic Period to the present. The emphasis is on major writers, whose works are studied for their literary value and in their historical and philosophical contexts.
**Prerequisites:**
ENG 101 - English Composition I with minimum grade of C

**ENG 211 SURVEY OF AMERICAN LIT. 1.....3-3-0**
This course is a chronological survey of American literature from the Colonial Period to the Civil War. Significant works of American writers are studied for their literary value and in their historical and philosophical contexts.
**Prerequisites:**
ENG 101 - English Composition I with minimum grade of C

**ENG 212 SURVEY OF AMERICAN LITERATURE II.....3-3-0**
This is a chronological survey of American literature from 1865 to the present. Upon successful completion of this course, students will be able to write analytical essays on literary texts, explain the individual, social, economic, and global forces that have shaped American literature from 1865 to the present, define the characteristics of realism, modernism, and postmodernism in relation to American literature, present chronologically the movements and major writers of American literature from 1865 to the present, and use secondary sources to analyze literary texts from diverse cultural and social perspectives.
**Prerequisites:**
ENG 101 - English Composition I with minimum grade of C

**ENG 221 LITERATURE OF THE WESTERN WORLD 1.....3-3-0**
This course is a survey of major periods, trends, ideas, and genres in Western literature from the beginning of Western tradition to the Renaissance. Representative writings and authors from the Old Testament to Shakespeare are studied.
**Prerequisites:**
ENG 101 - English Composition I with minimum grade of C

**ENG 222 LITERATURE OF THE WESTERN WORLD 2.....3-3-0**
This course is a survey of major periods, trends, ideas, and genres in Western literature from the 17th century to the Modern Era. Representative writings and authors from the age of Milton to the present are studied.
**Prerequisites:**
ENG 101 - English Composition I with minimum grade of C

**ENG 228 LITERATURE IN EARLY CHILDHOOD AND ELEMENTARY EDUCATION.....3-3-0**
This is a required course for students who are in the Education in the Early Years: Birth through Fourth Grade Program. It includes a comprehensive examination of children's literature including a variety of genres, authors, and illustrators. Students will examine authors' literary styles and techniques and learn how to include children's literature in every content area of the curriculum. In addition, students will become familiar with literary elements and authors' uses of them to achieve a specific purpose. They will develop skills in the use of storytelling and dramatization. Students will learn how to assess the quality and appropriateness of children's literature for various ages. EDU 100 must be taken as a prerequisite for taking this course.
**Prerequisites:**
EDU 100 - Introduction to Education

**ENG 235 POETRY.....3-3-0**
This course will include a study of the techniques and styles of poetry as a means of understanding human experience. The course will be a survey of poems selected because of the insights and revelations which they provide. The course will also provide appropriate background information and instruction in types, techniques, and styles of poetic composition with special emphasis on the relationship of these matters to the poetic vision of each work.
**Prerequisites:**
ENG 101 - English Composition I with minimum grade of C

**ENG 236 FICTION.....3-3-0**
This course aims to cultivate an appreciation of the commentaries and influences on contemporary civilization by European and American writers of fiction. The short story and/or the novel will be studied in terms of structure, plot, setting, character development, point of view, tone and style which, in concert, will provide a deeper understanding of the author's vision.
**Prerequisites:**
ENG 101 - English Composition I with minimum grade of C

**ENG 237 DRAMA.....3-3-0**
This course will aim to introduce the student to the significant playwrights of Western Literature, concentrating particularly on those playwrights who have had a major influence on the theatre. A particular play will be approached in terms of the culture of its origin and as a representation of universal human values and conflicts. Specifically, the course will deal with a discussion of plot, character, theme, setting and diction.
**Prerequisites:**
ENG 101 - English Composition I with minimum grade of C

**ENG 238 LITERARY VISION OF FILM.....3-3-0**
This course focuses on film as a mode of literary expression and developing a baseline knowledge of the techniques and devices of literature, selected films are viewed and discussed as works of literature. Only films which were created as films - that is, not based on books or works of drama - are considered. This is not a "film" course, and techniques relating to film are not studied.
**Prerequisites:**
ENG 101 - English Composition I with minimum grade of C

**ENG 245 SCIENCE FICTION.....3-3-0**
A survey of the works of distinguished science fiction writers from Jules Verne to the present. Novels and short stories by writers such as H.G. Wells, Isaac Asimov, Kurt Vonnegut, Robert Heinlein, Arthur Clarke and Ray Bradbury will be read and discussed. Discussions will be aimed at determining the specific characteristics of the genre and its relationship to fantasy and traditional fiction.
**Prerequisites:**
ENG 101 - English Composition I with minimum grade of C

**ENG 246 AFRICAN AMERICAN LITERATURE..... 3-3-0**
This course introduces the student to representative works by African Americans. Autobiographies, novels, poems, plays, and films will be studied, by some of the following: Frederick Douglas, Langston Hughes, Richard Wright, Ralph Ellison, Zora Neale Hurston, Malcolm X, Leroy Jones, James. Baldwin, Nikki Giovanni, Eldridge Cleaver, Toni Morrison, John Wideman, August Wilson, and Spike Lee.
**Prerequisites:**
ENG 101 - English Composition I with minimum grade of C

**ENG 255 WOMEN IN LITERATURE.....3-3-0**
This course will analyze the image of women in literary works by female and/or male authors. The instructor will select one of several possible formats to follow, such as thematic (e.g., women as mothers, wives, mistresses, shrews, temptresses, and heroes). The class will discuss themes, characters, structure, imagery, and point of view, all in relation to women's roles.
**Prerequisites:**
ENG 101 - English Composition I with minimum grade of C

**ENG 256 LITERATURE AND FILM..... 3-3-0**
The purpose of this course is to acquaint the student with works of literature and their adaptations into films. Both forms will be discussed and studied as expressions of human experiences. The emphasis of the course will be on the literary work; typically, the film will be viewed and discussed as an adaptation of that work.
**Prerequisites:**
ENG 101 - English Composition I with minimum grade of C

**ENG 257 CONTEMPORARY LITERATURE.....3-3-0**
This course is designed to familiarize the student with what some of our best writers are doing today; possible emphases include journeys into the mind and the effects of electronic media. Such writers as Kerouac, Ginsberg, Barthelme, Baraka, Pynchon, Barth, Bellow and Oates may be discussed.
**Prerequisites:**
ENG 101 - English Composition I with minimum grade of C

**ENG 265 INTRODUCTION TO CREATIVE WRITING..... 3-3-0**
Introduction to Creative Writing entails the study of the craft of creative writing. Over the course of the semester, students will learn to identify and discuss the characteristics of literary creative writing, compose basic works of creative writing, employ effective editing and revision skills, and use a standardized vocabulary to justify aesthetic literary judgments. Class enrollment is limited to 20 students.
**Prerequisites:**
ENG 101 - English Composition I with a minimum grade of C

**ENG 266 ADVANCED CREATIVE WRITING.....3-3-0**
This course develops further the writing skills learned in ENG 265. Students analyze literary models and critique each other's works with an emphasis on developing critical abilities necessary to refine their own works for publication. Most importantly, it will give them the chance to write for markets and learn the mechanisms through which they may submit their works for publication. They also may pursue special writing projects beyond the scope of the classroom, including chances to participate in internships and feature their own works while presenting coffeehouses or teaching writing workshops.
**Prerequisites:**
ENG 101 - English Composition I and ENG 265 - Creative Writing or portfolio approved by instructor

**ENG 275 SHAKESPEARE.....3-3-0**
This course is a general introduction to the comedies, histories, and tragedies of Shakespeare. The aim of the course is to enable the student to appreciate Shakespeare's dramatic ability, his skill with language, and his insights into humanity.
**Prerequisites:**
ENG 101 - English Composition I with minimum grade of C

**ENG 285 SOPHOMORE LITERATURE STUDIES..... 3-3-0**
This is a specialized sophomore level course typically dealing with a different subject each time the course is offered. Each course will present a body of literary materials which will serve as the basis for assisting the student in strengthening sensitivity to literature and developing the critical abilities needed for understanding, evaluating and appreciating literature. Consult the English Department for a detailed description of the course currently being offered.
**Prerequisites:**
ENG 101 - English Composition I with minimum grade of C

**ENG 285H SOPHOMORE LITERATURE STUDIES HONORS..... 3-3-0**
This is a specialized sophomore level course typically dealing with a different subject each time the course is offered. Each course will present a body of literary materials which will serve as the basis for assisting the student in strengthening sensitivity to literature and developing the critical abilities needed for understanding, evaluating and appreciating literature. Consult the English Department for a detailed description of the course currently being offered. This Honors course fosters high-achieving students' growth towards learning outcomes such as: problem solving, often with creative approaches; critical reading; forming judgments based on evidence, often from integrative learning; clear, persuasive research writing; oral presentation; and articulate reflection on personal growth. Honors courses are more likely to utilize student-driven active learning, emphasizing exploration and discovery, rather than the acquisition of specific knowledge; faculty might provide projects with no pre-determined conclusion, but with real-world application.
**Prerequisites:**
ENG 101 - English Composition I with minimum grade of C

## NANOFABRICATION

**ESC 211 MATERIAL, SAFETY & EQUIP NANOTECH FOR NANOFABRICATION.....3-2-2**
This course overviews basic material properties as well as environment, health, and safety (EHS) issues in equipment operation and materials handling in "top down" and "bottom up" nanofabrication. The chemical and physical materials properties underlying nanotechnology are surveyed. EHS topics arising from the processing and disposal of these materials are addressed including: cleanroom operation, OSHA lab standard safety training, health issues, biosafety levels (BSL) guidelines, and environmental concerns. Specific safety issues dealing with nanofabrication equipment, materials, and processing will also be discussed including those pertinent to wet benches, thermal processing tools, vacuum systems and pumps, gas delivery systems and toxic substance handling and detection. This course is designed to be one of six capstone courses (ESC 211, 212, 213, 214, 215, 216) for the Penn State Semiconductor Manufacturing Technology (SMT) program. The course is lab intensive, leveraging the Nanofabrication Facility on the University Park campus. All lectures will be given in a technology classroom, Suite 114 Luber Bldg., Research Park. This classroom is dedicated to the Center for Semiconductor Manufacturing Technology and thus has a wide variety of very specialized, "hands-on" materials and facilities continually available to students. The course grade evaluation will use a mixture of tests, presentations, reports, and project assignments. Teaming and team problem solving will be stressed.
**Prerequisites:**
A department recommendation, upon review of appropriate educational background, academic performance and personal interview

**ESC 212 BASIC NANOTECHNOLOGY PROCESSES..... 3-2-2**
This course is an overview of the broad spectrum of processing approaches 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 used in today's device and structure fabrication. Students learn to appreciate processing and manufacturing concerns including safety, 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 overview exposure covers basic nanofabrication processes including deposition, etching, and pattern transfer. This course is designed to be one of six capstone courses (Esc 211, 212, 213. 214, 215, 216) for the Penn State Semiconductor Manufacturing Technology (SMT) program. The course is lab intensive, leveraging the Nanofabrication Facility on the University Park campus. All lectures will be given in a technology classroom, Suite 114 Lubert bldg., Research Park. This classroom is dedicated to the Center for Semiconductor Manufacturing Technology and thus has a wide variety of very specialized, "hands-on" materials and facilities continually available to students. The course grade evaluation will use a mixture of tests, presentations, reports, and project assignments. Teaming and team problem solving will be stressed.
**Prerequisites:**
ESC 211 - Material, Safety and Equipment Overview for Nanofabrication

**ESC 213 MATERIALS IN NANOTECHNOLOGY..... 3-2-2**
This course is an in-depth, hands-on exposure to the producing and tailoring of the materials used in nanofabrication. The course will cover chemical materials production techniques such as colloidal chemistry; atmosphere, low-pressure and plasma enhanced chemical vapor deposition; nebulization; and atomic layer deposition. It will also cover physical techniques such as sputtering; thermal and electron beam evaporation; and spin-on approaches. This course is designed to give students experience in producing a wide variety of materials tailored for their mechanical, electrical, optical, magnetic, and biological properties. This course is designed to be one of six capstone courses (Esc 211, 212, 213, 214, 215, 216) for the Penn State Semiconductor Manufacturing Technology (SMT) program. The course is lab intensive, leveraging the Nanofabrication Facility on the University Park campus. All lectures will be given in a technology classroom, Suite 114 Luber bldg., Research Park. This classroom is dedicated to the Center for Semiconductor Manufacturing Technology and thus has a wide variety of very specialized, "hands-on" materials and facilities continually available to students. The course grade evaluation will use mixture of tests, presentations, reports and project assignments. Teaming and team problem solving will be stressed.
**Prerequisites:**
ESC 212 - Basic Nanotechnology Processes

**ESC 214 PATTERNING FOR NANOTECHNOLOGY..... 3-2-2**
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 will be discussed including polymers, solvents, sensitizers, and additives. The role or dyes and antireflective coatings will be discussed. In addition, critical dimension (CD) control and profile control of resists will be investigated. The third section will discuss the particle beam lithographic techniques such as e-beam lithography. The fourth section covers probe pattern generation and the fifth section explores imprinting lithography, step-and-flash, stamp lithography, and self-assembled lithography. This course is designed to be one of six capstone courses (Esc 2ll, 212,213,214, 215, 216) for the Penn State Semiconductor Manufacturing Technology (SMT) program. The course is lab intensive, leveraging the Nanofabrication Facility on the University Park campus. All lectures will be given in a technology classroom, Suite 114 Lubert bldg., Manufacturing Technology and thus has a wide variety of very specialized, "hands-on" materials and facilities continually available to students. The course grade evaluation will use a mixture of tests, presentations, reports, and project assignments. Teaming and tem problem solving will be stressed.
**Prerequisites:**
ESC 213 - Materials in Nanotechnology

**ESC 215 MATERIALS MODIFICATION/NANOTECHNOLOGY..... 3-2-2**
This course covers the applications of nano-scale devices and systems and the material chemical, physical, biological, or multiple-property requirements necessitated in these applications. Material modifications to meet these requirements will be addressed including structure control, composition control, surface property control, strain control, functionalization, and doping. This course is designed to be one of six capstone courses (Esc 211, 212, 213, 214, 215, 216) for the Penn State Semiconductor Manufacturing Technology (SMT) program. The course is lab intensive, leveraging the Nanofabrication Facility on the University Park campus. All lectures will be given in a technology classroom, Suite 114 Lubert Bldg., Research Park. This classroom is dedicated to the Center for Semiconductor Manufacturing Technology and thus has a wide variety of very specialized, "hands-on" materials and facilities continually available to students. The course grade evaluation will use a mixture of tests, presentations, reports, and project assignments. Teaming and team problem solving will be stressed.
**Prerequisites:**
ESC 214 - Patterning for Nanotechnology

**ESC 216 CHAR. PKG. & TESTING OF NANOTECH STRC OF NANOFABRICATED STRUCTURES..... 3-2-2**
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 will include hands-on use of tools such as the Atomic Force Microscope (AFM), Scanning Electron Microscope (SEM), 1 nm resolution field emission SEM, fluorescence microscopes, and Fourier transform infrared spectroscopy. This course is designed to be one of six capstone courses (ESC 211, 212, 213, 214, 215, 216) for the Penn State Semiconductor Manufacturing Technology (SMT) program. The course is lab intensive, leveraging the Nanofabrication Facility on the University Park campus. All lectures will be given in a technology classroom, Suite 114 Lubert Bldg., Research Park. This classroom is dedicated to the Center for Semiconductor Manufacturing Technology and thus has a wide variety of very specialized, "hands-on" materials and facilities continually available to students. The course grade evaluation will use a mixture of tests, presentations, reports, and project assignments. Teaming and team problem solving will be stressed.
**Prerequisites:**
A department recommendation, upon review of appropriate educational background, academic performance and personal interview

## ENGLISH/SECOND LANG

**ESL 004 ENGLISH AS A 2ND LANGUAGE II..... 0-6-0**
This semi-intensive (two hours a day, five days a week for seven weeks) ESL course is designed to develop the student's ability to make sense out of the English language as acquired thus far. The understanding of English will be applied to the areas of reading, speaking and spelling. This precollege level course cannot be used to fulfill a degree requirement nor is it calculated in a student's Grade Point Average (GPA); however, the credits billed will be applied towards a student's financial aid enrollment status and enrollment status reported to the National Student Clearinghouse.
**Prerequisites:**
ESL 003 - English As a Second Language I with a minimum grade of C. Placement score information can be found on the ACT 335 document linked to the course description online.

**ESL 005 ENGLISH AS A SECOND LANGUAGE III..... 0-6-0**
This semi-intensive (two hours a day, five days a week for seven weeks) ESL course introduces the student to basic everyday structure, vocabulary and pronunciation with practice in listening/speaking and writing. This precollege level course cannot be used to fulfill a degree requirement nor is it calculated in a student's Grade Point Average (GPA); however, the credits billed will be applied towards a student's financial aid enrollment status and enrollment status reported to the National Student Clearinghouse.
**Prerequisites:**
ESL 004 - English As a Second Language II with a minimum grade of C. Placement score information can be found on the ACT 335 document linked to the course description online.

**ESL 006 ENGLISH AS A SECOND LANGUAGE IV..... 0-6-0**
This semi-intensive (two hours a day, five days a week for seven weeks) ESL course is designed to develop the student's oral communication so that the native speakers would have little difficulty in understanding the student and to develop in the student the ability to write a well-constructed paragraph. This course is for students who have completed ESL 005 or have an appropriate score on the placement test. This precollege level course cannot be used to fulfill a degree requirement nor is it calculated in a student's Grade Point Average (GPA); however, the credits billed will be applied towards a student's financial aid enrollment status and enrollment status reported to the National Student Clearinghouse.
**Prerequisites:**
ESL 005 - English As a Second Language III with a minimum grade of C. Placement score information can be found on the ACT 335 document linked to the course description online.

**ESL 009 ENGLISH AS A SECOND LANG: ORAL..... 0-3-0**
A course designed for developing listening comprehension and pronunciation skills for ESL students with low intermediate English proficiency. By using tapes of lessons and natural speech, the student should attain accuracy at the sound, word and sentence level. Conversation practice will be based on topical discussions, readings and student debates. This precollege level course cannot be used to fulfill a degree requirement nor is it calculated in a student's Grade Point Average (GPA); however, the credits billed will be applied towards a student's financial aid enrollment status and enrollment status reported to the National Student Clearinghouse.

**ESL 010 ESL BASIC WRITING I..... 0-3-0**
ESL 010 is a low intermediate course that integrates computerized interactive tutorials to develop writing skills and teach communication through writing. This course reviews simple and advanced verb forms, adjectives and adverbs. Emphasis is on the sentence: word order, word choice, sentence combining and punctuation. Students will build upon their sentence skills to develop a unified paragraph of at least 75 words in length utilizing topic sentences. This is a required course for students who have successfully completed ESL 006 or have an appropriate score on the placement test. This precollege level course cannot be used to fulfill a degree requirement nor is it calculated in a student's Grade Point Average (GPA); however, the credits billed will be applied towards a student's financial aid enrollment status and enrollment status reported to the National Student Clearinghouse.
**Prerequisites:**
ESL 006 - English As a Second Language IV with a minimum grade of C

**ESL 011 ESL BASIC WRITING II.....0-3-0**
This course covers advanced grammar structures and paragraph development. Emphasis is placed on writing in a coherent and well organized manner through the development of main ideas/topic sentences, supporting information and conclusion. This course is for students who have successfully completed ESL 010 or have an appropriate score on the placement test. This precollege level course cannot be used to fulfill a degree requirement nor is it calculated in a student's Grade Point Average (GPA); however, the credits billed will be applied towards a student's financial aid enrollment status and enrollment status reported to the National Student Clearinghouse.
**Prerequisites:**
ESL 010 - ESL Basic Writing I with a minimum grade of C. Placement score information can be found on the ACT 335 document linked to the course description online.

**ESL 014 VOCABULARY & READING COMP. DEVELOP. I.....0-3-0**
This reading course, designed for non-native English speaking students, focuses on development of academic reading skills, literal and interpretative comprehension, and vocabulary development. This course prepares non-native English speaking students to take college courses leading to a degree, a certificate, or to transfer.? This precollege level course cannot be used to fulfill a degree requirement nor is it calculated in a student's Grade Point Average (GPA); however, the credits billed will be applied towards a student's financial aid enrollment status and enrollment status reported to the National Student Clearinghouse.
**Prerequisites:**
ESL 006 - English as a Second Language IV with a minimum grade of C. Placement score information can be found on the ACT 335 document linked to the course description online.

**ESL 017 VOCABULARY & READING COMPREHENSION DEVELOPMENT II.....0-3-0**
Vocabulary and Reading Comprehension Development is designed to prepare advanced non-native English speaking students for the rigors of a college curriculum. The course focuses on comprehension strategies, critical reading and thinking, information literacy, and vocabulary development. There is a strong emphasis on vocabulary development. This precollege level course cannot be used to fulfill a degree requirement nor is it calculated in a student's Grade Point Average (GPA); however, the credits billed will be applied towards a student's financial aid enrollment status and enrollment status reported to the National Student Clearinghouse.
**Prerequisites:**
REA 014 - Vocabulary and Reading Comprehension Development I with a minimum grade of C. Placement score information can be found on the ACT 335 document linked to the course description online.

## EXERCISE SCIENCE AND WELLNESS

**ESW 100 FOUNDATION OF PHYSICAL EDUCATION.....2-1-2**
This course is designed to acquaint the student with the concepts of physical education as the study of Human Movement, motor development, and socialization of sport. Emphasis is placed on the ways body movement enhances growth, development, and wellness of the mind and body. Practical applications and activities will be included. **This course is subject to a course fee.**

**ESW 101 INTRODUCTION TO DANCE STUDIES.....3-3-0**
This course provides an introduction to the study of dance at the college level. The course is designed for dance majors or anyone with a serious interest in pursuing dance studies. The course focuses on the development and care of the dancer's instrument. Students will learn and practice the fundamental principles of correct dance technique common to Western dance forms. The course addresses practical concerns of dance training including: injury prevention, cardiorespiratory fitness and endurance, strength training, stretching for flexibility, diet and nutrition, and caring for the dancing body.
**Prerequisites:**
ENG 010A - Basic Writing or ENG 011 - Basic Writing II or ESL 011 - Basic Writing II with a minimum grade of C
REA 011 - Fundamentals of College Reading or REA 017 - Vocabulary and Reading Comprehension Development II with a minimum grade of C

**ESW 102 INTRODUCTION TO EXERCISE SCIENCE, WELLNESS, AND SPORTS STUDIES.....3-3-0**
This ESW majors course is designed to provide foundational knowledge in exercise science, wellness, and sport studies through a broad range of classroom presentations and service learning experiences as well as integration of technology. Students will explore the various professional opportunities in the field and will develop an educational and professional plan to support their career aspirations.

**ESW 106 AEROBICS.....2-1-2**
This course is designed to provide an overview of the theory of aerobic exercise and a selection of aerobic activities and exercises that will develop the student to a higher level of physical fitness with a working knowledge of the principles of exercise. Discussions will deal with such topics as cardiovascular endurance, muscular strength, neuromuscular coordination, flexibility, warm-up, workout progression, cool down, and body nutrition for performance. **This course is subject to a course fee.**

**ESW 107 ZUMBA® CLASS & FITNESS PRINCIPLES ZUMBA FITNESS..... 2-1-2**
This course is designed to provide an overview of the theory, history, and practices of Zumba Fitness and support the student's development of a higher level of physical fitness through a working knowledge of the principles of exercise. Discussions will address such topics as cardiovascular endurance, muscular strength, neuromuscular coordination, flexibility, warm-up, workout progression, cool down, and body nutrition for performance. **This course is subject to a course fee.**
**Prerequisites:**
ENG 010A - Basic Writing or ENG 011 - Basic Writing II or ESL 011 - Basic Writing II
REA 011 - Fundamentals of College Reading or REA 017 - Vocabulary and Reading Comprehension Development II

**ESW 113 BADMINTON.....2-1-2**
This course is designed to develop and improve students' competence in the skills of badminton. Instruction and practice will emphasize refining the mechanics of the strokes within the basic and advanced shots of play. Students will be given the opportunity to learn and apply the game strategy to singles and doubles. The course will also focus on the health benefits of playing badminton across a lifespan. **This course is subject to a course fee.**

**ESW 117 CREATIVE DANCE I.....2-1-2**
This is an introductory course which allows the student to develop an innate capacity for expressive movements. The course explores modern dance fundamentals and Labanation vocabulary for individual and group work in interpretive movement. **This course is subject to a course fee.**

**ESW 123 GOLF.....2-1-2**
This course is designed to introduce students to the fundamentals of golf, including grip, stance, swing, rules, and etiquette. Emphasis is given to swing mechanics of the irons, woods, and putting, with some play on local golf courses. **This course is subject to a course fee.**

**ESW 128 WALK, JOG, RUN FOR FITNESS.....2-1-2**
This course is designed to enable the student to develop and implement a progressive individualized walk, jog, run program. The course will provide a thorough overview of a walk, jog, run program including techniques, training methods, physiological and psychological effects, nutrition and treatment of injury. Students will utilize technological resources to evaluate current trends and issues and analyze the importance of walking, jogging, and running as a lifetime activity. **This course is subject to a course fee.**

**ESW 137 INTRODUCTION TO TENNIS.....2-1-2**
The introductory level of tennis includes learning the basic tennis techniques such as the serve, volley, forehand, and backhand, and the basic strategies such as high and deep hitting, consistent and accurate play, short and long angle hitting, and utilization of the four quadrants of the court. **This course is subject to a course fee.**

**ESW 141 VOLLEYBALL.....2-1-2**
This course acquaints students with the skills and fundamentals of team play, the rules and etiquette of the game, and the principles of basic strategy and tournament play. **This course is subject to a course fee.**

**ESW 146 CONDITIONING,WEIGHT TRN & CONT.....2-1-2**
This course is designed to introduce the student to all areas of fitness training including progressive resistance (weight training), cardiovascular training, flexibility, and weight management. The student develops skills in planning and implementing personal fitness programs designed to meet student-own personal needs. Basic understanding of the physiological and psychological principles of human fitness is emphasized. Course designed for both women and men. Separate sections may be offered. **This course is subject to a course fee.**

**ESW 147 MAT PILATES.....2-1-2**
An introductory course that addresses the basic concepts of body conditioning designed by Joseph H. Pilates. The Pilates philosophy integrates fundamental concepts of body conditioning into a unique system of stretching and strengthening exercises. The course focuses on abdominal strength (core muscles), spinal alignment, flexibility, proper breathing, and the elongating of muscle groups. This course is ideal for beginners and is adaptable to individual needs through a natural progression of Level I, II, and III Pilates mat work exercises. **This course is subject to a course fee.**

**ESW 148 HATHA YOGA.....2-1-2**
Introduction to Hatha Yoga postures, breathing exercises, mental discipline, terminology, precepts and practices. The influence of Yoga on Western culture and guideline for advanced study will also be discussed. **This course is subject to a course fee.**

**ESW 151 FUNDAMENTALS OF FUNCTIONAL TRAINING.....2-1-2**
This course is designed to introduce the student to functional fitness practices which will enhance human performance through the lifespan. Special emphasis will be placed on the health and skill related components of fitness. The course will also focus on developing skills in planning and implementing functional training programs.

**ESW 160 MARTIAL ARTS & SELF-DEFENSE.....2-1-2**
This course is designed to acquaint the student with the basic principles of the martial arts and the techniques of self-defense. Emphasis is placed on learning the basic forms and positions of Karate, Judo and Self-Defense. **This course is subject to a course fee.**

**ESW 206 BASIC NUTRITION.....3-3-0**
This course will introduce students to the study of nutrition. It will incorporate fundamental scientific principles enabling students to develop their own nutritional lifestyle compatible with these principles. The course will provide an understanding of nutrients, their function in the body, deficiency diseases, body composition, nutrition and physical activity, nutrition through the life span, food faddism, consumer issues, and an evaluation of diets. The course will encourage the intelligent application of information so to enable the students to succeed in implementing good nutrition in their own lives.

**ESW 207 FOOD & CULTURE.....3-3-0**
This survey course introduces students to the study of Food & Culture, unraveling, in a regional approach, how historically and geographically meeting our human nutritional needs has been intertwined with the evolution of our modern eating habits. Beginning with the traditional beliefs and practices of the earliest global villages and continuing into today's American 'Melting Pot' of great culinary diversity, this course takes a multicultural and multiethnic approach to food and regional geography.

**ESW 208 INTEGRATIVE NUTRITION..... 3-3-0**
The course investigates the interrelatedness of health; the environment; and food nutrients, components and additives which are essential to health and wellness. In depth study of the application and use, safety and efficacy of herbal, vitamin, mineral and biological supplements, taken in complement with food to promote health will be covered. Current emerging trends in holistic nutrition including, but not limited to: organic foods, slow foods, food synergy and eating plans such as Ayurvedic approaches to nutrition, macrobiotics, fasting and raw food diets will be evaluated by students for integration into a holistic self-care plan and application into a personal nutrition-related approach to health. Completion of ESW 206 - Basic Nutrition is recommended but not required.
**Prerequisites:**
ENG 010A - Basic Writing or ENG 011 - Basic Writing II or ESL 011 - Basic Writing II
REA 011 - Fundamentals of College Reading or REA 017 - Vocabulary and Reading Comprehension Development II

**ESW 210 HOLISTIC HEALTH: COMPLEMENTARY & ALTERNATIVE HEALTH PRACTICE.....3-3-0**
This course will explore the use of complementary and alternative health practices within a holistic framework of care. A spirit of inquiry will be encouraged through sharing of knowledge, demonstration and exploration of selected health practices such as herbal remedies, homeopathy, healing touch therapies, chiropractic and Eastern therapies. Use of complementary and alternative health practices will be evaluated in the context of managing health conditions such as pain, weight, addictions, and gender specific issues. This course will examine use of complementary and alternative health practices in terms of safety, effectiveness and integration into one's own lifestyle and working with others.

**ESW 214 MIND-BODY CONNECTIONS.....3-3-0**
This course provides insights into and an understanding of mind-body connections as they influence one's health. Content will address the powerful ways in which emotional, mental, social, behavioral, spiritual and physical health impact on each other. Principles of the emerging field of psychoneuroimmunology will be examined. The impact of stress on health and eliciting of the relaxation response will be explored. Cognitive structuring and dynamics of behavior change will be examined. Students will begin to develop healthy strategies for self care through use of such modalities as biofeedback, meditation, breathing, journaling, guided imagery, aromatherapy, music and art therapies and humor within a holistic framework.
**Prerequisites:**
ESW/NUR 210 - Holistics Health: Complementary and Alternative Health Practices and/or ESW 208 - Integrative Nutrition (Recommended)

**ESW 215 PREVENTION & CARE OF ATHLETIC INJURY..... 3-2-1**
This course is designed to address the prevention and management of injuries in athletic activities. Course content includes discussion of relevant sports medicine issues, physical conditioning and training, nutritional and psychological concerns, ergogenic aids, and injury recognition. Practice is provided in the use of wrapping, taping, and therapeutic rehabilitation programs. **This course is subject to a course fee.**
**Prerequisites:**
BIO 129 - Functional Human Anatomy and Physiology or both BIO 131 - Human Anatomy and Physiology I and BIO 132 - Human Anatomy and Physiology II with minimum grades of C

**ESW 220 DIRECTING FITNESS AND RECREATIONAL PROGRAMS FOR ACTIVE AND AGING ADULTS..... 3-3-0**
Designed for students in health sciences, physical education and human services, and for Gerontological service/care workers; to include YMCA employees, nursing home administrators, nurses, recreational therapists, occupational therapists, community recreation leaders, and health care advocate. Content covered will include an introduction into the field of gerokinesiology, basic theories of exercise, aging and recreation, the design of individual and group recreational and fitness programs and the social, psychological, and physical issues of an aging population.

**ESW 222 APPLIED KINESIOLOGY..... 3-3-0**
This course is designed to introduce the student to the basic fundamentals of human movement, structural characteristics, articulations, and muscular actions around the major joints. The student will apply the basic anatomical and physical principles of human motion, the principles of biomechanics and the theory of neuromuscular action used in motor skills for occupational, daily living activities, and fitness across the lifespan. Upon completion of the course, the student will be able to fully analyze joint actions and muscles involved in multi-joint exercises or sport movements. In addition, the student will be able to identify and recommend exercises to enhance performance based on appropriate muscular analysis.
**Prerequisites:**
BIO 129 - Functional Human Anatomy and Physiology or both BIO 131 - Human Anatomy and Physiology I and BIO 132 - Human Anatomy and Physiology II

**ESW 224 EXERCISE PHYSIOLOGY WITH LAB..... 4-3-2**
This ESW major's course examines the physiological response and adaptations to acute and chronic bouts of exercise, training regimens, and environmental conditions. Through experiential learning, research, and technology, the student will analyze physiological responses to exercise. Training principles, nutritional considerations, and optimal human performance across the lifespan will be identified and analyzed. The lab component of the course will allow students to apply the concepts introduced in the lecture portion in hands-on and computer simulated learning opportunities.
**Prerequisites:**
BIO 129 - Functional Human Anatomy and Physiology with minimum grade of C or both BIO 131 - Human Anatomy and Physiology I and BIO 132 - Human Anatomy and Physiology II with minimum grades of C

**ESW 226 ASSESSMENT OF HUMAN FITNESS..... 3-3-0**
This course is designed to introduce the student to the use of health and fitness assessment technology and testing mechanisms needed to assess the physical fitness status of individuals in healthy and selected special populations. Students will perform assessments for the five (5) components of health related physical fitness: Cardiorespiratory endurance; Muscular strength and endurance; Flexibility; and Body composition. The data gathered from the fitness assessments will be used to develop appropriate fitness goals and exercise programs.
**Prerequisites:**
BIO 129 - Functional Human Anatomy and Physiology or both BIO 131 - Human Anatomy and Physiology I and BIO 132 - Human Anatomy and Physiology II

**ESW 227 EXERCISE PROGRAMMING FOR HEALTHY AND SPECIAL POPULATIONS.....3-3-0**
This course focuses on providing the student with the knowledge and experience needed to design exercise programs for individuals who meet the ACSM guidelines for healthy adult and special populations. Emphasis will be placed on practical approaches to fitness program design and appropriate adaptations and individualized modifications for each participant. Upon completion of the course, the student will be able to work in a broad range of physical activity settings by applying principles of exercise programming to meet the specific needs of each individual, working in one-on-one and small group settings.
**Prerequisites:**
ESW 226 - Assessment of Human Fitness

**ESW 228 TRENDS IN EXERCISE SCIENCE & WELLNESS.....2-2-0**
This capstone course in the Exercise Science and Wellness A.S. degree program will focus on trends in Exercise Science and Wellness. Students will explore the latest trends, legal, ethical issues as they relate to various fields. Through the semester, students will develop a professional plan to aid in transferring to a 4-year institution as well as continuing in their professional goals. Included in this course is a service learning component which will enable students to gain valuable life skills.
**Prerequisites:**
Previous three semesters in the ESW AS program of study
**Corequisites:**
ESW 245 - Safety and First Aid. May be taken prior or during course.

**ESW 236 PERSONAL HEALTH AND WELLNESS.....3-3-0**
This course assists the student in assimilating strategies to assess current lifestyle behaviors that promote personal, community and global health behavior changes across the lifespan. The student explores each of the Six Dimensions of Wellness, including physical, social, emotional, environmental, intellectual, and spiritual elements involved in achieving a healthy lifestyle.

**ESW 240 PRINCIPLES OF COACHING.....3-3-0**
This course is designed for coaches involved with community youth sports programs as well as with school and college athletic teams. The course is based on standards set by the National Association for Sport and Physical Education (NASPE). Emphasis is placed on the development of a coaching philosophy, relationships with players, staff, administrators, and parents, as well as the management and organization of a successful team/program. The course covers theories and techniques of teaching sports, evaluation techniques, and research related to competitive performance.

**ESW 245 SAFETY & FIRST AID.....3-3-0**
This course is designed to develop and provide the citizen responder with the knowledge and skills necessary to help sustain life and minimize the consequences of injury or sudden illness until advanced medical care arrives. American Heart Association certifications in Heartsaver First Aid; Adult/Child and Infant Cardiopulmonary Resuscitation (CPR) and Automated External Defibrillator (AED) are available upon meeting certification requirements. **This course is subject to a course fee.**
**Prerequisites:**
ENG 010A - Basic Writing or ENG 011 - Basic Writing II or ESL 011 - Basic Writing II
REA 011 - Fundamentals of College Reading or REA 017 - Vocabulary and Reading Comprehension Development II

**ESW 246 CARDIOPULMONARY RESUSCITATION FOR HEALTH CARE PROFESSIONALS.....1-1-0**
The Cardiopulmonary Resuscitation (CPR) for the Healthcare Professional course is designed to teach the skills of CPR for victims of all ages including ventilation with a barrier device, a bag-mask device, and oxygen; use of an automated external defibrillator (AED); and relief of foreign-body airway obstruction (FBAO). It is intended for individuals who provide healthcare to clients in a wide variety of venues. This two- week course includes discussion of healthy heart living and one mandatory on-campus day for skills completion as per AHA 2015 Guidelines BLS course. **This course is subject to a course fee.**

**ESW 255 HUMAN SEXUALITY.....3-3-0**
A survey of the major topic of sex education with emphasis placed on: sexual development, functioning, behavior, gender identification, reproduction, interpersonal relationships, health, historical and cultural sex studies, and sex education.

**ESW 296 PRACTICUM IN EXERCISE SCIENCE AND WELLNESS... 4-1-5**
Integrating a seminar and practicum experience in this course serves as the capstone course for the Health and Fitness Professional AAS and Personal Training Certificate programs. The course also offers students in the Exercise Science and Wellness AS degree program an opportunity to gain practical experience as it relates to each student's educational and career goals. Emphasis will be placed on professionalism, employment strategies, career options, and current issues in the health and fitness field. The field practicum is held in an educational fitness setting where the student works under the direct supervision of a cooperating supervisor. A faculty member arranges the placement and supervises the student on site visitations. At the completion of the course the student prepares a professional portfolio and sits for the ACSM Personal Training certification exam. **This course is subject to a course fee.**
**Prerequisites:**
ESW 222 - Applied Kinesiology and ESW 224 - Exercise Physiology and ESW 226 - Assessment of Human Fitness
**Corequisites:**
ESW 227 - Exercies Programming for Healthy and Special Populations. May be taken prior or during course.

## ENTREPRENEURSHIP

**ETP 110 ENTREPRENEURIAL ESSENTIALS..... 3-3-0**
This course will enable a student to explore the viability of a proposed entrepreneurial venture as well as key concepts and principles related to entrepreneurship. By conducting due-diligence research, the student will evaluate consumer and economic data that will result in a data-supported decision regarding the feasibility of a proposed venture.
**Prerequisites:**
MAT 011 - Beginning Algebra or MAT 011B - Beginning Algebra with Review of Arithmetic
ENG 010A - Basic Writing or ENG 011 - Basic Writing II or ESL 011 - Basic Writing II
REA 011 - Fundamentals of College Reading or REA 017 - Vocabulary and Reading Comprehension Development II

**ETP 110H ENTREPRENEURIAL ESSENTIALS HONORS..... 3-3-0**
This course will enable a student to explore the viability of a proposed entrepreneurial venture as well as key concepts and principles related to entrepreneurship. By conducting due-diligence research, the student will evaluate consumer and economic data that will result in a data-supported decision regarding the feasibility of a proposed venture. This Honors course fosters high-achieving students' growth towards learning outcomes such as: problem solving, often with creative approaches; critical reading and original data analysis; forming judgments based on evidence, often from alternative modes of inquiry or integrative learning; clear, persuasive research writing; oral presentation; and articulate reflection on personal growth. Honors courses are more likely to utilize student-driven active learning, emphasizing exploration and discovery, rather than the acquisition of specific knowledge; faculty might provide projects with no pre-determined conclusion, but with real-world application.
**Prerequisites:**
MAT 011 - Beginning Algebra or MAT 011B - Beginning Algebra with Review of Arithmetic
ENG 010A - Basic Writing or ENG 011 - Basic Writing II or ESL 011 - Basic Writing II
REA 011 - Fundamentals of College Reading or REA 017 - Vocabulary and Reading Comprehension Development II

**ETP 111 ENTREPRENEURIAL MARKETING..... 3-3-0**
This course will allow the student to gain insights essential for marketing an entrepreneurial venture utilizing innovative and financially responsible marketing strategies. Additionally, the student will prepare a marketing plan to launch the entrepreneurial venture, with an implementation strategy for the first two years of operation.
**Prerequisites:**
MAT 011 - Beginning Algebra or MAT 011B - Beginning Algebra with Review of Arithmetic
ENG 010A - Basic Writing or ENG 011 - Basic Writing II or ESL 011 - Basic Writing II
REA 011 - Fundamentals of College Reading or REA 017 - Vocabulary and Reading Comprehension Development II

**ETP 113 ENTREPRENEURIAL BUSINESS PLAN.....3-3-0**
This course will enable the student to prepare a professional, comprehensive business plan that will guide their business start-up and address capital funding. Topics to be covered include: the parts of a business plan, the planning process, and writing techniques that will get the plan noticed.
**Prerequisites:**
MAT 011 - Beginning Algebra or MAT 011B - Beginning Algebra with Review of Arithmetic
ENG 010A - Basic Writing or ENG 011 - Basic Writing II or ESL 011 - Basic Writing II
REA 011 - Fundamentals of College Reading or REA 017 - Vocabulary and Reading Comprehension Development II

## FRENCH

**FRE 101 ELEMENTARY FRENCH I..... 3-3-0**
Elementary French I is an introduction to the French language. Students will learn to master basic communicative situations in French at a mid-novice level. The systematic training in speaking, listening, writing, and reading, reinforced by the use of authentic audio and video material, will create competence and confidence in expressing in French. In addition, students will learn about the culture in French speaking countries.
**Prerequisites:**
ENG 010A - Basic Writing or ENG 011 - Basic Writing II or ESL 011 - Basic Writing II REA 011 - Fundamentals of College Reading or REA 017 - Vocabulary and Reading Comprehension Development II

**FRE 102 ELEMENTARY FRENCH II..... 3-3-0**
Elementary French II is the continuation of Elementary French I. Students will master basic communicative situations in French at a high novice level. The systematic training in speaking, listening, writing, and reading, reinforced by the use of authentic audio and video material, will enhance competence and confidence in expressing in French. In addition, students will identify the linguistic and cultural diversity of French speaking countries.
**Prerequisites:**
FRE 101 - Elementary French I

**FRE 190 INTRODUCTORY FRENCH FOR BUSINESS..... 3-3-0**
This course will focus on the application of the French language in the context of business and prepare students for dealing with French businesses. The systematic presentation and analysis of each topic will increase competence in speaking, listening, writing, and reading in French. In addition, students will learn about French business culture and etiquette and how to incorporate strategies when working with French businesses.
**Prerequisites:**
FRE 101 - Elementary French I or equivalent

**FRE 201 INTERMEDIATE FRENCH I.....3-3-0**
Intermediate French I is the continuation of Elementary French II. Students will master uncomplicated communicative tasks in French at a low intermediate level. Learners will express personal meaning by combining and recombining what they know and what they hear from their interlocutors into short statements. In addition, students will identify the linguistic and cultural diversity of French speaking countries through an introduction to French literature.
**Prerequisites:**
FRE 102 - Elementary French II or FRE 190 - Introductory French for Business

**FRE 202 INTERMEDIATE FRENCH II.....3-3-0**
Intermediate French II is the continuation of Intermediate French I. Students will master communicative tasks in French at a mid-intermediate level. Learners are at ease when performing uncomplicated tasks in speaking, listening, reading, and writing. In addition, students will summarize the linguistic and cultural diversity of French speaking countries through the analysis of French movie scenes.
**Prerequisites:**
FRE 201 - Intermediate French I

**FRE 251 ADVANCED FRENCH I..... 3-3-0**
Advanced French I is a course designed to improve proficiency in written and oral French. Students will study French politics and the culture diversity within the French-speaking countries via authentic materials selected from authentic media as well as from cultural readings. French literature is approached through the study of representative excerpts from the works of major French authors.
**Prerequisites:**
FRE 202 - Intermediate French II

**FRE 252 ADVANCED FRENCH II..... 3-3-0**
Advanced French II is a continuation of Advanced French I. It is a course designed to improve proficiency in written and oral French. Students will continue to study the contemporary culture of France and the French-speaking countries via authentic materials selected from authentic media as well as from cultural readings. French literature is approached through the study of representative excerpts from the works of major French authors.
**Prerequisites:**
FRE 251 - Advanced French I

## FIRE SCIENCE

**FSC 100 INTRODUCTION TO FIRE SCIENCE.....3-3-0**
This course will provide an introduction to the history and philosophy of fire protection; a review of fire losses; a discussion of the relationship between fire prevention and fire control and extinguishment; a career orientation; current legislative developments; a review of current and future fire protection.

**FSC 101 EMERGENCY SCENE MANAGEMENT..... 3-3-0**
This course will be concerned with the principles and applications of fire size-up; confinement and extinguishment; salvage and overhaul; pre-planning for fires and other natural disasters; conflagration problems; mutual aid; cooperation with other local departments; use of manpower and equipment; communication problems command and control.
**Prerequisites:**
FSC 100 - Introduction to Fire Science

**FSC 102 HAZARDOUS MATERIALS.....3-3-0**
This course is about hazardous material (hazmat) incident response. It is designed to provide both public and private sector emergency response personnel with a logical system for managing hazardous materials incidents. This course will also present a study of the proper storage, transportation and handling of flammable liquids and gasses, combustible solids, oxidizing and corrosive materials; dusts, metals and plastics; radioactive and poisonous substances; cryogenics and rocket fuels; electrical hazards; and will place emphasis on emergency situations and firefighting and control.
**Prerequisites:**
FSC 100 - Introduction to Fire Science

**FSC 103 FIRE DEPT ORG AND ADMIN.....3-3-0**
This course will acquaint the student with the basic principles and concepts of organizational structure; the construction of new fire facilities; the distribution of equipment and personnel; personnel management; communications; community and public relations; training; budgeting; the use of systems analysis and operations research; and reports and their uses.
**Prerequisites:**
FSC 100 - Introduction to Fire Science

**FSC 104 BUILDING CONSTRUCTION FOR F.S.....3-3-0**
The topics covered include: the functional and structural aspects of construction, constructional features, fire resistive and fire retardant materials, and ways in which occupancy affects construction requirements.
**Prerequisites:**
FSC 100 - Introduction to Fire Science

**FSC 105 FIRE PREVENTION & CODE ENFORCE.....3-3-0**
The topics covered include: federal state and local building codes and ordinances; national fire protection standards; National Electrical Code; Life Safety Codes; how codes affect construction and fire fighting; and the role of local fire departments and state officials.
**Prerequisites:**
FSC 100 - Introduction to Fire Science

**FSC 106 FIRE INVESTIGATION.....3-3-0**
The topics covered include: causes of fires, arson laws, investigative techniques, recognition and preservation of evidence, the interrogation of witnesses, reports, court procedure, testimony, and legal opinions.
**Prerequisites:**
FSC 100 - Introduction to Fire Science

**FSC 108 FIRE PROTECTION SYSTEMS.....3-3-0**
This course will focus on the study of automatic and manual, electronic, and mechanical system based fire protection. Students will examine the different types of active fire protection and components, their operational characteristics, when and where code installation requirements apply, and the inspection and maintenance requirements of these systems.
**Prerequisites:**
FSC 100 - Introduction to Fire Science

**FSC 110 SPECIAL STUDIES IN FIRE SCI.....3-3-0**
Topics or areas of professional interest within the fire science field will be explored. These offerings will vary from semester to semester, depending upon the needs of the students and the community, along with the future development of the program.
**Prerequisites:**
FSC 100 - Introduction to Fire Science

**FSC 265 PUBLIC SAFETY TECHNOLOGY.....3-3-0**
This course will focus on current themes in public safety technology, to include such topics as: Computer Aided Dispatch, basic ideas of mobile radio technology, mobile data/mobile computer capabilities and functionality, public safety applications for Global Positioning technology, as well as emerging trends that will appear in the Public Safety arena in the next 3 to 5 years. An overview of standards governing communications systems, dispatchers, and other areas of public safety technology will also be covered. Topics will be covered at a non-technical level to provide the student with an overview and understanding of the technology rather than an in-depth examination of just a few specific items. Lectures will include live demonstrations of devices to reinforce key concepts and promote greater understanding. Students will prepare a summary paper in small groups on an emerging idea in public safety technology, based upon original research.
**Prerequisites:**
CJS 100 - Introduction to Criminal Justice or EMP 100 - Emergency Planning or FSC 100 - Introduction to Fire Science

## GEOGRAPHY

**GEO 110 WORLD REGIONAL GEOGRAPHY..... 3-3-0**
This introduction to the social science of geography is a regional approach that surveys the diverse cultural and physical patterns of the world. This course is designed to cover a wide range of topics related to the regions of the world including: physical, environmental, population, ethnic, language, religious, agricultural, economic, political, and urban characteristics. Spatial skills and tools such as maps, location, scale, and various models (demographic, economic development, and urbanization) will be employed to better understand the diversity of regional geography.

**GEO 110H WORLD REGIONAL GEOGRAPHY HONORS..... 3-3-0**
This introduction to the social science of geography is a regional approach that surveys the diverse cultural and physical patterns of the world. This course is designed to cover a wide range of topics related to the regions of the world including: physical, environmental, population, ethnic, language, religious, agricultural, economic, political, and urban characteristics. Spatial skills and tools such as maps, location, scale, and various models (demographic, economic development, and urbanization) will be employed to better understand the diversity of regional geography. This Honors course fosters high-achieving students' growth towards learning outcomes such as: problem solving, often with creative approaches; critical reading; forming judgments based on evidence, often from integrative learning; clear, persuasive research writing; oral presentation; and articulate reflection on personal growth. Honors courses are more likely to utilize student-driven active learning, emphasizing exploration and discovery, rather than the acquisition of specific knowledge; faculty might provide projects with no pre-determined conclusion, but with real-world application.

**GEO 130 CULTURAL GEOGRAPHY..... 3-3-0**
This introductory course in the social science of human geography surveys the spatial aspects of: human-environment interaction, religion, language, agriculture, industrial & economic development, urbanization, globalization and population trends, as well as other adjustments made to the cultural landscape.

**GEO 135 PHYSICAL GEOGRAPHY..... 3-3-0**
This introduction to the science of physical geography describes the patterns of natural features on the earth. Topics will include location, landforms, hydrology, weather, climates, biological regions and human-environment interactions.
**Prerequisites:**
MAT 011 - Beginning Algebra or MAT 011B - Beginning Algebra with Review of Arithmetic with a minimum grade of C. Placement score information can be found on the ACT335 document linked to the online course description.

**GEO 137 URBAN GEOGRAPHY.....3-3-0**
This introduction to urban geography surveys the patterns of urbanization. The course includes a brief history of cities, models of morphology and location, transportation systems, economics, and social patterns associated with urban areas. A focus on urban areas in the United States (with an emphasis on Philadelphia) is used to explore and explain the urban patterns found in places around the world.

**GEO 207 FOOD & CULTURE.....3-3-0**
This survey course introduces students to the study of Food & Culture, unraveling, in a regional approach, how historically and geographically meeting our human nutritional needs has been intertwined with the evolution of our modern eating habits. Beginning with the traditional beliefs and practices of the earliest global villages and continuing into today's American 'Melting Pot' of great culinary diversity, this course takes a multicultural and multiethnic approach to food and regional geography.

**GEO 210 INTRODUCTION TO GEOGRAPHIC INFORMATION SYSTEMS..... 3-2-2**
This introduction to Geographic Information Systems is structured to develop skills and knowledge of various geographic location systems and skill in basic geographic analysis with industry leading software. The course emphasizes the techniques of spatial problem solving. The weight of the course is on practical analysis skills including data compilation, projection, analysis and reporting.
**Prerequisites:**
MAT 011 - Beginning Algebra or MAT 011B - Beginning Algebra with Review of Arithmetic
REA 011 - Fundamentals of College Reading or REA 017 - Vocabulary and Reading Comprehension Development II
CIS 100 - Introduction to PC's or have permission of instructor

**GEO 220 MAP DESIGN IN GEOGRAPHIC INFO SYS (GIS).....3-2-2**
This introduction to the art and science of cartography and geographic information systems is structured to develop skills in design and use of analytical and computer-mapping systems.
**Prerequisites:**
MAT 011 - Beginning Algebra or MAT 011B - Beginning Algebra with Review of Arithmetic
REA 011 - Fundamentals of College Reading or REA 017 - Vocabulary and Reading Comprehension Development II
CIS 100 - Introduction to PC's or have permission of instructor

**GEO 230 GIS APPLICATIONS..... 3-2-2**
This workshop teaches advanced geographic analysis with Geographic Information Systems. Students will learn each of the advanced data import skills, standard symbol systems, specialized geographic analysis and pseudo-3d displays specific to their discipline, and be exposed to problems in other disciplines. Specific tracks are available for emergency management / criminal justice, business & marketing, social sciences & human services, and environmental science.
**Prerequisites:**
GEO 210 - Introduction to Geographic Information Systems or GEO 220 -Map Design in Geographic Information Systems (GIS)

**GEO 238 INTRODUCTION TO URBAN & REGIONAL PLANNING.....3-3-0**
This course surveys the principles, methods and practices of contemporary urban and regional planning. This course will cover a range of topics including: principles and theories of urban morphology, urban structure and institutions, concepts of planning as a community process and a professional activity, planning as both a public and private responsibility, and the evolution of planning ideas in response to changing social, economic, and environmental conditions within the context of the United States political framework.

## GERMAN

**GER 101 ELEMENTARY GERMAN I.....3-3-0**
Elementary German I is an introduction to the German language. Students will learn to master basic communicative situations in German at a mid-novice level. The systematic training in speaking, listening, writing, and reading, reinforced by the use of authentic audio and video material, will create competence and confidence in expressing in German. In addition, students will learn about the culture in German speaking countries.
**Prerequisites:**
ENG 010A - Basic Writing or ENG 011 - Basic Writing II or ESL 011 - Basic Writing II
REA 011 - Fundamentals of College Reading or REA 017 - Vocabulary and Reading Comprehension Development II

**GER 102 ELEMENTARY GERMAN II.....3-3-0**
Elementary German II is the continuation of Elementary German I. Students will master basic communicative situations in German at a high novice level. The systematic training in speaking, listening, writing, and reading, reinforced by the use of authentic audio and video material, will enhance competence and confidence in expressing in German. In addition, students will identify the linguistic and cultural diversity of German speaking countries.
**Prerequisites:**
GER 101 - Elementary German I

**GER 111 THE WORLD OF GERMANY AND GERMAN SPEAKING COUNTRIES..... 3-3-0**
Taught entirely in English and open to all students, this course offers a modern-day perspective of Germany and the social and cultural forces which shaped Germany's image. The student will become acquainted with a land of contrasts which has emerged from chaos to become Europe's most dynamic force. A number of authentic documents will supplement lectures and class discussions.

**GER 201 INTERMEDIATE GERMAN I..... 3-3-0**
Intermediate German I is the continuation of Elementary German II. Students will master uncomplicated communicative tasks in German at a low intermediate level. Learners will express personal meaning by combining and recombining what they know and what they hear from their interlocutors into short statements. In addition, students will identify the linguistic and cultural diversity of German speaking countries through an introduction to German literature.
**Prerequisites:**
GER 102 - Elementary German II

**GER 202 INTERMEDIATE GERMAN II..... 3-3-0**
Intermediate German II is the continuation of Intermediate German I. Students will master communicative tasks in German at a mid intermediate level: Learners are at ease when performing uncomplicated tasks in speaking, listening, reading, and writing. In addition, students will summarize the linguistic and cultural diversity of German speaking countries through the analysis of German movie scenes.
**Prerequisites:**
GER 201 - Intermediate German I or approval from the instructor

**GER 251 ADVANCED GERMAN I.....3-3-0**
Advanced German I is a course designed to improve proficiency in written and oral German. Students will study the contemporary culture of Germany and the German-speaking countries via authentic materials selected from authentic media as well as from cultural readings. German literature is approached through the study of representative excerpts from the works of major German authors
**Prerequisites:**
GER 202 - Intermediate German II

**GER 252 ADVANCED GERMAN II.....3-3-0**
Advanced German II is a continuation of Advanced German I. It is a course designed to improve proficiency in written and oral German. Students will continue to study the contemporary culture of Germany and the German speaking countries via authentic materials selected from authentic media as well as from cultural readings. German literature is approached through the study of representative excerpts from the works of major German authors.
**Prerequisites:**
GER 251 - Advanced German I

## GEOLOGY

**GLG 115 ENVIRONMENTAL GEOLOGY..... 4-3-3**
Environmental Geology is an examination of geologic processes which have impact upon humans and of the impact humans have upon those processes. Topics such as coastal erosion, flooding, earthquakes, radon, greenhouse effect, water quality, and waste disposal will be investigated. Environmental Geology should be considered by the following students: those needing a lab-science elective, those preparing for a career as an environmental technician, and those considering a Geology major seeking a geology elective. Class time and Saturday field trips will be taken. **This course is subject to a course fee.**
**Prerequisites:**
MAT 011 - Beginning Algebra or MAT 011B - Beginning Algebra with Review of Arithmetic

**GLG 120 EARTH SCIENCE.....4-3-3**
Earth Science is a general survey course which includes the disciplines of Astronomy, Geology, Meteorology, and Oceanography. Specific topics to be examined include stellar evolution, planetary geology, cosmological theory, erosional and depositional processes, volcanoes, earthquakes, plate tectonics, weather patterns and forecasting. This course is recommended to fulfill a laboratory science requirement for non-science majors who do not have a strong science background. **This course is subject to a course fee.**

**GLG 121 INTRO TO ASTRONOMY..... 4-3-3**
Introduction to Astronomy is a one-semester college-level course in basic astronomy. The course may be used as a laboratory science elective with basic algebraic applications. The course explores a broad range astronomical concepts and principles in ten major areas: understanding the sky, apparent motions of the planets and the sun, telescopes and accompanying technology, basic structure and behavior of atoms, origin and analysis of light, origin of the solar system, internal structure and behavior of the sun, lifecycle of all stellar classes, origin and structure of galaxies, and cosmology. Throughout the course, emphasis is placed on the implementation of the scientific method, the evidence that astronomers use to support their conclusions, and the importance of astronomy. (Night-time observing is required). **This course is subject to a course fee.**
**Prerequisites:**
ENG 010A - Basic Writing or ENG 011 - Basic Writing II or ESL 011 - Basic Writing II with a minimum grade of C within 5 years
MAT 011 - Beginning Algebra or MAT 011B - Beginning Algebra with Review of Arithmetic with a minimum grade of C within 5 years

**GLG 125 THE SCIENCE OF CLIMATE CHANGE.....4-3-3**
The Science of Climate Change is an introductory survey of the causes and consequences of climate change at a variety of time and spatial scales throughout Earth's history. Natural and human-induced climate change will be studied as physical processes with varying dimensions of biophysical and societal impacts. This course should be considered by the following students: those needing to fulfill a lab science Core requirement, those preparing for a career in environmental science, and those considering a Geology or Atmospheric Sciences major seeking a geoscience elective. **This course is subject to a course fee.**
**Prerequisites:**
MAT 011 - Beginning Algebra or MAT 011B - Beginning Algebra with Review of Arithmetic
ENG 010A - Basic Writing or ENG 011 - Basic Writing II or ESL 011 - Basic Writing II
REA 011 - Fundamentals of College Reading or REA 017 - Vocabulary and Reading Comprehension Development II

**GLG 151 PHYSICAL GEOLOGY.....4-3-3**
Physical Geology is a survey of the physical character of the earth. Topics of surficial geology to be examined include weathering and mechanisms of erosion: mass movement, streams, wind, glaciers, and waves. The internal character of the earth will be explored by studying heat flow, seismology, volcanism and plutonism, metamorphism, crustal deformation and plate tectonics. Though this course and GLG152 are designed to accommodate requirements of the prospective geology major, GLG 151 and GLG 152 should be considered by the student who needs two successive semesters of the same science for transfer purposes. **This course is subject to a course fee.**
**Prerequisites:**
MAT 011 - Beginning Algebra or MAT 011B - Beginning Algebra with Review of Arithmetic

## HEALTH CARE PROFESSIONS

**HCP 100 MEDICAL OFFICE TECHNOLOGIES AND THE EHR.....3-3-0**
This course provides the student with an overview of the use of computer systems and electronic health record (EHR) software in today's medical office environment. Students will learn skills, terminology, and theories to manage EHRs and utilize Microsoft Office and Microsoft Word. A hands-on approach will give students the opportunity to develop technology skills that are applicable to their career as a healthcare professional.
**Prerequisites:**
ENG 010A - Basic Writing or ENG 011 - Basic Writing II or ESL 011 - Basic Writing II
REA 011 - Fundamentals of College Reading or ESL/REA 017 - Vocabulary and Reading Comprehension Development II
**Corequisites:**
HCP 224 - Medical Terminology. May be taken prior or during course.

**HCP 104 HUMAN BODY IN HEALTH AND DISEASE..... 3-3-0**
This introductory course provides students with the essentials of anatomy, the basic functions of the human body and the effects of disease using a systems approach. The normal structural organization and processes of each body system, common diseases, clinical applications, treatments and diagnostic procedures will be examined.
**Prerequisites:**
ENG 010A - Basic Writing or ENG 011 - Basic Writing II or ESL 011 - Basic Writing II
REA 011 - Fundamentals of College Reading or ESL/REA 017 - Vocabulary and Reading Comprehension Development II

**HCP 105 CAREERS IN HEALTH CARE..... 1-1-0**
Professions in the health care industry offer students a wide range of career opportunities. This course will provide an overview of the health care industry and the variety of disciplines that support it. The course will investigate health care careers, focusing on the nature of the work, legal and ethical responsibilities, as well as required abilities, educational preparation and credentialing. Understanding the impact of current trends in health care on employment will assist students toward planning and pursuit of their own career goals. An opportunity to interface with a variety of health care practitioners encourages discussion and examination of professional activities.

**HCP 114 MED LAW & ETHICS FOR HEALTH PROFESSIONAL.....3-3-0**
This course provides the student with a deeper understanding of legal and ethical issues in healthcare. Students explore the legal, ethical and moral dilemmas currently faced by healthcare professionals, and identify issues related to potential legal liability in the workplace.

**HCP 117 MEDICAL OFFICE ADMINISTRATION..... 4-4-0**
This course builds a solid foundation in Medical Office Administrative skills and introduces students to the administrative procedures and business practices commonly performed in the medical office. Emphasis on financial practices, health insurance, reimbursement, therapeutic communication and patient education will help prepare the student for entry level office administration. Course specific competency evaluations must be successfully completed by the student. **This course is subject to a course fee.**
**Prerequisites:**
REA 011 - Fundamentals of College Reading or ESL/REA 017 - Vocabulary and Reading Comprehension Development II
ENG 010A - Basic Writing or ENG 011 - Basic Writing II or ESL 011 - Basic Writing II
**Corequisites:**
HCP 224 - Medical Terminology. May be taken prior or during course.
HCP 100 - Medical Office Technologies and the EHR. May be taken prior or during course.
HCP 114 - Medical Law and Ethics. May be taken prior or during course.

**HCP 118 PROFESSIONAL ESSENTIALS FOR A HEALTHCARE CAREER..... 3-3-0**
This course builds a solid foundation of the professional skills required to work within the health care community. It provides students with an introduction to health care organization and examines behaviors that impact their career as a health care professional. Students will explore the impact of cultural competency and sensitivity when working with others in inter-professional collaborative practice and explore patient relationships and advocacy. **This course is subject to a course fee.**
**Prerequisites:**
REA 011 - Fundamentals of College Reading or ESL/REA 017 - Vocabulary and Reading Comprehension Development II
ENG 010A - Basic Writing or ENG 011 - Basic Writing II or ESL 011 - Basic Writing II

**HCP 120 ETHICAL ISSUES-CONS. & HEATHCARE PROFESS..... 3-3-0**
This course addresses the needs of the health care consumer and the provider alike. Stemming from a philosophical base, this course will examine controversies emerging from rapid technological advances and modern health care practice. Conflicts discussed range from the person's right to choose or refuse a particular course of treatment to issues of euthanasia, genetic research, and human experimentation. Students are encouraged to participate in discussions of ethical problems reported in the popular media and to develop a personal decision-making system which can be applied to a variety of ethical issues. Emphasis is on critical analysis and the incorporation of theory to ethical deliberations. The course is interactive, therefore, open discussion format and familiarity with use of the computer is essential.

**HCP 121 LABORATORY PROCEDURES IN THE MEDICAL OFFICE 3-2-2**
This comprehensive course introduces the student to the purpose, techniques and documentation of diagnostic laboratory procedures commonly performed in the medical office. Subjects covered include general laboratory techniques, phlebotomy, specimen collection, handling and processing, diagnostic testing and performing hematology, chemistry, urinalysis, microbiology and immunology testing. Course specific competency evaluations must be successfully completed by the student. The course will assist the student in developing basic laboratory skills and a firm understanding of the scientific method, enabling students to appreciate the scientific process, and build scientific reasoning and critical thinking skills that are applicable to their career as a health care professional. **This course is subject to a course fee.**
**Prerequisites:**
ENG 010A - Basic Writing or ENG 011 - Basic Writing II or ESL 011 - Basic Writing II
REA 011 - Fundamentals of College Reading or ESL/REA 017 - Vocabulary and Reading Comprehension Development II
**Corequisites:**
HCP/MAS/BIO 104 - The Human Body in Health and Disease OR BIO 103 - Introduction to Anatomy and Physiology OR BIO 131 - Human Anatomy and Physiology I AND BIO 132 - Human Anatomy and Physiology II. May be taken prior or during course.
HCP 224 - Medical Terminology. May be taken prior or during course.

**HCP 220 GENERAL PHARMACOLOGY.....3-3-0**
Designed for the student who has a basic understanding of the human body and how it works. This course emphasizes the major drug classifications, related legal/ethical considerations, pharmakokinetics, pharmakodynamics, drug toxicity and therapeutic monitoring.

**HCP 224 MEDICAL TERMINOLOGY..... 3-3-0**
This course is designed to develop a basic understanding of human body systems and the medical vocabulary associated with these systems. While attaining a working knowledge of human anatomy, students will experience a word-building system comprised of medical prefixes, suffixes and word roots which will allow them to write and to develop fundamental concepts for the meaning of various medical nomenclature. Accurate spelling, medical definitions, and medical abbreviations are key elements.
**Prerequisites:**
ENG 010A - Basic Writing or ENG 011 - Basic Writing II or ESL 011 - Basic Writing II

**HCP 226 PRINCIPLES OF MEDICAL CODING I.....3-3-0**
This course is designed to provide the student with an understanding of coding and classification systems in order to assign valid diagnostic and/or procedure codes for medical billing and reimbursement required by the Health Insurance Portability and Accountability Act (HIPAA) including the validation of coded clinical information. The ICD-CM classification system is introduced with an emphasis on use of the alphabetic index and tabular list for code assignment. The course focuses on ICD-CM rules, conventions, and instructions as well as specific guidelines (e.g. circulatory, injury, pregnancy), including assignment criteria for principal and additional diagnoses in all applicable patient settings. The impact of proper code assignment, MS-DRGs and reimbursement are also discussed.
**Prerequisites:**
REA 011 - Fundamentals of College Reading or ESL/REA 017 - Vocabulary and Reading Comprehension Development II
**Corequisites:**
HCP 104 - The Human Body in Health and Disease OR BIO 103 - Introduction to Human Anatomy and Physiology OR BIO 131 - Human Anatomy and Physiology I AND BIO 132 - Human Anatomy and Physiology II. May be taken prior or during course.
HCP 224 - Medical Terminology. May be taken prior or during course.

**HCP 227 PRINCIPLES OF MEDICAL CODING II.....3-3-0**
This course expands student knowledge of coding and classification systems in order to assign valid diagnostic and/or procedure codes for medical billing and reimbursement required by the Health Insurance Portability and Accountability Act (HIPAA) including the validation of coded clinical information. Focus is placed on ICD-10-CM and ICD-10-PCS classification systems. The course introduces the professional standards for coding and reporting of diagnostic inpatient and outpatient services and inpatient procedure services. Coding characteristics, conventions and guidelines will be applied in identifying and accurately assigning codes to diseases, conditions and procedures. Health records, manual and computerized coding methods, and coding references will be utilized in the coding process.
**Prerequisites:**
REA 011 - Fundamentals of College Reading or ESL/REA 017 - Vocabulary and Reading Comprehension Development II
**Corequisites:**
HCP/MAS/BIO 104 - The Human Body in Health and Disease; or BIO 103 - Introduction to Human Anatomy and Physiology; or BIO 131 - Human Anatomy and Physiology I AND BIO 132 Human Anatomy and Physiology II. May be taken prior or during course.
HCP 224 - Medical Terminology. May be taken prior or during course.
HCP 226 - Medical Coding I. May be taken prior or during course.

**HCP 230 CPT CODING AND REIMBURSEMENT MATERIALS..... 3-3-0**
This course is designed to expand student knowledge of medical codes used in billing and reimbursement with emphasis on Current Procedural Terminology (CPT), Healthcare Common Procedure Coding System (HCPCS) II and the Ambulatory Payment Classifications (APCs) classification systems. The use of diagnosis and procedure codes for professional services reimbursement and coding systems for reimbursement will be analyzed. The relationship between these coding systems will be explored as well as the coding systems used by non-physician medical suppliers and for durable medical equipment.
**Prerequisites:**
REA 011 - Fundamentals of College Reading or ESL/REA 017 - Vocabulary and Reading Comprehension Development II
**Corequisites:**
HCP/MAS/BIO 104 - The Human Body in Health and Disease or BIO 103 - Introduction to Human Anatomy and Physiology or BIO 131 - Human Anatomy and Physiology I AND BIO 132 Human Anatomy and Physiology II. May be taken prior or during course.
HCP 224 - Medical Terminology. May be taken prior or during course.
HCP 226 - Medical Coding I. May be taken prior or during course.

## HISTORY

**HIS 101 HISTORY OF WESTERN CIVILIZATION I ANCIENT MEDIEVAL AND EARLY MODERN..... 3-3-0**
This course is a survey of the origins of Western civilization starting with prehistoric man and the emergence of agriculture. The course continues with the study of the Ancient Near Eastern Civilizations, Greece and Rome, the Middle Ages and Europe up through the Renaissance and Reformation to roughly the eighteenth century. These civilizations are studied by looking at their economy, religion, politics, art, literature and everyday life.

**HIS 101H HISTORY OF WESTERN CIVILIZATION I ANCIENT MEDIEVAL AND EARLY MODERN HONORS.....3-3-0**
This course is a survey of the origins of Western civilization starting with prehistoric man and the emergence of agriculture. The course continues with the study of the Ancient Near Eastern Civilizations, Greece and Rome, the Middle Ages and Europe up through the Renaissance and Reformation to roughly the eighteenth century. These civilizations are studied by looking at their economy, religion, politics, art, literature and everyday life. This Honors course fosters high-achieving students' growth towards learning outcomes such as: problem solving, often with creative approaches; critical reading, artistic literacy, or original text analysis; forming judgments based on evidence, often from alternative modes of inquiry or integrative learning; clear, persuasive research writing; oral presentation; and articulate reflection on personal growth. Honors courses are more likely to utilize student-driven active learning, emphasizing exploration and discovery, rather than the acquisition of specific knowledge; faculty might provide projects with no pre-determined conclusion, but with real-world application.

**HIS 102 HISTORY OF WESTERN CIVILIZATION II MODERN EUROPEAN HISTORY.....3-3-0**
A survey of western civilization covers the period from the middle of the seventeenth century to the twenty-first century. The course begins with the Scientific Revolution, Enlightenment and the French Revolution, and then proceeds to look at other challenges in society and culture and the impact of the West on the rest of the world through imperialism, totalitarianism and conflict. The Cold War and the modern period conclude the course.

**HIS 102H HISTORY OF WESTERN CIVILIZATION II MODERN EUROPEAN HISTORY HONORS..... 3-3-0**
A survey of western civilization covers the period from the middle of the seventeenth century to the twenty-first century. The course begins with the Scientific Revolution, Enlightenment and the French Revolution, and then proceeds to look at other challenges in society and culture and the impact of the West on the rest of the world through imperialism, totalitarianism and conflict. The Cold War and the modern period conclude the course. This Honors course fosters high-achieving students' growth towards learning outcomes such as: problem solving, often with creative approaches; critical reading and original text analysis; forming judgments based on evidence, often from alternative modes of inquiry or integrative learning; clear, persuasive research writing; oral presentation; and articulate reflection on personal growth. Honors courses are more likely to utilize student-driven active learning, emphasizing exploration and discovery, rather than the acquisition of specific knowledge; faculty might provide projects with no pre-determined conclusion, but with real-world application.

**HIS 121 WORLD CIVILIZATIONS I: TO 1500..... 3-3-0**
A survey of world civilizations covers the period from prehistory to the sixteenth century. The course begins with the origin of humans, first river valley civilizations, empire-building, foundations of the great world religions, and then proceeds to look at the rise of Europe. The Renaissance and the early explorers will conclude the course. Government, societal, economic, cultural, and religious aspects are analyzed throughout the course.

**HIS 122 WORLD CIVILIZATION II: FROM 1500..... 3-3-0**
This course is a continuation of HIS 121. It is a survey of the major events that have occurred in the world since 1500. The interrelationships between the civilizations of Asia, Africa, Europe and the Americas provide many opportunities for comparisons of their varied histories. This course will help students gain a clearer understanding of a complicated, interdependent modern world.

**HIS 203 HISTORY OF U.S.: TO 1877.....3-3-0**
A survey of the political, social, economic, and intellectual history of the United States from pre-Columbian Indians through the period of the Civil War and Reconstruction.

**HIS 203H HISTORY OF U.S.: TO 1877 HONORS.....3-3-0**
This course is a survey of the political, social, economic, and intellectual history of the United States from pre-Columbian Indians through the period of the Civil War and Reconstruction. This Honors course fosters high-achieving students' growth towards learning outcomes such as: problem solving, often with creative approaches; critical reading and original text analysis; forming judgments based on evidence, often from alternative modes of inquiry or integrative learning; clear, persuasive research writing; oral presentation; and articulate reflection on personal growth. Honors courses are more likely to utilize student-driven active learning, emphasizing exploration and discovery, rather than the acquisition of specific knowledge; faculty might provide projects with no pre-determined conclusion, but with real-world application.

**HIS 205 HISTORY OF U.S.: FROM 1877.....3-3-0**
A survey of the political, economic and intellectual history of the United States from the period of Reconstruction until the present. Emphasis is on the rise of industrial America and the growth of the country as a world power in the Twentieth Century.

**HIS 205H HISTORY OF U.S.: FROM 1877 HONORS.....3-3-0**
A survey of the political, economic and intellectual history of the United States from the period of Reconstruction until the present. Emphasis is on the rise of industrial America and the growth of the country as a world power in the Twentieth Century. This Honors course fosters high-achieving students' growth towards learning outcomes such as: problem solving, often with creative approaches; critical reading and original text analysis; forming judgments based on evidence, often from alternative modes of inquiry or integrative learning; clear, persuasive research writing; oral presentation; and articulate reflection on personal growth. Honors courses are more likely to utilize student-driven active learning, emphasizing exploration and discovery, rather than the acquisition of specific knowledge; faculty might provide projects with no pre-determined conclusion, but with real-world application.

**HIS 210 HISTORY OF PENNSYLVANIA..... 3-3-0**
A history of the state of Pennsylvania that emphasizes the key role it has played in the history of the nation. Emphasis will be placed on industrial development, cultural contributions, military events, and constitutional issues in which Pennsylvania has had a pivotal role. A regional visit to one historic site is a course requirement.

**HIS 213 THE CIVIL WAR & RECONSTRUCTION.....3-3-0**
This course covers the period from the election of Lincoln in 1860 to the end of reconstruction in 1877. The military history of the war will be studied in its political and social context. Stress will be given to the revolutionary changes brought about by the War, especially those affecting African-Americans. Causes of the Civil War will be studied and how it evolved into a war against slavery.

**HIS 214 AFRICAN-AMERICAN HIST & CULT.....3-3-0**
This course is a chronological survey of the history of African Americans from their African beginnings through their progress in the twenty-first century. Five units in the history of African Americans will be emphasized - becoming African American, antebellum black life, the Civil War and Reconstruction, White Supremacy and legalized injustice, the Civil Rights movement through the modern era.

**HIS 215 AMERICAN IMMIGRATION..... 3-3-0**
This course will examine the immigrant experience in the United States in a loose chronological manner by focusing on diversity issues, analyzing legislation and highlighting anti-immigrant social movements. The students will research the personal aspect of immigration by studying the lives of immigrants in autobiographical accounts and historical fiction. Class discussions will focus on discovering to what extent America is a society of immigrants.

**HIS 218 HISTORY OF LATIN AMERICA: BLOOD AND EMPIRE.....3-3-0**
This course provides a survey of the history of Latin America from pre-Columbian times to the present. Emphasis is placed on the twentieth century. Trends in political, economic, social and cultural development are studied, as well as the relationship between the United States and Latin America.

**HIS 219 THE VIETNAM WAR.....3-3-0**
This course covers the experience of Americans and Vietnamese, soldiers and civilians in the Vietnam War. It has three parts: 1) the origins of American involvement, 1945 1963; 2) the war America waged on the ground and in the air; 3) the impact of the war on American society and government.

**HIS 220 WOMEN IN AMERICA.....3-3-0**
This course is a chronological survey of the role of women in American history from the colonial period up to the modern day. It examines the experiences of women from various ethnicities and economic backgrounds. The contributions of women to the political, economic, and social development of the nation will be emphasized. The historiography and theory of the field of women's history will also be a focus.
**Prerequisites:**
ENG 010A - Basic Writing or ENG 011 - Basic Writing II or ESL 011 - Basic Writing II
REA 011 - Fundamentals of College Reading or REA 017 - Vocabulary and Reading Comprehension Development II

**HIS 225 TOPICS IN MODERN HISTORY.....3-3-0**
Specialized sophomore level courses which will deal with a different subject each semester. Included will be such chronological histories as those of France, Germany, or England, or such topical histories as War, Society and Technology Western Imperialism or Culture and Society in European life. Check with the History Coordinator as to which subject is dealt with when the course if offered.

**HIS 234 ASIAN CIVILIZATION..... 3-3-0**
A survey of the major civilizations of "monsoon Asia" with the focus on India, China and Japan. This course will emphasize political, economic, social and cultural forces that have shaped Asian civilization. Students will gain a greater appreciation of the differences and similarities between Asian civilization and the rest of the world.

**HIS 235 MODERN CHINA..... 3-3-0**
This course explores the origins and development of Modern China. The main subjects of the course are the fall of the Qing dynasty, the Western influence, the rivalry between the Chinese Communist Party and the Nationalist Guomindang Party, the Sino-Japanese War, and the emergence of the People's Republic of China, from the Mao years to the present.

**HIS 237 INDIAN CIVILIZATION..... 3-3-0**
This course is a topical introduction to Indian civilization from its ancient origins to the rise of modern, technological India. It will focus on the history and culture of India, including religious traditions, caste, imperialism and the British Raj, the Indian nationalist movement, the life and ethics of Gandhi, the impact of modernization, and India's global role.
**Prerequisites:**
ENG 010A - Basic Writing or ENG 011 - Basic Writing II or ESL 011 - Basic Writing II
REA 011 - Fundamentals of College Reading or REA 017 - Vocabulary and Reading Comprehension Development II

**HIS 241 THE HISTORY OF THE HOLOCAUST.....3-3-0**
A survey of the Holocaust, the attempted annihilation of the Jews of Europe by Nazi Germany between 1933 and 1945. This course also focuses on other destructive crimes carried out by Nazi Germany, including the mass murder of the Gypsies and the mentally and physically handicapped. The course will emphasize the nature and significance of the Holocaust and the impact of prejudice, racism, and stereotyping in other societies.

**HIS 250 HISTORY OF MODERN MIDDLE EAST.....3-3-0**
After a brief survey of the Islamic background of the Middle East and the analysis of the rise and decline of the Ottoman Empire, the course focuses on the development of the Middle East since Napoleon?s invasion of Egypt in 1798. Modernization, imperialism, and nationalism are the dominant themes in the history of this region in the nineteenth and twentieth centuries. The national histories of Turkey, Iran, the Arab states, and Israel are examined. Attention is given to the role of the Great Powers of the Middle East.

**HIS 260 RUSSIA FROM TSARISM TO VLADIMIR PUTIN.....3-3-0**
This course begins with the brief overview of the Russian state before the 1800s and then proceeds to look at changes in the social, economic and political structure of pre-revolutionary Russia, the formation and break-up of the Soviet Union and the post-Soviet period.

## HONORS

**HON 111H SPECIAL TOPICS IN HONORS INTERNATIONAL STUDY..... 3-3-0**
This course is an international study abroad experience. This course develops an understanding of a contemporary global culture. Students will explore the basic social and working skills for effectively interacting with people in business and other cross-cultural circumstances. This Honors course fosters high-achieving students' growth towards learning outcomes such as: problem solving, often with creative approaches; critical reading, artistic literacy, and original data analysis; forming judgments based on evidence, often from alternative modes of inquiry or integrative learning; clear, persuasive research writing; oral presentation; and articulate reflection on personal growth. Honors courses are more likely to utilize student-driven active learning, emphasizing exploration and discovery, rather than the acquisition of specific knowledge; faculty might provide projects with no pre-determined conclusion, but with real-world application.
**Prerequisites:**
Students must have successfully completed or tested out of at least 12 credit hours of College work with a grade point average of 3.5 or better.

**HON 203H HONORS EXPERIENCE..... 3-2-1**
This service-learning course will enrich Honors Program students' and Phi Theta Kappa members' academic environment with an opportunity to explore and acquire a deeper understanding of significant and timely interdisciplinary questions and civic issues. This course will cover a different subject each semester based on Phi Theta Kappa's "Honors in Action" program, but will consistently utilize student research of a variety of perspectives to collaboratively develop sustainable service projects improving the world around them, encouraging excellence. This course meets the Honors Program's community service and "Honors Experience" requirements. This Honors course fosters high-achieving students' growth towards learning outcomes such as: problem solving, often with creative approaches; critical reading, artistic literacy, or original data analysis; forming judgments based on evidence, often from alternative modes of inquiry or integrative learning; clear, persuasive research writing; oral presentation; and articulate reflection on personal growth. Honors courses are more likely to utilize student-driven active learning, emphasizing exploration and discovery, rather than the acquisition of specific knowledge; faculty might provide projects with no pre-determined conclusion, but with real-world application.
**Prerequisites:**
Eligible to participate in the Honors Program or be eligible for membership in Phi Theta Kappa

## HOSPITALITY MANAGEMENT

**HOS 111 INTRODUCTION TO HOSPITALITY MANAGEMENT.....3-3-0**
This course is designed to introduce the student to the vast variety of career opportunities and career paths within the world's largest and fastest growing industry. Each segment is discussed in terms of its growth potential, trends, unique characteristics, and management responsibilities. Field trips are taken hospitality-industry related operations which may include hotels, restaurants, country clubs, conference centers, caterers and retirement communities.

**HOS 114 FOOD & BEVERAGE OPERATIONS.....3-3-0**
This course will introduce students to proper operating procedures for the front of the house and as it relates to other areas of a hospitality establishment. The course stresses the importance of front of the house experiences and as it relates to the overall success of the operation. During the course, students will learn about customer service, front of the house operations, career opportunities, table service styles, various beverage categories, service, and applicable laws.

**HOS 160 MEETINGS, CONVENTIONS, AND CONFERENCE MANAGEMENT..... 3-3-0**
The meetings, conventions, and conference industry is a major market sector in the tourism and hospitality industry, and is one of the fastest growing sectors within the industry. This course will provide students insight into its elaborate and diverse nature exploring operations, strategic meeting management, accommodations, food and beverage management, technical services, risk management, project management, technology, and the U.S. multicultural meetings market. This culminating experiential course allows students to plan and execute an event.

**HOS 170 TOURISM AND HOSPITALITY SALES MANAGEMENT.....3-3-0**
The primary objective of the course is to provide a general overview of sales strategies, brand promotion, multi-cultural tourism, sales management discipline, current and future trends and its role in the tourism and hospitality industry. The student will be exposed to the overall nature and dimensions of sales and sales management, as it is relevant to and practiced in the tourism and hospitality industry. Through readings, assignments, and a hands-on project students have the opportunity to practice and demonstrate what they learn during the course.

**HOS 185 MANAGING THE CUSTOMER EXPERIENCE.....3-3-0**
This course is designed to provide the students with a broad perspective of customer service requirements in the hospitality industry. Students will learn how to deliver an exceptional guest experience and to act on customer requests and complaints in a service-minded manner. Topics will include anticipating guests' needs, providing proactive service, exceeding guest expectations, empowering employees, and turning challenges into opportunities. Discussions will include industry best practices as exhibited by widely known businesses and hospitality organizations.
**Prerequisites:**
HOS 111 - Introduction to the Hospitality Industry
CUL 102 - Hospitality Fundamentals
**Corequisites:**
CUL 170 - Management & Supervision. May be taken prior or during course.

**HOS 210 SUSTAINABLE HOSPITALITY AND TOURISM MANAGEMENT..... 3-3-0**
This course provides an introduction to sustainable hospitality and tourism management practices and development. This course examines the principles of sustainable development, water conservation, waste management, marketing, and ecodesign. Students will use strategies to understand sustainability and the financial implications of hospitality and tourism businesses. In addition, this course will provide an overview of ethics, sustainable economics, and corporate social responsibility.

**HOS 214 SPECIAL EVENT MANAGEMENT..... 3-2-2**
This course is designed to introduce students to the special events segment of the hospitality industry. The course provides principles and practice related to all facets of this growing career specialty. Discussions will emphasize best practices and trends. Students participate in the planning and execution of on-campus special events (to be taken in the last semester).
**Prerequisites:**
CUL 114 - Beverage Management and CUL 120 - Introduction to Culinary Techniques

**HOS 222 NATURE, SPORT, AND DESTINATION TOURISM MANAGEMENT..... 3-3-0**
This course provides an introduction to the fundamentals of nature, sport, and destination management organizations (DMO). This course examines the principles and theories of nature and sport based tourism and the interrelationships of marketing, finance, destination management organization (DMO) strategies and operations. In addition, this course will use the interconnectedness of nature and sport tourism from historical, economic, environmental, policy, behavioral perspectives, and its connection to concepts, principles, theories, and the business of destination management organizations (DMO).

**HOS 230 ENTREPRENEURSHIP, PRODUCT, AND CONCEPT DEVELOPMENT IN THE TOURISM INDUSTRY..... 3-3-0**
This course provides an introduction to the fundamentals of entrepreneurship and the successful development of tourism products. This course examines the principles and theories of entrepreneurship, life cycles of existing products, and explores the conceptual creation of new products. Using the tourism industry as a blueprint, students will explore entrepreneurship by analyzing market segmentation, conducting yields, profit and loss statements by developing a business plan that could be turned into a new food, beverage, or tourism concept. In addition, this course will provide an overview of new food product development, organization, management, marketing, strategy, commercial feasibility, and law using class lecturers, projects, and case studies.

**HOS 231 HOSPITALITY MARKETING..... 3-3-0**
This course is designed to provide the student with an understanding of the basic marketing concepts as they apply to the hospitality industry. Emphasis is placed on the concept of the five P's of Marketing - People, Product, Package, Price, and Promotion. Students will have the opportunity to earn a certificate of completion from the National Restaurant Association's ManageFirst program. Students will complete a group marketing project with in-class presentation.
**Prerequisites:**
HOS 111 - Introduction to the Hospitality Industry

**HOS 251 TOURISM, HOTEL AND CASINO MANAGEMENT..... 3-3-0**
This course is designed to provide students with an overview of the concepts and practices in the hotel and casino management industry. The student will be exposed to the overall nature and dimensions of front office management, housekeeping management, revenue management, sales, marketing, and business operations in a hotel and casino. Innovation and sustainability trends will be discussed along with hotel and casino management best practices. The culminating course project allows students to plan and design a revenue management and sales strategy in collaboration with a full service hotel.

**HOS 260 LEGAL ISSUES IN TOURISM AND HOSPITALITY INDUSTRY..... 3-3-0**
This course provides a comprehensive overview of laws and regulations governing the tourism and hospitality industry. Legal implications of civil laws, areas of tort, contract law, labor relations laws, Equal Employment Opportunity laws, Title VII of the Civil Rights Act and the Americans with Disabilities Act, risk management, hospitality law, zoning, and unions will be discussed. Reciprocal obligations and human resources management will explore law and legal relationships that exist in the business context. Issues will be discussed from the points of views of innkeepers, restaurateurs, travel agents, lawyers and event planners.

**HOS 270 INNOVATION AND LEADERSHIP IN TOURISM MANAGEMENT..... 3-3-0**
This capstone course culminates the theoretical training for students in tourism and hospitality studies. This course provides a solid foundation of knowledge related to tourism innovation while connecting the interrelated elements of marketing, finance, business application software, technological fluency, business communication tools, social issues, operations, problem solving, and how these changes occurring impact the global tourism environment. Students learn by engaging in a series of team based managerial, social, and operational case studies focusing on current and future trends in tourism allowing for thinking "outside the box". Students will learn how to be comfortable with their professional strengths and or opportunities to capitalize on their intellectual potential. Social intelligence will be connected to leadership techniques, allowing students to integrate knowledge from previous tourism and hospitality courses to complete their professional portfolio.
**Prerequisites:**
HOS 111 - Introduction to Hospitality Management, CUL 114/HOS 114 - Food and Beverage Operations, HOS 170 - Tourism and Hospitality Sales, and HOS 251 - Principles of Tourism, Hotel and Casino Management

**HOS 297 COOPERATIVE INTERNSHIP IN HOSPITALITY MANAGEMENT..... 3-0-15**
This is a work-experience course in which the student is required to work a minimum of 200 hours in a college-approved tourism and hospitality position in the student's area of specialization. The position may be paid or unpaid. **This course is subject to a course fee.**
**Prerequisites:**
HOS 111 - Introduction to Hospitality Management, CUL 114/HOS 114 - Food and Beverage Operations, HOS 170 - Tourism and Hospitality Sales, and HOS 251 Principles of Tourism, Hotel, and Casino Management

## HUMAN SERVICES

**HSW 101 INTRODUCTION TO HUMAN SERVICES AND THE HELPING PROFESSION..... 3-3-0**
This course is designed to help students explore human services as a generalist human services professional. Emphasis is on historical development, roles of the human service professional, theories of helping, technology, managed care, crisis intervention, international and multicultural issues in human services. Students are encouraged to examine themselves as helpers in the human services profession.

**HSW 102 THEORIES OF GROUP COUNSELING..... 3-3-0**
A survey of therapeutic modalities commonly employed in group settings. Students are expected to carefully analyze the theories presented and to begin developing a basis for their own theory of effective group work with various populations.
**Prerequisites:**
HSW 101 - Introduction to Human Services and the Helping Profession

**HSW 105 SOCIAL POLICY & ETHICS IN HUMAN SERVICES..... 3-3-0**
This course examines the relationship of social policy, ethics, and the human services field. Students will address ethical dilemmas, particularly as they relate to current and needed social policies on local, state, and national levels. A basic understanding of social welfare theories will assist the student in evaluating, assessing, and advocating for change in both a micro / macro perspective. The Ethical Standards of Human Service Professionals (National Organization for Human Services) will serve as a backbone for students to use in decision-making, assessment of clients and client groups, and promotion of change in a diverse setting.

**HSW 130 INTRODUCTION TO YOUTH AND FAMILY SYSTEMS..... 3-3-0**
This introductory course examines children and youth within the context of their familial role. Emphasis is placed upon non-traditional as well as traditional family systems and the impact that issues such as divorce, substance abuse, child abuse and incarceration has on the various units in the family system.

**HSW 155 INTRODUCTION TO AGING..... 3-3-0**
This introductory course is designed to discuss basic principles and sensitize students to those personal and social forces which impact the lives of older adults in contemporary America. Commonly held attitudes about older persons and the aging process will be examined along with current theories and prominent bodies of knowledge associated with the biological, psychological and sociological aspects of aging. Roles which older adults assume in various settings - community, residential and institutions, as well as the responses of society to older adults will be emphasized.

**HSW 160 THE MIDDLE YEARS..... 3-3-0**
This course explores the developmental stages of the middle years of life span: the twenties, thirties, forties, and fifties. The course covers the major psycho-social theories and research on how we adapt to the psycho-dynamic and cultural pressures of middle age. It is designed for those whose work brings them into contact with adults and for students of all ages (including those who are anticipating, experiencing, or who have completed the changes of middle adulthood). The unique pressures on the "sandwich" generation (who have responsibility for teenagers and aging parents) will be examined.

**HSW 202 THEORIES OF INDIVIDUAL COUNSELING..... 3-3-0**
Professionalization, ethics and the impact of values on the helping process are considered. Special attention is given to evaluation research (accountability), testing and report writing in diverse settings. Students develop their own theory of helping, explain its relationship to existing theories, and demonstrate its application(s).
**Prerequisites:**
HSW 101 - Introduction to Human Services and the Helping Profession

**HSW 203 ASSESSMENT & DOCUMENTATION IN HUMAN SERVICES..... 3-3-0**
This course is designed to teach students the necessary skills to assess and document client interactions in a human services agency or program. Students will explore the nature of the helping relationship, demonstrate their active listening abilities, learn how to gather information, build treatment plans, and write case notes. Students will also understand case management in a managed care environment, and the legal, ethical and regulatory implications of comprehensive assessment and documentation.
**Prerequisites:**
ENG 101 - English Composition I with a minimum grade of C
HSW 101 - Introduction to Human Services and the Helping Profession with a minimum grade of C

**HSW 205 VOLUNTEER ADMINISTRATION..... 3-3-0**
This course examines the development and role of volunteerism in a profit-oriented society. Specifically, it is an in-depth exploration of the fundamentals of volunteer organization and management from an administrative perspective. It is designed for those whose work brings them into contact with volunteers, the currently employed volunteer administrator, and the student who will eventually be involved with volunteer management.

**HSW 206 HOSPICE: CONCEPTS & SKILLS..... 3-3-0**
A course designed for those whose work brings them into contact with the dying (and their families) or for anyone who wishes to understand the issue of his/her own mortality in relation to he life cycle. Students will have the opportunity to examine the "hospice without walls" concept, to clarify attitudes toward death and dying, and to explore how such attitude are learned and can be changed. Skills that can be acquired and practiced include: hospice and grief outreach and counseling, administration of cost-effective hospice counseling in the social service agency, and mobilizing support networks for the dying and their families.

**HSW 210 PROFESSIONAL DEVELOPMENT IN HUMAN SERVICES 3-3-0**
This course is designed to prepare students for the practicum experience through professional self reflection and development. Students will evaluate human service agencies, organizational structures, and funding sources. Students will select a field site, process agency interview, and prepare for supervision in the field. Topics such as self-assessment, document gathering, and certification reviews will be addressed. The development of portfolio management demonstrating interpersonal styles, and program competency will be required. Students must pass this course with a grade of "C" or higher before taking HSW 211.
**Prerequisites:**
HSW 102 - Theories of Group Counseling or HSW 202 - Theories of individual Counseling
HSW/PSY 203 - Assessment and Documentation in Human Services

**HSW 211 HUMAN SERVICES PRACTICUM..... 6-0-14**
A course designed to integrate human services theory within a practical milieu. Through supervised clinical experience, the student begins hands-on training in a community agency. Skills focused upon are: intake interviewing, case management, assessment of client/consumer needs and intervention strategies to meet those needs, individual and group counseling, outreach activities, recording procedures, appropriate use of community referral and networking resources, staff relations, and inter-agency communication, evaluating program services and volunteer participation. Two hundred and eighty hours of recorded clinical experience are required in addition to a one and half -hour seminar every other week.
**This course is subject to a course fee.**
**Prerequisites:**
ENG 101 - English Composition I with a minimum grade of C
HSW 210 - Professional Development in Human Services with a minimum grade of C

**HSW 216 ASSESSMENT & TECHNIQUES FOR CHILD/YOUTH..... 3-3-0**
This course is designed to develop the knowledge and skills in assessing the risk factors in the current situation of the child and/or adolescent. The course will focus upon the youth's educational social, psychological, emotional and physical environment to determine the level of required intervention. Students will learn the techniques needed to assess and reduce risk factors.
**Prerequisites:**
HSW 101 - Introduction to Human Services and the Helping Profession

**HSW 219 THE DRUG AND ALCOHOL TREATMENT PROCESS: AN INTRODUCTION..... 3-3-0**
Designed to provide a working knowledge of the helping process as it applies to drug and alcohol counseling, students completing this course should be able to: develop assessment and diagnostic skills; formulate appropriate goals, and treatment plans; improve interviewing and intervention skills with drug/alcohol clients; discuss and compare individual, group, and family treatment approaches; describe the levels of service available to drug/alcohol clients and their families; use AA, AL-ANON and other support groups as treatment allies; appreciate the impact of sex, age, ethnicity, race and religion on the treatment process; and understand the American Psychiatric Association's (DSM V) assessment of substance use disorders, anti-social personalities and depression.

**HSW 220 INTRO TO ADJUNCTIVE THERAPIES.....3-3-0**
A survey of adjunctive therapies and activities that enhance the therapeutic process for populations served by human service agencies. Therapeutic modalities include but are not limited to: art, music, movement, dance, poetry, psychodrama and biofeedback.

**HSW 250 PSYCHOLOGY OF AGING: HELPING SKILLS IN WORKING WITH OLDER ADULTS.....3-3-0**
This course is an in-depth exploration of psychological theories and their applications to appreciating and working with older adults. Students will have the opportunity to gain an increased understanding of their own personal development and self knowledge in the context of the life cycle and to explore feelings about the aging process. Classroom experiences that focus on enhancing communications skills will be designed to enable students to translate psychological theories and helping techniques to every day family and job-related encounters with older adults. Open to all majors.
**Prerequisites:**
HSW 155 - Introduction to Aging or PSY 101 - Introduction to Psychology or SOC 101 - Introduction to Sociology

**HSW 254 AGING IN THE UNITED STATES.....3-3-0**
This course is an in-depth exploration of the current social issues concerning older adults in U.S. society. Students will examine the social needs which confront all older people and those needs of particular sub-groups of the older population such as the frail elderly, women, and minorities. Emphasis will be placed on reviewing the legislation which has led to the creation of programs and services for meeting the needs of older adults and on analyzing the system of services to detect areas of unmet needs, such as the need for "long-term care." Students will have the opportunity to gain an understanding of techniques of advocacy which can be used on behalf of and in concert with older persons. This course is open to all majors.
**Prerequisites:**
HSW 155 - Introduction to Aging or PSY 101 - Introduction to Psychology or SOC 101 - Introduction to Sociology

## INTERDISCIPLINARY

**IDS 115 ISSUES OF RACE AND ETHNICITY.....3-3-0**
This course analyzes the realities and mythologies that surround the issue of race and ethnicity in the modern world. Perspectives from multiple disciplines are used to examine the concept of race and its meaning, nature and significance in various contemporary issues. The topics considered in this course include the economic, political and social issues of the day and the possibilities of finding solutions as we tackle these problems relating to the issue of race and ethnicity.

**IDS 116 CHILDHOOD IN AMERICA.....3-3-0**
This course is designed to expose students to American childhood and youth experiences from a variety of racial, ethnic, class and gender perspectives. The course will be a thematic exploration of a wide range of topics that include but are not limited to: familial and social relationships, social and political movements, educational experiences and economic conditions in the twentieth and twenty-first centuries. The course will examine childhood through an interdisciplinary approach, incorporating history, literature and sociology to help students contextualize individual and groups experiences.

**IDS 200 AMERICAN CHILDHOOD.....3-3-0**
This course is designed to expose students to childhood and youth experiences from a variety of racial, ethnic, class and gender perspectives. The course will be thematic exploring a wide range of topics that include but are not limited to: familial and social relationships, social and political movements, educational experiences and economic conditions in the twentieth and twenty-first centuries. We will examine childhood through an interdisciplinary approach, incorporating history, literature and sociology to help students contextualize individual and groups experiences.

## ITALIAN

**ITA 101 ELEMENTARY ITALIAN I.....3-3-0**
Elementary Italian I is an introduction to the Italian language. Students will learn to master basic communicative situations in Italian at a mid-novice level. The systematic training in speaking, listening, writing, and reading, reinforced by the use of authentic audio and video material, will create competence and confidence in expressing in Italian. In addition, students will learn about the various cultures in Italy.
**Prerequisites:**
ENG 010A - Basic Writing or ENG 011 - Basic Writing II or ESL 011 - Basic Writing II REA 011 - Fundamentals of College Reading or REA 017 - Vocabulary and Reading Comprehension Development II

**ITA 102 ELEMENTARY ITALIAN II.....3-3-0**
Elementary Italian II is the continuation of Elementary Italian I. Students will master basic communicative situations in Italian at a high novice level. The systematic training in speaking, listening, writing, and reading, reinforced by the use of authentic audio and video material, will enhance competence and confidence in expressing in Italian. In addition, students will identify the linguistic and cultural diversity of Italy.
**Prerequisites:**
ITA 101 - Elementary Italian I

**ITA 201 INTERMEDIATE ITALIAN I.....3-3-0**
Intermediate Italian I is the continuation of Elementary Italian II. Students will master uncomplicated communicative tasks in Italian at a low intermediate level. Learners will express personal meaning by combining and recombining what they know and what they hear from their interlocutors into short statements. In addition, students will identify the linguistic and cultural diversity of Italy through an introduction to Italian movies.
**Prerequisites:**
ITA 102 - Elementary Italian II

**ITA 202 INTERMEDIATE ITALIAN II.....3-3-0**
Intermediate Italian II is the continuation of Intermediate Italian I. Students will master communicative tasks in Italian at a mid-intermediate level. Learners are at ease when performing uncomplicated tasks in speaking, listening, reading, and writing. In addition, students will identify the linguistic and cultural diversity of Italy through an introduction to Italian literature.
**Prerequisites:**
ITA 201 - Intermediate Italian I

**ITA 251 ADVANCED ITALIAN I.....3-3-0**
Advanced Italian I is a course designed to improve proficiency in written and oral Italian. Students will also study the contemporary culture of Italy via authentic materials selected from authentic media as well as from cultural readings. Italian literature is approached through the study of representative excerpts from the works of major Italian authors. This class is taught in Italian. Outside reading is required.
**Prerequisites:**
ITA 202 - Intermediate Italian II

**ITA 252 ADVANCED ITALIAN II..... 3-3-0**
Advanced Italian II is a continuation of Advanced Italian I. It is a course designed to improve proficiency in written and oral Italian. Students will continue to study the contemporary culture of Italy via authentic materials selected from authentic media as well as from cultural readings. Italian literature is approached through the study of representative excerpts from the works of major Italian authors. This class is taught in Italian. Outside reading is required.
**Prerequisites:**
ITA 251 - Advanced Italian I

## JAPANESE

**JPN 101 ELEMENTARY JAPANESE I..... 3-3-0**
Elementary Japanese I is an introduction to the Japanese language. Students will learn to master basic communicative situations in Japanese at a mid-novice level. The systematic training in speaking, listening, writing, and reading, reinforced by the use of authentic audio and video material, will create competence and confidence in expressing in Japanese. In addition, students will learn about the various cultures in Japan.
**Prerequisites:**
ENG 010A - Basic Writing or ENG 011 - Basic Writing II or ESL 011 - Basic Writing II
REA 011 - Fundamentals of College Reading or REA 017 - Vocabulary and Reading Comprehension Development II

**JPN 102 ELEMENTARY JAPANESE II..... 3-3-0**
Elementary Japanese II is the continuation of Elementary Japanese I. Students will continue to master basic communicative situations in Japanese at a high novice level. The systematic training in speaking, listening, writing, and reading, reinforced by the use of authentic audio and video material, will enhance competence and confidence in expressing in Japanese. In addition, students will identify the linguistic and cultural diversity of Japan.
**Prerequisites:**
JPN 101 - Elementary Japanese I

**JPN 201 INTERMEDIATE JAPANESE I..... 3-3-0**
This course introduces students to conversational Japanese using the modules of the subjects. Using sentence patterns and common expressions, it stresses communication with Japanese people at a low intermediate level. The conversational skills and vocabulary building will be enhanced by listening to the accompanying AV/Multimedia materials. The students will be encouraged to express his/her own ideas verbally using simple sentence patterns in the class. The study of Kanji is introduced.
**Prerequisites:**
JPN 102 - Elementary Japanese II

**JPN 202 INTERMEDIATE JAPANESE II..... 3-3-0**
Intermediate Japanese 202 is a continuation of Intermediate Japanese 201 with extensive practice in building vocabulary and conversational skills at a mid-intermediate level. The recognition of Kanji writing as well as advanced grammar will be covered as the class progresses. The analysis of dialogues and the creation of skits will give the student practice in conversation.
**Prerequisites:**
JPN 201 - Intermediate Japanese I

## MEDICAL ASSISTING

**MAS 104 HUMAN BODY IN HEALTH AND DISEASE.....3-3-0**
This introductory course provides students with the essentials of anatomy, the basic functions of the human body and the effects of disease using a systems approach. The normal structural organization and processes of each body system, common diseases, clinical applications, treatments and diagnostic procedures will be examined.
**Prerequisites:**
ENG 010A - Basic Writing or ENG 011 - Basic Writing II or ESL 011 - Basic Writing II
REA 011 - Fundamentals of College Reading or ESL/REA 017 - Vocabulary and Reading Comprehension Development II

**MAS 113 CLINICAL ASSISTING PROCEDURES I.....3-2-2**
The course builds a solid foundation in Medical Assisting and introduces students to the clinical procedures commonly performed in a variety of medical offices. This course explores asepsis and infection control, nutrition and wellness, pharmacology and medication administration, and assisting the physician and health care providers. Course specific competency evaluations must be successfully completed by the student. **This course is subject to a course fee.**
**Prerequisites:**
ENG 010A - Basic Writing or ENG 011 - Basic Writing II or ESL 011 - Basic Writing II
REA 011 - Fundamentals of College Reading or ESL/REA 017 - Vocabulary and Reading Comprehension Development II
MAT 010 - Fundamentals of Arithmetic or MAT 010B - Review of the Fundamentals of Arithmetic
**Corequisites:**
HCP 224 - Medical Terminology. May be taken prior or during course.
HCP 100 - Medical Office Technologies and the EHR. May be taken prior or during course.

**MAS 114 MED LAW & ETHICS FOR HEALTH PROFESSIONAL.....3-3-0**
This course provides the student with a deeper understanding of legal and ethical issues in healthcare. Students explore the legal, ethical and moral dilemmas currently faced by healthcare professionals, and identify issues related to potential legal liability in the workplace.

**MAS 117 MEDICAL OFFICE ADMINISTRATION.....4-4-0**
This course builds a solid foundation in Medical Office Administrative skills and introduces students to the administrative procedures and business practices commonly performed in the medical office. Emphasis on financial practices, health insurance, reimbursement, therapeutic communication and patient education will help prepare the student for entry level office administration. Course specific competency evaluations must be successfully completed by the student. **This course is subject to a course fee.**
**Prerequisites:**
REA 011 - Fundamentals of College Reading or ESL/REA 017 - Vocabulary and Reading Comprehension Development II
ENG 010A - Basic Writing or ENG 011 - Basic Writing II or ESL 011 - Basic Writing II
**Corequisites:**
HCP 224 - Medical Terminology. May be taken prior or during course.
HCP 100 - Medical Office Technologies and the EHR. May be taken prior or during course.
HCP 114 - Medical Law and Ethics. May be taken prior or during course.

**MAS 121 LABORATORY PROCEDURES IN THE MEDICAL OFFICE 3-2-2**
This comprehensive course introduces the student to the purpose, techniques and documentation of diagnostic laboratory procedures commonly performed in the medical office. Subjects covered include general laboratory techniques, phlebotomy, specimen collection, handling and processing, diagnostic testing and performing hematology, chemistry, urinalysis, microbiology and immunology testing. Course specific competency evaluations must be successfully completed by the student. The course will assist the student in developing basic laboratory skills and a firm understanding of the scientific method, enabling students to appreciate the scientific process, and build scientific reasoning and critical thinking skills that are applicable to their career as a health care professional. **This course is subject to a course fee.**
**Prerequisites:**
ENG 010A - Basic Writing or ENG 011 - Basic Writing II or ESL 011 - Basic Writing II
REA 011 - Fundamentals of College Reading or ESL/REA 017 - Vocabulary and Reading Comprehension Development II
**Corequisites:**
HCP/MAS/BIO 104 - The Human Body in Health and Disease OR BIO 103 - Introduction to Anatomy and Physiology OR BIO 131 - Human Anatomy and Physiology I AND BIO 132 - Human Anatomy and Physiology II. May be taken prior or during course.
HCP 224 - Medical Terminology. May be taken prior or during course.

**MAS 123 CLINICAL ASSISTING PROCEDURES II.....3-2-2**
The course continues to build a solid foundation in Medical Assisting and expands knowledge of clinical procedures commonly performed in a variety of medical offices. This course explores anatomy and physiology, medical terminology, common pathology and diseases, diagnostic treatment modalities, and patient care techniques. Course specific competency evaluations must be successfully completed by the student. This course is subject to a course fee. **This course is subject to a course fee.**
**Corequisites:**
HCP/MAS/BIO 104 - The Human Body in Health and Disease. May be taken prior or during course.
MAS 113 -Medical Assisting- Clinical Assisting Procedures I. May be taken prior or during course.
HCP/MAS 121 Laboratory Procedures in the Medical Office. May be taken prior or during course.
HCP/MAS 117 - Medical Office Administration. May be taken prior or during course.

**MAS 130 MEDICAL ASSISTING PRACTICUM.....6-2-10**
This capstone course will serve as the culminating point in preparing for the transition from student to practicing Medical Assistant by providing the student with the opportunity to apply the skills learned in the classroom and laboratory to medical assisting practice in the medical office. This important part of the student's total education includes an opportunity to perform various clinical and administrative procedures at the practicum site. These experiences are then shared in the classroom seminar setting. Students must complete a capstone project and course-specific evaluations. **This course is subject to a course fee.**
**Prerequisites:**
MAS 123 - Clinical Assisting Procedures II

## MATHEMATICS

**MAT 011 BEGINNING ALGEBRA..... 0-3-0**
A first course in algebra with some review of arithmetic. It introduces the beginning concepts of algebra and is appropriate for students with a weak background or no background in algebra. Topics include signed numbers, algebraic terminology, basic operations on algebraic expressions and exponents, solution of linear equations and inequalities, simple factoring, algebraic fractions, and word problems. This precollege level course cannot be used to fulfill a degree requirement nor is it calculated in a student's Grade Point Average (GPA); however, the credits billed will be applied towards a student's financial aid enrollment status and enrollment status reported to the National Student Clearinghouse.
**Prerequisites:**
MAT 010 - Fundamentals of Arithmetic with a minimum grade of C or MAT 010B - Review of the Fundamentals of Arithmetic with a minimum grade of P. Placement score information can be found on the ACT335 document linked to the online course description.

**MAT 085 FUNDAMENTALS OF MATHEMATICS.....0-4-2**
A fundamental course in basic mathematical skills with an introduction to algebraic concepts. This course does not offer degree credit. Topics include solving linear equations, graphing principles, scientific notation, operations on signed numbers, fractions, decimals, percents, and other arithmetic topics. This precollege level course cannot be used to fulfill a degree requirement nor is it calculated in a student's Grade Point Average (GPA); however, the credits billed will be applied towards a student's financial aid enrollment status and enrollment status reported to the National Student Clearinghouse
**Prerequisites:**
Course requires Math placement test. Placement score information can be found on the ACT335 document linked to the online course description.

**MAT 100 INTERMEDIATE ALGEBRA.....3-3-0**
This intermediate algebra course reviews and extends the material taught in MAT 011. It is appropriate for students who have taken MAT 011 or who have had an elementary algebra course in high school. It will prepare students for MAT 125, MAT 130, MAT 131, MAT 140 and/or MAT 161. Topics include a brief review of introductory algebra, introduction to functions, factoring, algebraic fractions, radicals, fractional exponents, the Pythagorean theorem, functional notation, graphing, quadratic equations, logarithms, systems of linear equations, and word problems applications. A graphing calculator is required. Instruction will be presented using a TI-84+.
**Prerequisites:**
MAT 011 - Beginning Algebra or MAT 011B - Beginning Algebra with Review of Arithmetic with a minimum grade of C. Placement score information can be found on the ACT335 document linked to the online course description.

**MAT 100A INTERMEDIATE ALGEBRA..... 3-4-1**
This intermediate algebra course reviews and extends the material taught in MAT 085. It is appropriate for students who have taken MAT 085 or who have had an elementary algebra course in high school. It will prepare students for MAT 125, MAT130, MAT 131, MAT 140 and/or MAT 161. Topics include a brief review of introductory algebra, introduction to functions, factoring, algebraic fractions, radicals, fractional exponents, the Pythagorean theorem, functional notation, graphing, quadratic equations, logarithms, systems of linear equations, and word problems applications. A graphing calculator is required. Instruction will be presented using a TI-84+. MAT 100A covers the same topics as MAT 100 by meeting 4 hours a week for 3 credits. It is important to note that the students will pay for four hours, but only receive three credits.
**Prerequisites:**
MAT 011 - Beginning Algebra or MAT 085 - Fundamentals of Mathematics with a minimum grade of C. Placement score information can be found on the ACT335 document linked to the online course description.

**MAT 103A FOUNDATIONS OF MATHEMATICS.....3-4-1**
This course is to give the students an understanding of the foundations of math. Topics include sets, logic, number bases and the structure of the number system from naturals to the reals, solving multiple step problems, and teaching to one's peers. This course does not satisfy the MAT 100 prerequisite requirement for MAT 125, MAT 130, MAT 131, MAT 140, or MAT 161. MAT 103A covers the same topics as MAT 103 by meeting 4 hours a week for 3 credits. It is important to note that the students will pay for four hours, but only receive three credits. NOTE: Check with a counselor regarding transfer equivalency.
**Prerequisites:**
MAT 011 - Beginning Algebra or MAT 085 - Fundamentals of Mathematics with a minimum grade of C. Placement score information can be found on the ACT335 document linked to the online course description.

**MAT 104 FOUNDATIONS OF MATHEMATICS II..... 3-3-0**
This is the second course in the sequence MAT 103, MAT 104. Topics include geometry, measurement, probability, statistics, and problem solving. This course does not satisfy the MAT 100 prerequisite requirement for MAT 125, MAT 140 or MAT 161.
**Prerequisites:**
MAT 103 - Foundations of Math with a minimum grade of C

**MAT 106 MATH APPLICATIONS.....3-3-0**
This course is designed for liberal arts, social science, humanities, secondary education, and communications majors. It stresses mathematical applications from linear programming, probability and statistics, and at least one of the following topics: matrix algebra, game theory, graph theory, mathematics of finance, and the computer with applications. A calculator is required for this course; see instructor. This course does not satisfy the MAT 100 prerequisite requirement for MAT 125, MAT 140 or MAT 161.
**Prerequisites:**
MAT 011 - Beginning Algebra or MAT 011B - Beginning Algebra with Review of Arithmetic with a minimum grade of C. Placement score information can be found on the ACT335 document linked to the online course description.

**MAT 106A MATH APPLICATIONS..... 3-4-1**
This course is designed for non-STEM, non-Business and non-Education majors. It stresses mathematical applications from linear programming, probability and statistics, and mathematics of finance. In addition, the course covers at least one of the following topics: matrix algebra, game theory, graph theory, or the computer with applications. A calculator is required for this course. This course does not satisfy the MAT 100 prerequisite requirement for MAT 125, MAT 140 or MAT 161, but does satisfy the prerequisite for MAT 130 and MAT 131. MAT 106A covers the same topics as MAT 106 by meeting 4 hours a week for 3 credits. It is important to note that the students will pay for four hours, but only receive three credits.
**Prerequisites:**
MAT 011 - Beginning Algebra or MAT 085 - Fundamentals of Mathematics with a minimum grade of C. Placement score information can be found on the ACT335 document linked to the online course description.

**MAT 108 MATHEMATICS CULTURE & CONCEPT..... 3-3-0**
A course, designed primarily for liberal arts students, which shows how mathematics has developed concomitantly with civilization. The applications demonstrate that mathematics is related not only to the physical sciences but also to the social sciences, to philosophy, logic, religion, literature and the arts. This course does not satisfy the MAT 100 prerequisite requirement for MAT 125, MAT 131, MAT 140 or MAT 161.
**Prerequisites:**
MAT 011 - Beginning Algebra or MAT 011B - Beginning Algebra with Review of Arithmetic with a minimum grade of C. Placement score information can be found on the ACT335 document linked to the online course description.

**MAT 125 DISCRETE MATHEMATICS..... 3-3-0**
A course in discrete mathematics with special emphasis on computer science applications. Topics include sets, number systems, the nature of proof, formal logic, functions and relations, combinatorics, recurrence relations, trees and Boolean algebra.
**Prerequisites:**
CIS 111 Computer Science I: Programming and Concepts with a minimum grade of C
MAT 100 - Intermediate Algebra with a minimum grade of C or math placement test recommendation of "ABV 100"

**MAT 130 PROBABILITY AND STATISTICS.....4-4-0**
A course designed for students in all fields. Topics include organization of data, measures of central tendency, measures of variation, statistical inference, correlation along with some more advanced topics such as analysis of variance and simple/multiple regression. A graphing calculator is required for class, homework and testing. Classroom instruction and programs will be presented using a TI-84 Plus.
**Prerequisites:**
MAT 100 Intermediate Algebra or MAT 100B Intermediate Algebra with Review or MAT 104 Foundations of Mathematics II or MAT 106 Math Applications with a minimum grade of C

**MAT 130H PROBABILITY AND STATISTICS HONORS.....4-4-0**
A course designed for students in all fields. Topics include organization of data, measures of central tendency, measures of variation, statistical inference, correlation along with some more advanced topics such as analysis of variance and simple/multiple regression. A graphing calculator is required for class, homework and testing. Classroom instruction and programs will be presented using a TI-84 Plus. This Honors course fosters high-achieving students' growth towards learning outcomes such as: problem solving, often with creative approaches; critical reading and original data analysis; forming judgments based on evidence; clear, persuasive research writing; oral presentation; and articulate reflection on personal growth. Honors courses are more likely to utilize student-driven active learning, emphasizing exploration and discovery, rather than the acquisition of specific knowledge; faculty might provide projects with no pre-determined conclusion, but with real-world application.
**Prerequisites:**
MAT 100 - Intermediate Algebra or MAT 100B - Intermediate Algebra & Review with a minimum grade of C. Placement score information can be found on the ACT335 document linked to the online course description.

**MAT 131 INTRODUCTION TO STATISTICS I..... 3-3-0**
A basic course designed for students in all fields. Topics include organization of data, measures of central tendency, measures of variation, statistical inference and correlation. This is a self-contained course, or with MAT 132, it is a course with greater depth and applications. A graphing calculator is required for class, homework and testing. Classroom instruction and programs will be presented using a TI-84 Plus.
**Prerequisites:**
MAT 100 Intermediate Algebra or MAT 100B Intermediate Algebra with Review or MAT 104 Foundations of Mathematics II or MAT 106 Math Applications with a minimum grade of C

**MAT 132 INTRODUCTION TO STATISTICS II..... 3-3-0**
A continuation of MAT 131 with business applications including statistical inference and decision procedures, regression, correlation, time series, quality control and index numbers. A graphing calculator is required for classes, homework and testing. Classroom instruction and programs will be presented using a TI-84 Plus.
**Prerequisites:**
MAT 131 - Introduction to Statistics I with a minimum grade of C

**MAT 140 FINITE MATHEMATICS FOR BUSINESS..... 3-3-0**
A course in finite mathematics with special emphasis on applications to business and related fields. Topics include linear and quadratic equations with applications involving supply, demand, revenue, cost, profit and break-even points; matrices and systems of linear equations; graphing; linear programming; simplex method; mathematics of finance; and model building. Classroom instruction and programs will be presented using a TI-84 Plus.
**Prerequisites:**
MAT 100 - Intermediate Algebra or MAT 100B - Intermediate Algebra & Review with a minimum grade of C. Placement score information can be found on the ACT335 document linked to the online course description.

**MAT 142 CALCULUS FOR BUSINESS, SOC SCI.....3-3-0**
A one semester calculus course containing an introduction to differential and integral calculus using algebraic, exponential and logarithmic functions. A graphing calculator is required for class, homework and testing. Classroom instruction and programs will be presented using a TI 84 Plus.
**Prerequisites:**
MAT 140 - Finite Mathematics for Business with a minimum grade of C

**MAT 161 PRECALCULUS I.....4-4-0**
A comprehensive precalculus course which extends the material taught in MAT 100. Additional topics include: quadratic and absolute value, inequalities, binomial theorem, sigma notation, conic sections, theory of equations and complex numbers. A graphing calculator is required for class, homework, and testing. Classroom instruction will be presented using a TI-84 Plus.
**Prerequisites:**
MAT 100 - Intermediate Algebra or MAT 100B - Intermediate Algebra & Review with a minimum grade of C. Placement score information can be found on the ACT335 document linked to the online course description.

**MAT 162 PRECALCULUS II.....4-4-0**
This is a continuation of MAT 161 including the following topics: exponential and logarithmic functions and trigonometry. The trigonometry topics includes right triangles, functions, graphs, identities, vectors, law of sines, law of cosines, polar coordinates and polar graphing, complex numbers, inverse functions and applications. A graphing calculator is required. Instruction will be presented using a TI-84 Plus.
**Prerequisites:**
MAT 161 - Precalculus I with a minimum grade of C

**MAT 188 CALCULUS WITH A REVIEW OF FUNCTION I..... 4-4-0**
A course primarily designed for students who will major in mathematics, science, engineering, or business. The sequence of courses, MAT 188 and MAT 189, is designed for students who have a good background in functions and trigonometry. MAT 188 and MAT 189 cover similar topics as the sequence MAT 161, MAT 162, and MAT 190 but at a faster pace. Together with MAT 189 the course covers all of the material in MAT 190, Calculus I. MAT 188 covers inequalities, Fundamental Theorem of Algebra, basic trigonometry, Law of Sines and Cosines, limits, differentiation, integration, curve sketching and applications for polynomials and trigonometric functions. A graphing calculator is required for class, homework, and testing. Classroom instruction and programs will be presented using a TI-84 Plus. You must pass both MAT 188 and MAT 189 to transfer credits equivalent to Calculus I. You should not take MAT 188 unless you are planning on taking MAT 189 the next semester.
**Prerequisites:**
Students must have successfully completed either MAT 100 (or MAT 100B) with a minimum grade of B, or MAT 116 with a minimum grade of C, or have an ABV 116 on the Math Placement test

**MAT 189 CALCULUS WITH A REVIEW OF FUNCTIONS II.....4-4-0**
This course is a continuation of MAT 188. This course completes the coverage of Calculus I, MAT 190. MAT 189 covers limits, differentiation, integration curve sketching and applications for rational and radical functions. Also covered is an introduction to logarithms, exponential functions, and conic sections. The course concludes with a summary of Calculus I. A graphing calculator is required for class, homework, and testing. Classroom instruction and programs will be presented using a TI-84 Plus.
**Prerequisites:**
MAT 188 - Calculus With a Review of Function I with a minimum grade of C

**MAT 190 CALCULUS & ANALYTIC GEOMETRY I.....4-4-0**
A course designed primarily for students who will major in mathematics, science, engineering, or business. Topics include concepts from analytic geometry, limits, differentiation and integration of algebraic and trigonometric functions, curve sketching and applications. A graphing calculator is required for class, homework, and testing. Classroom instruction and programs will be presented using a TI-84 Plus. This course meets
**Prerequisites:**
MAT 162 - Precalculus II or 170 - Algebra and Trigonometry with a minimum grade of C. Placement score information can be found on the ACT335 document linked to the online course description.

**MAT 201 CALCULUS & ANALYTIC GEOMETRY II.....4-4-0**
This is the second course in the calculus sequence. It is designed primarily for students who will major in mathematics, science, engineering, or business. Topics include differentiation and integration of exponential, logarithmic, trigonometric, and hyperbolic functions, integration techniques, improper integrals, sequences, series, Taylor's formula, L'Hopital's rule, and applications. A graphing calculator is required for class, homework and testing. Classroom instruction and programs will be presented using a graphing calculator.
**Prerequisites:**
MAT 189 - Calculus With a Review of Functions II or 190 - Calculus & Analytic Geometry I with a minimum grade of C

**MAT 202 CALCULUS & ANALYTIC GEOMETRY III.....4-4-0**
This is a third course in the calculus sequence. It is designed primarily for students who will major in mathematics, science, engineering, or business. Topics include vector analysis, solid analytic geometry, partial derivatives and multiple integrals with applications. A TI 84 Plus Graphing Calculator is required for the course.
**Prerequisites:**
MAT 201 - Calculus & Analytic Geometry II with a minimum grade of C

**MAT 211 FOUNDATIONS OF MATHEMATICAL PROOF.....3-3-0**
This course is designed to introduce students to the foundations of higher mathematics, which includes an introduction to mathematical abstraction and an introduction to the language of mathematical proof. Topics include: logic; the use of quantifiers to assist with logic; set theory; applying appropriate proof techniques; relations and functions, including the Cartesian product and its applications. This course is highly recommended for those students who have not been exposed to mathematical proof and intend to take advanced math courses.
**Prerequisites:**
MAT 190 - Calculus & Analytic Geometry I with a minimum grade of C
**Corequisites:**
MAT 201 - Calculus and Analytic Geometry II. May be taken prior or during course.

**MAT 220 LINEAR ALGEBRA W/APPLICATIONS.....4-4-0**
A one semester course in linear algebra. Topics include vector spaces, matrices, and linear transformations, eigenvalues and eigenvectors, determinants, function spaces, and applications. It can be taken concurrently with MAT 202 or MAT 223. A graphing calculator is required for class, homework and testing. Classroom instruction and programs will be presented using a TI-86 or TI-92.
**Prerequisites:**
MAT 201 - Calculus & Analytic Geometry II with a minimum grade of C

**MAT 223 DIFFERENTIAL EQUATIONS..... 4-4-0**
A course primarily in differential equations and related topics. Topics include differential equations of the first order, linear differential equations of higher orders, systems of differential equations, LaPlace transforms, numerical methods, and applications. It can be taken concurrently with MAT 202 or MAT 220. A graphing calculator is required for class, homework, and testing. Classroom instruction and programs will be presented using a TI-86/TI92.
**Prerequisites:**
MAT 201 - Calculus & Analytic Geometry II with a minimum grade of C

## MANAGEMENT

**MGT 110 INTRODUCTION TO BUSINESS..... 3-3-0**
Students will learn the organization and management of an enterprise, including a study of the characteristics of economic systems, the nature and functions of management, and the operations of the basic organizational functions of finance, marketing, and production.

**MGT 111 PRINCIPLES OF MANAGEMENT.....3-3-0**
In addition to building a solid foundation of management fundamentals, this course introduces students to emerging concepts and issues that are shaping the theory and practice of management. Students discuss quality, productivity, customer satisfaction, global management, social responsibility, ethics, social/cultural perspectives and other topics that students will encounter both on the job and in any advanced studies.

**MGT 112 PRINCIPLES OF LEADERSHIP..... 3-3-0**
This course emphasizes theories and models of leadership in a variety of organizations. Students will demonstrate mastery and apply effective leadership principles, concepts and skills in various organizational settings. Students will integrate critical thinking and problem solving while examining personal and organizational aspects of management. Engaging in a variety of activities, the following concepts will be explored: creating a vision, understanding philosophies and styles, managing conflict, establishing a constructive culture, and examining ethics.

**MGT 112H PRINCIPLES OF LEADERSHIP HONORS..... 3-3-0**
This course emphasizes theories and models of leadership in a variety of organizations. Students will demonstrate mastery and apply effective leadership principles, concepts and skills in various organizational settings. Students will integrate critical thinking and problem solving while examining personal and organizational aspects of management. Engaging in a variety of activities, the following concepts will be explored: creating a vision, understanding philosophies and styles, managing conflict, establishing a constructive culture, and examining ethics. This Honors course fosters high-achieving students' growth towards learning outcomes such as: problem solving, often with creative approaches; critical reading and original data analysis; forming judgments based on evidence, often from alternative modes of inquiry or integrative learning; clear, persuasive research writing; and articulate reflection on personal growth. Honors courses are more likely to utilize student-driven active learning, emphasizing exploration and discovery, rather than the acquisition of specific knowledge; faculty might provide projects with no pre-determined conclusion, but with real-world application.

**MGT 113 CONFLICT RESOLUTION AND NEGOTIATION..... 3-3-0**
This course provides a framework for negotiation skills and conflict resolution approaches for more effective organizational leadership. Students will learn to identify solutions to workplace conflict and develop negotiation skills to create a collaborative environment. Topics emphasized include: reaching practical agreements, achieving objectives, strengthening relationships, and ultimately increasing productivity.

**MGT 114 STRATEGIC ANALYTICS FOR LEADERS.....3-3-0**
This course introduces the concept of data analytics and its applicability to organizations. Students will learn how to apply critical thinking skills and analytics to enhance data driven decision making essential to today's leaders. Students will use the latest software to evaluate and apply data to enhance business performance. Students will learn how to organize and interpret data, conduct analysis, and develop visually appealing and informative reports. This course will enhance leadership performance for analytical problem solving and decision making in today's dynamic business environment.

**MGT 121 SMALL BUSINESS MANAGEMENT..... 3-3-0**
Students gain practical knowledge about starting and managing a small business organization. Course topics include the development of a business plan, financial structuring, site selection, marketing strategies and pricing techniques.

**MGT 131 HUMAN RESOURCES MANAGEMENT.....3-3-0**
Students learn personnel procedures and practices. Topics include equal opportunity, personnel planning, employee selection, employee incentive systems, and performance appraisal.

**MGT 131H HUMAN RESOURCES MANAGEMENT HONORS.....3-3-0**
Students learn personnel procedures and practices. Topics include equal opportunity, personnel planning, employee selection, employee incentive systems, and performance appraisal. This Honors course fosters high-achieving students' growth towards learning outcomes such as: problem solving, often with creative approaches; critical reading and original data analysis; forming judgments based on evidence, often from alternative modes of inquiry or integrative learning; clear, persuasive research writing; oral presentation; and articulate reflection on personal growth. Honors courses are more likely to utilize student-driven active learning, emphasizing exploration and discovery, rather than the acquisition of specific knowledge; faculty might provide projects with no pre-determined conclusion, but with real-world application.

**MGT 141 PRINCIPLES OF RISK MANAGEMENT/INSURANCE.....3-3-0**
Students learn the fundamentals of risk management and the appropriate application of insurance. The course stresses the nature of risk as well as the purpose and use of insurance in risk management.

**MGT 160 CUSTOMER RELATIONSHIP MANAGEMENT..... 3-3-0**
This course introduces students to major issues and creative problem-solving in managing customer relationships. Important strategies necessary to maintain high quality relationships with customers in a competitive, challenging, and complex environment are developed. Current trends in the industry will be reviewed, and students will develop the ability to interpret these trends and will develop the skills necessary to achieve excellence in managing customer relationships in a dynamic marketplace.

**MGT 198 COOP INTERNSHIP - MANAGEMENT I..... 3-0-15**
This course consists of employment in a college-approved organization to enable the student to gain insight into modern management techniques. The course requires an optimum of 15 hours per week supervised and coordinated by a faculty member. Students are rated by the employer on their job performance. **This course is subject to a course fee.**

**MGT 210 ETHICAL DECISION MAKING IN BUS..... 3-3-0**
This course emphasizes the complexities of business decision making within an ethical framework. After identifying the wide variety of ethical issues facing individuals in business and the moral philosophies which can be applied, the course will develop an ethical decision-making framework. Both the role of the individual and of the organization in influencing ethical decision-making will be emphasized as will the impact of cultural influences on international business ethics. Managing ethics will be proposed as an essential part of the function of organizational leaders.
**Prerequisites:**
MGT 110 - Introduction to Business OR MGT 111 - Principles of Management

**MGT 221 SUPERVISION.....3-3-0**
In this course students will develop the skills and knowledge necessary to grow into a supervisory position in a business environment. The course will provide the students with the opportunity to integrate the knowledge gained in the basic business courses and to refine the basic supervisory and management skills learned in these courses. The course includes topics relating to the role of the supervisor in the management process in a business environment.
**Prerequisites:**
MGT 110 - Introduction to Business or MGT 111 - Principles of Management

**MGT 231 PROJECT MANAGEMENT.....3-3-0**
This course will introduce students to key aspects of contemporary project management. Through hands-on exercises and case studies, students will learn the project planning process in detail, culminating in the creation of a baseline plan and budget using a state-of-the-art project management tool. Topics addressed will be project scope and objectives, deliverables, milestones, tasks, work breakdown structure, responsibility and authority, project network, critical path analysis, costs, resource allocation, and auditing.
**Prerequisites:**
CIS 110 - Information Systems for Management with Computer Applications
MGT 111 - Principles of Management

**MGT 295 BUSINESS MANAGEMENT CAPSTONE.....3-3-0**
This course provides students with an integrative learning experience, combining their acquired knowledge and skills in accounting, economics, marketing, and management. Students are expected to apply practical understanding and academic theory to demonstrate critical thinking skills. The course is a summative experience that emphasizes business and management competencies in today's global environment. Students will develop mastery in strategic management to successfully provide value in a competitive and dynamic marketplace.
**Prerequisites:**
MGT 111 - Principles of Management
MKT 111 - Principles of Marketing
ACC 105 - Survey of Accounting and ACC 150 - Legal Environment of Business
OFM 101 - Business Software Essentials
ENG 117 - Writing for Business and Industry

**MGT 298 COOP INTERNSHIP MANAGEMENT II.....3-0-15**
This course consists of continued employment in a college-approved organization to enable the student to gain insight into modern management techniques. The course requires an optimum of 15 hours per week supervised and coordinated by a faculty member. Students are rated by the employer on their job performance. **This course is subject to a course fee.**
**Prerequisites:**
MGT 198 - Coop Internship - Management I and permission of the coordinator

## MARKETING

**MKT 111 PRINCIPLES OF MARKETING..... 3-3-0**
Students will learn the principles of marketing strategy planning, including target market and marketing mix variables with emphasis on key strategy decisions in each area. This course will explore organizational marketing activities including: consumer behavior, marketing research, social/cultural perspectives, legal and ethical issues and environmental influences. The course will also cover: implementation, control, marketing's link with other functional areas and the challenges and opportunities that exist for marketers.

**MKT 121 PERSONAL SALES MANAGEMENT..... 3-3-0**
This course focuses on highlighting the sales person as an essential element in providing value to an organization and to the customer. The course emphasizes the importance of securing, building and maintaining long term relationships in sales. This course presents clear and concise information on successful approaches to selling in the contemporary business environment. Students will learn how to manage and add value to the buyer -seller relationship process. Students will learn to apply the model for relationship selling that is used by firms today.

**MKT 131 ADVERTISING & PROMOTION.....3-3-0**
Students learn the theory and practice of advertising and marketing promotions, including advertising principles and practices plus the integration of other types of marketing promotions. Focus is on the process of advertising, promotions and media working together for strategic and effective Marketing Communications. Emphasis is placed on understanding, identifying, evaluating, selecting and planning the various types of promotions.

**MKT 141 RETAIL MERCHANDISING.....3-3-0**
Students learn basic concepts of retailing organizations and their structure. Special emphasis is placed on helping each student to discover an area of retailing which may offer a challenging and rewarding career.

**MKT 198 COOP INTERNSHIP MARKETING I.....3-0-15**
This course consists of employment in a college-approved organization to enable the student to gain insight into selling and merchandising practices of distributors. The course requires an optimum of 15 hours per week supervised and coordinated by a faculty member. Students are rated by the employer on their job performance. **This course is subject to a course fee.**

**MKT 211 DIGITAL MARKETING..... 3-3-0**
This course is designed to provide a structured and comprehensive look at the complex and challenging areas of Digital Marketing. Classic marketing principles will be applied to Digital Marketing. Students will learn how to maximize the power of Digital Marketing in the business world and assess the opportunities available with Digital Marketing. Students will develop proficiency in making critical strategic marketing decisions. Students will learn to appreciate the innovation and technology of this growing Marketing media and acquire the knowledge to implement Digital Marketing solutions into marketing strategies.
**Prerequisites:**
MKT 111 - Principles of Marketing

**MKT 298 COOP INTERNSHIP IN MARKETING II..... 3-0-15**
This course consists of continued employment in a college-approved organization to enable the student to gain insight into selling and merchandising practices of distributors. The course requires an optimum of 15 hours per week supervised and coordinated by a faculty member. Students are rated by the employer on their job performance. **This course is subject to a course fee.**
**Prerequisites:**
MKT 198 - Coop Internship Marketing I

## MEDICAL LAB TECH

**MLT 106 PHLEBOTOMY.....4-2-8**
A comprehensive one-semester course in the fundamentals and practice of phlebotomy (blood specimen collection). Lecture topics covered include venipuncture, capillary collection, safety, medical terminology, orientation to the clinical laboratory and health care, and specimen handling and processing. Students spend 100 hours in a hospital laboratory practicing blood collection techniques under supervision. Upon successful completion of the course, students are eligible to sit for national certification exams and to seek employment as phlebotomists. Additionally students are trained in adult Cardiopulmonary Resuscitation (CPR). **This course is subject to a course fee.**
**Prerequisites:**
High school diploma or GED

**MLT 110 INTRODUCTION FOR THE MEDICAL LABORATORY TECHNICIAN..... 4-2-6**
This course introduces the student to varied aspects of Medical Laboratory Technician careers. The course is a combination of classroom and laboratory experiences. Subjects covered include general laboratory techniques, safety, professional issues, an introduction to the role of computers in the laboratory setting, and some basic concepts and analyses from each of the major areas of the medical laboratory. **This course is subject to a course fee.**
**Prerequisites:**
Medical Laboratory Technician Selective Admissions Criteria and Admission into the Program and MAT 011 - Beginning Algebra or MAT 011B - Beginning Algebra with Review of Arithmetic with a minimum grade of C

**MLT 123 IMMUNOHEMATOLOGY LECTURE.....2-2-0**
Comprehensive course in fundamentals of theory and practice in blood banking, including blood group systems, antibody detection and identification, compatibility testing, donor selection and processing, component therapy, and transfusion reactions.
**Prerequisites:**
MLT 110 - Introduction for the Medical Laboratory Technician with a minimum grade of C

**MLT 124 IMMUNOHEMATOLOGY LABORATORY.....1-0-3**
The student develops proficiency in basic laboratory procedures for the blood bank, including specimen collection and handling, blood typing, neonatal testing, antibody screening and identification and compatibility testing. **This course is subject to a course fee.**
**Prerequisites:**
MLT 110 - Introduction for the Medical Laboratory Technician with a minimum grade of C

**MLT 125 HEMATOLOGY LECTURE..... 2-2-0**
Comprehensive course in the fundamentals of theory and practice in clinical hematology and hemostatis, including hematopoiesis of red and white cells, cell function, correlation of test results with pathophysiology, and the principles of routine analyses and instrumentation.
**Prerequisites:**
MLT 110 - Introduction for the Medical Laboratory Technician with a minimum grade of C
BIO 130 - Introductory Anatomy and Physiology with a minimum grade of C
CHE 131 - Chemistry for Technology I with a minimum grade of C

**MLT 126 HEMATOLOGY LABORATORY.....1-0-3**
Students develop proficiency in basic laboratory procedures in hematology and hemostasis, including complete blood counts, platelet counts, differentials, basic coagulation tests, cell counts, and specimen collection and handling. Instrumentation is introduced. **This course is subject to a course fee.**
**Prerequisites:**
MLT 110 - Introduction for the Medical Laboratory Technician with a minimum grade of C
BIO 130 - Introductory Anatomy and Physiology with a minimum grade of C
CHE 131 - Chemistry for Technology I with a minimum grade of C

**MLT 233 CLINICAL CHEMISTRY LECTURE.....3-3-0**
A comprehensive course emphasizing the principles and procedures of routine clinical chemistry analyses, including instrumentation, correlation of results with pathophysiology, quality control, toxicology and urinalysis.
**Prerequisites:**
MLT 110 - Introduction for the Medical Laboratory Technician with a minimum grade of C
BIO 130 - Introductory Anatomy and Physiology with a minimum grade of C
CHE 132 - Chemistry for Technology II with a minimum grade of C

**MLT 234 CLINICAL CHEMISTRY LABORATORY..... 2-0-6**
The student develops proficiency in basic laboratory analyses in chemistry (including urinalysis and body fluids). Emphasis is on frequently performed tests, spectrophotometry, manual procedures, developing organizational skills and quality control. Instrumentation is introduced. **This course is subject to a course fee.**
**Prerequisites:**
MLT 110 - Introduction for the Medical Laboratory Technician with a minimum grade of C
BIO 130 - Introductory Anatomy and Physiology with a minimum grade of C
CHE 132 - Chemistry for Technology II with a minimum grade of C

**MLT 235 CLINICAL PRACTICUM IN MLT I.....3-0-12**
The student applies basic skills learned on campus to three clinical areas: blood bank, hematology and microbiology. Students spend 12 hours per week for 4 weeks in each clinical area at an off-campus clinical site, performing routine tests under supervision. **This course is subject to a course fee.**
**Prerequisites:**
MLT 123 - Immunohematology Lecture, MLT 124 - Immunohematology Laboratory, MLT 125 - Hematology Lecture, and MLT 126 - Hematology Laboratory with a minimum grade of C
BIO 141 - Clinical Microbiology I with a minimum grade of C

**MLT 244 PROFESSIONAL ISSUES IN MEDICAL LAB. TECH.....2-2-0**
This course is designed for the second year clinical MLT student. It is intended to introduce the student to non-clinical MLT related issues. It explores topics such as health care delivery systems, managed care approaches to reimbursement issues, health care finance, laboratory information systems, professional communication skills, professional documentation and legal-ethical questions. The student explores some of the many challenges facing the MLT profession.
**Prerequisites:**
MLT 235 - Clinical Practicum in MLT I
**Corequisites:**
MLT 245 - Clinical Practicum in MLT II

**MLT 245 CLINICAL PRACTICUM IN MLT II.....6-0-24**
This course is a structured practical experience at a clinical site. The student spends 24 hours per week for three weeks at an off-campus laboratory in each of the following areas: blood bank, hematology/ coagulation/ urinalysis, microbiology/serology, and chemistry. Emphasis is on supervised performance of routine tests, efficiency, operation of instrumentation and development of professional traits. The student will participate on a blood collection team and tour several off-campus enrichment sites. **This course is subject to a course fee.**
**Prerequisites:**
MLT 233 - Clinical Chemistry Lecture, MLT 234 - Clinical Chemistry Laboratory, and MLT 235 - Clinical Practicum in MLT I with a minimum grade of C
BIO 241 - Clinical Microbiology II with a minimum grade of C

**MLT 246 MLT SEMINAR.....1-1-0**
A capstone course with a variety of formats covering topics such as professional issues and job-seeking skills. The student will make oral case study presentations and participate in a group project.
**Prerequisites:**
MLT 233 - Clinical Chemistry Lecture, MLT 234 - Clinical Chemistry Laboratory, and MLT 235 - Clinical Practicum in MLT I with a minimum grade of C
BIO 241 - Clinical Microbiology II with a minimum grade of C

## MASS MEDIA STUDIES & PRODUCTN

**MSP 107 INTRODUCTION TO VIDEO PRODUCTION AND LITERACY.....3-2-2**
Students are introduced to the theory and operation of analog and digital cameras, elementary lighting and basic audio equipment, common professional video production, and filmmaking. After instructors explain the theory of production equipment, students complete assignments in basic equipment operation. The fundamentals of visual storytelling are emphasized. Through demonstrations and hands-on experience, students apply the basics of lighting, exposure, composition, sequencing, and non-linear editing techniques used by professionals in visual narrative storytelling. The students develop ideas learned in MSP 111 (Mass Media and Society) and apply skills to capture quality images and sound using digital video equipment. Using these skills, they learn to tell stories using video and sound. Projects developed are distributed over student and other community-based media. **This course is subject to a course fee.**
Search Keyword: Communication

**Prerequisites:**
MSP 111 - Mass Media and Society with a minimum grade of C

**MSP 111 MASS MEDIA AND SOCIETY.....3-2-2**
Students learn to access, analyze, evaluate and create media and are introduced to the basic building blocks of storytelling and journalism. They identify, research, write, and produce aural and visual packages about key media issues based on their understanding and interpretation of the issues that are then distributed over class, college and community based channels. By doing so they gain an understanding of the media saturated world and the aesthetic, cultural, economic, and political forces that guide the creation and distribution of media messages. **This course is subject to a course fee.**
Search Keyword: Communication

**Prerequisites:**
ENG 010A - Basic Writing or ENG 011 - Basic Writing II or ESL 011 - Basic Writing II with a minimum grade of C
REA 011 - Fundamentals of College Reading or REA 017 - Vocabulary and Reading Comprehension Development II with a minimum grade of C

**MSP 112 SURVEY OF MASS MEDIA INDUSTRIES IN THE UNITED STATES.....3-2-2**
Building on skills and insights obtained in MSP 111, students survey the history and evolution of mass media industries in the United States to achieve a basic understanding of current trends that affect the future of the industry. They analyze and evaluate themes and create media that examines the formative history and current issues related to print, motion picture, sound recording, radio, television, the Internet, games, social media and emerging communication technologies. Projects developed are distributed over class, school and community-based channels. Students are required to research, interview primary and secondary sources, analyze research, write, create and produce media work to build upon their digital portfolio. Students analyze legal, ethical and controversial issues confronting mass media industries. **This course is subject to a course fee.**
Search Keyword: Communication

**Prerequisites:**
MSP 111 - Mass Media and Society with a minimum grade of C
**Corequisites:**
ENG 101 - English Composition I. May be taken prior or during course.

**MSP 125 INTRODUCTION TO WRITING FOR BROADCAST NEWS. 3-2-2**
This course explores the theory and practice to give students a foundation in the principles and practice of broadcast news reporting and writing. The course teaches students to organize, research, and write coherent news stories for broadcast using a variety of professional news styles. Students analyze written formats and styles used in radio and television newsrooms, choose sound bites, write broadcast news copy, and are introduced to professional information-gathering and interviewing techniques. Students write voiceovers and anchor readers and field packages. **This course is subject to a course fee.**
Search Keyword: Communication

**Prerequisites:**
MSP 111 - Mass Media and Society with a minimum grade of C

**MSP 126 INTRODUCTION TO SCRIPTWRITING..... 3-2-2**
Students analyze narrative scriptwriting for film, television and radio. Emphasis is placed on the pitch, treatment, and appropriate format. Students apply the foundations of scriptwriting to original and adapted material. Students are encouraged to develop a unique voice by researching, writing, and editing preparatory, and marketing material for completed scripts. Students write scripts to form for television, film, and radio that are also used in advertising, public relations, gaming, animation, and narrative drama. **This course is subject to a course fee.**
Search Keyword: Communication

**Prerequisites:**
MSP 111 - Mass Media and Society with a minimum grade of C

**MSP 153 CAMPUS RADIO WORKSHOP..... 1-0-2**
Campus Radio Workshop focuses on creating and producing original content for radio. As part of this course students conceive, create, produce and distribute productions about the College and College life for Montco Radio, and other community-based media outlets. The students participate in workshops where they are introduced to radio procedures and operations and work on sound packages including narrative, interview, music,news, and drama. They obtain hands-on industry experience and work to become key members of the student-operated radio station, Montco Radio. **This course is subject to a course fee.**
Search Keyword: Communication

**Prerequisites:**
MSP 111 - Mass Media and Society with a minimum grade of C

**MSP 169 INTRODUCTION TO ELECTRONIC JOURNALISM..... 3-2-2**
This course introduces the basic building blocks of electronic journalism. It builds on basic broadcast writing skills and explains how professionals in mass media tell stories using digital technology. Students explore the reporter's role and the technology involved in news reporting. Students will apply their skills and develop stories, edit words, and produce both the pictures and sound as they prepare their stories and news packages for electronic distribution to a diverse audience over college, student, and community-based media. Students gain a clear understanding of the principles and professional practices of television news production and learn to critically evaluate the ethics and controversies in unbiased storytelling. **This course is subject to a course fee.**
Search Keyword: Communication

**Prerequisites:**
MSP 125 - Introduction to Writing for Broadcast News or MSP 126 - Introduction to Scriptwriting

**MSP 200 ETHICS, RESPONSIBILITY, MASS MEDIA AND THE LAW 3-3-0**
Students examine and analyze mass media through case studies and commentaries that focus on a wide spectrum of historical and contemporary legal and ethical issues faced by media practitioners in broadcasting, advertising, public relations, publishing, and filmmaking. The course builds on information learned in MSP 111 to provide a foundation for the theoretical principles of media ethics and the legal issues surrounding mass media, journalism, and content distribution.
Search Keyword: Communication

**Prerequisites:**
MSP 111 - Mass Media and Society with a minimum grade of C
**Corequisites:**
ENG 102 - English Composition II. May be taken prior or during course.

**MSP 210 HISTORY OF FILM I..... 3-2-2**
This course introduces students to the history, ideas, and vocabulary of modern cinema. Students learn about the various cinematic styles, genres, and techniques used in filmmaking as an art form. Students view, analyze, and critique films from the introduction of sound until the end of WW II. The goal of this course is to teach students how to think and write about early cinema from a historical, cultural, and aesthetic perspective.
Search Keyword: Communication

**Prerequisites:**
MSP 111 - Mass Media and Society with a minimum grade of C
**Corequisites:**
ENG 102 - English Composition II. May be taken prior or during course.

**MSP 211 HISTORY OF FILM II.....3-2-2**
This course will teach students how to research, analyze, and critique contemporary cinema. Students examine significant aesthetic developments in narrative, documentary, and experimental film history since WWII to gain a better understanding of the artistic, social, economic, and technological developments that helped create specific film movements inside and outside of the Hollywood studio system. The course focuses on individual films and filmmakers of the period.
Search Keyword: Communication

**Prerequisites:**
MSP - Mass Media and Society with a minimum grade of C
**Corequisites:**
ENG 102 - English Composition II. May be taken prior or during course.

**MSP 213 ROCK AND ROLL, RADIO AND THE RECORDING INDUSTRY..... 3-3-0**
A survey of the history and evolution of Rock and Roll in America and its impact on radio, the recording industry, television, and society. Topics range from Rock and Roll's relationship to the birth of AM and FM radio to its influence on current and emerging technologies. Emphasis is placed on understanding Rock and Roll's impact on modern society.
Search Keyword: Communication

**Prerequisites:**
MSP 111 - Mass Media and Society with a minimum grade of C
**Corequisites:**
ENG 102 - English Composition II. May be taken prior or during course.

**MSP 214 RADIO AROUND THE WORLD.....3-3-0**
This course surveys the history and evolution of radio in America and around the world and its impact on society and culture. Topics range from the roots of AM and FM to Internet, Satellite, and emerging technologies that impact radio. Emphasis is placed on the history of programming styles, marketing, music, news promotion, and job development in the radio industry.
Search Keyword: Communication

**Prerequisites:**
MSP 111 - Mass Media and Society with a minimum grade of C
**Corequisites:**
ENG 102 - English Composition II. May be taken prior or during course.

**MSP 216 HISTORY OF TELEVISION.....3-3-0**
This course surveys the historical, social, economic, and aesthetic implications of television in American life since WWII. Students learn about the people, personalities, technology, and business decisions responsible for the development of television as an industry. Students explore the development of television and the global impact of the medium, and they learn how American life shapes both the content and development of the television industry.
Search Keyword: Communication

**Prerequisites:**
MSP 111 - Mass Media and Society with a minimum grade of C
**Corequisites:**
ENG 102 - English Composition II. May be taken prior or during course.

**MSP 217 HISTORY OF NEW MEDIA.....3-3-0**
Students study the history of New Media and how computers and emerging technologies have influenced, shaped and changed our culture and society. During their course of study, students interact with various forms of new media and investigate the theories that helped create current digital communications.
Search Keyword: Communication

**Prerequisites:**
MSP 111 - Mass Media and Society with a minimum grade of C
**Corequisites:**
ENG 102 - English Composition II. May be taken prior or during course.

**MSP 219 INTRODUCTION TO MEDIA OPERATIONS.....3-2-2**
Students learn about the organizational skills, financial practices, and business operations of mass media facilities. Students analyze the impact of new technologies, research issues, problems and solutions, develop case statements, and prepare plans and strategies to operate, manage, direct, and motivate a workforce of students and volunteers at co-curricular media clubs: CAPG, Montco Radio, Real to Reel and the Scriptwriter's Club. Students develop programming schedules, market and operate campus-based media facilities. They prepare business presentations, operational budgets, and strategies crucial for the success of student media operations. **This course is subject to a course fee.**
Search Keyword: Communication

**Prerequisites:**
MSP 111 - Mass Media and Society with a minimum grade of C

**MSP 225 ELECTRONIC JOURNALISM.....3-2-2**
Students build on previous production experience to develop more involved techniques of electronic reporting. Students work in production teams using professional audio and video equipment to plan and produce a news or documentary project in a professional atmosphere. Students perform increasingly complex pre-production, production, and post-production techniques while working on individual and team projects. They work to enhance their storytelling knowledge and skills while meeting professional news standards and deadlines. The programs produced are faculty and peer reviewed and presented as news-based productions ready for distribution over student, college, and community-based media. **This course is subject to a course fee.**
Search Keyword: Communication

**Prerequisites:**
MSP 169 - Introduction to Electronic Journalism

**MSP 226 SCRIPTWRITING.....3-2-2**
This class builds on scriptwriting skills introduced in COM 126 as students develop an increased ability to present their ideas using a variety of methods and techniques of scriptwriting. Students analyze film and television scripts, styles and genres, and develop their understanding of audience as they work to find a writing voice. Students create a treatment, character bible, and script. They explore copyright, registration, employment, and guild issues and are introduced to the business of scriptwriting. During the workshop students read their work and listen to comments and critiques from their peers and faculty. **This course is subject to a course fee.**
Search Keyword: Communication

**Prerequisites:**
MSP 112 - Survey of Mass Media Industries in the United States and MSP 126 - Introduction to Scriptwriting with a minimum grade of C

**MSP 230 THE MOVIES: MEANINGS & METHODS.....3-2-2**
The popular arts of "the movies" and television are carefully prepared constructions of sights and sounds. Watching them is the chief way our society comes to recognize itself. COM 230 is about learning to get more enjoyment and meaning from these products of the image industries. The course examines how meaning is created and communicated in non-print media. Basic concepts and techniques in constructing and interrelating visual and aural images will be discussed in light of the historical development of film and video technology and techniques.
Search Keyword: Communication

**MSP 235 CURRENT ISSUES IN MASS MEDIA.....3-3-0**
In this survey course students analyze current issues in mass media by examining existing communications technologies, programming, and business models. They explore current issues related to cable TV, emerging technologies, interactive and satellite technologies, the Internet, fiber-optics, digital audio and video, HDTV, and nanotechnology. Students research topics of interest, analyze personal and business uses of emerging technologies, and examine their implications for the audience, users, producers, and distributors.
Search Keyword: Communication

**Prerequisites:**
MSP 111 - Mass Media and Society with a minimum grade of C
**Corequisites:**
ENG 102 - English Composition II. May be taken prior or during course.

**MSP 248 DIRECTING ACTORS..... 3-2-2**
This course is designed to teach future film directors the method, vocabulary, and decorum for working in dramatic television and narrative film. Students become beginning narrative film directors as they are introduced to the conventions and methods of acting, learn how to define a visual narrative and coherent vision from scripts and communicate that vision to actors. The course consists of readings, discussions, exercises, and in-class rehearsals. As part of the class students are required to direct actors in a series of projects presented over selected college media. **This course is subject to a course fee.**
Search Keyword: Communication

**Prerequisites:**
MSP 107 - Introduction to Video Production and Literacy and either MSP 126 - Introduction to Scriptwriting or MSP 278 - Introduction to Video Production II

**MSP 253 CAMPUS RADIO WORKSHOP II..... 1-0-2**
Campus Radio Workshop II builds on the experience, knowledge and skills acquired in MSP 153. In this Workshop, students must take leadership roles in creating and producing original content for radio. They help to operate the station and to create sound packages for distribution, including narrative, interview, music, news, and drama. As a result, they obtain an in-depth, hands-on industry experience and take an increasingly active role in operating the student-run radio station, Montco Radio. **This course is subject to a course fee.**
Search Keyword: Communication

**Prerequisites:**
MSP 153 - Campus Radio Workshop
**Corequisites:**
SRT 250 - Sound Design Workshop or MSP 219 - Introduction to Media Operations. May be taken prior or during course.

**MSP 262 NEW MEDIA PRODUCTION.....3-2-2**
Students will tell stories using new media production and distribution techniques through emerging technologies. Students create, oversee and participate in productions from the early stages of conception, through the process of distribution. Emphasis is placed on the procedures and processes of preparing for and carrying out production of new media content for distribution to a diverse digital audience. **This course is subject to a course fee.**
Search Keyword: Communication

**Prerequisites:**
MSP 107 - Introduction to Video Production and Literacy or SRT 104 - Introduction to Sound Recording Technology
MSP 125 - Introduction to Writing for Broadcast News or MSP 126 - Introduction to Scriptwriting

**MSP 268 INTRODUCTION TO CIVIC JOURNALISM..... 3-2-2**
Using professional production equipment, students learn journalistic skills by researching, writing, editing, and producing short documentary-style news reports that examine local issues facing Montgomery County communities. They broaden creative styles and techniques for producing documentary style reports while meeting professional news standards and deadlines. Students submit written proposals, review rough-cuts for approval, and digitally edit their final stories for distribution via student, College and community-based media. **This course is subject to a course fee.**
Search Keyword: Communication

**Prerequisites:**
MSP 169 - Introduction to Electronic Journalism with a minimum grade of C

**MSP 278 VIDEO PRODUCTION II.....3-2-2**
This course reinforces basic video and film production skills, while the student is introduced to more advanced video and film production techniques. Emphasis is placed on the procedures and processes of preparing for and carrying out a documentary or narrative shoot. Students act as producers-directors. They pitch stories, write treatments and scripts, evaluate the role of the director and producer, produce a one-minute, three-minute, and five-minute project, and submit production books for review. Students individually produce these projects using professional production equipment and techniques. They are faculty and peer reviewed, evaluated, and presented as productions ready for distribution over various student, College, and community-based media. **This course is subject to a course fee.**
Search Keyword: Communication

**Prerequisites:**
MSP 107 - Introduction to Video Production and Literacy with a minimum grade of C

**MSP 279 DIGITAL FILMMAKING.....3-2-2**
Students assume individual roles on a film crew. Students explore and analyze the theory and practice of narrative video as an art form, entertainment medium, and a creative communication tool. Students learn about film structure as it relates to story development. Students use advanced camera features and increase their understanding of more advanced lighting, and editing techniques. They collaborate to produce and distribute narrative projects for a diverse audience over student, College and community-based media. **This course is subject to a course fee.**
Search Keyword: Communication

**Prerequisites:**
MSP 107 - Introduction to Video Production and Literacy with a minimum grade of C

**MSP 282 TECHNIQUES OF VIDEO EDITING.....3-2-2**
Students develop a critical understanding of the processes, aesthetics and technical theory involved in non-linear editing for narrative filmmaking and news production. Students examine diverse editing styles and ideas through reading and close analysis of a variety of TV and film examples. They learn new skills and editing techniques by working as the assigned editor on individual student and College-based projects. Students apply their understanding of editing workflow, sound design, screen direction, continuity, and pacing to projects distributed to student, College and community based media. **This course is subject to a course fee.**
Search Keyword: Communication

**Prerequisites:**
MSP 107 - Introduction to Video Production and Literacy with a minimum grade of C

**MSP 286 LIVE TV PRODUCTION..... 3-2-2**
Students explore the creative process and aesthetics for producing and directing multi-camera live-studio programming. Students design, produce, direct, light, schedule, and budget for live programs. These projects include serial dramas and comedy, talk shows, sporting events, political debates, public-affairs, and news programs. Students analyze and critique current live television productions, apply theory, identify and discuss aesthetics, and determine trends. Students produce their own creative projects individually and as part of a production team. **This course is subject to a course fee.**
Search Keyword: Communication

**Prerequisites:**
MSP 107 - Introduction to Video Production and Literacy, SRT 104 - Introduction to Sound Recording Technology, or MSP 125 - Introduction to Writing for Broadcast News with minimum grade of C

**MSP 291 MASS MEDIA CAPSTONE.....3-2-2**
In this course, students work collaboratively, discuss, conceive, create and produce a body of work that displays the culmination of their knowledge, experience, and writing and production skills. Students develop advanced skills in scripting, journalism, writing, planning, organizing and executing media projects from inception to completion. Students work as producers and directors and lead a production crew on media packages. At the end of the course, students design, organize and complete a portfolio, including a resume, cover letter, personal essays and all professional-level media work. Students also practice mock job placement interviews. **This course is subject to a course fee.**
Search Keyword: Communication

**Prerequisites:**
MSP 107 - Introduction to Video Production and Literacy and MSP 200 - Ethics, Responsibility, Mass Media and the Law with minimum grade of C

## MUSIC

**MUS 110 MUSIC APPRECIATION.....3-3-0**
Music Appreciation is a chronological survey of Western music from classical antiquity through the 20th century. Throughout the course, music will be examined for its own intrinsic characteristics in addition to being used as a means for achieving a greater understanding the society, politics, philosophies, and aesthetics of each historical period. Whenever possible, relationships between the music of Western culture and the music of other world cultures will be examined. In addition to the in-class activities, every student may be required to attend a live concert (approved by the instructor) and, following specific guidelines, prepare a written review of that concert experience.
**Prerequisites:**
ENG 010A - Basic Writing or ENG 011 - Basic Writing II or ESL 011 - Basic Writing II
REA 011 - Fundamentals of College Reading or REA 017 - Vocabulary and Reading Comprehension Development II

**MUS 111 HISTORY OF ROCK AND ROLL.....3-3-0**
This course will explore the origins and development of popular music in America, from ragtime and blues, through rockabilly and the British invasion, to punk, rap, and heavy metal. Students will gain an understanding of a variety of popular styles and artists, as well as discover how popular music reflected and influenced the changing social and cultural norms of America. In addition to the in-class activities and assessments, every student will be required to write a research paper on a specific topic related to the course (approved by the instructor).
**Prerequisites:**
ENG 010A - Basic Writing or ENG 011 - Basic Writing II or ESL 011 - Basic Writing II
REA 011 - Fundamentals of College Reading or REA 017 - Vocabulary and Reading Comprehension Development II

**MUS 112 AFRICAN-AMERICAN TRADITIONS IN AMERICAN MUSIC.....3-3-0**
African-American Traditions in American Music is an introductory survey of the history of African-American music in the United States. Consideration will be given to the music's origins and practice in West Africa; the relationship of the music's evolution to the major tradition in western music; and examination of the religious, social, political and economic forces which helped to shape the music; and representative musical forms in specific genre of American music.
**Prerequisites:**
REA 011 - Fundamentals of College Reading or REA 017 - Vocabulary and Reading Comprehension Development II
ENG 010A - Basic Writing or ENG 011 - Basic Writing II or ESL 011 - Basic Writing II

**MUS 113 MUSIC IN AMERICAN CULTURE.....3-3-0**
Music in American Culture will examine various styles of music found in United States cultural history. Folk, fine art, and popular music examples drawn from diverse traditions will be examined on the basis of their intrinsic characteristics, as well as in connection with their social, economic, and political contexts.
**Prerequisites:**
ENG 010A - Basic Writing or ENG 011 - Basic Writing II or ESL 011 - Basic Writing II
REA 011 - Fundamentals of College Reading or REA 017 - Vocabulary and Reading Comprehension Development II

**MUS 114 INTRODUCTION TO WORLD MUSIC CULTURES.....3-3-0**
Introduction to World Music Cultures is an entry-level course in the study of World Music. These musical traditions will be explored both on the basis of their intrinsic characteristics, as well as in connection with their social, economic, and political contexts. Students will also be introduced to the discipline of Ethnomusicology. As a term project, each student will be required to visit and document a local musical culture selected by the student and approved by the instructor.
**Prerequisites:**
REA 011 - Fundamentals of College Reading or REA 017 - Vocabulary and Reading Comprehension Development II
ENG 010A - Basic Writing or ENG 011 - Basic Writing II or ESL 011 - Basic Writing II

**MUS 120 MUSIC FUNDAMENTALS.....3-3-0**
A beginning course in music fundamentals for students with little or no musical background, or a review for students in need of additional preparation for advanced studies. Knowledge of notation, intervals, rhythm, melody, and harmony will be developed, as well as sight singing and elementary ear training skills.
**Prerequisites:**
MAT 010 - Fundamentals of Arithmetic or MAT 010B - Review of the Fundamentals of Arithmetic
REA 011 - Fundamentals of College Reading or REA 017 - Vocabulary and Reading Comprehension Development II

**MUS 133 COLLEGE CHOIR I.....1-0-3**
A human performance course in which students participate in the preparation and production of a program of mixed choral ensemble music. No previous musical training is required, although it is helpful. **This course is subject to a course fee.**

**MUS 134 COLLEGE CHOIR II.....1-0-3**
A human performance course in which students participate in the preparation and production of a program of mixed choral ensemble music. No previous musical training is required, although it is helpful. **This course is subject to a course fee.**

**MUS 135 COLLEGE CHOIR III.....1-0-3**
A human performance course in which students participate in the preparation and production of a program of mixed choral ensemble music. No previous musical training is required, although it is helpful. **This course is subject to a course fee.**

**MUS 136 COLLEGE CHOIR IV.....1-0-3**
A human performance course in which students participate in the preparation and production of a program of mixed choral ensemble music. No previous musical training is required, although it is helpful. **This course is subject to a course fee.**

**MUS 140 INTRODUCTION TO DIGITAL MUSIC TECHNOLOGY.....3-3-0**
Introduction to Digital Music Technology is an entry-level course in modern music production. Students will study the nature of musical sound and the relationship between digital and analog sound processing. Students will also receive an introduction to the basics of MIDI, the fundamental computer music language. Through hands-on projects, students will learn about the various tools of modern audio production with an emphasis on digital tools including synthesizers, midi controllers, sequencers, mixers, effects generators and more. The students will prepare a final project that will demonstrate familiarity with these devices and an understanding of aesthetic choices associated with their use.
**Prerequisites:**
MUS 120 - Music Fundamentals with a minimum grade of C

**MUS 141 INTERMEDIATE DIGITAL MUSIC: MULTIMEDIA AND MAX.....3-3-0**
This course is a continuation of studies begun in MUS 140 and will focus on Music Technology, Music Composition, and their application to multimedia. Students learn how to score for film and digital images, synchronize multimedia and create a resulting DVD of their own design. The second large project will introduce the student to the creation of an interactive object computer programming language called MAX. The student will learn to create an 'application' that will run MIDI and Digital Audio Files in real time. Computer programming experience is not required.
**Prerequisites:**
MUS 140 - Introduction to Digital Music Technology

**MUS 146 PRINCIPLES OF PRIVATE MUSIC INSTRUCTION.....3-3-0**
This course will explore the process of successfully developing and maintaining an independent applied music studio. Students will explore the pedagogical, pragmatic, and entrepreneurial aspects of the private instruction business, applicable to both instrumental and voice disciplines. Concepts discussed will include aesthetic analysis of student performances, teaching methods, learning styles, curriculum, studio technology, professional associations, policies, resume-writing, and business practices.
**Prerequisites:**
REA 011 - Fundamentals of College Reading or REA 017 - Vocabulary and Reading Comprehension Development II
ENG 010A - Basic Writing or ENG 011 - Basic Writing II or ESL 011 - Basic Writing II
MAT 011 - Beginning Algebra or MAT 011B - Beginning Algebra with Review of Arithmetic

**MUS 150 GUITAR CLASS I.....1-1-2**
Guitar Class is a course designed to establish a basic understanding of the guitar as an accompanying and solo instrument. Student is responsible for providing their own Classical (nylon string) or Acoustic (steel string) guitar. Electric guitars are not acceptable. Students may choose to purchase or rent the appropriate instrument. This course will enhance pre-existing skills on the guitar, while providing essential rudiments for those who enroll as beginners. Students will learn or improve their knowledge of standard musical notation as it applies to guitar repertory. Students will be introduced to the fundamental techniques of guitar playing, including strumming and finger-style techniques. Through repertory study students will also learn about the history and repertory of the guitar within both western and other cultures. **This course is subject to a course fee.**
**Prerequisites:**
ENG 010A - Basic Writing or ENG 011 - Basic Writing II or ESL 011 - Basic Writing II
REA 011 - Fundamentals of College Reading or REA 017 - Vocabulary and Reading Comprehension Development II

**MUS 151 GUITAR CLASS 2.....1-1-2**
Guitar Class 2 is a course designed to continue to develop skills introduced in Guitar Class 1. The course is also open to students who can demonstrate fluency with the guitar comparable to that achieved in Guitar Class 1. Students will expand their knowledge of standard musical notation as it applies to guitar repertory. Students will be introduced to the more advanced techniques of guitar playing, including strumming and finger-style techniques. Through repertory study students will also learn about the history and repertory of the guitar within both western and other cultures. **This course is subject to a course fee.**
**Prerequisites:**
MUS 150 - Guitar Class I with a minimum grade of C

**MUS 152 COMMERCIAL & JAZZ GUITAR STUDIES.....1-1-2**
The purpose of this course is to further develop the skills students have acquired on their own or in Guitar I class. This course will introduce intermediate techniques focusing on plectrum style guitar playing in the Jazz/Commercial genres. Students will develop the necessary skills to function as a guitarist by learning to 1) play a variety of accompaniment styles, 2) improvise using scales and arpeggio patterns combined with a knowledge of chord-scale relationships, 3) read chord charts and melody lines and 4) perform a continually expanding repertoire. **This course is subject to a course fee.**
**Prerequisites:**
MUS 150 - Guitar Class I with minimum grade of C

**MUS 160 JAZZ LAB BAND I.....1-0-3**
Jazz Lab Band I is an entry-level course in jazz performance open to players of woodwinds, brass, piano, guitar, bass, and percussion. Students will develop basic foundation skills as jazz soloists and ensemble players. Repertoire will vary each semester based on the strengths, weaknesses, and pedagogical needs of the ensemble. Students will be required to provide their own instrument (a standard drum set, bass and guitar amplifier, keyboard, and keyboard amplifier will be provided). This course is open to all students who possess a basic ability to play their instrument. The ability to read music is required. Students will be evaluated in the first class, and those who are not prepared for ensemble work will be advised to withdraw. **This course is subject to a course fee.**

**MUS 161 JAZZ LAB BAND II.....1-0-3**
Jazz Lab Band II is an entry-level course in jazz performance open to players of woodwinds, brass, piano, guitar, bass, and percussion. Students will develop basic foundation skills as jazz soloists and ensemble players. Repertoire will vary each semester based on the strengths, weaknesses, and pedagogical needs of the ensemble. Students will be required to provide their own instrument (a standard drum set, bass and guitar amplifier, keyboard, and keyboard amplifier will be provided). This course is open to all students who possess a basic ability to play their instrument. The ability to read music is required. Students will be evaluated in the first class, and those who are not prepared for ensemble work will be advised to withdraw. **This course is subject to a course fee.**

**MUS 162 JAZZ LAB BAND III.....1-0-3**
Jazz Lab Band III is an entry-level course in jazz performance open to players of woodwinds, brass, piano, guitar, bass, and percussion. Students will develop basic foundation skills as jazz soloists and ensemble players. Repertoire will vary each semester based on the strengths, weaknesses, and pedagogical needs of the ensemble. Students will be required to provide their own instrument (a standard drum set, bass and guitar amplifier, keyboard, and keyboard amplifier will be provided). This course is open to all students who possess a basic ability to play their instrument. The ability to read music is required. Students will be evaluated in the first class, and those who are not prepared for ensemble work will be advised to withdraw. **This course is subject to a course fee.**

**MUS 163 JAZZ LAB BAND IV.....1-0-3**
Jazz Lab Band IV is an entry-level course in jazz performance open to players of woodwinds, brass, piano, guitar, bass, and percussion. Students will develop basic foundation skills as jazz soloists and ensemble players. Repertoire will vary each semester based on the strengths, weaknesses, and pedagogical needs of the ensemble. Students will be required to provide their own instrument (a standard drum set, bass and guitar amplifier, keyboard, and keyboard amplifier will be provided). This course is open to all students who possess a basic ability to play their instrument. The ability to read music is required. Students will be evaluated in the first class, and those who are not prepared for ensemble work will be advised to withdraw. **This course is subject to a course fee.**

**MUS 170 PIANO CLASS I.....1-1-2**
The first in a series of four classes designed to give students a complete orientation to keyboard skills. Piano Class 1 is ideal for those with little or no previous piano study. Students may begin their studies in higher level classes if they pass the prescribed proficiency test. To provide for the proper level of individual attention, the class size will be limited to 16. **This course is subject to a course fee.**
**Prerequisites:**
MAT 011 - Beginning Algebra or MAT 011B - Beginning Algebra with Review of Arithmetic
ENG 010A - Basic Writing or ENG 011 - Basic Writing II or ESL 011 - Basic Writing II
REA 011 - Fundamentals of College Reading or REA 017 - Vocabulary and Reading Comprehension Development II

**MUS 171 PIANO CLASS II.....1-1-2**
The second in a series of four classes designed to give students a complete orientation to keyboard skills. Piano Class 2 continues the studies begun in Piano Class 1. Students can begin with Piano Class 2 if they pass the level 1 piano proficiency exam. To provide for the proper level of individual attention, the class size will be limited to 16. **This course is subject to a course fee.**
**Prerequisites:**
MUS 170 - Piano Class 1, or success on the Level 1 piano proficiency exam

**MUS 172 PIANO CLASS 3.....1-1-2**
The third in a series of four classes designed to give students a complete orientation to keyboard skills. Piano Class 3 continues the studies begun in Piano Class 2. Students can begin with Piano Class 3 if they pass the level 2 piano proficiency exam. To provide for the proper level of individual attention, the class size will be limited to 16. **This course is subject to a course fee.**
**Prerequisites:**
MUS 171 - Piano Class II, or have a Level 2 on the piano proficiency exam

**MUS 173 PIANO CLASS 4.....1-1-2**
The last in a series of four classes designed to give students a complete orientation to keyboard skills. Piano Class 4 continues the studies begun in Piano Class 3. Students can begin with Piano Class 4 if they pass the level 3 piano proficiency exam. To provide for the proper level of individual attention, the class size will be limited to 16. **This course is subject to a course fee.**
**Prerequisites:**
MUS 172 - Piano Class 3, or have a Level 3 on the piano proficiency exam

**MUS 180B APPLIED MUSIC LESSONS I - BASS GUITAR.....1-1-0**
Through this course, credit is earned for private instruction on bass guitar. Check with the department for current availability. Open by permission of the individual instructor. **This course is subject to a course fee.**

**MUS 180G APPLIED MUSIC LESSONS I - GUITAR.....1-1-0**
Through this course, credit is earned for private instruction on guitar. Check with the department for current availability. Open by permission of the individual instructor. **This course is subject to a course fee.**

**MUS 180I APPLIED MUSIC LESSONS I - INSTRUMENTAL.....1-1-0**
Through this course, credit is earned for private instruction on the student's chosen instrument. Lessons are generally available various band and orchestral instruments. Check with the department for current availability. Open by permission of the individual instructor. **This course is subject to a course fee.**

**MUS 180P APPLIED MUSIC LESSONS I - PIANO.....1-1-0**
Through this course, credit is earned for private instruction on piano. Check with the department for current availability. Open by permission of the individual instructor. **This course is subject to a course fee.**

**MUS 180V APPLIED MUSIC LESSONS I - VOICE.....1-1-0**
Through this course, credit is earned for private voice instruction. Check with the department for current availability. Open by permission of the individual instructor. **This course is subject to a course fee.**

**MUS 181B APPLIED MUSIC LESSONS II - BASS GUITAR.....1-1-0**
Through this course, credit is earned for private instruction on bass guitar. Check with the department for current availability. Open by permission of the individual instructor. **This course is subject to a course fee.**
**Prerequisites:**
MUS 180B - Applied Music Lessons I - Bass Guitar

**MUS 181G APPLIED MUSIC LESSONS II - GUITAR.....1-1-0**
Through this course, credit is earned for private instruction on guitar. Check with the department for current availability. Open by permission of the individual instructor. **This course is subject to a course fee.**
**Prerequisites:**
MUS 180G - Applied Music Lessons I - Guitar

**MUS 181I APPLIED MUSIC LESSONS II - INSTRUMENTAL.....1-1-0**
Through this course, credit is earned for private instruction on the student's chosen instrument. Lessons are generally available for various band and orchestral instruments. Check with the department for current availability. Open by permission of the individual instructor. **This course is subject to a course fee.**
**Prerequisites:**
MUS 180I - Applied Music Lessons I - Instrumental

**MUS 181P APPLIED MUSIC LESSONS II - PIANO.....1-1-0**
Through this course, credit is earned for private instruction on the piano. Check with the department for current availability. Open by permission of the individual instructor. **This course is subject to a course fee.**
**Prerequisites:**
MUS 180P - Applied Music Lessons I - Piano

**MUS 181V APPLIED MUSIC LESSONS II - VOICE.....1-1-0**
Through this course, credit is earned for private voice instruction. Check with the department for current availability. Open by permission of the individual instructor. **This course is subject to a course fee.**
**Prerequisites:**
MUS 180V - Applied Music Lessons I - Voice

**MUS 182B APPLIED MUSIC LESSONS III - BASS GUITAR.....1-1-0**
Through this course, credit is earned for private instruction on bass guitar. Check with the department for current availability. Open by permission of the individual instructor. **This course is subject to a course fee.**
**Prerequisites:**
MUS 181B - Applied Music Lessons II - Bass Guitar

**MUS 182G APPLIED MUSIC LESSONS III - GUITAR.....1-1-0**
Through this course, credit is earned for private instruction on guitar. Check with the department for current availability. Open by permission of the individual instructor. **This course is subject to a course fee.**
**Prerequisites:**
MUS 181G - Applied Music Lessons II - Guitar

**MUS 182I APPLIED MUSIC LESSONS III - INSTRUMENTAL.....1-1-0**
Through this course, credit is earned for private instruction on the student's chosen instrument. Lessons are generally available for various band and orchestral instruments. Check with the department for current availability. Open by permission of the individual instructor. **This course is subject to a course fee.**
**Prerequisites:**
MUS 181I - Applied Music Lessons II - Instrumental

**MUS 182P APPLIED MUSIC LESSONS III - PIANO.....1-1-0**
Through this course, credit is earned for private instruction on piano. Check with the department for current availability. Open by permission of the individual instructor. **This course is subject to a course fee.**
**Prerequisites:**
MUS 181P - Applied Music Lessons II - Piano

**MUS 182V APPLIED MUSIC LESSONS III - VOICE.....1-1-0**
Through this course, credit is earned for private voice instruction. Check with the department for current availability. Open by permission of the individual instructor. **This course is subject to a course fee.**
**Prerequisites:**
MUS 181V - Applied Music Lessons II - Voice

**MUS 183B APPLIED MUSIC LESSONS IV - BASS GUITAR..... 1-1-0**
Through this course, credit is earned for private instruction on bass guitar. Check with the department for current availability. Open by permission of the individual instructor. **This course is subject to a course fee.**
**Prerequisites:**
MUS 182B - Applied Music Lessons III - Bass Guitar

**MUS 183G APPLIED MUSIC LESSONS IV - GUITAR.....1-1-0**
Through this course, credit is earned for private instruction on guitar. Check with the department for current availability. Open by permission of the individual instructor. **This course is subject to a course fee.**
**Prerequisites:**
MUS 182G - Applied Music Lessons III - Guitar

**MUS 183I APPLIED MUSIC LESSONS IV - INSTRUMENTAL..... 1-1-0**
Through this course, credit is earned for private instruction on the student's chosen instrument. Lessons are generally available for various band and orchestral instruments. Check with the department for current availability. Open by permission of the individual instructor. **This course is subject to a course fee.**
**Prerequisites:**
MUS 182I - Applied Music Lessons III - Instrumental

**MUS 183P APPLIED MUSIC LESSONS IV - PIANO..... 1-1-0**
Through this course, credit is earned for private instruction on piano. Check with the department for current availability. Open by permission of the individual instructor. **This course is subject to a course fee.**
**Prerequisites:**
MUS 182P - Applied Music Lessons III - Piano

**MUS 183V APPLIED MUSIC LESSONS IV - VOICE..... 1-1-0**
Through this course, credit is earned for private voice instruction. Check with the department for current availability. Open by permission of the individual instructor. **This course is subject to a course fee.**
**Prerequisites:**
MUS 182V - Applied Music Lessons III - Voice

**MUS 190 CHAMBER STRINGS I..... 1-1-2**
Chamber Strings I is a performance course for students who want the opportunity to participate in an orchestral strings setting. The course focuses on developing technique and breadth of repertoire for string (violin, viola, cello, bass) students. This course is open to all students who possess a basic ability to play an instrument. The ability to read music is required. Students will be evaluated in the first class, and those who are not prepared for ensemble work will be advised to withdraw. **This course is subject to a course fee.**

**MUS 191 CHAMBER STRINGS II..... 1-1-2**
Chamber Strings II is a performance course for students who want the opportunity to participate in an orchestral strings setting. The course focuses on developing technique and breadth of repertoire for string (violin, viola, cello, bass) students. This course is open to all students who possess a basic ability to play an instrument. The ability to read music is required. Students will be evaluated in the first class, and those who are not prepared for ensemble work will be advised to withdraw. **This course is subject to a course fee.**
**Prerequisites:**
MUS 190 - Chamber Strings I

**MUS 192 CHAMBER STRINGS III..... 1-1-2**
Chamber Strings III is a performance course for students who want the opportunity to participate in an orchestral strings setting. The course focuses on developing technique and breadth of repertoire for string (violin, viola, cello, bass) students. This course is open to all students who possess a basic ability to play an instrument. The ability to read music is required. Students will be evaluated in the first class, and those who are not prepared for ensemble work will be advised to withdraw. **This course is subject to a course fee.**
**Prerequisites:**
MUS 191 - Chamber Strings II

**MUS 193 CHAMBER STRINGS IV.....1-1-2**
Chamber Strings IV is a performance course for students who want the opportunity to participate in an orchestral strings setting. The course focuses on developing technique and breadth of repertoire for string (violin, viola, cello, bass) students. This course is open to all students who possess a basic ability to play an instrument. The ability to read music is required. Students will be evaluated in the first class, and those who are not prepared for ensemble work will be advised to withdraw. **This course is subject to a course fee.**
**Prerequisites:**
MUS 192 - Chamber Strings III

**MUS 194 WIND ENSEMBLE I.....1-1-2**
Wind Ensemble I is a performance course for students who want the opportunity to participate in a symphonic band setting. The course focuses on developing technique and breadth of repertoire for flute, oboe, clarinet, bassoon, saxophone, trumpet, trombone, french horn, and tuba. This course is open to all students who possess a basic ability to play an instrument. The ability to read music is required. Students will be evaluated in the first class, and those who are not prepared for ensemble work will be advised to withdraw. **This course is subject to a course fee.**

**MUS 195 WIND ENSEMBLE II.....1-1-2**
Wind Ensemble II is a performance course for students who want the opportunity to participate in a symphonic band setting. The course focuses on developing technique and breadth of repertoire for flute, oboe, clarinet, bassoon, saxophone, trumpet, trombone, french horn, and tuba. This course is open to all students who possess a basic ability to play an instrument. The ability to read music is required. Students will be evaluated in the first class, and those who are not prepared for ensemble work will be advised to withdraw. **This course is subject to a course fee.**
**Prerequisites:**
MUS 194 - Wind Ensemble I

**MUS 196 WIND ENSEMBLE III.....1-1-2**
Wind Ensemble III is a performance course for students who want the opportunity to participate in a symphonic band setting. The course focuses on developing technique and breadth of repertoire for flute, oboe, clarinet, bassoon, saxophone, trumpet, trombone, french horn, and tuba. This course is open to all students who possess a basic ability to play an instrument. The ability to read music is required. Students will be evaluated in the first class, and those who are not prepared for ensemble work will be advised to withdraw. **This course is subject to a course fee.**
**Prerequisites:**
MUS 195 - Wind Ensemble II

**MUS 197 WIND ENSEMBLE IV.....1-1-2**
Wind Ensemble IV is a performance course for students who want the opportunity to participate in a symphonic band setting. The course focuses on developing technique and breadth of repertoire for flute, oboe, clarinet, bassoon, saxophone, trumpet, trombone, french horn, and tuba. This course is open to all students who possess a basic ability to play an instrument. The ability to read music is required. Students will be evaluated in the first class, and those who are not prepared for ensemble work will be advised to withdraw. **This course is subject to a course fee.**
**Prerequisites:**
MUS 196 - Wind Ensemble III

**MUS 210 JAZZ HISTORY.....3-3-0**
Jazz History will explore the history and recordings of American Jazz beginning with the roots of Jazz during the 1800's and progressing to the Hard Bop, Free Jazz, Avant Garde, and Fusion styles of today. The course is designed for the student with some musical background. Students will explore Jazz within its cultural and historical contexts, in addition to learning the basics of jazz theory and analysis. Learn how American History shaped this musical art form that was born in the United States. Students will have the opportunity to see and hear legendary jazz artists such as Louis Armstrong, Benny Goodman, Count Basie, Duke Ellington, Charlie Parker, Dizzy Gillespie, Miles Davis, Thelonious Monk, John Coltrane, and many, many more.
**Prerequisites:**
ENG 010A - Basic Writing or ENG 011 - Basic Writing II or ESL 011 - Basic Writing II
REA 011 - Fundamentals of College Reading or REA 017 - Vocabulary and Reading Comprehension Development II

**MUS 211 WESTERN MUSIC HISTORY I: FROM MEDIEVAL TO RENAISSANCE.....3-3-0**
An exploration of the music and culture of Western civilization from ancient times to the Renaissance. Students will study both the sacred and secular music of the medieval and renaissance periods, including (but not limited to) Gregorian chant, Troubadour songs, Madrigals, Motets, Masses, and instrumental music. Each musical genre will be examined on the basis of its intrinsic characteristics as well as in connection with the aesthetic, social, philosophical, political, and economic environment in which it was created. Students will be expected to have a basic understanding of standard musical notation.
**Prerequisites:**
ENG 010A - Basic Writing or ENG 011 - Basic Writing II or ESL 011 - Basic Writing II
REA 011 - Fundamentals of College Reading or REA 017 - Vocabulary and Reading Comprehension Development II

**MUS 212 WESTERN MUSIC HISTORY 2: THE BAROQUE: FROM MONTEVERDI TO BACH.....3-3-0**
An exploration of the music and culture of Western civilization from the late 16th century to the mid 18th century. Students will study both the sacred and secular music of the late renaissance and baroque periods, including (but not limited to) the late renaissance madrigal, the Venetian polychoral tradition, monody, opera, oratorio, cantata, suite, sonata, and concerto. Each musical genre will be examined on the basis of its intrinsic characteristics as well as in connection with the aesthetic, social, philosophical, political, and economic environment in which it was created. Students will be expected to have a basic understanding of standard musical notation.
**Prerequisites:**
ENG 010A - Basic Writing or ENG 011 - Basic Writing II or ESL 011 - Basic Writing II
REA 011 - Fundamentals of College Reading or REA 017 - Vocabulary and Reading Comprehension Development II

**MUS 213 WESTERN MUSIC HISTORY 3: THE CLASSICAL AND EARLY ROMANTIC ERAS: FROM BACH TO BEETHOVEN AND BEYOND...3-3-0**
An exploration of the music and culture of Western civilization from the mid 18th century to the early 19th century. Students will study both the sacred and secular music of the classical and early romantic eras, including (but not limited to) opera, church music, symphony, sonata, concerto, and chamber music. The music and careers of Haydn, Mozart, Beethoven, Schubert, Berlioz, and others will be examined in some detail. Each musical genre will be examined on the basis of its intrinsic characteristics as well as in connection with the aesthetic, social, philosophical, political, and economic environment in which it was created. Students will be expected to have a basic understanding of standard musical notation.
**Prerequisites:**
ENG 010A - Basic Writing or ENG 011 - Basic Writing II or ESL 011 - Basic Writing II
REA 011 - Fundamentals of College Reading or REA 017 - Vocabulary and Reading Comprehension Development II

**MUS 214 WESTERN MUSIC HISTORY 4: THE LATE 19TH AND THE 20TH CENTURY.....3-3-0**
An exploration of the music and culture of Western civilization of the late 19th and 20th centuries. Students will study both the sacred and secular music of these periods, including the intersections between the Western classical tradition, World music and Popular music, especially jazz. Works will be examined on the basis of their intrinsic characteristics as well as in connection with the aesthetic, social, philosophical, political, and economic environment in which they were created. Students will be expected to have a basic understanding of standard musical notation.
**Prerequisites:**
ENG 010A - Basic Writing or ENG 011 - Basic Writing II or ESL 011 - Basic Writing II
REA 011 - Fundamentals of College Reading or REA 017 - Vocabulary and Reading Comprehension Development II

**MUS 221 MUSIC THEORY I..... 3-3-0**
For students with some musical background who wish to expand their understanding of music theory. Emphasis will be on the study of Western music harmonic practices of the 18th and 19th centuries. The course will concentrate on musical analysis (melodic, harmonic and formal) and creative application of the concepts studied. Throughout the course, both technical and aesthetic considerations will be given equal attention. Students will also research a composer of choice from the above mentioned time period and prepare a properly documented presentation on that composer's life and musical style. A working knowledge of musical symbols and notation is required.
**Prerequisites:**
MUS 120 - Music Fundamentals with a minimum grade of C

**MUS 222 MUSIC THEORY II..... 3-3-0**
Directed to students with previous experience in musical analysis (phrase/chord identification) and harmony (four-voice/keyboard style), this course will focus on melody harmonization, form and analysis, modal harmony, and modulation. An introduction to instrumentation and composition will be included.
**Prerequisites:**
MUS 221 - Music Theory I

**MUS 231 AURAL THEORY 1..... 3-3-0**
Aural Theory 1 is for students with some musical background who wish to develop their ear training and musicianship skills. The course is designed to prepare students to be successful as music or music education majors, or to hone musicianship skills for non majors. Individual and group classroom activities and computer-assisted drills will be used to develop the student's aural skills with rhythmic, melodic, and harmonic materials. A working knowledge of musical symbols and notation is required. Students are encouraged to enroll simultaneously in MUS 221 (Music Theory 1).
**Prerequisites:**
MUS 120 - Music Fundamentals with a minimum grade of C
MUS 221 - Music Theory I (Recommended)

**MUS 232 AURAL THEORY 2..... 3-3-0**
Aural Theory 2 is for students who wish to continue developing their ear training and musicianship skills. The course is designed to prepare students to be successful as music or music education majors, or to hone musicianship skills for non-majors. Individual and group classroom activities and computer-assisted drills will be used to develop the student's aural skills with rhythmic, melodic, and harmonic materials. Previous experience in sight singing and dictation is required.
**Prerequisites:**
MUS 231 - Aural Theory 1 with a minimum grade of C

**MUS 233 CHAMBER CHOIR I.....1-3-0**
Chamber Choir is a performance course for students who want an opportunity to participate in a small chamber style ensemble. The group will explore repertory from a wide range of stylistic periods. This ensemble is open by permission of the instructor only, normally by audition. Students must also be registered for the College Choir. **This course is subject to a course fee.**
**Corequisites:**
Take MUS*133 - College Choir I or MUS*134 - College Choir II or MUS*135 - College Choir III or MUS*136 - College Choir IV. May be taken prior or during course.

**MUS 234 CHAMBER CHOIR II.....1-3-0**
Chamber Choir is a performance course for students who want an opportunity to participate in a small chamber style ensemble. The group will explore repertory from a wide range of stylistic periods. This ensemble is open by permission of the instructor only, normally by audition. Students must also be registered for the College Choir. **This course is subject to a course fee.**
**Corequisites:**
Take MUS*133 - College Choir I or MUS*134 - College Choir II or MUS*135 - College Choir III or MUS*136 - College Choir IV. May be taken prior or during course.

**MUS 235 CHAMBER CHOIR III.....1-3-0**
Chamber Choir is a performance course for students who want an opportunity to participate in a small chamber style ensemble. The group will explore repertory from a wide range of stylistic periods. This ensemble is open by permission of the instructor only, normally by audition. Students must also be registered for the College Choir. **This course is subject to a course fee.**
**Corequisites:**
Take MUS*133 - College Choir I or MUS*134 - College Choir II or MUS*135 - College Choir III or MUS*136 - College Choir IV. May be taken prior or during course.

**MUS 236 CHAMBER CHOIR IV..... 1-3-0**
Chamber Choir is a performance course for students who want an opportunity to participate in a small chamber style ensemble. The group will explore repertory from a wide range of stylistic periods. This ensemble is open by permission of the instructor only, normally by audition. Students must also be registered for the College Choir. **This course is subject to a course fee.**
**Corequisites:**
Take MUS*133 - College Choir I or MUS*134 - College Choir II or MUS*135 - College Choir III or MUS*136 - College Choir IV. May be taken prior or during course.

**MUS 240 THE ART AND BUSINESS OF SONGWRITING..... 3-3-0**
The Art and Business of Songwriting is an elective course which teaches the art of musical composition with an emphasis on the genre of contemporary song. It is designed for the student with some knowledge of or background in the basics of music who wishes to apply that knowledge to the creation of music in contemporary popular genres. Students will explore the various musical forms employed by songwriters and apply them to their own compositional projects. The course provides an overview of the historical development of the art of popular song in Western culture, exploring in particular the significant contributions made by America's immigrant and African-American populations. Students will also examine the business of songwriting and its place in the overall music industry.
**Prerequisites:**
MUS 120 - Music Fundamentals with a minimum grade of C

**MUS 241 THE BUSINESS OF MUSIC..... 3-3-0**
The Business of Music will provide students with an overview of the current state of the Music Industry. Students will also acquire set of skills needed to pursue a career in that industry. Topics covered will include music business career opportunities, marketing concepts, management skills and promotion. Throughout the semester, the students will explore various professions in the music field and receive an introduction to music publishing, concert production and touring, management, merchandising and recording, public relations, radio promotion, brick and mortar and internet distribution, merchandising, multimedia advertising, and budgeting.
**Prerequisites:**
MAT 011 - Beginning Algebra or MAT 011B - Beginning Algebra with Review of Arithmetic
ENG 010A - Basic Writing or ENG 011 - Basic Writing II or ESL 011 - Basic Writing II
REA 011 - Fundamentals of College Reading or REA 017 - Vocabulary and Reading Comprehension Development II

**MUS 260 PERFORMANCE JAZZ ENSEMBLE I.....1-0-3**
Performance Jazz Ensemble I is an intermediate-level course in Jazz performance open to experienced players of saxophone (alto, tenor, and baritone), trumpet, trombone, keyboard, guitar, bass, and drums. Enrollment in this class is by audition only. Students will be expected to have significant performance experience on their instrument and some experience playing within a jazz ensemble. Students will develop skills as soloists through individual practice, ensemble practice, and performances. As the lead Jazz ensemble at the College, this ensemble will be expected to participate in a variety of public service events throughout the semester. Repertoire will vary, but will include Jazz Standards, Blues (both major and minor), tunes based on rhythm changes, and student jazz compositions/ arrangements. Students will be required to provide their own instrument (a standard drum set, bass and guitar amplifier, keyboard, and keyboard amplifier will be provided). **This course is subject to a course fee.**
**Corequisites:**
MUS 160 - Jazz Lab Band I or MUS 161 - Jazz Lab Band II or MUS 162 - Jazz Lab Band III or MUS 163 - Jazz Lab Band IV

**MUS 261 PERFORMANCE JAZZ ENSEMBLE II.....1-0-3**
Performance Jazz Ensemble II is an intermediate-level course in Jazz performance open to experienced players of saxophone (alto, tenor, and baritone), trumpet, trombone, keyboard, guitar, bass, and drums. Enrollment in this class is by audition only. Students will be expected to have significant performance experience on their instrument and some experience playing within a jazz ensemble. Students will develop skills as soloists through individual practice, ensemble practice, and performances. As the lead Jazz ensemble at the college, this ensemble will be expected to participate in a variety of public service events throughout the semester. Repertoire will vary, but will include Jazz Standards, Blues (both major and minor), tunes based on rhythm changes, and student jazz compositions/ arrangements. Students will be required to provide their own instrument (a standard drum set, bass and guitar amplifier, keyboard, and keyboard amplifier will be provided). **This course is subject to a course fee.**
**Prerequisites:**
MUS 260 - Performance Jazz Ensemble I
**Corequisites:**
MUS 160 - Jazz Lab Band I, MUS 161 - Jazz Lab Band II, MUS 162 - Jazz Lab Band III or MUS 163 - Jazz Lab Band IV

**MUS 262 PERFORMANCE JAZZ ENSEMBLE III.....1-0-3**
Performance Jazz Ensemble III is an intermediate-level course in Jazz performance open to experienced players of saxophone (alto, tenor, and baritone), trumpet, trombone, keyboard, guitar, bass, and drums. Enrollment in this class is by audition only. Students will be expected to have significant performance experience on their instrument and some experience playing within a jazz ensemble. Students will develop skills as soloists through individual practice, ensemble practice, and performances. As the lead Jazz ensemble at the college, this ensemble will be expected to participate in a variety of public service events throughout the semester. Repertoire will vary, but will include Jazz Standards, Blues (both major and minor), tunes based on rhythm changes, and student jazz compositions/ arrangements. Students will be required to provide their own instrument (a standard drum set, bass and guitar amplifier, keyboard, and keyboard amplifier will be provided). **This course is subject to a course fee.**
**Prerequisites:**
MUS 261 - Performance Jazz Ensemble II
**Corequisites:**
MUS 160 - Jazz Lab Band I, MUS 161 - Jazz Lab Band II, MUS 162 - Jazz Lab Band III or MUS 163 - Jazz Lab Band IV

**MUS 263 PERFORMANCE JAZZ ENSEMBLE IV..... 1-0-3**
Performance Jazz Ensemble IV is an intermediate-level course in Jazz performance open to experienced players of saxophone (alto, tenor, and baritone), trumpet, trombone, keyboard, guitar, bass, and drums. Enrollment in this class is by audition only. Students will be expected to have significant performance experience on their instrument and some experience playing within a jazz ensemble. Students will develop skills as soloists through individual practice, ensemble practice, and performances. As the lead Jazz ensemble at the college, this ensemble will be expected to participate in a variety of public service events throughout the semester. Repertoire will vary, but will include Jazz Standards, Blues (both major and minor), tunes based on rhythm changes, and student jazz compositions/ arrangements. Students will be required to provide their own instrument (a standard drum set, bass and guitar amplifier, keyboard, and keyboard amplifier will be provided). **This course is subject to a course fee.**
**Prerequisites:**
MUS 262 - Performance Jazz Ensemble III
**Corequisites:**
MUS 160 - Jazz Lab Band I, MUS 161 - Jazz Lab Band II, MUS 162 - Jazz Lab Band III or MUS 163 - Jazz Lab Band IV

## NURSING

**NUR 050 TRANSITION INTO ASSOCIATE DEGREE NURSING.....3-2-3**
This course is designed to aid the student who is eligible for advanced standing with socialization from the previous role to the role of the registered nurse. The student will be familiarized with the program at Montgomery County Community College. The emphasis of the course will be on the use of the nursing process in the implementation of the roles of the associate degree nurse. Seminars, videotaping, presentations, independent study and clinical experience are all integral parts of this course. **This course is subject to a course fee.**
**Prerequisites:**
OPTION 1: Total Composite TEAS score of 75% or higher, Reading Comprehension TEAS score of 75% or higher, AND placement into BIO 131 - Anatomy and Physiology I ALL requirements completed within 5 years; or OPTION 2: Total Composite TEAS score of 65% or higher, Reading Comprehension TEAS score of 75% or higher, AND BIO 131 - Anatomy and Physiology I, BIO 132 - Anatomy and Physiology II, or BIO 140 - Microbiology with a minimum grade of B ALL requirements completed within 5 years.
**Corequisites:**
BIO 131 - Human Anatomy and Physiology I and BIO 140 - Microbiology and Immunology. May be taken prior or during course.
MAT 106A - Math Applications. May be taken prior or during course.

**NUR 106 CONCEPTS OF NURSING..... 3-3-0**
This course focuses on those basic concepts which form the foundation of nursing practice, including nursing history, caring, health, wellness-illness, nursing process, communication, teaching-learning, legal-ethical principles of practice, cultural diversity, spirituality, theories of growth and development, and scope of nursing within the health care system. Examination of nursing theories helps introduce the philosophy and conceptual framework of the nursing program. This is a non-clinical course. **This course is subject to a course fee.**
**Prerequisites:**
OPTION 1: Total Composite TEAS score of 75% or higher, Reading Comprehension TEAS score of 75% or higher, AND placement into BIO 131 - Anatomy and Physiology I ALL requirements completed within 5 years; or OPTION 2: Total Composite TEAS score of 65% or higher, Reading Comprehension TEAS score of 75% or higher, AND BIO 131 - Anatomy and Physiology I, BIO 132 - Anatomy and Physiology II, or BIO 140 - Microbiology with a minimum grade of B ALL requirements completed within 5 years.
**Corequisites:**
BIO 131 - Human Anatomy and Physiology I and BIO 140 - Microbiology and Immunology. May be taken prior or during course.
MAT 106A - Math Applications. May be taken prior or during course.

**NUR 110 INTRODUCTION TO NURSING..... 8-5-9**
This course is designed to develop caring attitudes and behaviors towards self and others and provide a foundation of nursing skills. Application of these skills will occur with clients across the lifespan in wellness-oriented settings. Client needs will be identified using the nursing process, with an emphasis on assessment. Presentations, seminars and laboratory practice are an integral part of the course. **This course is subject to a course fee.**
**Prerequisites:**
NUR 106 - Concepts of Nursing with a minimum grade of C within 1 year
BIO 131 - Human Anatomy and Physiology I with a minimum grade of C within 5 years
BIO 140 - Microbiology and Immunology with a minimum grade of C within 5 years
MAT 106A - Math Applications with a minimum grade of C within 5 years
All clinical requirements must be completed, uploaded and approved through CastleBranch to be eligible to take this course.
**Corequisites:**
BIO 132 - Human Anatomy and Physiology II. May be taken prior or during course.
PSY 101 - Introduction to Psychology. May be taken prior or during course.

**NUR 112 NURSING CARE OF CLIENTS WITH UNCOMPLICATED HEALTH CARE NEEDS..... 8-5-9**
This course focuses on the use of the nursing process to assist clients across the lifespan experiencing commonly occurring uncomplicated healthcare needs. There will be an emphasis on developing skills necessary to function as a member of the healthcare team. Clinical experiences will occur in a variety of settings. **This course is subject to a course fee.**
**Prerequisites:**
NUR 110 - Introduction to Nursing with a minimum grade of C OR NUR 050 - Transition into Associate Degree Nursing with a minimum grade of P within 1 year
BIO 132 - Human Anatomy and Physiology II with a minimum grade of C within 5 years
PSY 101 Introduction to Psychology
All clinical requirements must be completed, uploaded and approved through CastleBranch prior to registration for Advanced Standing Students.
**Corequisites:**
PSY 206 Human Development: A Life Span Approach. May be taken prior or during course.
ENG 101 English Composition I. May be taken prior or during course.
All clinical requirements must be complete and current as per CastleBranch guidelines for all other students.. May be taken prior or during course.

**NUR 210 HOLISTIC HEALTH: COMP & ALTERNATIVE HEALTH PRACTICES.....3-3-0**
This course will explore the use of complementary and alternative health practices within a holistic framework of care. A spirit of inquiry will be encouraged through sharing of knowledge, demonstration and exploration of selected health practices such as herbal remedies, homeopathy, healing touch therapies, chiropractic and Eastern therapies. Use of complementary and alternative health practices will be evaluated in the context of managing health conditions such as pain, weight, addictions, and gender specific issues. This course will examine use of complementary and alternative health practices in terms of safety, effectiveness and integration into one's own lifestyle and working with others.

**NUR 211 NURSING CARE OF CLIENTS W/COMPLEX NEEDS..... 8-4-12**
This course focuses on the use of the nursing process to assist clients across the lifespan experiencing frequently seen complex healthcare needs. There will be an emphasis on increasing autonomy within an expanded scope of nursing practice. Clinical experience will occur in a variety of settings. **This course is subject to a course fee.**
**Prerequisites:**
NUR 112 Nursing Care of Clients with Uncomplicated Health Care Needs with a minimum grade of C
PSY 206 Human Development - A Life-Span Approach
ENG 101 English Composition I
All clinical requirements must be completed, uploaded and approved through CastleBranch prior to registration for Advanced Standing Students.
**Corequisites:**
ENG 102 English Composition II. May be taken prior or during course.
SOC 101 Introduction to Sociology. May be taken prior or during course.
All clinical requirements must be complete and current as per CastleBranch guidelines for all other students. May be taken prior or during course.

**NUR 212 NURSING MANAGEMENT OF CLIENT CARE.....8-3-15**
This course focuses on the nursing management of clients, across the lifespan, experiencing acute and chronic healthcare needs. Emphasis will be on client advocacy and collaboration, in providing for the continuity of care. Clinical experiences will occur in a variety of settings. **This course is subject to a course fee.**
**Prerequisites:**
NUR 211 - Nursing Care of Clients with Complex Healthcare Needs with a minimum grade of C
ENG 102 - English Composition II
SOC 101 - Introduction to Sociology
**Corequisites:**
NUR 213 - Professional Issues in Nursing (a minimum grade of C is required). May be taken prior or during course.
Any Aesthetic Sensibility course (THA*105 or THA*114 recommended). May be taken prior or during course.
All clinical requirements must be complete and current as per CastleBranch guidelines.. May be taken prior or during course.

**NUR 213 PROFESSIONAL ISSUES IN NURSING.....2-2-0**
This course explores current issues in nursing such as legal-ethical questions, management styles, leadership roles, nursing research and healthcare delivery systems. It emphasizes transition from student nurse to professional nurse by exploring professional responsibilities and accountability to self, profession and society. This is a non-clinical course.
**Prerequisites:**
NUR 211 - Nursing Care of Clients with Complex Healthcare Needs with a minimum grade of C
ENG 102 - English Composition II
SOC 101 - Introduction to Sociology
**Corequisites:**
NUR 212 - Nursing Management of Client Care (a minimum grade of C is required). May be taken prior or during course.
Any Aesthetic Sensibility course (THA*105 or THA*114 recommended). May be taken prior or during course.

**NUR 214 MIND-BODY CONNECTIONS.....3-3-0**
This course provides insights into and an understanding of mind-body connections as they influence one's health. Content will address the powerful ways in which emotional, mental, social, behavioral, spiritual and physical health impact on each other. Principles of the emerging field of psychoneuroimmunology will be examined. The impact of stress on health and eliciting of the relaxation response will be explored. Cognitive structuring and dynamics of behavior change will be examined. Students will begin to develop healthy strategies for self care through use of such modalities as biofeedback, meditation, breathing, journaling, guided imagery, aromatherapy, music and art therapies and humor within a holistic framework.
**Prerequisites:**
ESW/NUR 210 - Holistics Health: Complementary and Alternative Health Practices and/or ESW 208 - Integrative Nutrition (Recommended)

**NUR 220 GENERAL PHARMACOLOGY..... 3-3-0**
Designed for the student who has a basic understanding of the human body and how it works. This course emphasizes the major drug classifications, related legal/ethical considerations, pharmakokinetics, pharmakodynamics, drug toxicity and therapeutic monitoring.

## OFFICE MANAGEMENT

**OFM 100 COMPUTER KEYBOARDING.....1-1-0**
This course introduces the "touch" method of keyboarding on the computer including the alphabet keys, number and symbol keys, and the keypad. Students work towards developing a keyboarding speed of 20-25 words per minute with accuracy. The course assumes no previous knowledge of keyboarding. It may be taken on a Pass/No Pass (P/NP) basis only. (The final course grade will not affect grade point average.)

**OFM 101 BUSINESS SOFTWARE ESSENTIALS.....3-3-0**
This course is designed to introduce students to computer systems and how businesses and offices use these as tools for organization, communication, decision-making and analysis. This course provides students with an overview of the use of business application software and problem-solving using that software. Taking a multimedia approach, topics include business communication tools, scheduling and presentation software, management information systems, operating systems, word processing, spreadsheets, databases, enterprise resource planning (ERP) systems, project management systems and business use of social media and open-source software. Students will evaluate and implement the use of these programs to solve a variety of problems and scenarios via real-world simulation projects that one would encounter in typical business or office environments. Industry standard computer software will be used.

**OFM 110 MICROSOFT WORD APPLICATIONS.....3-3-0**
This course provides a comprehensive overview of Microsoft Word software features commonly used in business environments. In this hands-on course, students will learn to create and customize documents using editing functions, formatting features, graphics and images, tables, charts, references, mail merge, and forms. This course will also prepare students to manage shared and collaborative documents with the use of the comments, track changes, protection, and sharing features.

**OFM 161 MODERN OFFICE MANAGEMENT.....3-3-0**
This course emphasizes the essential skills required for administrative assistants working in a contemporary office environment. Topics include: typical office protocols, time management, office equipment and technology, records management, meeting and travel planning, and proper business communication. Students will develop their customer service, teamwork, and problem solving skills via real-world office simulations.

**OFM 198 COOPERATIVE INTERNSHIP IN OFM.....3-0-15**
This course consists of employment in a college-approved organization to enable the student to gain insight into the operation of a modern office. The course requires an optimum of 15 hours per week supervised and coordinated by a faculty member. Students are rated by the employer on their job performance. **This course is subject to a course fee.**
**Prerequisites:**
Permission of coordinator

**OFM 243 INTEGRATED OFFICE SOFTWARE APPLICATIONS..... 3-3-0**
This capstone course builds upon prior word processing, spreadsheet, database, presentation, graphics, and multimedia skills, as it further develops and extends the student's ability to integrate and apply the technology needed for particular "job functions". Online and multimedia applications will be used to incorporate images, audio, and video into a variety of document formats. Students will further develop their decision-making, critical thinking, and problem solving skills via simulations of typical job functions found in professional office environments.
**Prerequisites:**
CIS 110 - Information Systems for Management with Computer Applications, or OFM 101 - Business Software Essentials, or OFM 110 - Microsoft Word Applications

**OFM 245 DESKTOP PUBLISHING..... 3-3-0**
This course is designed for office professional staff, as well as for personal use. Using Microsoft Office Publisher software, students will reinforce and apply Windows skills, publication design techniques, page set-up and document layout, and work with text and graphic elements in a wide variety of business and personal publications. This is primarily a hands-on course.

**OFM 250 PROOFREADING AND EDITING..... 3-3-0**
This course develops proficiency in proofreading and editing skills for the workplace. Students develop skills to detect and correct spelling, punctuation, and grammatical errors and to ensure the use of audience-appropriate language in written communications including memos, letters, reports, email messages, databases, presentation slides, advertisements, and spreadsheets. Students will learn correct formatting of documents from business, health care, finance, and education.
**Prerequisites:**
ENG 010A - Basic Writing or ENG 011 - Basic Writing II or ESL 011 - Basic Writing II

**OFM 298 COOPERATIVE INTERNSHIP IN OFM II.....3-0-15**
This course consists of continued employment in a college-approved organization to enable the student to gain insight into the operation of a modern office. The course requires an optimum of 15 hours per week supervised and coordinated by a faculty member. Students are rated by the employer on their job performance. **This course is subject to a course fee.**
**Prerequisites:**
OFM 198 - Cooperative Internship in OFM I and permission of coordinator

## PUBLIC HEALTH

**PBH 101 INTRODUCTION TO PUBLIC HEALTH..... 3-3-0**
This course is designed to provide an overview of public health in the Unites States and globally as well as engage students in dialogue about the discipline of public health, the profession, and the interdisciplinary approach to addressing population health issues. Students work together in small groups to analyze and evaluate health information, health care systems and the social determinants of health. The history of public health and its five core areas - epidemiology, biostatistics, environmental health, social behavioral health, and health policy - are explored.
**Prerequisites:**
ENG 010A - Basic Writing or ENG 011 - Basic Writing II or ESL 011 - Basic Writing II
REA 011 - Fundamentals of College Reading or REA 017 - Vocabulary and Reading Comprehension Development II

**PBH 102 COMMUNICATION IN PUBLIC HEALTH.....3-3-0**
In this course the critical role of communication within public health is explored. The application of health communication theory to practice including risk communication, health literacy, and cross-cultural issues are examined. Using evidence-based thinking, a foundational understanding of theoretical and applied considerations in developing communication strategies designed to impact health and health behavior is developed.
**Prerequisites:**
PBH 101 - Introduction to Public Health
SPC 110 - Speech Communication or SPC 111 - Introduction to Speech Communication: Cross-Cultural Emphasis or SPC 120 - Public Speaking

**PBH 200 PUBLIC HEALTH EDUCATION.....3-3-0**
This course addresses the field of health education as it relates to Public Health. Theories, practices, and principles of health promotion and disease prevention within U.S. and global communities are discussed using an evidence-based thinking approach. The role of the Health Educator in assessing and planning for community based health challenges is explored.
**Prerequisites:**
PBH 102 - Communication in Public Health

**PBH 201 PUBLIC HEALTH ADMINISTRATION IN THE U.S. HEALTHCARE SYSTEM.....3-3-0**
This course is designed to provide a foundation for understanding the organization of the U.S. healthcare system. The role of public health in the administration of health care services and strategies to improve healthcare efficiency are critically examined. Also addressed is the quality and cost of health care and how policy, planning, ethical issues, and public and private systems can and do impact the health of individuals and populations.
**Prerequisites:**
PBH 200 - Public Health Education

**PBH 202 ENVIRONMENTAL HEALTH.....3-3-0**
This course examines the impact of the environment on human health and explores strategies used by public health professionals to minimize negative environmental effects. Environmental health hazards, exposure pathways and control, and the influence of climate change on individual and population health are discussed.
**Prerequisites:**
BIO 115 - Environmental Biology
PBH 102 - Communication in Public Health

## PHILOSOPHY

**PHI 100 INTRODUCTION TO PHILOSOPHY.....3-3-0**
A general introduction to philosophical issues and the methods of philosophical investigation. The course may be essentially historical in its approach or essentially problem-focused. Readings may be drawn from 'big names' in the history of philosophy (e.g., Aristotle, Plato, Thomas Aquinas, Descartes, Locke, Hume, Mill, and others) or from contemporary 'state-of-the-discipline' sources, or from both. Issues will include some from the following, among others: freewill and determinism; ethical relativism v ethical objectivism; the existence and rationality of belief in the existence of a god; the mind and body problem and the problem of other minds; the nature of persons and the possibility of artificial persons (thinking computers); applied philosophy issues such as the problem of abortion, the problem of same-sex marriage, the problem of death penalty.

**PHI 101 INTRODUCTION TO ETHICS.....3-3-0**
This course is an introduction to the history of the philosophical examination of ethics from ancient Greece through contemporary thought in Western Philosophy will examined. Attention will also be given to non-Western ethical traditions (Confucianism, Buddhism, for example) that began even earlier than well-documented Western ethics. The substance of dominant varieties of objectivist views such as virtue ethics, utilitarianism, and deontological ethics will come under our scrutiny. Similar attention will be given to relativist/subjectivist opposition to these various objectivist views. An on-going focal point for all of the inquiries in the course will be the "debate" between supporters of objectivist views and supporters of "anti"-objectivist views as this "debate" has progressed through history. The course will also include discussion of the proper relation between the government and the diverse substantive ethical perspectives of individuals in a society such as the United States that is intentionally ethically pluralistic.
**Prerequisites:**
ENG 010A - Basic Writing or ENG 011 - Basic Writing II or ESL 011 - Basic Writing II

**PHI 110 INTRODUCTION TO LOGIC.....3-3-0**
This course will discuss and practice the fundamentals of both informal and formal logic: the analysis of arguments, the uses of language, definitions, recognizing and disarming fallacies, and the rules of valid deductive inference in terms of both classical syllogistic logic and a brief introduction of the basics of modern formal logic.

**PHI 115 PROBLEMS IN PHILOSOPHY.....3-3-0**
An introduction to philosophy and philosophical investigation that is less general, but no more advanced, than PHI 100 (Introduction to Philosophy). Philosophical methods will be used to examine some of the most troublesome ethical/social issues of contemporary life. Among the issues/problems that might be discussed are the following: cloning and genetic engineering; drug use and drug addiction; same-sex sexual relations and same-sex marriage; the use of non-human inhabitants of this planet for research and for food; punishment and the death penalty; euthanasia and assisted suicide; racism, sexism, ageism, and affirmative action. Alternative versions of this course may focus on topics such as justice, beauty, truth, and ultimate reality.

**PHI 120 ETHICAL ISSUES AFFECTING CONSUMERS AND HEALTHCARE PROFESSIONS.....3-3-0**
This course addresses the needs of the health care consumer and the provider alike. Stemming from a philosophical base, this course will examine controversies emerging from rapid technological advances and modern health care practice. Conflicts discussed range from the person's right to choose or refuse a particular course of treatment to issues of euthanasia, genetic research, and human experimentation. Students are encouraged to participate in discussions of ethical problems reported in the popular media and to develop a personal decision-making system which can be applied to a variety of ethical issues. Emphasis is on critical analysis and the incorporation of theory to ethical deliberations. The course is interactive, therefore, open discussion format and familiarity with use of the computer is essential.

**PHI 215 COMPARATIVE RELIGIONS.....3-3-0**
An examination and study of the historical backgrounds and present day vitality of the major living religions of the world. Special attention will be focused on the study of ideas, cultic and ethical practices, and philosophical systems of: Hinduism, Buddhism, Jainism, Christianity, Zoroastrianism, Islam, Confucianism, Shintoism, Judaism, Sikhism and Taoism.

## PHYSICS

**PHY 115 TECHNICAL PHYSICS.....4-3-3**
This course is a one-semester, algebra-based overview of topics in introductory physics designed for students in the life sciences. Topics include basic principles of motion, mechanics, statics, work and energy, fluid mechanics, sound and waves, thermal physics, electricity, magnetism, light, and optics. The weekly laboratory is designed to reinforce material introduced in lecture.
**Prerequisites:**
MAT 011 - Beginning Algebra or MAT 011B - Beginning Algebra with Review of Arithmetic with a minimum grade of C. Placement score information can be found on the ACT335 document linked to the online course description.

**PHY 120 INTRODUCTION TO ASTRONOMY.....4-3-3**
Introduction to Astronomy is a one-semester college-level course in basic astronomy. The course may be used as a laboratory science elective with basic algebraic applications. The course explores a broad range astronomical concepts and principles in ten major areas: understanding the sky, apparent motions of the planets and the sun, telescopes and accompanying technology, basic structure and behavior of atoms, origin and analysis of light, origin of the solar system, internal structure and behavior of the sun, lifecycle of all stellar classes, origin and structure of galaxies, and cosmology. Throughout the course, emphasis is placed on the implementation of the scientific method, the evidence that astronomers use to support their conclusions, and the importance of astronomy. (Night-time observing is required). **This course is subject to a course fee.** This course is subject to a course fee. Refer to http://mc3.edu/adm-fin-aid/paying/tuition/course-f ees for current rates.
**Prerequisites:**
ENG 010A - Basic Writing or ENG 011 - Basic Writing II or ESL 011 - Basic Writing II with a minimum grade of C within 5 years
MAT 011 - Beginning Algebra or MAT 011B - Beginning Algebra with Review of Arithmetic with a minimum grade of C within 5 years

**PHY 121 GENERAL PHYSICS I.....4-3-3**
This course, designed for liberal arts and life science majors, is an algebra-based approach to the experimental and analytical study of Newtonian mechanics and thermal physics, emphasizing one-and two-dimensional kinematics, Newton's laws of motion, energy, momentum, conservation theorems, center of mass, rotational dynamics, static equilibrium, thermal properties of materials, calorimetry, the laws of thermodynamics, and heat engines. **This course is subject to a course fee.**
**Prerequisites:**
High school algebra, MAT 011 - Beginning Algebra, or MAT 011B - Beginning Algebra with Review of Arithmetic with a minimum grade of C

**PHY 122 GENERAL PHYSICS II.....4-3-3**
This course, designed for liberal arts and life science majors, is an algebra-based approach to the experimental and analytical study of oscillations, wave motion, acoustics, electrostatics, electric fields, basic direct-current circuits, magnetism, electromagnetic induction, light, and optics. The course also introduces students to the basic concepts of modern physics. **This course is subject to a course fee.**
**Prerequisites:**
PHY121 General Physics I (Algebra-based), is strongly recommended, but not required (Recommended)
High school algebra, MAT 011 - Beginning Algebra, or MAT 011B - Beginning Algebra with Review of Arithmetic with a minimum grade of C

**PHY 151 PRINCIPLES OF PHYSICS I.....4-3-3**
This calculus-based course, designed for physical science majors, presents in depth an experimental and analytical study of Newtonian mechanics and thermal physics, emphasizing one- and two-dimensional kinematics, dynamics, work and energy, conservation theorems, linear and angular momentum, collisions, rotational dynamics, statics, fluid mechanics, thermal properties of materials, laws of thermodynamics, kinetic theory of ideal gases, calorimetry, Carnot cycle, heat engines, and heat pumps. **This course is subject to a course fee.**
**Corequisites:**
MAT 189 - Calculus with a Review of Functions II or MAT 190 - Calculus and Analytic Geometry I. May be taken prior or during course.

**PHY 152 PRINCIPLES OF PHYSICS II.....4-3-3**
This calculus-based course, designed for physical science majors, presents in depth an experimental and analytical study of mechanical oscillators, simple harmonic motion, waves, acoustics, resonance, electrostatics, electric fields, DC and AC circuits, magnetism, electromagnetic induction, electromagnetic waves, including the laws of Coulomb, Faraday, Gauss, Ampere, and Kirchhoff. The course will also cover the nature of light, and geometrical and physical optics, as applied to reflection, refraction, polarization, interference, and diffraction. **This course is subject to a course fee.**
**Prerequisites:**
MAT 189 - Calculus With a Review of Functions II or MAT 190 - Calculus and Analytic Geometry I
PHY 151 - Principles of Physics I
**Corequisites:**
MAT 201 - Calculus and Analytic Geometry II. May be taken prior or during course.

**PHY 153 MODERN PHYSICS.....3-3-0**
A one-semester course covering an introduction to the basic concepts underlying modem physics. Topics include the theories of Special Relativity and Quantum Mechanics with emphasis on the physical phenomena and experiments that led up to the origin of these theories. The course continues through a study of the applications of quantum mechanical theories to specialized areas of modem physics, such as atomic structure, lasers, physics of solids, and nuclear physics. In addition to lectures and problem solving, the course will make use of computer facilities and software to permit the student to observe and experience simulations of realistic numerical problems in the field of modem physics. **This course is subject to a course fee.**
**Prerequisites:**
MAT 201 - Calculus & Analytic Geometry II
PHY 152 - Principles of Physics II

## POLITICAL SCIENCE

**POL 101 INTRO. TO POLITICAL SCIENCE..... 3-3-0**
An introduction to the field of political science and its various divisions. A study of political systems, institutions, processes, and behavior. The purpose of the course is to sensitize the student to the promise and limits of political analysis and to prepare him to pursue more advanced courses.

**POL 124 AMERICAN NATIONAL GOVERNMENT..... 3-3-0**
An examination of the basic structure and functions of American National Government, with emphasis on the power relationships between the Congress, the President, and the Judiciary. Political parties, pressure groups, civil rights, and the federal structure of our government will be stressed.

**POL 125 AMERICAN STATE & LOCAL GOVERN..... 3-3-0**
This course examines the operation of state and local government with analysis of their powers to tax and finance, enforce laws, regulate commerce and business, and promote social and economic welfare.

**POL 202 CIVIL LIBERTIES (CON. LAW II).....3-3-0**
A study of constitutional guarantees designed to protect the individual against arbitrary, unreasonable, and oppressive government. Freedom of speech and of the press, religious freedom, freedom of assembly, property rights. Constitutional problems concerning crime and its punishment.
**Prerequisites:**
POL 124 - American National Government (Recommended)

**POL 240 COMPARATIVE POLITICS.....3-3-0**
This is a course in the comparative analysis of various contemporary political systems. It focuses on the examination of their political cultures, constitutional foundations, governmental structures, policy-making processes, and capacity to adapt to change.

**POL 245 INTERNATIONAL POLITICS.....3-3-0**
This course focuses on the study of contemporary relations between states and other international actors. It places special emphasis on the analysis of foreign policy decision-making, diplomatic practices, international systems, international law and organizations, alliance behavior, conflict and conflict resolution as well as current international problems.

**POL 250 TERRORISM & COUNTER-TERRORISM.....3-3-0**
Terrorism in the 21st century is a global phenomenon. This course is designed to provide a comprehensive and interdisciplinary survey of the history, theory, and modern-day political manifestations of terrorism and counter-terrorism. Terrorism will be evaluated in terms of its underlying cultural, economic, political, and psychological root causes. Effective counteraction and profiling requires empathetic explorations and analyses by students into causes and mind-sets. Counter-terrorism strategies and tactics will also be examined specifically in light of the legal and procedural safeguards that are fundamental to the maintenance of liberal democratic social and political values.
**Prerequisites:**
A passing grade in at least one introductory level course in any of the following: Anthropology, Criminal Justice Studies, Economics, Geography, History, Political Science, Psychology or Sociology

## PSYCHOLOGY

**PSY 101 INTRODUCTION TO PSYCHOLOGY.....3-3-0**
An examination of the vocabulary, theories and research methods common to the various branches of the science of psychology. The course surveys psychology from its early history to important new advances in brain research. The principles of psychology are applied to learning, to mental health, and to everyday life.

**PSY 101H INTRODUCTION TO PSYCHOLOGY HONORS.....3-3-0**
An examination of the vocabulary, theories and research methods common to the various branches of the science of psychology. The course surveys psychology from its early history to important new advances in brain research. The principles of psychology are applied to learning, to mental health, and to everyday life. This Honors course fosters high-achieving students' growth towards learning outcomes such as: problem solving, often with creative approaches; critical reading, artistic literacy, or original data analysis; forming judgments based on evidence, often from alternative modes of inquiry or integrative learning; clear, persuasive research writing; oral presentation; and articulate reflection on personal growth. Honors courses are more likely to utilize student-driven active learning, emphasizing exploration and discovery, rather than the acquisition of specific knowledge; faculty might provide projects with no pre-determined conclusion, but with real-world application.

**PSY 136 PERSONALITY..... 3-3-0**
A comparison of major approaches to the study of the development and structure of normal personality. Topics include the applications of psychological research to understanding and promoting mental health and human resilience. Consideration is given to the role of healthy personality in managing frustration, conflict, adjusting to predictable and unpredictable life changes, and achieving maximum well-being.

**PSY 137 INTRODUCTION TO ORGANIZATIONAL PSYCHOLOGY... 3-3-0**
Explores the application of psychological theory and research to understanding and improving work environments in both for profit and non-profit organizations. Students will gain skills through experiential learning of topics including enhancing motivation, performance evaluation, job satisfaction, communication, conflict resolution, achievement and leadership.

**PSY 200 CHILD PSYCHOLOGY..... 3-3-0**
This course is a study of human development from concept through adolescence. Physical, psychological, social, and emotional development is examined. The major theories are introduced as the back bone to the course. Research and its application to child development are also included. Historical relevance and cultural differences are also embedded throughout the course.
**Prerequisites:**
PSY 101 - Introduction to Psychology

**PSY 203 ASSESSMENT & DOCUMENTATION IN HUMAN SERVICES..... 3-3-0**
This course is designed to teach students the necessary skills to assess and document client interactions in a human services agency or program. Students will explore the nature of the helping relationship, demonstrate their active listening abilities, learn how to gather information, build treatment plans, and write case notes. Students will also understand case management in a managed care environment, and the legal, ethical and regulatory implications of comprehensive assessment and documentation.
**Prerequisites:**
ENG 101 - English Composition I with a minimum grade of C
HSW 101 - Introduction to Human Services and the Helping Profession with a minimum grade of C

**PSY 204 ADOLESCENT PSYCHOLOGY.....3-3-0**
The effects of experiences in childhood and of cultural institutions on adolescence are identified and analyzed. Major themes and topics researched and discussed include: historical and current theories on adolescent development; personality; the development of healthy and unhealthy coping styles; and major indicators of cognitive, physical and psychosocial development.

**PSY 206 HUMAN DEVELOPMENT/LIFE-SPAN AP.....3-3-0**
A study of human development from conception to death. The physical, social, psychological and cognitive areas of life-span development will be examined. The major theories of human development the potential age stage-related crisis and other related problems of each stage will be given careful attention.

**PSY 210 EDUCATIONAL PSYCHOLOGY.....3-3-0**
This course investigates three models (Behavioristic, Humanistic, and Cognitive) of human functioning and selected learning strategies derived from each. In addition, a number of traits and behaviors (e.g. SES, culture, motivation, curiosity, creativity, and intelligence) related to children's learning and cognitive developments are explored.

**PSY 214 SOCIAL PSYCHOLOGY.....3-3-0**
Social psychology is a subfield of the science of psychology that focuses the ways in which the thoughts, feelings, and behaviors of one individual are influenced by the real, imagined, or implied behaviors or characteristics of others. A primary goal of this course is to introduce you to the perspectives, research methods, and empirical findings of social psychology. Equally important is the goal of cultivating your skills for analyzing the social situations and events that you encounter in your everyday lives. Finally, throughout the course, emphasis will be placed on developing critical and integrative ways of thinking about theory and research in social psychology. The course will focus on how man, as a social species, relates to one another. The course will also emphasize attitudes, persuasion, moral development, competition, aggression, attraction and love, prejudice and discrimination, group formation, research skills, and information literacy.

**PSY 215 ABNORMAL PSYCHOLOGY..... 3-3-0**
Biology, behavior and environment interact in complex ways to produce what is defined as abnormal. Historical material, pertinent research and relevant case studies provide an understanding of abnormal psychology and its impact on all of us.

**PSY 216 ASSESSMENT & TECHNIQUES FOR CHILD/YOUTH..... 3-3-0**
This course is designed to develop the knowledge and skills in assessing the risk factors in the current situation of the child and/or adolescent. The course will focus upon the youth, educational, social, psychological, emotional and physical environment to determine the level of required intervention. Students will learn the techniques needed to assess and reduce risk factors.
**Prerequisites:**
HSW 101 - Introduction to Human Services and the Helping Profession

**PSY 217 DRUGS - THEIR USE AND ABUSE.....3-3-0**
This course explores the scientific facts about drugs commonly used and abused and their impact on human life. It details and integrates biological, psychological, social and cultural components of the most popular psychoactive substances. Legal, illegal, prescription, over-the-counter, performance enhancing substances as well as herbal medications is researched and described.

**PSY 219 THE DRUG AND ALCOHOL TREATMENT PROCESS: AN INTRODUCTION.....3-3-0**
Designed to provide a working knowledge of the helping process as it applies to drug and alcohol counseling, students completing this course should be able to: develop assessment and diagnostic skills; formulate appropriate goals, and treatment plans; improve interviewing and intervention skills with drug/alcohol clients; discuss and compare individual, group, and family treatment approaches; describe the levels of service available to drug/alcohol clients and their families; use AA, AL-ANON and other support groups as treatment allies; appreciate the impact of sex, age, ethnicity, race and religion on the treatment process; and understand the American Psychiatric Association's (DSM V) assessment of substance use disorders, anti-social personalities and depression.

**PSY 231 RESEARCH METHODS IN PSYCHOLOGY.....4-3-1**
This course provides students with foundational knowledge and skills required to conduct valid research in psychology and other social sciences. Students will learn how to formulate a research study, prepare a proposal, and identify the ethical guidelines for research with human subjects. Approaches to measurement of behavior and experience, analysis and interpretation of results, and preparation of a written report of findings will be included. Three hours per week will be devoted to lecture/class presentation, and one hour per week will be spent in guided small group work on development and implementation of a research project.
**Prerequisites:**
PSY 101 - Introduction to Psychology
MAT 130 - Probability and Statistics or MAT 131 - Introduction to Statistics

**PSY 232 POSITIVE PSYCHOLOGY.....3-3-0**
This course provides an overview of the field of Positive Psychology. The course is designed to broaden the scope of traditional Psychology by examining the circumstances under which humans, institutions, and communities thrive. It presents theory and research related to strengths, optimism, happiness, and resiliency. A strong emphasis is placed on the application of empirically-based knowledge. Information is delivered through lectures, readings, in-class exercises, out-of-class activities, and class discussion.

**PSY 250 PSYCHOLOGY OF AGING: HELPING SKILLS IN WORKING WITH OLDER ADULTS.....3-3-0**
This course is an in-depth exploration of psychological theories and their applications to appreciating and working with older adults. Students will have the opportunity to gain an increased understanding of their own personal development and self knowledge in the context of the life cycle and to explore feelings about the aging process. Classroom experiences that focus on enhancing communications skills will be designed to enable students to translate psychological theories and helping techniques to every day family and job-related encounters with older adults. Open to all majors.
**Prerequisites:**
HSW 155 - Introduction to Aging, PSY 101 - Introduction to Psychology, or SOC 101 - Introduction to Sociology

**PSY 255 HUMAN SEXUALITY.....3-3-0**
A survey of the major topic of sex education with emphasis placed on: sexual development, functioning, behavior, gender identification, reproduction, interpersonal relationships, health, historical and cultural sex studies, and sex education.

## PHYSICAL THERAPIST ASSISTANT

**PTA 100 FUNDAMENTALS OF PHYSICAL THERAPIST ASSISTING AND DATA COLLECTION..... 3-2-4**
This course explores common health conditions encountered in the physical therapy discipline and introduces the Physical Therapy Assistant (PTA) student to basic patient and healthcare team considerations critical to the professional role. Evaluative techniques essential to the discipline are stressed while concepts and purposes of therapeutic exercise and treatment strategies are presented. A focus on the characteristics and components of normal movement serve to assist the student in understanding the abnormal. Within the course the development of effective communication and interpersonal skills is fostered. During student-to-student practice in the on-campus laboratory setting students use simulated patient scenarios to demonstrate competency attainment in fundamental assessments, patient care skills and procedures. **This course is subject to a course fee.**
**Prerequisites:**
Complete developmental requirements in English, Mathematics, and Reading
**Corequisites:**
PTA 110 - Therapeutic Modalities in Physical Therapy. May be taken prior or during course.

**PTA 110 THERAPEUTIC MODALITIES IN PHYSICAL THERAPY..... 3-2-4**
This course addresses the basic physical science, data collection, and principles of selected physical therapy interventions to facilitate healing and pain control. Presentation of a wide variety of clinical scenarios and pathologies facilitates the student's ability to use clinical judgement in selecting applying appropriate modalities. During student-to-student practice in the on-campus laboratory setting students use simulated patient scenarios to demonstrate competency attainment. **This course is subject to a course fee.**
**Prerequisites:**
HCP 224 - Medical Terminology
MAT 106 - Math Applications
PHY 115 - Technical Physics
ENG 101 - English Composition I
ESW 222 - Applied Kinesiology and ESW 224 - Exercise Physiology
CMS 120 - Public Speaking
HCP/PHI 120 - Ethical Issues Affecting Consumers and Healthcare Professions
PSY 206 - Human Development - A Life-Span Approach
Arts and Humanities Elective that meets core
**Corequisites:**
PTA 100 - Fundamentals of Physical Therapist Assisting and Data Collection. May be taken prior or during course.

**PTA 200 PATHOLOGY & REHAB OF ORTHOPEDIC CONDITIONS ACROSS THE LIFESPAN AND CONTINUUM OF CARE..... 5-4-4**
This course emphasizes the etiology, pathology, prevention, data collection, and appropriate physical therapy interventions related to orthopaedic conditions. Application of orthotic devices, braces and splints for orthopedic conditions is discussed. Evidence based practice, clinical research, and justifying interventions based on clinical literature is integrated in the study of musculoskeletal system conditions. Critical thinking skills are developed as the student applies data in clinical decision making. During student-to-student practice in the on-campus laboratory setting students use simulated patient scenarios to demonstrate competency attainment. **This course is subject to a course fee.**
**Prerequisites:**
PTA 100 - Fundamentals of Physical Therapist Assisting and Data Collection and PTA 110 - Therapeutic Modalities in Physical Therapy
**Corequisites:**
PTA 201 - Physical Therapist Assistant Roles, Relationships and Responsibilities Seminar I. May be taken prior or during course.

**PTA 201 PHYSICAL THERAPIST ASSISTANT (PTA) ROLES, RELATIONSHIPS AND RESPONSIBILITIES SEMINAR I.....2-2-0**
First of four seminars designed to foster professional development and prepare the physical therapist assistant student to successfully complete essential competencies and behaviors in the field of physical therapy. Orientation to the profession and the performance and behavioral expectations of the physical therapist assistant are discussed.
**Prerequisites:**
PTA 100 - Fundamentals of Physical Therapist Assisting and Data Collection and PTA 110 - Therapeutic Modalities in Physical Therapy
**Corequisites:**
PTA 200 - Pathology & Rehabilitation of Orthopedic Conditions Across the Lifespan and Continuum of Care. May be taken prior or during course.

**PTA 202 PHYSICAL THERAPIST ASSISTANT (PTA) ROLES, RELATIONSHIPS AND RESPONSIBILITIES SEMINAR II.....1-1-0**
Second of four seminars designed to foster professional development and prepare the physical therapist assistant student to successfully complete essential competencies and behaviors in the field of physical therapy. Evidenced practice and the role of the PTA as teacher is examined. Building on the first seminar course, discussion of performance and behavioral expectations of the physical therapist assistant continues.
**Prerequisites:**
PTA 201 - Physical Therapist Assistant (PTA) Roles, Relationships and Responsibilities Seminar I
**Corequisites:**
PTA 221 - Clinical Education I. May be taken prior or during course.

**PTA 203 PHYSICAL THERAPIST ASSISTANT (PTA) ROLES, RELATIONSHIPS AND RESPONSIBILITIES SEMINAR III.....1-1-0**
Third of four seminars designed to foster professional development and prepare the physical therapist assistant (PTA) student to successfully complete essential competencies and behaviors in the field of physical therapy. Learning opportunities assist in the transition from student to entry-level clinician. Activities include national board exam review preparation, Pennsylvania State PTA certification application process, job search strategies, resume development, and professional interview skills. Student self-assessment of performance and behavioral expectations met during the concurrent PTA 222 Clinical Education II experience is explored.
**Prerequisites:**
PTA 210 - Pathology & Rehabilitation or Neurological Conditions Across the Lifespan and Continuum of Care and PTA 220 - Pathology & Rehabilitation of Special Populations and Conditions Across the Lifespan and Continuum of Care
**Corequisites:**
PTA 222 - Clinical Education II. May be taken prior or during course.

**PTA 204 PHYSICAL THERAPIST ASSISTANT (PTA) ROLES, RELATIONSHIPS AND RESPONSIBILITIES SEMINAR IV..... 1-1-0**
Last of four seminars designed to foster professional development and prepare the physical therapist assistant student to successfully complete essential competencies and behaviors in the field of physical therapy. Participation in the healthcare environment and practice management of the physical therapy service is examined. Student self-assessment of performance and behavioral expectations met during the concurrent PTA 223 Clinical Education III experience is explored.
**Prerequisites:**
PTA 222 - Clinical Education II and PTA 203 - Physical Therapist Assistant (PTA) Roles, Relationships and Responsibilities Seminar III
**Corequisites:**
PTA 223 - Clinical Education III. May be taken prior or during course.

**PTA 210 PATHOLOGY & REHABILITATION OF NEUROLOGICAL CONDITIONS ACROSS THE LIFESPAN AND CONTINUUM OF CARE..... 5-4-4**

This course emphasizes the etiology, pathology, prevention, data collection, and appropriate physical therapy interventions related to neurological conditions. Focus on motor control and motor learning throughout the lifespan serves to assist the student in understanding the abnormal. Application of orthotic devices, braces and splints for neurological conditions is discussed. Evidence based practice, clinical research, and justifying interventions based on clinical literature is integrated in the study of neurological conditions. Critical thinking skills are further developed as the student applies data in clinical decision making. During student-to-student practice in the on-campus laboratory setting students use simulated patient scenarios to demonstrate competency attainment. **This course is subject to a course fee.**

**Prerequisites:**
PTA 202 - Physical Therapist Assistant (PTA) Roles, Relationships and Responsibilities Seminar II and PTA 221 - Clinical Education I

**Corequisites:**
PTA 220 - Pathology & Rehabilitation of Special Populations and Conditions Across the Lifespan and Continuum of Care. May be taken prior or during course.

**PTA 220 PATHOLOGY & REHABILITATION OF SPECIAL POPULATIONS AND CONDITIONS ACROSS THE LIFESPAN AND CONTINUUM OF CARE.....4-3-4**

This course emphasizes the etiology, pathology, prevention, data collection, and selected physical therapy interventions for management of patients with a variety of long term conditions that benefit from rehabilitative services. The physical therapy related needs of the geriatric population are discussed as many of these conditions impact the elderly. Emphasis is placed on wound care and lower extremity amputation physical therapy interventions. **This course is subject to a course fee.**

**Prerequisites:**
PTA 221 - Clinical Education I and PTA 202 - Physical Therapist Assistant (PTA) Roles, Relationships and Responsibilities Seminar II

**Corequisites:**
PTA 210 - Pathology & Rehabilitation or Neurological Conditions Across the Lifespan and Continuum of Care. May be taken prior or during course.

**PTA 221 CLINICAL EDUCATION I.....2-0-16**

This integrated 7-week clinical affiliated course of 240 hours affords the beginning Physical therapist Assistant (PTA) student direct patient care experience in applying assessments, procedures and skills under the direct supervision of a licensed practitioner of physical therapy. With a focus on safe, legal, ethical and effective use of physical therapy interventions the acute or out-patient setting affords the student with a variety of clinical experiences with diverse patient populations where professional competency within the scope of practice of the PTA is developed. Supervision of the student at the beginner level is provided by the staff of the affiliating institution and is coordinated by the college faculty. **This course is subject to a course fee.**

**Prerequisites:**
PTA 200 - Pathology & Rehabilitation of Orthopedic Conditions Across the Lifespan and Continuum of Care and PTA 201 - Physical Therapist Assistant (PTA) Roles, Relationships and Responsibilities Seminar I

**Corequisites:**
PTA 202 - Physical Therapist Assistant (PTA) Roles, Relationships and Responsibilities Seminar II

**PTA 222 CLINICAL EDUCATION II.....2-0-16**

This integrated 7-week clinical affiliated course of 240 hours affords the PTA intermediate student direct patient care experience in applying assessments, procedures and skills under the direct supervision of a licensed practitioner of physical therapy. With a focus on safe, legal, ethical and effective use of physical therapy interventions the acute or out-patient setting affords the student with a variety of clinical experiences with diverse patient populations where professional competency within the scope of practice of the PTA is developed. Supervision of the student at the intermediate level is provided by the staff of the affiliating institution and is coordinated by the college faculty. **This course is subject to a course fee.**

**Prerequisites:**
PTA 210 - Pathology & Rehabilitation or Neurological Conditions Across the Lifespan and Continuum of Care and PTA 220 - Pathology & Rehabilitation of Special Populations and Conditions Across the Lifespan and Continuum of Care

**Corequisites:**
PTA 203 - Physical Therapist Assistant (PTA) Roles, Relationships and Responsibilities Seminar III

**PTA 223 CLINICAL EDUCATION III.....2-0-16**

This terminal 6-week clinical affiliated course of 240 hours affords the PTA student preparing for entry level practice direct patient care experience in applying assessments, procedures and skills under the direct supervision of a licensed practitioner of physical therapy. With a focus on safe, legal, ethical and effective use of physical therapy interventions the acute or out-patient setting affords the student with a variety of clinical experiences with diverse patient populations where professional competency within the scope of practice of the PTA is developed. Supervision of the student culminating in entry level practice is provided by the staff of the affiliating institution and is coordinated by the college faculty. **This course is subject to a course fee.**

**Prerequisites:**
PTA 203 Physical Therapist Assistant (PTA) Roles, Relationships and Responsibilities Seminar III and PTA 222 - Clinical Education II

**Corequisites:**
PTA 204 - Physical Therapist Assistant (PTA) Roles, Relationships and Responsibilities Seminar

## RADIOGRAPHY

**RAD 100 INTRODUCTION TO RADIOGRAPHY & PATIENT CARE....3-3-0**

This course will provide the student with an overview of the foundations in radiography and the practitioner's role in the health care delivery system. Principles, practices and policies of the health care organizations will be examined and discussed in addition to the professional responsibilities of the radiographer. Communication skills and professional conduct of the radiographer in the clinical setting will also be introduced. Basic concepts of patient care, physical and psychological needs of the patient, and routine and emergency patient care will be described. Human diversity in health care will be discussed and its impact in the treatment of patients. In addition, a self-teaching workbook and self-assessments will be utilized to learn medical terminology.

**Prerequisites:**
BIO 131 - Human Anatomy and Physiology I and BIO 132 - Human Anatomy and Physiology II with a minimum grade of C on the first attempt within 5 years
MAT 100 - Intermediate Algebra with a minimum grade of C on the first attempt within 5 years

**Corequisites:**
RAD 102 - Radiographic Exposure and Technique. May be taken prior or during course.
RAD 104 - Clinical Education I. May be taken prior or during course.
RAD 111 - Radiographic Procedures. May be taken prior or during course.

**RAD 102 RADIOGRAPHIC EXPOSURE AND TECHNIQUE..... 3-2-2**
This course is designed to provide the student with the entry-level knowledge base to formulate the applicable factors that influence the production of radiographic images. An introduction to digital imaging with related accessories will be discussed. Demonstrations and student experimentation will be included in the application of the theory. **This course is subject to a course fee.**
**Prerequisites:**
BIO 131 - Human Anatomy and Physiology I and BIO 132 - Human Anatomy and Physiology II with minimun grade of C on the first attempt within five (5) years
MAT 100 - Intermediate Algebra or higher with minimum grade of C on the first attempt within five (5) years
**Corequisites:**
RAD 100 - Introduction to Radiography and Patient Care. May be taken prior or during course.
RAD 104 - Clinical Education I. May be taken prior or during course.
RAD 111 - Radiographic Procedures I. May be taken prior or during course.

**RAD 103 RADIATION PROTECTION AND BIOLOGY.....2-2-0**
This course is designed to present an overview of the basic principles of radiation protection and the principles of the interaction of radiation with living organisms. Included in this course are the various methods of protecting the radiographer, patient and others from unnecessary radiation exposure and limitation devices used to limit exposure. Factors affecting biological responses are presented including acute and chronic effects of radiation. Basic principles regarding exposure will be discussed. Radiation health and safety requirements of federal and state agencies will also be incorporated.
**Prerequisites:**
RAD 124- Clinical Education III
**Corequisites:**
RAD 214 - Clinical Education IV. May be taken prior or during course.
RAD 221 - Radiographic Procedures III. May be taken prior or during course.

**RAD 104 CLINICAL EDUCATION I.....3-0-15**
During this first semester of Clinical Education, students will be assigned to clinical areas in the clinical education center, which coincide with didactic information covered during the semester in Procedures I (RAD 111), Radiographic Exposure and Technique I (RAD 102), and Introduction to Radiography (RAD 100). Students will be oriented to ethics and laws as they pertain to imaging, clinical rules and regulations, the department of radiology to which they are assigned, and the clinical education handbook. Students will attend clinical education for 15 hours per week. **This course is subject to a course fee.**
**Prerequisites:**
BIO 131 - Human Anatomy and Physiology I and BIO 132 - Human Anatomy and Physiology II with minimun grade of C on the first attempt within five (5) years
MAT 100 - Intermediate Algebra or higher with minimum grade of C on the first attempt within five (5) years
**Corequisites:**
RAD 100 - Introduction to Radiography and Patient Care. May be taken prior or during course.
RAD 102 - Radiographic Exposure and Technique. May be taken prior or during course.
RAD 111 - Radiographic Procedures I. May be taken prior or during course.

**RAD 105 RADIATION PHYSICS.....3-3-0**
This course is designed to establish a basic knowledge of atomic structure and terminology. The nature and characteristic of radiation, x-ray production and the fundamentals of photon interactions with matter are included. Students will establish a knowledge base in radiographic, fluoroscopic, mobile, and tomographic requirements and design. Basic quality control will also be discussed.
**Prerequisites:**
RAD 100 - Introduction to Radiography and Patient Care, RAD 102 - Radiographic Exposure and Technique, RAD 104 - Clinical Education I, and RAD 111 - Radiographic Procedures I
**Corequisites:**
RAD 113 - Principles of Digital Imaging. May be taken prior or during course.
RAD 121 - Radiographic Procedures II. May be taken prior or during course.
RAD 114 - Clinical Education II. May be taken prior or during course.

**RAD 111 RADIOGRAPHIC PROCEDURES I.....3-2-2**
Radiographic Procedures I is designed to provide the knowledge base necessary to perform standard radiographic procedures. This course combines didactic coursework along with laboratory demonstration, simulation and practice. Students will learn radiographic procedures of the chest, abdomen and upper extremity and shoulder girdle. **This course is subject to a course fee.**
**Prerequisites:**
BIO 131 - Human Anatomy and Physiology I and BIO 132 - Human Anatomy and Physiology II with minimun grade of C on the first attempt within five (5) years
MAT 100 - Intermediate Algebra or higher with minimum grade of C on the first attempt within five (5) years
**Corequisites:**
RAD 100 - Introduction to Radiography and Patient Care. May be taken prior or during course.
RAD 102 - Radiographic Exposure and Technique. May be taken prior or during course.
RAD 104 - Clinical Education I. May be taken prior or during course.

**RAD 113 PRINCIPLES OF DIGITAL IMAGING.....3-2-2**
This course focuses specifically on the components, principles and operation of digital imaging systems. Factors that impact image acquisition, display, archiving and retrieval are discussed. Quality control and continuous quality management will also be presented.
**Prerequisites:**
RAD 100 - Introduction to Radiography and Patient Care, RAD 102 - Radiographic Exposure and Technique, RAD 104 - Clinical Education I, and RAD 111 - Radiographic Procedures I
**Corequisites:**
RAD 105 - Radiation Physics. May be taken prior or during course.
RAD 114 - Clinical Education II. May be taken prior or during course.
RAD 121 - Radiographic Procedures II. May be taken prior or during course.

**RAD 114 CLINICAL EDUCATION II..... 3-0-15**
This clinical course is a continuation of Clinical Education I. Emphasis is placed on clinical rotations where students can observe, practice and perform those examinations learned and simulated in the Radiographic Procedures I and II course. Students will be required to perform competency examinations, image evaluations and proper patient care procedures. **This course is subject to a course fee.**
**Prerequisites:**
RAD 100 - Introduction to Radiography and Patient Care, RAD 102 - Radiographic Exposure and Technique, RAD 104 - Clinical Education I, RAD 111 - Radiographic Procedures I
**Corequisites:**
RAD 105 - Radiation Physics. May be taken prior or during course.
RAD 113 - Principles of Digital Imaging. May be taken prior or during course.
RAD 121 - Radiographic Procedures II. May be taken prior or during course.

**RAD 121 RADIOGRAPHIC PROCEDURES II.....3-2-2**
This course is a continuation of the Radiographic Procedures I (RAD 111) course. This course is designed to prepare the student to perform certain radiographic procedures of the lower extremity and spine that are of optimal diagnostic quality. Laboratory experience combined with simulations and clinical experience are used to complement the didactic portion of the course. **This course is subject to a course fee.**
**Prerequisites:**
RAD 100 - Introduction to Radiography and Patient Care, RAD 102 - Radiographic Exposure and Technique, RAD 104 - Clinical Education I, and RAD 111 - Radiographic Procedures I
**Corequisites:**
RAD 105 - Radiation Physics. May be taken prior or during course.
RAD 113 - Principles of Digital Imaging. May be taken prior or during course.
RAD 114 - Clinical Education II. May be taken prior or during course.

**RAD 124 CLINICAL EDUCATION III.....4-0-20**
This course is a continuation of the Clinical Education series. Students will spend 20 hours per week during the Summer Sessions at the clinical education center observing, assisting and performing radiologic examinations. Students will utilize this concentrated time to master positioning, technique and patient care skills that they learned throughout the first year of the program. **This course is subject to a course fee.**
**Prerequisites:**
RAD 105 - Radiation Physics, RAD 113 - Principles of Digital Imaging, RAD 114 - Clinical Education II, and RAD 121 - Radiographic Procedures II

**RAD 214 CLINICAL EDUCATION IV.....4-0-20**
The student will observe, assist and perform radiographic examinations at the Clinical Education Centers that correlate with the didactic courses in those areas. Special attention during this semester will be given to fluoroscopic procedures as well as imaging of the skull and sinuses. **This course is subject to a course fee.**
**Prerequisites:**
RAD 124 - Clinical Education III
**Corequisites:**
RAD 103 - Radiation Protection and Biology. May be taken prior or during course.
RAD 221 - Radiographic Procedures III. May be taken prior or during course.

**RAD 221 RADIOGRAPHIC PROCEDURES III.....3-2-2**
As a continuation of Radiographic Procedures, this course will provide the student with the knowledge to perform standard radiographic procedures of the skull, sinuses and contrast media studies. Special studies including venography, angiography, mammography, CT, MRI and vascular imaging will be included. Coursework will also include pharmacology and cross sectional anatomy. Laboratory simulations as well as student practice will be emphasized in this course. **This course is subject to a course fee.**
**Prerequisites:**
RAD 124 - Clinical Education III
**Corequisites:**
RAD 103 - Radiation Protection and Biology. May be taken prior or during course.
RAD 214 - Clinical Education IV. May be taken prior or during course.

**RAD 224 CLINICAL EDUCATION V.....4-0-20**
As the last of the clinical education series, students will be completing their clinical competency examinations and will have the opportunity to rotate to various specialty areas in the radiology department. In addition, program officials and/or designees will be completing terminal competency examinations with each student to assure program competency. Terminal competency evaluations must be successfully completed by each student in order to be eligible for graduation and professional practice. **This course is subject to a course fee.**
**Prerequisites:**
RAD 103 - Radiation Protection and Biology, RAD 214 - Clinical Education IV, and RAD 221 - Radiographic Procedures III
**Corequisites:**
RAD 230 - Radiographic Pathology. May be taken prior or during course.
RAD 250 - Professional Issues in Radiography. May be taken prior or during course.

**RAD 230 RADIOGRAPHIC PATHOLOGY.....2-2-0**
This course introduces theories of disease causation and the pathophysiologic disorders that compromise healthy systems as applied to the radiographer. Etiology, responses and radiographic manifestations will be discussed. Each major body system will be included to address radiographic appearance of disease and disease management. The major emphasis of this course is how radiographic examinations demonstrate different pathologies.
**Prerequisites:**
RAD 103 - Radiation Protection and Biology, RAD 214 - Clinical Education IV, and RAD 221 - Radiographic Procedures III
**Corequisites:**
RAD 224 - Clinical Education V. May be taken prior or during course.
RAD 250 - Professional Issues in Radiography. May be taken prior or during course.

**RAD 250 PROFESSIONAL ISSUES IN RADIOGRAPHY..... 1-1-0**
This culminating course will assist the graduate in preparing for job interviews, career advancement, resume writing and other life skills that the graduate radiographer will need. With the use of guest speakers, representatives from area institutions and career placement counselors, the student will complete the curriculum with the advantage of career advice and counseling. Students will be required to complete a capstone project.
**Prerequisites:**
RAD 103 - Radiation Protection and Biology, RAD 214 - Clinical Education IV, and RAD 221 - Radiographic Procedures III
**Corequisites:**
RAD 230 - Radiographic Pathology. May be taken prior or during course.
RAD 224 - Clinical Education V. May be taken prior or during course.

## READING/STUDY SKILLS

**REA 010 ELEMENTS OF READING.....0-3-0**
Elements of Reading is a developmental course designed to help students improve basic academic reading strategies including word analysis, vocabulary building, literal and interpretative comprehension. An appreciation of reading as a basic tool of learning will be fostered. This precollege level course cannot be used to fulfill a degree requirement nor is it calculated in a student's Grade Point Average (GPA); however, the credits billed will be applied towards a student's financial aid enrollment status and enrollment status reported to the National Student Clearinghouse.
**Prerequisites:**
Reading placement test recommendation of REA 010

**REA 011 FUNDAMENTALS OF COLLEGE READ..... 0-3-0**
This is a course designed to develop higher level reading comprehension skills necessary at the college level. The course focus is on comprehension strategies, critical reading and thinking, information literacy, and vocabulary development. The development of a more extensive vocabulary is emphasized. This precollege level course cannot be used to fulfill a degree requirement nor is it calculated in a student's Grade Point Average (GPA); however, the credits billed will be applied towards a student's financial aid enrollment status and enrollment status reported to the National Student Clearinghouse.
**Prerequisites:**
REA 010 - Elements of Reading with a minimum grade of C

**REA 014 VOCABULARY AND READING COMPREHENSION DEVELOPMENT I.....0-3-0**
This reading course, designed for non-native English speaking students, focuses on development of academic reading skills, literal and interpretative comprehension, and vocabulary development. This course prepares non-native English speaking students to take college courses leading to a degree, a certificate, or to transfer. This precollege level course cannot be used to fulfill a degree requirement nor is it calculated in a student's Grade Point Average (GPA); however, the credits billed will be applied towards a student's financial aid enrollment status and enrollment status reported to the National Student Clearinghouse.
**Prerequisites:**
ESL 006 - English as a Second Language II with a minimum grade of C

**REA 017 VOCABULARY & READING COMPREHENSION DEVELOPMENT II.....0-3-0**
Vocabulary and Reading Comprehension Development is designed to prepare advanced non-native English speaking students for the rigors of a college curriculum. The course focuses on comprehension strategies, critical reading and thinking, information literacy, and vocabulary development. There is a strong emphasis on vocabulary development. This precollege level course cannot be used to fulfill a degree requirement nor is it calculated in a student's Grade Point Average (GPA); however, the credits billed will be applied towards a student's financial aid enrollment status and enrollment status reported to the National Student Clearinghouse.
**Prerequisites:**
REA 014 - Vocabulary and Reading Comprehension Development I with a minimum grade of C

**REA 110 COMPREHENSION STRATEGIES FOR COLLEGE READING I.....3-3-0**
This course is designed to enhance higher level critical reading and thinking skills through extensive guided practice with academic discipline-based and informational readings. Students learn several appropriate problem-solving strategies: analysis, interpretation, synthesis, and evaluation. Practice and utilization of discipline-specific vocabulary and lecture related note-taking are also fostered.
**Prerequisites:**
REA 011 - Fundamentals of College Reading or REA 017 - Vocabulary and Reading Comprehension Development II with a minimum grade of C

## STRATEGIES FOR COLLEGE SUCCESS

**SCS 101 STRATEGIES FOR COLLEGE SUCCESS.....2-2-1**
An introduction to academic success strategies which includes: time management; goal setting; critical thinking; learning styles; test taking skills; familiarization with college resources; appreciation of diversity in college and career development. Students will engage in various self-assessments that encourage positive academic success strategies. This course also includes a lab component of individualized academic advising throughout the semester by the course instructor. NOTE: This course is mandatory for all students testing into any 010 developmental course or two or more developmental courses as a result of the placement tests.
**Prerequisites:**
ESL 010 - Basic Writing I for students who place into ESL courses

## SOCIOLOGY

**SOC 101 INTRODUCTION TO SOCIOLOGY.....3-3-0**
This course introduces the scientific study of human society. It presents the basic components of sociology, i.e., groups, society, culture, socialization, institutions, collective behavior, stratification, and social change, for review and critique. Social structures, social rules and change within society is explored with respect to the history of societal development as well as current social trends.

**SOC 101H INTRODUCTION TO SOCIOLOGY HONORS.....3-3-0**
This course introduces the scientific study of human society. It presents the basic components of sociology, i.e., groups, society, culture, socialization, institutions, collective behavior, stratification, and social change, for review and critique. Social structures, social rules and change within society are explored with respect to the history of societal development as well as current social trends. This Honors course fosters high-achieving students' growth towards learning outcomes such as: problem solving, often with creative approaches; critical reading, artistic literacy, or original data analysis; forming judgments based on evidence, often from alternative modes of inquiry or integrative learning; clear, persuasive research writing; oral presentation; and articulate reflection on personal growth. Honors courses are more likely to utilize student-driven active learning, emphasizing exploration and discovery, rather than the acquisition of specific knowledge; faculty might provide projects with no pre-determined conclusion, but with real-world application.

**SOC 103 SOCIAL PROBLEMS.....3-3-0**
This course offers a critical examination of major social problems in the contemporary United States within the context of wider global issues. Students will learn to think sociologically about the causes and consequences of contemporary social problems. Course focus is on uncovering the social conditions, forces, and social structures that give rise to social problems. Problems covered include but are not limited to: poverty, gender, homophobia/heterosexim, race and class inequality, crime, education, environment and health care.

**SOC 105 SOCIAL POLICY & ETHICS IN HUMAN SERVICES.....3-3-0**
This course examines the relationship of social policy, ethics, and the human services field. Students will address ethical dilemmas, particularly as they relate to current and needed social policies on local, state, and national levels. A basic understanding of social welfare theories will assist the student in evaluating, assessing, and advocating for change in both a micro / macro perspective. The Ethical Standards of Human Service Professionals (National Organization for Human Services) will serve as a backbone for students to use in decision-making, assessment of clients and client groups, and promotion of change in a diverse setting.

**SOC 130 INTRODUCTION TO YOUTH AND FAMILY SYSTEMS.....3-3-0**
This introductory course examines children and youth within the context of their familial role. Emphasis is placed upon non-traditional as well as traditional family systems and the impact that issues such as divorce, substance abuse, child abuse and incarceration has on the various units in the family system.

**SOC 220 CRIMINOLOGY..... 3-3-0**
A study of crime and delinquency patterns, their causes, and remedial measures, emphasizing social, economic, and psychological forces involved in the shaping of criminal behavior. The role of law enforcement and the functioning of treatment and punishment models will also be discussed.
**Prerequisites:**
CJS 100 - Introduction to Criminal Justice

**SOC 224 MINORITIES IN UNITED STATES..... 3-3-0**
This course is designed to study the social structure of the United States, i.e., "elitism," "pluralism," and the major ethnic, racial, and religious minorities therein: reasons for their migrations, problems encountered, and prohibitions preventing some from participating in the mainstream of American life will also be discussed. Focus is both sociological and historical.

**SOC 230 SOCIOLOGY OF FAMILIES.....3-3-0**
This course explores the historical development of families; class, ethnic and sexual variations of family structure in contemporary societies; social issues that impact contemporary families; the division of labor and power in families; and current trends in American family patterns.

**SOC 244 SOCIOLOGY OF DEATH & DYING.....3-3-0**
The course consists of an investigation of the following topics: individual attitudes on death and dying, social and cultural attitudes on death and dying, socializing the individual into attitudes on death and dying, medical concept of death and dying, legal concept of death and dying, demographic data on death and dying, death and dying and its effect on the economy, the family and death, religion (attitudes and ritual) and death, euthanasia and suicide as well as practical methods for dealing with death and the dying.

**SOC 250 TERRORISM & COUNTERTERRORISM.....3-3-0**
Terrorism in the 21st century is a global phenomenon. This course is designed to provide a comprehensive and interdisciplinary survey of the history, theory, and modern-day political manifestations of terrorism and counter-terrorism. Terrorism will be evaluated in terms of its underlying cultural, economic, political, and psychological root causes. Effective counteraction and profiling requires empathetic explorations and analyses by students into causes and mind-sets. Counter-terrorism strategies and tactics will also be examined specifically in light of the legal and procedural safeguards that are fundamental to the maintenance of liberal democratic social and political values.
**Prerequisites:**
A passing grade in at least one introductory level course in any of the following: Anthropology, Criminal Justice Studies, Economics, Geography, History, Political Science, Psychology or Sociology

**SOC 254 AGING IN THE UNITED STATES..... 3-3-0**
This course is an in-depth exploration of the current social issues concerning older adults in U.S. society. Students will examine the social needs which confront all older people and those needs of particular sub-groups of the older population such as the frail elderly, women, and minorities. Emphasis will be placed on reviewing the legislation which has led to the creation of programs and services for meeting the needs of older adults and on analyzing the system of services to detect areas of unmet needs, such as the need for long-term care. Students will have the opportunity to gain an understanding of techniques of advocacy which can be used on behalf of and in concert with older persons. Open to all majors.
**Prerequisites:**
HSW 155 - Introduction to Aging, PSY 101 - Introduction to Psychology, or SOC 101 - Introduction to Sociology

**SOC 255 ORGANIZED CRIME.....3-3-0**
This course examines the problem of organized crime (OC) from an interdisciplinary perspective, including a series of key legal, law enforcement and social issues, with a focus on American OC and enterprise crime in comparative perspective. Topics will include: the concept and definition of OC; a range of theoretical perspectives on OC; the relationship between white collar, criminal organized crime, enterprise crime and non-criminal economic activity; historical origins; ethnic connections; international linkages; models of organized crime; major organized crime groups; major organized criminal activities; emerging organized criminal activities; the relationship of OC to public corruption; strategies for combating organized crime; and the future outlook.
**Prerequisites:**
CJS 100 - Introduction to Criminal Justice or SOC 101 - Introduction to Sociology

## SPANISH

**SPA 101 ELEMENTARY SPANISH I.....3-3-0**
A study of the fundamentals of Spanish language with exercises on communication skills, as well as an introduction to Hispanic culture through various media selections. Open to students with no previous training or one year of high school Spanish.

**SPA 102 ELEMENTARY SPANISH II.....3-3-0**
This course, a continuation of SPA 101, reinforces progress in the four language skills: speaking, writing, listening, and reading. Increased emphasis given to oral communication skills. SPA 102 promotes understanding of Hispanic culture.
**Prerequisites:**
SPA 101 - Elementary Spanish I

**SPA 111 THE WORLD OF SPAIN..... 3-3-0**
Taught in English and open to all students, this course will provide an understanding of the forces that have molded the Spain of today and have influenced many aspects of our society. The student will learn about the complex customs and personalities, the unity and diversity of the Spanish people. Lectures and class discussions will be supplemented by audiovisual materials and individual research.

**SPA 112 THE WORLD OF LATIN AMERICA.....3-3-0**
Taught in English and open to all students, this course will provide an understanding of the forces that have molded the Latin America of today and have influenced many aspects of our society. The student will learn about the complex customs and personalities, the unity and diversity of the Latin American people. Lectures and class discussions will be supplemented by audiovisual materials and individual research.

**SPA 127 SPANISH/HEALTH CARE & RELATED..... 3-3-0**
A primarily conversational course designed to teach students to communicate with Spanish speaking persons in health related matters, as well as in situations involving emergencies, accidents, family and job related problems.

**SPA 201 INTERMEDIATE SPANISH I..... 3-3-0**
This course, a continuation of SPA 102, reinforces progress in the four language skills: speaking, writing, listening, and reading. Increased emphasis given to oral communication skills. SPA 201 promotes understanding of Hispanic culture.
**Prerequisites:**
SPA 102 - Elementary Spanish II

**SPA 202 INTERMEDIATE SPANISH II..... 3-3-0**
This course, a continuation of SPA 201 increases the emphasis on review of grammatical concepts and instruction in new topics. Expanded focus is given to speaking and understanding the target language through listening to native speech, reading of more complex texts, and writing skills. SPA 202 continues to promote the understanding of Hispanic culture.
**Prerequisites:**
SPA 201 - Intermediate Spanish I

**SPA 215 SPANISH CONVERSATION I..... 3-3-0**
Practical use of the language with emphasis on oral-aural techniques, leading toward fluency and correctness in speaking. As a conversation course, most of the activities will be performed by the students.
**Prerequisites:**
SPA 202 - Intermediate Spanish II

**SPA 216 SPANISH CONVERSATION II..... 3-3-0**
This course provides practical use of the language with emphasis on speaking and listening skills, leading to oral proficiency. As a conversation course, most of the activities will be performed by the students.
**Prerequisites:**
SPA 215 - Spanish Conversation I

**SPA 230 SPANISH: FILMS, CULTURE, AND CONVERSATION..... 3-3-0**
This course explores films representing the broad spectrum of Hispanic experiences. Course study includes Hispanic America and Spain as depicted in movies with a cultural, historical and political background. Classes will be conducted in Spanish.
**Prerequisites:**
SPA 202 - Intermediate Spanish II
ENG 010A - Basic Writing or ENG 011 - Basic Writing II or ESL 011 - Basic Writing II
REA 011 - Fundamentals of College Reading or REA 017 - Vocabulary and Reading Comprehension Development II

**SPA 251 ADVANCED SPANISH I.....3-3-0**
Advanced Spanish I is a course designed to improve proficiency in written and oral Spanish. Students will study the contemporary culture of Spain via authentic materials selected from authentic media as well as from cultural readings. Spanish literature is approached through the study of representative excerpts from the works of major Spanish authors. This class is taught in Spanish. Outside reading is required.
**Prerequisites:**
SPA 202 - Intermediate Spanish II

**SPA 252 ADVANCED SPANISH II.....3-3-0**
The History and Culture of Latin America is a course designed to increase students' awareness and understanding of the historical, literary, and artistic development of this geographical area while improving proficiency in oral and written communication skills. This class is taught in Spanish. Outside reading is required.
**Prerequisites:**
SPA 251 - Advanced Spanish I

## SOUND RECORDING TECHNOLOGY

**SRT 104 INTRODUCTION TO SOUND RECORDING TECHNOLOGY3-2-2**
This course introduces the theory and operation of sound recording equipment for music production, video, filmmaking, animation, and radio. Students are introduced to sound theory and the basics of recording and editing and then complete assignments in basic equipment operation. In addition to production, emphasis is placed on aesthetic analysis of sound through a series of critical listening assignments and workshops where voice, sound effects, and music are combined to create theater of the mind. **This course is subject to a course fee.**
**Prerequisites:**
MUS 120 - Music Fundamentals

**SRT 130 SRT SOFTWARE WORKSHOP I..... 1-0-2**
SRT Software Workshop I is a breakout course that introduces students to specialized sound recording and music technology software. Students expand upon what they have learned in SRT 104 and MUS/SRT 140 by applying new techniques in recording, editing, sequencing and signal processing in current software applications. The course focuses on sampling, sequencing and processing within software packages such as Abelton Live, Komplete, Reason and ProTools. Students participate in task-oriented workshops where they are introduced to the procedures, methods, and operation of specialized software. **This course is subject to a course fee.**
**Prerequisites:**
MUS 140 - Introduction to Digital Music Technology
SRT 104 - Introduction to Sound Recording Technology

**SRT 131 LIVE SOUND RECORDING AND REINFORCEMENT WORKSHOP I.....1-0-2**
Live Sound Recording and Reinforcement Workshop I is a breakout course that introduces students to the principles and practice of live sound recording and reinforcement. The course focuses on system components, set-up, management, mixing and troubleshooting, as well as principles and concepts fundamental to live sound recording and reinforcement. Students participate in task-oriented workshops where they are introduced to the procedures, methods, and operation of live sound equipment. They obtain hands-on industry experience in recording and reinforcement at various local venues featuring live performances. **This course is subject to a course fee.**
**Prerequisites:**
MUS 140- Introduction to Digital Music Technology
SRT 104 - Introduction to Sound Recording Technology

**SRT 159 INTRODUCTION TO MUSIC PRODUCTION.....3-2-2**
The successor to the Artists-and-Repertoire executive of pop's golden era, the producer, stands at the point of intersection between a recording's human element and its increasingly advanced technological aspect. Often a producer's work results in a signature style or "sound"; if this sound is especially novel or musically persuasive, top recording artists may energetically seek the producer out. SRT 159 will explore the art and history of production as it relates to music past and present. Students will experience the original recordings of great songs recorded by great producers. Emphasis will be placed on the differences between producers and their individual styles, identifying key production techniques, and utilizing them in recordings that students will produce themselves. **This course is subject to a course fee.**
**Prerequisites:**
MUS 141 - Intermediate Digital Music Technology
SRT 250 - Sound Recording Technology I

**SRT 214 EVOLUTION OF SOUND RECORDING TECHNOLOGY..... 3-3-0**
A survey of the history and evolution of Sound Recording and Music Technology and its impact on the recording industry, music, and society. Topics include the development of sound technology in the U.S. and Europe, the birth of the recording industry, and how recording sound influenced music and created current and emerging technologies. Emphasis is placed on understanding the evolution of sound recording technology and its impact on music and the recording industry.
**Prerequisites:**
SRT 104 - Introduction to Sound Recording Technology

**SRT 230 SRT SOFTWARE WORKSHOP II..... 1-0-2**
This breakout course is a continuation of SRT 130 and further explores specialized sound recording and music technology software. Students expand upon what they have learned in SRT 130, SRT 250 and MUS 141 by applying new techniques in recording, editing, sequencing and signal processing in current software applications. The course focuses on sampling, sequencing and processing within software packages such as Abelton Live, Melodyne, Komplete, Waves, Reason and ProTools. Students participate in task-oriented workshops where they are introduced to the procedures, methods, and operation of specialized software. **This course is subject to a course fee.**
**Prerequisites:**
SRT 130 - SRT Software Workshop I and SRT 250 - Sound Recording Technology I
MUS 141 - Intermediate Digital Music Technology

**SRT 231 LIVE SOUND RECORDING AND REINFORCEMENT WORKSHOP II.....1-0-2**
This breakout course is a continuation of SRT 131 and further explores the principles and practice of live sound recording and reinforcement. The course focuses on system components, set-up, management, mixing and troubleshooting, as well as principles and concepts fundamental to live sound recording and reinforcement. Students participate in task-oriented workshops where they are introduced to the procedures, methods, and operation of live sound equipment. They obtain hands-on industry experience in recording and reinforcement at various local venues featuring live performances. **This course is subject to a course fee.**
**Prerequisites:**
SRT 131 - Live Sound Recording and Reinforcement Workshop I and SRT 159 - Introduction to Music Production and SRT 250 - Sound Recording Technology I

**SRT 242 MUSIC BUSINESS APPRECIATION.....3-3-0**
This course is a continuation of studies begun in MUS 241 The Business of Music. Students will focus in the individual elements of the Music Business Marketing Plan created in the previous course and the realization of that plan with an in depth focus in online music marketing, promotion strategies, social media, legal structuring of the business and the financial considerations that go with running a business. Recommended but not required: MUS 140 (Introduction to Digital Music Technology) and/or MUS 240 (The Art and Business of Songwriting).
**Prerequisites:**
MUS 241 - The Business of Music
REA 011 - Fundamentals of College Reading or REA 017 - Vocabulary and Reading Comprehension Development II
ENG 010A - Basic Writing or ENG 011 - Basic Writing II or ESL 011 - Basic Writing II
MAT 011 - Beginning Algebra or MAT 011B - Beginning Algebra with Review of Arithmetic

**SRT 250 SOUND RECORDING TECHNOLOGY I..... 3-2-2**
This course introduces students to the theory and practice of sound recording technology and music production. Students are introduced to sound recording and production techniques including multi-track music recording, mixing, editing, and signal processing. Emphasis is placed on the procedures and processes of preparing for and carrying out a basic production from start to finish. Students act as the sound engineer, producer, director, and embody other production roles. Students work to expand their aesthetic understanding, analyze sound through production, and participate in a series of critical listening assignments and workshops. **This course is subject to a course fee.**
**Prerequisites:**
SRT 104 - Introduction to Sound Recording Technology

**SRT 256 SOUND RECORDING TECHNOLOGY II.....3-2-2**
This course explores the theory and practice of sound recording technology and music production. Emphasis is placed on the technical application of multi-track music recording, mixing, editing, signal processing, equalization, DSP, and MIDI sequencing. Students oversee and participate in productions from the early stages of conception, through the process of distribution. Students expand their aesthetic analysis of sound through a series of critical listening assignments and workshops. **This course is subject to a course fee.**
**Prerequisites:**
SRT 250 - Sound Recording Technology I

**SRT 259 MUSIC PRODUCTION.....3-2-2**
The sound recording producer, as the person most immediately responsible for making a recording, often needs a strong grasp of various recording techniques as well as interpersonal skills which reflect an understanding of human psychology, as well as technical expertise. In the hip-hop & R&B genre, where the creation of a recording and the act of providing a distinctive sonic quality may be one and the same, therefore, artists are often listed as their own producers. SRT 259 will explore music production from both the artist's and producer's perspective, while distinguishing between the two perspectives. Students will create individual productions using various techniques introduced in class which will build upon what was learned in SRT 159. Emphasis will be placed on individual and group critique where students analyze and discuss the various student productions based on the theory and techniques of production. **This course is subject to a course fee.**
**Prerequisites:**
SRT 159 - Introduction to Music Production and SRT 256 - Sound Recording Technology II

**SRT 290 SOUND REC & MUSIC TECHNOLOGY CAPSTONE..... 1-0-2**
Sound Recording and Music Technology Capstone provides opportunity for students to develop, produce and edit a major sound recording based project in this studio/lab workshop. Emphasis is placed on developing advanced skills in pitching, planning, organizing and executing sound recording projects from inception to completion. In this workshop students work collaboratively, discuss, conceive, create and produce a work that displays the culmination of their knowledge, experience and production skills. Students work as producers, engineers and directors as the leader of their production. As part of this course, students organize and finish a complete portfolio of all their work that includes a résumé, reel, personal statement and cover letter. **This course is subject to a course fee.**
**Prerequisites:**
SRT 159 - Recording Studio Production I and SRT 256 - Sound Recording Technology I
MUS 241 - The Business of Music

**SRT 297 SOUND RECORDING & MUSIC TECHNOLOGY INTERNSHIP I.....3-0-15**
This course is an internship in a college-approved sound recording and music technology facility. It provides an opportunity for students to both experience and increase their understanding of employment within the Sound Recording and Music Technology industry. The course requires students to obtain an internship at a sound recording facility where they work under the direct supervision of a supervisor in the facility for a minimum of 5 hours per week (to a maximum of 15 hours per week or 255 total hours). In addition the student is required to maintain direct and consistent contact with an assigned Sound Recording and Music Technology Program faculty member. Students are rated by the employer on their job performance as part of the evaluation by the Sound Recording and Music Technology Program faculty member. **This course is subject to a course fee.**
**Prerequisites:**
SRT 104 - Introduction to Sound Recording Technology and SRT 159 - Recording Studio Production I and SRT 250 - Sound Recording Technology I
MUS 140 - Introduction to Digital Music Technology

## SURGICAL TECHNOLOGY

**SUR 105 SURGICAL TECHNOLOGY I.....7-6-4**
This course is designed to introduce the student to the role of the Surgical Technologist in the health practice environment. Fundamental team skills are developed to assist the student to function during the care of patients having surgery. Communication utilizing medical terminology and basic computer functions is demonstrated and discussed in relation to its role in the operating room. The principles of aseptic techniques are introduced and demonstrated with the inclusion of the methods of sterilization, instrument identification, surgical set-up and instrumentation handling. Patient, equipment, and supply preparation are demonstrated and applied to the procedural stages, with basic concepts of robotics presented in relation to General, Colorectal, and Gynecologic/Obstetric Surgery. Accountability, responsibility and commitment to the surgical technologist profession are discussed. Concurrent clinical laboratory experiences introduce the student to the practice setting in the operating room as well as the sterile processing area. **This course is subject to a course fee.**
**Prerequisites:**
MAT 011 - Beginning Algebra
BIO 131 - Human Anatomy and Physiology I with a minimum grade of C within five years
ENG 101 - English Composition I
CMS/SPC 110 Speech Communication, CMS/SPC 113 Voice and Articulation , CMS/SPC 120 Public Speaking, CMS/SPC 230 Communication in Organizations or THA 105 Introduction to Acting I: Improvisation and Fundamentals
**Corequisites:**
BIO 132 - Human Anatomy and Physiology II. May be taken prior or during course.

**SUR 106 SURGICAL TECHNOLOGY II.....8-6-8**
This course is designed to build on the knowledge gained in SUR 105. Fundamental team skills and knowledge of medical terminology are enhanced in SUR 106 and applied in the environment of the operating room and various specialties of surgery. Basic concepts of electricity and specialty equipment are introduced with the emphasis on safe patient care in the operating room. Patient, equipment, and supply preparation are demonstrated in the following types of surgeries: ear, nose, throat, mouth, jaw, and eye. The specialty of cosmetic and reconstructive plastic surgery is presented. Students are exposed to neurosurgery of the spinal column and the brain. The actual procedural stages for each basic surgery within the aforementioned specialties are presented and reinforced in the clinical setting. The concurrent clinical laboratory experience during the actual surgical interventions affords students the opportunity to directly apply didactic information. **This course is subject to a course fee.**
**Prerequisites:**
BIO 132 - Human Anatomy and Physiology II with a minimum grade of C within five years
SUR 105 - Surgical Technology I
**Corequisites:**
BIO 140 - Microbiology and Immunology. May be taken prior or during course.

**SUR 205 SURGICAL TECHNOLOGY III.....10-6-16**
This course is designed to build on the knowledge gained in SUR 105 and SUR 106. Fundamental team skills in the environment of the operating room are applied to various specialties of surgery. Patient, equipment, and supply preparation are demonstrated in the following types of surgeries: genitourinary, cardio-thoracic, vascular, and orthopedic. The patient preparation, instrument and equipment set-up and assembly are demonstrated. The actual procedural stages for each basic surgery within the specialties are presented and reinforced in the clinical setting. The concurrent clinical laboratory and site experience afford the student the opportunity to directly apply didactic information. The patient profile is also discussed with consideration given to age specific needs during the surgical intervention. Response to death and dying in the operating room is introduced with exploration of various coping strategies. Co morbidities are described. Employment skills and interview techniques are addressed with development of a professional resume. **This course is subject to a course fee.**
**Prerequisites:**
SUR 106 - Surgical Technology II
**Corequisites:**
ENG 102 - English Composition II or ENG 115 - Writing for Technical Communication or ENG 117 - Writing for Business and Industry. May be taken prior or during course.

**SUR 206 SURGICAL TECHNOLOGY IV.....7-3-16**
This course is designed to extend the knowledge of the Surgical Technologist. It is built on the knowledge gained from SUR 105, SUR 106, and SUR 205. Essential team skills in the operating room environment are applied to various surgical specialties and disaster/public health emergencies. Patient, equipment, and supply preparation are demonstrated in the following types of surgeries: advanced orthopedics, cardiovascular, minimally invasive cardiac, and trauma surgery. The patient preparation, instrument and equipment set-up and assembly are demonstrated. The actual procedural stages for each surgery within the specialties are presented and reinforced in the clinical setting. The concurrent clinical experience affords the student the opportunity to directly apply didactic information. **This course is subject to a course fee.**
**Prerequisites:**
SUR 205 - Surgical Technology III
**Corequisites:**
SOC 244 - Sociology of Death and Dying. May be taken prior or during course.

## THEATRE

**THA 105 INTRODUCTION TO ACTING I: IMPROVISATION AND FUNDAMENTALS.....3-2-2**
This entry-level course in acting is an exploration of the individual's body, voice and imagination and tools for communication. Through theatre games and exercises, students will explore improvisation and acting as a continuum of dynamic action, of listening and responding to stimuli and action with both the body and the emotional self. These tools will be applied to the presentation of monologues and scenes in class. Students will be required to attend live Theater performances. **This course is subject to a course fee.**
**Prerequisites:**
ENG 010A - Basic Writing or ENG 011 - Basic Writing II or ESL 011 - Basic Writing II
REA 011 - Fundamentals of College Reading or REA 017 - Vocabulary and Reading Comprehension Development II

**THA 106 INTRODUCTION TO ACTING II: SCENE STUDY.....3-2-2**
This course is a continuing exploration of an actor's tools, voice body and imagination. Students will discuss and explore the actor's tools and instruments through exercise work, scene work and personal explorations. Students will be required to attend live Theater performances. **This course is subject to a course fee.**
**Prerequisites:**
THA 105 - Introduction to Acting I: Improvisation and Fundamentals with a minimum grade of C

**THA 114 INTRODUCTION TO THEATRE.....3-1-2**
This course is an entry level course in theatre history, its practice, and the creation of the theatrical event, exploring theatre's role as a central, social communication event. Through group and individual presentations, students will also explore as well as the roles of the various artists who collaborate to create theatre, how ideas are reflected in conception and reading of a play, and explore how ideas about interpretation and aesthetic can be reflected in production. Students will be required to attend live Theater performances.
**Prerequisites:**
ENG 010A - Basic Writing or ENG 011 - Basic Writing II or ESL 011 - Basic Writing II
REA 011 - Fundamentals of College Reading or REA 017 - Vocabulary and Reading Comprehension Development II

**THA 150 THEATRE PRODUCTION WORKSHOP I: INTRODUCTION TO STAGECRAFT..... 3-1-5**
A studio class in which students learn the components of theatre production by participating in producing, staging and mounting a full length stage production. **This course is subject to a course fee.**
**Prerequisites:**
ENG 010A - Basic Writing or ENG 011 - Basic Writing II or ESL 011 - Basic Writing II
REA 011 - Fundamentals of College Reading or REA 017 - Vocabulary and Reading Comprehension Development II

**THA 151 THEATRE PRODUCTION WORKSHOP II: APPLIED STAGECRAFT..... 3-1-5**
A continuation in the participation of producing, staging and mounting a full-length stage production. Students are expected to take greater responsibility and positions of leadership in this endeavor, applying techniques and stagecraft studied to the creation of a theatrical production. Evaluation of the process's strengths and weaknesses and one's performance in it will be evaluated and self-evaluated. Recommendations for future success are encouraged. **This course is subject to a course fee.**
**Prerequisites:**
THA 150 - Theatre Production Workshop I: Introduction to Stagecraft with minimum grade of C

**THA 201 ACTING FOR THE CAMERA.....3-2-2**
This course is an upper level course in acting technique. Through in class camera work, students explore the principles and acquire the necessary skills to work in the medium of film and television. Students will be required to attend live Theater performances. **This course is subject to a course fee.**
**Prerequisites:**
ENG 010A - Basic Writing or ENG 011 - Basic Writing II or ESL 011 - Basic Writing II
REA 011 - Fundamentals of College Reading or REA 017 -Vocabulary and Reading Comprehension Development II
THA 105 - Introduction to Acting I: Improvisation and Fundamentals and THA 106 - Introduction to Acting II: Scene Study with a minimum grade of C

**THA 203 THEATRE PRODUCTION WORKSHOP: PRACTICUM.....3-1-5**
This studio/lab course stresses the practical application of skills and techniques of applied stagecraft, working directly on production and consisting of practical application and lab hours. Lab hours include both hours spent working on projects during class-time as well as additional hours to be completed throughout the semester outside of class-time. **This course is subject to a course fee.**
**Prerequisites:**
THA 151 - Theatre Production Workshop II: Applied Stagecraft with minimum grade of C

**THA 205 DIRECTING: CREATING THE WORLD OF THE STAGE.....3-2-2**
This course gives theatre artists the tools for moving a story from page to stage. Student directors will study an overview of the role of the director in theatre history, the skills required in analyzing a text for interpretation, and basic organization for creating a production. These skills will then be applied to scene-work (using student actors), as well as the conceptualization and presentation of a theatre piece. Students will be required to attend live theatre performances. **This course is subject to a course fee.**
**Prerequisites:**
THA 105 - Introduction to Acting I: Improvisation and Fundamentals, THA 114 - Introduction to Theatre and THA 150 - Theatre Production Workshop I: Introduction to Stagecraft with minimum grades of C

**THA 250 ACTING SHAKESPEARE..... 3-2-2**
This course is an upper level course in acting technique, investigating the performance of Shakespeare's plays through scene work and related exercises. Tools of the actor which will be stressed are commitment, simplicity, listening, focus, concentration, play, imagination and openness. Students will be required to attend live Theater performances. **This course is subject to a course fee.**
**Prerequisites:**
THA 105 - Introduction to Acting I: Improvisation and Fundamentals and THA 106 - Introduction to Acting II: Scene Study with minimum grade of C

**THA 252 MUSICAL THEATRE: INTERPRETING SONG AND SCENE..... 3-2-2**
This specialized course in theatre will explore the practical aspects of musical theatre performance and introduce the student to the history of the genre. Through the study of this American art form, students will expand their performance repertoire as well as their knowledge of groundbreaking shows and prolific composers. Students will workshop material throughout the semester in-class in front of their peers, rehearse and present songs and scenes, and will be required to attend live theatre performances. **This course is subject to a course fee.**
**Prerequisites:**
THA 105 - Introduction to Acting I: Improvisation and Fundamentals with minimum grade of C
MUS 120 - Music Fundamentals with minimum grade C

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## MONTGOMERY COUNTY COMMUNITY COLLEGE FOUNDATION

The Foundation's mission is to create awareness and promote philanthropy within the community and College in order to provide private support for scholarships, teaching and learning initiatives, student support programs, community outreach and facility improvements so that ours students have access to a quality higher education in order to become good citizens.

Foundation objectives:

- To identify and develop meaningful long-lasting relationships that result in first and increased levels of private philanthropy from individuals, corporations, and foundations primarily through annual, major and planned gifts
- To create and grow an engaged constituency of volunteer leadership, alumni, faculty and staff, the business community, and friends in Montgomery County and beyond who desire to invest in the College through the Foundation
- To raise funding primarily for the support of scholarships and internships for deserving students, teaching and learning initiatives, facility enhancements, community outreach, and student support programs

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## MONTGOMERY COUNTY COMMUNITY COLLEGE ALUMNI ASSOCIATION

The Alumni Association has over 65,000 members and counting. Students that have either graduated or have taken 30 credits or more are considered alumni. In the spring of 2015, the Alumni Association launched its brochure which offers benefits to alumni, which includes home and auto insurance discounts. Alumni are encouraged to stay engaged with the College by attending events, volunteering, and making a gift to the Annual Fund. Alumni are also encouraged to contact the Alumni Office with changes of address notifications at 215-461-1139 or alumni@mc3.edu.

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- D.H. University of Pittsburgh
- B.S. Edinboro University of Pennsylvania
- M.Ed, Ed.D. University of Pittsburgh

Candy K. Basile, Administrative Support Secretary
- A.A.S. Montgomery County Community College

Deborah Rogers, Executive Assistant to the College's Board of Trustees
- A.A.S. Montgomery County Community College

### Academic Affairs

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Helen Weaver
Erin White-Mincarelli

# ACADEMIC CALENDAR

## FALL SEMESTER 2019

Day and Evening Classes Begin..... 8/28/19
Labor Day – No Classes.....9/2/19
Thanksgiving Holiday – No Classes.....11/27 - 12/1/19
Classes End.....12/9/19
Reading Day for Finals.....12/10/19
Final Examinations..... 12/11 - 12/17/19

### FALL SESSION DATES:

15-Week Session..... 8/28 - 12/17/19
1st 7-Week Session.....8/28 - 10/16/19
2nd 7-Week Session.....10/23 - 12/15/19

## WINTER SEMESTER 2019-2020

Classes Begin.....12/19/19
New Year's Day Holiday – No Classes.....1/1/20
Classes End.....1/13/20

### WINTER SESSION DATES:

Winter Session.....12/19/19 - 1/13/20

## SPRING SEMESTER 2020

Day and Evening Classes Begin..... 1/22/20
Spring Break – No Classes.....3/16 - 3/22/20
Classes End.....5/5/20
Reading Day for Finals.....5/6/20
Final Examinations.....5/7 - 5/13/20
Commencement.....5/21/20

### SPRING SESSION DATES:

15-Week Session..... 1/22 - 5/13/20
1st 7-Week Session.....1/22 - 3/10/20
2nd 7-Week Session.....3/23 - 5/10/20

## SUMMER SEMESTER 2020

Day and Evening Classes Begin..... 5/18/20
Memorial Day Holiday – No Classes..... 5/25/20
Independence Day Holiday – No Classes.....7/2 - 7/4/20
Classes End.....8/27/20

* No final exam period possible.

### SUMMER SESSION DATES:

14-Week Session..... 5/18 - 8/27/20
1st 6-Week Session.....5/18 - 6/29/20
2nd 6-Week Session.....7/6 - 8/16/20

For more than 50 years, Montgomery County Community College has grown with the community to meet the evolving educational needs of Montgomery County. The College's comprehensive curriculum includes more than 100 associate degree and certificate programs, as well as customized workforce training and certifications. Students enjoy the flexibility of learning at the College's thriving campuses in Blue Bell and Pottstown, at the Culinary Arts Institute in Lansdale, and online through a robust Virtual Campus.

An Achieving the Dream (AtD) Leader College, the institution is positioned at the vanguard of national efforts to increase completion, improve learning outcomes, and remove barriers to access. The College is also recognized regionally and nationally for its sustainability leadership, work with military veterans, community service and service learning opportunities, and use of classroom technology.

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