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Montgomery County
Community College

COURSE CATALOG
2014-15
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https://wwws.mc3.edu/asps/online-app/

WHAT WE ARE ALL ABOUT
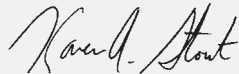
Message From the President

To *Think Big* is more than a slogan at Montgomery County Community College. It is also a mindset that motivates us to excel on behalf of you, the student. Student success is our number one priority at the College and all our combined efforts are directed toward making that a reality for you.

We strive to ensure that your college experience is academically superior, relevant and innovative, providing you with the instruction, facilities and tools you need to be successful in the classroom. When you attend our College, be assured that you will be well prepared for your next step – whether you plan to transfer to a four-year institution or prepare for one of our many high-demand career options.

Beyond the classroom, we focus our energies on providing support services that allow you to concentrate on your studies. At Montgomery County Community College, you'll receive personal attention that is tailored to your individual needs – helping you obtain the financial, academic and social support you need to achieve your goals.

We welcome you to our community and encourage you to embrace the idea of Thinking Big. Keep it top of mind as you journey toward achieving your potential. Remember that we're here to help. Your success is our success.

Karen A. Stout, President

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 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 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 institutional effectiveness.
- 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.

HOW WE ARE STRUCTURED TO SERVE YOU

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 degrees in arts and sciences, as well as appropriate diplomas and certificates. In recognition of our high standards, the College is fully accredited by the Commission of Higher Education of the Middle States Association of Colleges and Secondary Schools.

Our operating funding sources are tuition, the Commonwealth of Pennsylvania and Montgomery County (each contributing approximately one-third). 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 CAMPUSES

To meet the need for accessible higher education within the County, the College has expanded its reach over the years to multiple campuses.

HOW TO FIND US

CENTRAL CAMPUS

The College's scenic 186-acre Blue Bell campus is within easy commuting distance for most residents of Montgomery County. To schedule a tour or interview with Admissions call 215-641-6551.

BY CAR

From the Pennsylvania Turnpike:
Take Exit 333 at Norristown. Go west on Germantown Pike to Route 202. Turn right and go north. Look for College sign on right, 1/2 mile north of Route 73.

From the Schuylkill Expressway (I-76):
Alt. 1) From I-76 Exit 331B, take I-476 (Blue Route) north to Exit 20, Germantown Pike West. Go west on Germantown Pike to Route 202. Turn right and go north. Look for College sign on right. Alt. 2) Get on Pennsylvania Turnpike at Valley Forge and go east to Exit 333, then follow directions listed above. Alt. 3) Get off at Route 202 north exit, stay on Route 202 North through Norristown and north. Look for College sign on right, 1/2 mile north of Route 73.

From Chester County:
1) Take Route 202 north through Great Valley, King of Prussia and Norristown and north. Look for College sign on right, 1/2 mile north of Route 73.
2) Take Route 422 east to Route 29 interchange. Take Route 29 east to Ridge Pike. Turn right on Ridge, bear left at intersection to Germantown Pike, take Germantown Pike to Route 202. Turn left, take Route 202 north. Look for College sign in right.

From Bucks County:
Take Routes 309 or 202 south to Montgomeryville. Take Route 202 south to Morris Road intersection. Look for College sign on left.

From Delaware County:
Take I-476 (Blue Route) north to Exit 20, Germantown Pike West. Go west on Germantown Pike to Route 202. Turn right and go north. Look for College sign on right.

BY PUBLIC TRANSPORTATION

The Southeastern Pennsylvania Transportation Authority (SEPTA) operates two bus routes directly to the Central Campus:
- Route 94 (Chestnut Hill to Montgomery Mall via Ambler) – Connections with
  — Routes 23, 77, L, Chestnut Hill West and Chestnut Hill East Regional Rail in Chestnut Hill
  — Routes 98, 134 and 201 at Fort Washington Station
  — Lansdale/Doylestown Regional Rail at Fort Washington, Ambler, Penllyn and Lansdale Stations
  — Route 132 at Montgomery Mall
- Route 96 (Norristown Transportation Center to Lansdale via Montgomery Mall) – Connections with:
  — Routes 90, 91, 93, 96, 97, 98, 99, 131, Norristown High Speed Line and Manayunk/Norristown Regional Rail at Norristown Transportation Center
  — Route 132 at Montgomery Mall and Lansdale Station
  — Lansdale/Doylestown Regional Rail at Lansdale Station

Please refer to timetables for further information. SEPTA information is available in College Hall (Security Office), at www.septa.org or by calling 610-279-8400.
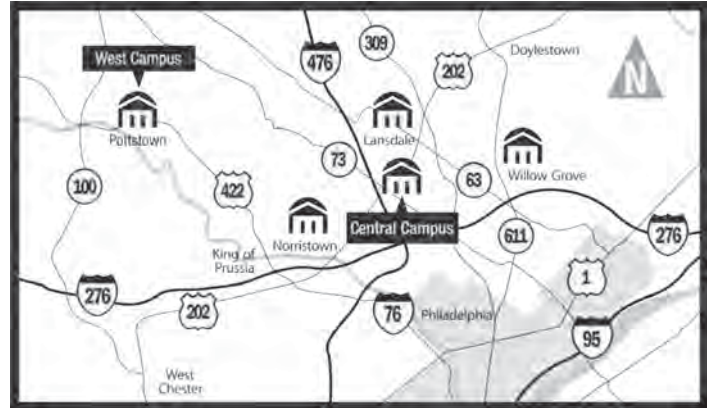
WEST CAMPUS

The West Campus in Pottstown is located centrally to communities in the Tri-county area. Call 610-718-1850 for information.

BY CAR

The West Campus location at 101 College Drive is two blocks south of the intersection of High and Hanover Streets in Pottstown. It's easily accessible for Chester County residents via Route 100 North to King Street. Turn right on King St., go three blocks to Hanover Street, turn right, go to the third light, turn right on College Drive.

From Route 422 West:
Take the Hanover Street exit, turn right on Hanover, go to the second light and turn left on College Drive.

From Route 422 East:
Take Route 100 North to King Street, turn right, go three blocks to Hanover Street, turn right, go to the third light, turn right on College Drive.

BY PUBLIC TRANSPORTATION

The West Campus is served by:
- Pottstown Area Rapid Transit (PART):
  — Coventry Mall, High Street and Pottstown Center day lines
  — High Street night line More information: www. pottstownarearapidtransit.com or 610-326-5413.
- SEPTA Route 93(Norristown Transportation Center to Pottstown via Collegeville) – Connections with:
  — Routes 90, 94, 96, 97, 98, 99, 131, Norristown High Speed Line and Manayunk/Norristown Regional Rail Line at Norristown Transportation Center.

SEPTA contacts are found above.

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
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. 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 who demonstrates through assessment testing an ability to benefit from postsecondary educational experiences.

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.

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. For those who do not demonstrate the appropriate level of academic preparation necessary for success, the applicant must enroll in developmental courses or in an Adult Basic Education program as outlined in the College's Placement and Testing Policy.

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. Please visit www.mc3.edu/ged or call 610-819-2056 for more information about testing. For information pertaining to the GED preparation workshops held at the College, please contact 610-718-1807 for information on a high school equivalency diploma offered by the Commonwealth of Pennsylvania, see the previous section.

READMISSION BY STUDENTS IN GOOD STANDING
After an extended absence, Montgomery County Community College students who are in good academic standing do not need to submit a new College Application. Simply contact Enrollment Services to verify your residency and address information and contact the Student Success Center to schedule an appointment with an academic advisor or counselor.

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 GPA less than 2.0
- completed 12 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 http://www.mc3.edu/about-us/policies/109 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 US Consulate Office located 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 to find out 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 Assisting, Medical Laboratory Technician, Nursing, Radiography, Surgical Technology, and Police Academy Act 120 training programs. Each program has specific admissions requirements and may have prerequisite coursework that must be completed before student is 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, please refer to the prerequisite curriculum listing for the programs 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 Admission 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 younger than 15 years of age must also schedule a personal interview through the Director of Admissions that convinces the interviewer that the student has the ability to participate at a satisfactory level. 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 with their high school that courses completed at the College will fulfill specific high school graduation requirements.

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 (please see College's Competency Validations in Academic Readiness Policy).

The College will allow non-high school graduates to apply for admission to a program of study under Early Admissions including Dual Enrollment. Applicants who apply for Early Admissions must demonstrate academic readiness at the college level as determined by placement (assessment) test, testing exemptions or completion of developmental coursework. Students who are younger than 15 years of age may apply to participate in the Dual Enrollment program, please contact the Office of Admissions for specific requirements and to schedule an interview.

For more information about our Dual Enrollment program, please visit www.mc3.edu/ dual-enroll or call the Office of Dual Enrollment Initiatives at 610-718-1916 or email us at dualenroll@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
Lori Davidson
610-718-1841
ldavidso@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:
- This is a 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
- Students must be referred and sponsored 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 two or more years)

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 offers a unique opportunity for high ability students to thrive intellectually in a comfortable and challenging academic environment. In small classes of 15 or fewer, Honors students, through creative and stimulating teaching with professors as mentors and facilitators, assume responsibility for their learning.
The program provides the opportunity for highly motivated students to expand the limits of their intellectual, cultural and social horizons in a caring, stimulating atmosphere.

The Honors student must complete 18 credits in Honors to graduate with an Honors designation. In addition, Honors students must complete three one-credit Honors Colloquia. The program also requires that students participate in two Honors activities each academic year. These experiences may involve off-campus activities such as: Honors debates; trips to theaters, symphonies, museums; visits to special programs at area universities; Sleeping Bag Seminars sponsored by the National Collegiate Honors Council.

The admission requirements for the Honors Program at Montgomery County Community College for the recent high school graduate are any two of the following.
1. High school cumulative grade point average of 3.5
2. Top 15% of high school graduating class
3. Top 15% score in College placement tests
4. Personal interview with the Honors Coordinator

In order to remain in the program, a student must maintain a grade point average of 3.25.

Note: Qualified students may enroll in Honors sections without being enrolled in the Honors Program. For more information, call 215-641-6415.

TRANSFER STUDENT ADMISSIONS

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

I. The consideration of transfer credit will be determined by course equivalencies, including expected learning outcomes, with those of the College's curricula and standards.

II. 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.

III. 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.

IV. Presented credits that meet grade and curricular requirements will be accepted at the College, up to seventy-five percent (75%) of the credits required for an associate's degree or certificate program. Transfer credit for specific majors are accepted to the extent that acceptance of the credits would not be counter to discipline-specific accrediting agencies.

V. Developmental coursework is not accepted for transfer credit but will be transcripted for prerequisite purposes.

VI. 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.

VII. 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, please 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

I. 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.

II. 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.

III. The MCCC transcript will only reflect the total number of credits equated; individual course equivalencies awarded will not appear.

IV. 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 the appropriate discipline approval, 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. The course for which credit is granted must be acceptable toward the student's degree. For the most up-to-date listing of AP credits awarded, please see College's website for 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.

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 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:

I. 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).

II. 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 fifteen (15) working days during the academic Fall and Spring semesters. The decision of the provost is final.

III. 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 and Delaware County Community College. Students who enroll for these majors at the peer community colleges must be authorized by the Director of Admissions 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 (AAS)
	Furniture and Cabinet Making (Cert)
	Historic Preservation (Cert)
	Paralegal (AAS and Cert)
	Sports Management (AA)
	Travel & Event Planning (AAS/Cert)
	Women's Studies (Cert)
Community College of Philadelphia	Art-Photography (AA)
	Chemical Technology (AAS)
	Interpreter Education (AA)
Delaware County Community College	Architecture Technology (AAS)
	Automated Manufacturing/ Robotics Technology (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 degree in about 16 months. There are 27 associate degree programs available through continuous study.

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-, 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, please view the Academic Calendar, visit http://mc3.edu/academics/academic-calendar

E-LEARNING
The e-Learning program 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 e-Learning. Refer to http://mc3.edu/academics/online-learning for course offerings, programs, and support services. Check out iTunes U for success strategies for e-Learners.

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 in promoting 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
• Preparation for placement test
• SAT Preparation Classes
• GED Preparation Classes and GED exam

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. If students do not have these items or the scores or grades are not high enough, students are required to take the College's placement tests. The College offers students many ways to prepare for placement test and preparing for placement tests is highly encouraged. This preparation can take place both on and off campus. For more information, please 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 http://mc3.edu/adm-fin-aid/paying.

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, the student 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 the Deferred Payment Plan through the Office of Enrollment Services.

RESIDENCY REQUIREMENTS

IN-COUNTY TUITION

Legal residency in Montgomery County for the purpose of in-county tuition is established upon meeting the requirements for in-state tuition and completion of six (6) months of continuous residence in Montgomery County at the time of 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 domicile of the parents or guardian and must use the address of the parents or legal guardian as his/her permanent address/residence. 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. 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-STATE TUITION

To establish residency in the Commonwealth of Pennsylvania, students must demonstrate continuous residence in the Commonwealth for a period of twelve (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 domicile of the parents or guardian and must use the address of the parents or legal guardian as his/her permanent address/residence. 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.

DEFERRED PAYMENT PLAN

To assist students in meeting their financial obligation to the College a Deferred Payment Plan is offered for tuition and fees.

To qualify for the program, a student must:
- Be registered for three or more credits in a current semester.
- Be a continuing education student registered in a qualified technology and/or career program that leads to certification or public service programs whose tuition is over $400. The programs must meet for 10 weeks or more.
- Pay a $35 non-refundable Deferred Payment Plan set up fee upon submission of the Deferred Payment Plan Application, along with the initial payment.
- Complete all required information of the Deferred Payment Plan Agreement for mail, fax, scan and email enrollment. Your payment must be received with this enrollment form.
- The deferred plan cannot be processed without payment, (initial payment and set-up fee). If you are enrolling in person please be prepared to make your initial payment, including the set-up fee.

If you are taking a continuing education course, please contact the Office of Enrollment Services at 215-641-6551 or email payment@mc3.edu.

TUITION AND FEES REFUND POLICY

Tuition is fully refunded if we cancel a course. Otherwise, fees are refundable only in certain situations. To withdraw or drop courses, or substitute another class for a canceled course, please 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 from a course.

Refund Policy for Regular Semesters (14 Weeks in Length)
_____

If Students Withdraw: **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 Summer Sessions, Special Sessions,
and Irregularly Scheduled Sessions and Courses (Less than 14 Weeks in Length)
_____

If Students Withdraw: **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 Federal Stafford Loans

Federal Financial Aid Programs Non-need based:
• PLUS (Parent Loans for Undergraduate Students)
• Federal Unsubsidized Stafford Loans

The College also offers over 70 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 http://mc3.edu/adm-fin-aid/fin-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 www.fafsa.ed.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.

Deadline:		For:	
	May 1		Foundation scholarships
	May 1		PHEAA state grants
	May 1		SEOG grants and Federal Work Study
	June 30		Federal Pell Grants

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.

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.
• 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.

Students:
• Must attend the classes for which they are registered or they will not be eligible for the amount of aid being received.
• 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 www.mc3.edu/admissions/paying
• Cannot receive financial aid for a class they intend to audit.
• Applying for a federal Stafford Loan must complete an entrance and exit interview and complete a Master Promissory Note to understand their obligation for loan repayment.
• 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.
• 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 6 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.
• The Financial Aid Office determines your financial aid award based upon your registration status as of the census date of each semester. Census dates can be found online at http://mc3.edu/adm-fin-aid/fin-aid/understand-fin-aid/attendance.
• 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

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.

Progress Standards

Completion Rate (67% Rule): Students must, at a minimum, receive a satisfactory grade in courses attempted by completing 67% of the credits for which they are enrolled. This calculation is performed by dividing the number of credits earned by the number of credits attempted. The College begins checking completion rates after the student has attempted 12 credits. The College counts all withdrawals and incompletes as attempted credits.

Maximum hours (150% Rule): Students may only receive financial aid up to the point at which they can no longer complete the program of study within 150% of the program length. The College counts all credits attempted and all transfer credits applicable to the student's program. This calculation includes all semesters including those for which the student received no federal aid. For example, a student whose program requires 60 credits may only attempt up to 90 credits in that program.

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

Cumulative GPA Minimum Requirements (GPA Rule): A student 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, Incompletes and Audits 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 then the student's progress can be recalculated upon written request by the student. Repeated coursework is also counted as attempted credits and all grades related to this repeated coursework are calculated into the student's financial aid GPA calculation.

Change of Major and Second Degrees: Once a student completes all the requirements for their program they can no longer receive financial aid unless they enter a new degree program. Students 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 the student's second degree program.

Ineligibility for Financial Aid

Students who are on Academic Suspension or Academic Probation by the college are ineligible for financial aid. Students may still enroll without benefit of financial aid if they are on Academic Probation. Students who do not meet the progress standard and cumulative grade point average requirements will be ineligible for financial aid.

Appeals

If the student had mitigating circumstances that may have affected the student's academic progress the student may appeal their status. Mitigating circumstances include serious illness or accident involving the student; death, accident, or serious illness of an immediate family member or other mitigating circumstance beyond the control of the student. The student must complete the Financial Aid Academic Progress Appeal Form, provide acceptable supporting documentation and complete all required steps outlined on the form Process for Filing a Financial Aid Appeal for Academic Progress.

If the student's appeal is approved the student must follow the academic plan/recommendations by the College and successfully complete those courses with a grade of C or better in order to continue receiving federal student aid. Failure to follow the plan and successfully complete all registered courses during the semester of appeal will result in the student having to successfully complete courses on their own until the academic standards are met as described in this policy. Successful completion means the student receives a grade of A, B or C. Withdrawals, Incompletes or Audits do not count as a successful completion grade.

The Financial Aid Office will place a student in a Probationary status when an appeal for Unsatisfactory or Max Time progress has been approved. The student will remain in a Probationary status until they meet the minimum criteria for satisfactory academic progress as defined in Section I

Regaining Financial Aid Eligibility

Students who do not meet the Academic Progress policy requirements and choose to enroll at the College without financial aid assistance will have their progress checked at the end of that term of enrollment. If the student is successful the College will reinstate financial aid eligibility for subsequent semesters.

Financial Aid Programs

Grants	Amount	Who is Eligible?
Pell (federal program)	$200-$5,645	Citizen/permanent resident
SEOG (federal and institutional program)	$200-$600	Same
College work study (federal and institutional)	Varies - work max. 20 hours/wk @ $8/hour	Same
Pennsylvania Higher Education Assistance Agency (PHEAA) tuition up to $2,900	Minimum $100, Maximum is 80% of	Citizen/permanent resident - enrolled at least half-time. Resident of PA.
Loans	**Amount**	**Who is Eligible?**
William D. Ford Federal direct Loans	$500-$5,500 at least half-time.	Citizen/permanent resident - enrolled
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
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.

ACADEMIC RESOURCES, SPECIAL PROGRAMS, AND SERVICES

THE COLLEGE LIBRARIES

Central Campus, College Hall, 215-641-6596
West Campus, South Hall, 610-718-1864

The Brendlinger Library at Central Campus and the West Campus Library provide resources in all subject areas, with depth in areas appropriate to the curriculum. Personal interests and information needs may be pursued through a variety of resources available in both print and electronic formats including books, magazines, scholarly journals, newspapers, and government documents. Our web-based resources allow for access on and off campus. In addition, the Libraries offer books and music on CDs, educational films on DVD and via videostreaming, and feature films on DVD. We also offer wireless laptops for use anywhere on Central or West Campus. The Libraries strive to provide excellent service to our students. We welcome your questions and encourage you to ASK US!

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, College Hall 180
215-641-6452, lalcc@mc3.edu

West Campus, 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.

FOUNDATIONAL SKILLS LABORATORY
Central Campus, College Hall 168, 215-461-1150
mryan@mc3.edu

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

The Foundational Skills Lab, operating under Tutorial Services, offers structured learning assistance through tutoring, workshops, and instructional computer software for developmental and ESL courses. The FSL also offers placement testing preparation and integrated skills labs for developmental courses.

SUPPLEMENTAL INSTRUCTION
Supplemental Instruction (SI) is a program which 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.

LINK 2 SUCCESS PROGRAM
Link 2 Success is a transition program that intends to assist students, who test below set levels on all three placement tests, English, reading, and mathematics, to successfully transition to the College or into the workforce. This free program is offered on both of the College's campuses through a community partner.

FIRST YEAR INITIATIVES PROGRAM

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

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

The First Year Initiatives Program strives to address the unique needs and concerns of first year college students in order to facilitate a successful transition from their high school, post-secondary or non-educational experiences. 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.

Welcome Month
Welcome Month is designed to ensure that students transition to the College successfully and become aware of 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.

New Student-In-A-Day
The College understands that today's student has many responsibilities with work, families and many other obligations. Therefore, we make it possible for students to complete placement testing, meet with an academic advisor, complete freshmen registration and go on a campus tour all in one day (to be eligible for this program students must complete placement testing by 5:30 pm Monday - Thursday and 1:00 pm on Friday and Saturday). Students who indicate need will be encouraged to attend our Student Success Workshops to address any potential barriers to success their first semester enrolled.

Learn Over Lunch Workshops

Each semester beginning in week three, the Student Success Centers, in cooperation with Tutorial Services provide weekly workshops on topics that focus on student success (for example: The Seven Habits of Highly Effective Students, Study Skills, Studying for Math and Science, Keys to Economic Success, Managing Time, Your Most Valuable Resource, Unlock Your Potential Through Healthy Living, and more). Students who are on Academic Probation must attend at least one workshop a semester in consultation with their academic advisor/counselor. All First-Year students are encouraged to attend. The workshops are held during fall and spring semesters – Mondays at West Campus and Wednesdays at Central Campus from 12:30 p.m. until 1:30 p.m. Lunch is provided.

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 WebAdvisor 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 and 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 in the program 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
Student Success Center
215-641-6222, 215-641-6330

West Campus
Student Success Center
South Hall, 610-718-1936

Let KEYS open the door to a brighter future for you and your family, you do the work and KEYS will help support you succeed. Keystone Education Yields Success (KEYS) has been developed by the PA Department of Public Welfare in response to growing research that shows 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 odds 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 (Transitional Assistance for Needy Families-cash assistance) and SNAP (Supplemental Nutrition Assistance Program-food stamps) benefit recipients to succeed in community college.
Supportive services for KEYS students issued by the CAO or community college include:
• Student advisors/facilitator for career counseling, academic support and help with financial aid options
• Facilitating requests for supportive services available through the County Assistance Office (CAO).
• Connecting students to other needed community services.
• Paid child care assistance.
• Paid books and school supplies assistance.
• Paid job related professional fees and uniforms cost assistance.
• Paid Vocational Work Experience (VWE), in relation to your course of study.
• 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.

To apply to KEYS, you first must contact your CAO caseworker. We cannot enroll anyone without an official referral from your local CAO. These services are not guaranteed entitlements but based on your eligibility and availability of resources.

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 which 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, Alpha Kappa Zeta at the Central Campus was chartered in 1984 and Beta Tau Lambda at the West Campus 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.

UPWARD BOUND: PARTNERSHIP FOR STUDENT SUCCESS

Samuel Coleman
Program Director
Student Success Center
215-619-7359
scoleman@mc3.edu

Upward Bound is a dynamic college preparatory program designed to motivate and prepare selected high school students for the successful pursuit of a college education. Upward Bound challenges students to develop the skills, study habits, discipline, and attitude necessary to be successful in high school and college. Students recognize and develop their potential to excel academically!

There is no cost for the program and the following services are offered to students:
• College-prep classes
• Tutoring
• College tours
• Cultural field trips
• Academic advising
• Financial aid advising
• Career counseling

Upward Bound serves students from Norristown and Pottstown High School through the Summer Academy and Academic Year programs. Selected students can enroll starting in the ninth grade and continue in the program through graduation from high school. All selected students are expected to participate their entire time in high school and attend college after high school graduation. Students are encouraged to apply to the college that they are interested in attending.

Eligibility Requirements
• Currently be in the 9-11th grade at Norristown or Pottstown High School (rising 9th graders are eligible)
• Meet family income guidelines as determined by the U.S. Department of Education
• Be first-generation college bound (meaning neither parent has earned a bachelor's degree)
• Be a citizen or permanent resident of the U.S.

Participation Requirements
• Show a sincere desire to improve academically
• Demonstrate strong interest in and potential for succeeding in college
• Be willing to make a commitment to participate in all Upward Bound after-school, Saturday, and summer activities
• Be open to new cultural, social, educational and recreational experiences

Applying for the Upward Bound Program:
• Complete an application
• Include a copy of your current report card and PSSA scores
• Include two letters of recommendation (these are to be submitted by counselors, teachers, clergy persons or other professionals; not parents or relatives)
• Include a three hundred word essay that answers the following questions: What are your educational plans after you graduate from high school? How do you think the Upward Bound Program can help you achieve your goals?

STUDENT SERVICES

ACADEMIC ADVISING

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

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

Professional academic advisors are available in the Student Success Centers on both campuses to assist students with their advising needs. Academic advisors 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 encouraged to schedule an appointment to meet with an advisor early in their career at the College and to meet with an advisor on a regular basis. Students are ultimately responsible for their course selections, as well as for the fulfillment of degree or certificate requirements.

COUNSELING SERVICES

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

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

The College has a staff of professional counselors to help students achieve academic success, emotional stability and to balance their academic and personal lives. Counseling provides an opportunity for students to discuss their concerns openly with a professional, to review options and make decisions after an objective consideration of facts and circumstances. Additionally, counselors assist students to explore career options and to cope with a variety of issues and concerns such as stress and time management.

The College's counseling services are available to all full-time and part-time enrolled students. Students needing on-going therapy are referred to community agencies. Strict confidentiality is maintained in the handling of every contact. We encourage students to seek individual counseling appointments. However, a counselor is also available on call during the day in the locations listed above to meet with students on a drop-in basis and respond to their brief questions and concerns.

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. degree 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, Cabrini College, Chestnut Hill College, Cheyney University, Delaware Valley College, DeSales University, Drexel University, Eastern University, Gwynedd-Mercy College, Kutztown University, LaSalle University, Lehigh University, Messiah College, Peirce College, Penn State Abington, Philadelphia University's Accelerated Bachelor of Science Degree Completion (Evening) Program, Rosemont College, Saint Joseph's University, Strayer University, Temple University, University of Phoenix, 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.

Through the Partnership Program, students also have 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 Transfer and Articulation Oversight Committee (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, Communication, Computer Science, Criminal Justice, Education in the Early Years, Fine Arts, Social Sciences – Geography, Social Sciences – History, Mathematics, Social Sciences - Psychology, and Theatre. Students who graduate within any of these programs will be assured transfer as juniors into bachelor degrees in similar fields of study at any of the fourteen 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 very 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, 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)

Alvernia University
- Bachelor of science in nursing (Pottstown Campus)
- Bachelor of science in healthcare science (Pottstown Campus)
- Master of science in nursing (Pottstown Campus)

Chestnut Hill College
- Bachelor of science in human services (Both Campuses)
- Master of science in administration of human services (Pottstown Campus)

Drexel University
- Doctorate of education in educational leadership and management (Both Campuses)
- Master of science in educational administration (Blue Bell Campus)
- Master of science in learning technologies (Pottstown Campus)
- Master of science in educational improvement and transformation (Pottstown Campus)
- Professional development certificates in learning technologies and educational policy (Pottstown Campus)

Immaculata University
- Doctorate of education in higher education (Blue Bell Campus)

Temple University
- Master of science in education (Pottstown Campus)
- Certification in career and technical education (Pottstown Campus)

Villanova University
Bachelor of interdisciplinary studies in leadership studies (Pottstown Campus)

CAREER SERVICES

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

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

Selecting an appropriate career path and finding employment are major goals for students. The College's Career Services Office provides career counseling services to students to help select a major and career, and job coaching services to students and alumni who are seeking full time career-oriented jobs; changing jobs or fields; or looking for part-time, summer or internship positions.

Appointments: Make an individual counseling appointment to explore career options and get help with job search issues, including writing resumes and cover letters.

Career Assessment: Use a self-paced career exploration program, Focus 2, to help you select a major and career (www.mc3.edu, MyMC3, Student Services, Career Services). Results may be also be discussed with a counselor on an appointment basis.

Resume Critique: Post your resume on www.collegecentral.com/mc3 to have it reviewed, before it is approved for employer viewing. A resume may also be reviewed by a counselor to make sure it will generate interviews.

Interviewing Practice: Learn to enhance your chances of being offered a job by making an appointment to get valuable interviewing practice.

Job Listings: Access local job and internship postings at www.collegecentral.com/mc3. Students are encouraged to post their resumes for employer review.

Job Fairs: Attend Recruiter on Campus events throughout each semester, as well as large Career Expos twice a year, in the fall at West Campus and in the spring at Central Campus.

Online Resources: Various resources may be accessed on the Career Services website at www.mc3.edu (MyMC3, Student Services, Career Services). Useful information may also be found on FACEBOOK http://facebook.com/Mc3CareerServices and TWITTER http://twitter.com/Mc3CareerSrvc

Career Library Resources: Occupational and career outlook materials are available for check-out in the Student Success Center at West Campus and the Brendlinger Library at Central Campus.

The Perkins Career Program

The Perkins Career Program assists students in an Associate of Applied Science (A.A.S.) or certificate program of study in acquiring the specific academic, vocational, and personal skills needed to perform effectively on the job today. Each student's career knowledge of his/her chosen field and the opportunities available in that arena will be heightened. Part of this preparation may be an internship position to develop skills and experiences. Personalized services available to each Perkins Career Program student on the College's campuses focus on educational and employment success. For more information contact: 215-641-6577 at Central Campus or 610-718-1906 at West Campus.

The Occupation Preparation Program

The Student Success Center conducts this program to provide career exploration and planning, academic advising, tutorial support and internship opportunities to students enrolled in Associate in Applied Science (AAS) degree and certificate programs. Career services are available day and evening at both campuses.

COOPERATIVE/INTERNSHIP OPPORTUNITIES

Cooperative/internship experiences offer our students the opportunity to gain valuable work experience in their field of study. The benefits and objectives of the College's Cooperative/Internship Program are to:

- Provide students with a cooperative/internship experience in which they may apply what they have learned in the classroom.
- Help student interns explore careers in their field of study so that they can make more thoughtful, intelligent career choices.
- Help students earn income (in many internships) that can support the cost of their college experience.
- Assist students' transition from college to a career.
- Help students develop general and specific occupational skills, knowledge, attitudes and behavioral patterns that will be required in their careers.

Interested students should contact the College's Internship Director of Job Placement and Internships at 215-641-6577, or the Academic Program Director or Faculty Coordinator of their appropriate discipline.

Internship announcements can also be accessed by students registered on our website at www.mc3.edu.

SERVICES FOR STUDENTS WITH DISABILITIES

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

West Campus
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, the College will provide reasonable accommodations to ensure equal access to the College community.

Students with disabilities may be eligible for academic support, use of assistive technology, and supportive and advocacy counseling. Students may also be eligible for classroom accommodations for testing and note-taking. There are no additional fees for these services.

Students who need access to these services are responsible for identifying their needs and requesting support and accommodations. Students with hidden disabilities need to provide recent and relevant documentation from a qualified professional to support their requests. 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 Students with Disabilities 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 web site and from the Director and Coordinator of Disability Services.

VETERANS' EDUCATIONAL BENEFITS

Central Campus
Veterans Resource Center, 215-619-7307

West Campus
Student Success Center, South Hall, 610-718-1947

Veterans and certain dependents of veterans, Reservists and National Guard members may be entitled to educational benefits from the Department of Veterans Affairs. You should verify your program status before registering. If you have eligibility questions, call 888-442-4551. If you are using veterans benefits for the first time or are transferring to the College, contact the veterans' advisor for assistance in determining which documents you are required to complete for the application or transfer process. New student-veterans must provide a copy of their military discharge (DD-214, Member 4 copy) and a copy of the Department of Veterans Affairs (VA) Certificate of Eligibility for education benefits. VA regulations require that you maintain a 2.0 GPA in your declared major to receive educational benefits. The VA will not pay for audits, withdrawals or No Pass grades.

ENGLISH AS A SECOND LANGUAGE (ESL) ADVISING

Central Campus
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 (REA014andREA017), 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

Central Campus, College Hall 115
West Campus, South Hall 154
Office: 215-641-6606
Fax: 215-619-7164 (confidential) Health@mc3.edu
Office Hours: 8:30am – 4:30pm

The Health & Wellness Initiatives Office is located at the Central Campus in College Hall 115 and at the West Campus, generally one day a week, in South Hall 154. The Health & Wellness Office provides college-wide leadership in the development, coordination and promotion of health & wellness programs for students and employees.

The primary focus is on proactive and preventive health related lifestyle behaviors. Free health information materials are made available at office locations at both campuses.

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 in attendance at 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 healthcare 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 & 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 by the Office of Health & Wellness to students. 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
Student Success Center, College Hall
215-641-6577
StudentReferral@mc3.edu

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

The Student Support and Referral Team 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
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 the 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
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 early 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
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 nutured 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.

STUDENT AND CULTURAL ACTIVITIES

ATHLETICS AND CAMPUS RECREATION

Our commitment to enhance each student's college experience is evident in our intercollegiate and campus recreation programs. The Department of Athletics and Campus Recreation is designed to offer "something for everyone." Students can compete in formal programs through intercollegiate athletics or semi-formal and informal activities through campus recreation activities.

Central Campus
Physical Education Center 220, 215-641-6519 or 6672

West Campus
South Hall 106, 610-718-2037

Intercollegiate Athletics
The Mustangs compete in 7 intercollegiate sports: men's and women's soccer, women's volleyball, men's and women's basketball, baseball and softball. Our Mustangs are members of the National Junior College Athletic Association (NJCAA) in Region 19 and the Eastern Pennsylvania Conference (EPC).

Intramural Athletics
The College also offers a wide variety of intramural athletics on both campuses. Intramurals are team or individual activities designed for the student who wishes to participate in athletic competition on a semi-formal or informal basis. Many students enjoy participation in our intramural program which allows for friendly competition before or after classes. Opportunities from which to choose include: 5K, Table Tennis, Pool, Badminton, Basketball, Flag Football, Indoor Soccer, Tennis, Volleyball.

Wellness Center
The Physical Education Center on Central Campus offers a Wellness Center that is open and FREE of charge to all students, faculty, staff, and alumni of Montgomery County Community College. The Wellness Center is equipped with weight machines, free weights, and cardiovascular machines. All users must complete a waiver form prior to using the Wellness Center. The waiver form can be filled out at the Front Desk of the Physical Education Center.

STUDENT LEADERSHIP AND INVOLVEMENT

Central Campus
College Hall 103, 215-641-6581
getinvolved@mc3.edu

West Campus
South Hall 106, 610-718-1852
getinvolved@mc3.edu

Involvement in extracurricular activities is a valuable part of each student's college experience. The Student Leadership and Involvement program enhances and supports the academic program of the institution while encouraging personal growth and development. Programs and activities are designed to foster the intellectual, social, and cultural development of students and to foster a sense of community among students, faculty, and staff. The Student Leadership and Involvement Office is directly responsible for the development, implementation, and evaluation of student activities, community and civic engagement, programs and events. This includes assisting student clubs and organizations, facilitating leadership training, planning and coordinating various campus activities and co-curricular service-learning opportunities. Get involved. Get connected.

Student Clubs and Organizations
African American Student League
African Students Association
Biology Club
Book Club
CAP-G (communications club)
Ceramics Club
Community Service Club (ACE)
Criminal Justice & Fire Science Club
Dance Performance Ensemble
Dental Hygiene Club
Doug's Corner
Drama Club
Fashion Club
Film Club
Gay-Straight Alliance
History Club
Honors Club
HOLA Club (Latin American Students Club)
International Club
KEYS Club
Literary Magazine
Medical Assisting Club
Medical Lab Technicians Club (MLT)
MONTCO JAMZ
Montco Radio Station
Montgazette (student newspaper)
Muslim Student Association
Phi Beta Lambda (business majors)
Phi Theta Kappa (honor society)
Political Science Club
Radiography Club
Student Government Association (SGA)
Student Nursing Club
Student Programming Board
THRIVE (Christian fellowship)

Veteran Students Organization
Writer's Club
Young Democrats
Young Republicans

CULTURAL ACTIVITIES

Montgomery County Community College serves as a center for cultural activities within Montgomery County, presenting works of exemplary artists through cultural and humanities events that enhance the educational mission of the College and the quality of life for our community.

Through the College's Lively Arts series, we offer music, dance, theater, film, speakers, special attractions, and forums on contemporary issues. Programming is aimed at both adults and children. For more information about the Lively Arts Series please call 215-641-6518 or 215-619-7309.

Art Galleries

Fine Arts Center
Central Campus in Blue Bell

North Hall
West Campus in Pottstown

The Galleries provide unique educational programs and diverse exhibitions at our two professional gallery spaces. Exhibitions of student, faculty, and alumni work, in addition to presenting artists of local, regional and national prominence integrate visual culture and the development of critical viewing skills. The Galleries serve the larger regional community as destinations and resources for students, faculty, community partners and artists. The Galleries are free and open to the public.

ACADEMIC GRADING AND PROGRESSION POLICIES

Graded Designations

Grades	Quality Points
A	4.00
A-	3.67
B+	3.33
B	3.00
B-	2.67
C+	2.33
C	2.00
D	1.00
F	0.00
XF	Academic misconduct
FN	F never attended
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
NC	No credit
NS	No show for attendance
W	Student initiated during withdrawal period
WEX	Withdrawal with approved excuse

Midterm Academic Progress*

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 College approved grading system in the course syllabus. Students are responsible for obtaining a clear understanding of 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% 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 responsibility of the student to notify the College when there is the intent 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) in all of their registered classes. Administrative deregistration is treated the same as a regular drop status as it relates to the students' 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 into the electronic grading system an indicator of student progress. 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 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% 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% of the course time and prior to 75% 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% 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% 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), with deployment orders the student may opt to have all courses and charges removed from the record for the semester. 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 course and the tuition will be removed from the student's record. 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	3.00	3 x 3.00 =	9.00
PSY 101	3	F	0.00	3 x 0.00 =	0.00
MAT 100	3	C	2.00	3 x 2.00 =	6.00
BIO 121	4	D	1.00	4 x 1.00 =	4.00
FRE 101	3	A	4.00	3 x 4.00 =	12.00
TOTAL	**16**				**31.00**

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

Credits attempted include credits 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 GP A calculation. Courses with a course number below 100 are also not included in the GPA.

GRADE REPORTS

Students must obtain their grade reports on WebAdvisor, 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

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

West Campus
Student Success Center
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.

Students are encouraged to view and print their Program Evaluation at www.mc3.edu, accessing WebAdvisor and selecting Program Evaluation.

Students may also see how their coursework applies to a different major by using the "What If" feature of Program Evaluation on WebAdvisor 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

Central Campus
Student Success Center
College Hall
advising@mc3.edu

West Campus
Student Success Center
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 found 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 accolades.

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 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

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 during the previous semester and at least two times since entering the College; and has a cumulative GPA within the range as outlined in the Academic Progress Table. An academic suspension student will be dropped from all upcoming registered coursework. The College may readmit an academic suspension student after a minimum of a one-semester enrollment stop-out, if the student first meets with a counselor to create an academic plan for success

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 te 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 it is 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.

STANDARDS FOR STUDENT CONDUCT

Montgomery County Community College is committed to providing a campus environment in which all students have an equal opportunity to learn, study and grow as scholars and as citizens of the larger community. Students are expected to treat all members of the college community with dignity, respect, fairness and civility, and to behave in a responsible manner at all times both in and outside of the classroom.

While fully recognizing every individual student's personal rights, including the right to free speech, the College has established a Student Code of Conduct to describe behavior that is in violation of acceptable college standards and the disciplinary sanctions and disciplinary procedures for code violations. The Code applies to behavior on College-owned property, in College classes conducted on campus or at a distance, and at all College-sponsored activities whether on or off campus. Academically-related classroom violations are addressed under the College's Academic Discipline Policy and Academic Code of Ethics.

Behavior that is considered in violation of the College's Code of Conduct may result in disciplinary action. Any violation of the Code of Conduct should be reported to the Dean of Student Affairs, or the Assistant Vice President of Student Affairs at the West Campus. The Vice President for Student Affairs is responsible for administering the College's Code of Conduct.

The Code of Conduct is available in the Student Handbook, on the website at http://mc3.edu/about-us/policies/125, from the Dean of Student Affairs Office at Central Campus and from the Assistant Vice President of Student Affairs Office at West Campus.

STUDENT RECORDS AND TRANSCRIPTS

PRIVACY OF STUDENT RECORDS – FAMILY EDUCATIONAL RIGHTS AND PRIVACY ACT (FERPA)

Montgomery County Community College (the 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) afford 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 to the Director of Student Records and Registration/Registrar, written requests that identify the record(s) they wish to inspect. 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 specify 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 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 students' education records without the students' 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
• Addresses
• 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. Students' requests for non-disclosure will be honored until the student requests its removal.

TRANSCRIPTS
A transcript is a record of courses a student attempted and/or completed at the College. Students or alumni who need a transcript should request a transcript online. They must complete an official Transcript Request Form, with a $5-per-copy transcript fee. Forms are available at http://www.mc3.edu/adm-fin-aid/request-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
West Campus, 610-718-1948

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 other 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.

APPLICATION FOR GRADUATION

Central Campus
Enrollment Services
College Hall 240
215-641-6551

West Campus
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.

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 General Studies

Because some students want to complete two years of work at the College without committing to a curriculum or wish to pursue a self-designed programs of study, the College offers an Associate in General Studies (AGS) degree.

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 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 a second associate degree from the College must complete at least 21 additional college-level credits and fulfill all of the course requirements 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 towards 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 that is 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 that is 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
In independent study courses, a faculty member gives students assignments with problems for independent study that incorporate previous instruction. Credit hours are variable.

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
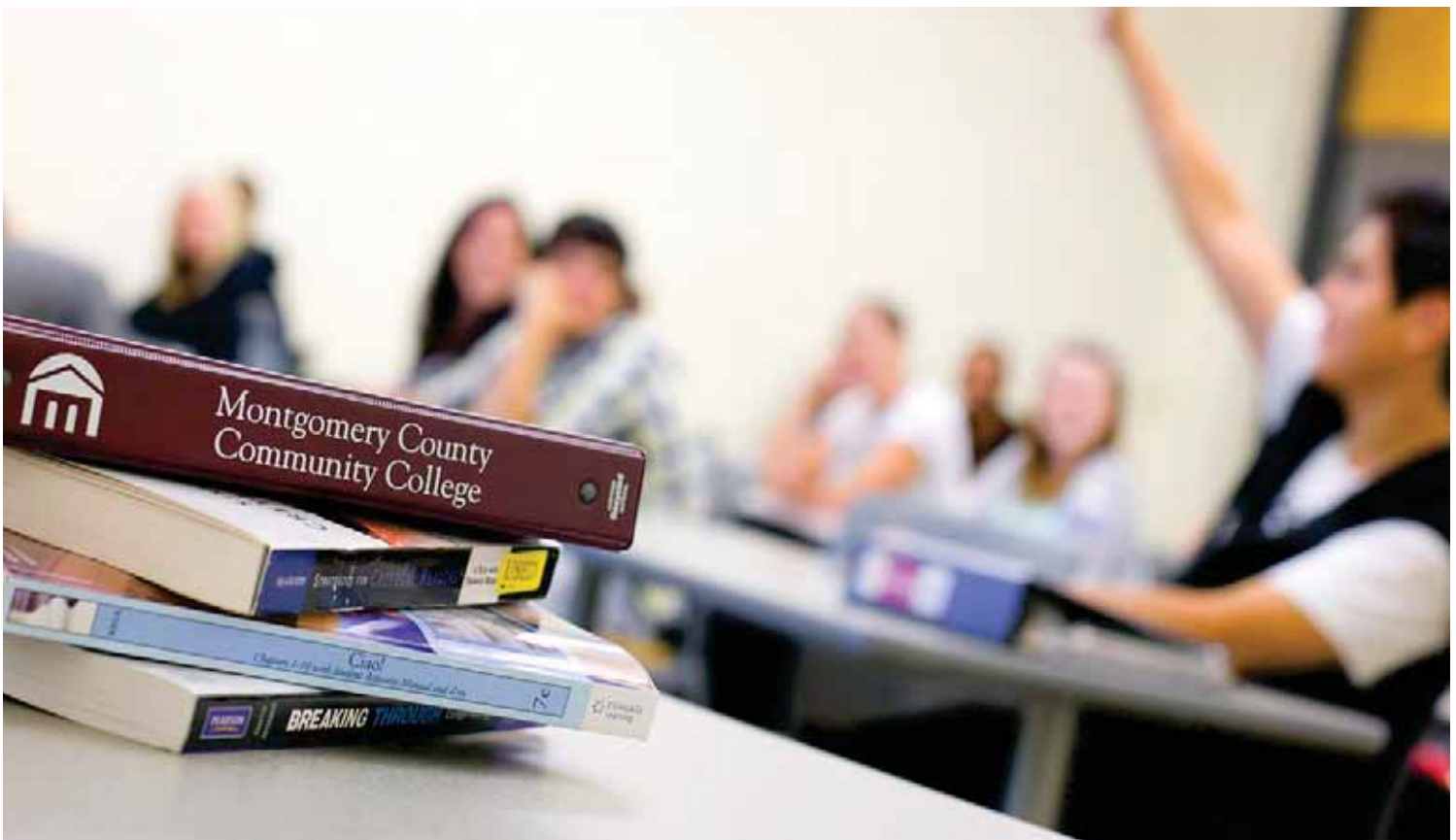
MAJORS, DEGREES AND CERTIFICATES

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. Location codes indicate where the programs and degrees are offered: Central Campus (CC), West Campus (WTC), Online (ONLN) and Off-Campus Locations (OFFC).

TWO-YEAR ASSOCIATE DEGREES

	MAJOR CODE	DEGREE CODE	LOCATION CODE
Career Programs			
Accounting	AL	AAS	CC, WTC, ONLN
Biotechnology	BI	AAS	CC
Biotechnology, Nanotechnology	BI.N	AAS	CC
Culinary Arts -			
Professional Culinary Arts	CU.C	AAS	OFFC
Professional Baking & Pastry Arts	CU.P	AAS	OFFC
Computer Networking	C.PC	AAS	CC
Criminal Justice	PS	AAS	CC, WTC, ONLN
CJS Concentration in Homeland Security	PS.HS	AAS	CC, ONLN, OFFC
Dental Hygiene General Studies	DH.GS	AAS	CC
Digital Audio Production	DA	AAS	CC
Digital Broadcasting	DB	AAS	CC
Electronic Game Simulation Design	EGSD	AAS	CC
Emergency Management & Planning -	EP	AAS	CC, OFFC, ONLN
Homeland Security	EP.HS	AAS	CC, OFFC, ONLN
Engineering Technology	ET	AAS	CC
Engineering Technology -			
Electrical	EO	AAS	CC
Mechanical	EO	AAS	CC
Nanofabrication	EO	AAS	CC
Fire Science	FS	AAS	CC, OFFC
Health & Fitness Professional	PE.FIT	AAS	CC
Health Services Management -	HS	AAS	CC, WTC, ONLN
Medical Coding	HS.MC	AAS	CC, WTC, ONLN
Medical Office Assistant	HS.MOA	AAS	CC, WTC, ONLN
Hotel & Restaurant Management -			
Food Services Management	HM.FOOD	AAS	CC, OFFC
Hotel Management	HM.HOTEL	AAS	CC, OFFC
Human Services	MH	AAS	CC, WTC, ONLN
Human Services -			
Addictions	MH.D&A	AAS	CC, WTC
Child, Youth, and Family Services	MH.Y	AAS	CC, WTC, ONLN
Gerontology	MH.GER	AAS	CC, WTC, ONLN

TWO-YEAR ASSOCIATE DEGREES (continued)	MAJOR CODE	DEGREE CODE	LOCATION CODE
Management -	BM.M	AAS	CC, WTC, ONLN
Real Estate	BM.RE	AAS	CC, ONLN
Entrepreneurship	BM.ETP	AAS	CC, WTC, ONLN
Marketing	MM	AAS	CC, WTC, ONLN
Medical Laboratory Technician Gen. Studies	ML.GS	AAS	CC
Nursing General Studies	NR.GS	AAS	CC
Office Administration -	SS	AAS	CC, ONLN
Virtual Assistance	SS.VO	AAS	CC, ONLN
Radiography General Studies	RT.GS	AAS	WTC
Surgical Technology General Studies	SR.GS	AAS	WTC
Web Design & Development - Design	DP.DES	AAS	CC, ONLN
Web Design & Development - Development	DP.DEV	AAS	CC, ONLN

TWO-YEAR ASSOCIATE DEGREES	MAJOR CODE	DEGREE CODE	LOCATION CODE
Transfer Programs			
Biotechnology	LB	AS	CC
Business Administration	BA	AS	CC, WTC, ONLN
Communication	ST	AA	CC, WTC
Computer Science	SC	AS	CC, WTC, ONLN
Dance	DAN	AA	CC, WTC
Education in the Early Years - Birth through 4th Grade	EEY	AA	CC, WTC, ONLN
Education in the Middle Years - Fourth through Eighth Grade	EMY	AA	CC, WTC, ONLN
Engineering Science	EG	AS	CC
Exercise Science and Wellness -	ESW	AS	CC, WTC
Athletic Training	ESW.AT	AS	CC
Teaching Health and Physical Education	ESW.HP	AS	CC
Recreation and Sport Studies	ESW.RS	AS	CC
Fine Art	FA.A	AFA	CC, WTC
Information Technology	IT	AS	CC
Liberal Studies	LI	AA	CC, WTC, ONLN
Life Sciences	LSC	AS	CC
Mathematics	LM	AA	CC, WTC
Music	MU	AA	CC, WTC
Physical Sciences	LP	AS	CC, WTC
Secondary Education	ES	AA	CC, WTC, ONLN
Social Sciences -	LS	AA	CC, WTC, ONLN
General Studies (and/or undecided)	S	AGS	CC, WTC, ONLN
Geography Concentration	LS.G	AA	CC, WTC, ONLN
History Concentration	LS.H	AA	CC, WTC, ONLN
Psychology Concentration	LS.P	AA	CC, WTC, ONLN
Theater Arts	THA	AA	CC, WTC

CERTIFICATE PROGRAMS	MAJOR CODE	DEGREE CODE	LOCATION CODE
One-Year/Less (Career)			
Certificate in Accounting	C, ACC	CRT	CC, WTC, ONLN
Certificate in Business Management	CB	CRT	CC, WTC, ONLN
Certificate in Cloud Computing	C.CLC	CRT	CC
Certificate in Computer Networking	C.PC	CRT	CC, ONLN
Certificate in Culinary Arts	C.CULA	CRT	OFFC
Certificate in Baking & Pastry Arts	C.CULB	CRT	OFFC
Certificate in Drug & Alcohol Studies	CD	CRT	CC, WTC
Certificate in Emergency Management Planning	C.EP	CRT	CC, OFFC, ONLN
Certificate in Entrepreneurship	C.ETP	SHC	CC, WTC, ONLN
Certificate in Fire Science	CF	CRT	CC, OFFC
Certificate in Gerontology	CG CC	CRT	WTC, ONLN
Certificate in Hotel/Restaurant/ Institutional Supervision	C.HM	CRT	CC
Certificate in Human Services	C.MH	CRT	CC, WTC, ONLN
Certificate in Marketing	C.MKT	CRT	CC,WTC
Certificate in Medical Assisting General Studies	C.MA.GS	CRT	CC, WTC
Certificate in Software Engineering	C.SOFT	CRT	CC
Certificate Computer Information Systems	PI	SPC	C, ONLN
Certificate in Web Design & Development: Design Concentration	C.DES	CRT	CC, WTC, ONLN
Certificate in Web Design & Development: Developmental Concentration	C.DEV	CRT	CC, WTC, ONLN
Specialty Certificate in Accounting	PA	SPC	CC, WTC, ONLN
Specialty Certificate in Computer Networking	PN	SPC	CC, ONLN
Specialty Certificate in Game Design	PG	SPC	CC
Specialty Certificate in Hotel/Restaurant Management	PH	SPC	CC
Specialty Certificate in Homeland Security	C.PSHS	SPC	CC, WTC, ONLN
Specialty Certificate in Marketing/Management	PM	SPC	CC, WTC, ONLN
Specialty Certificate in Office Administration	PO	SPC	CC, ONLN
Specialty Certificate in Public Relations	PPR	SPC	CC
Specialty Certificate in Real Estate	PR	SPC	CC, ONLN
Specialty Certificate in Software Engineering	PF	SPC	CC, ONLN
Specialty Certificate in Web Development	PW	SPC	CC, ONLN
Specialty Certificate in Public Relations	SPR	SPC	CC

CERTIFICATE OF COMPLETION	MAJOR CODE	DEGREE CODE	LOCATION CODE
Short-Term (Job-Ready)			
Biotechnology and Biomanufacturing	CS.BIC	CC	CC
Homeland Security	CS.HS	CC	
GIS Systems Operation	CS.GIS	CC	
Medical Coding	CS.MC	CC	CC
Medical Office Assistant	CS.MOA	CC	CC, WTC
Phlebotomy	CS.PBT	CC	CC
Security Management	CS.SM	CC	
Virtual Assistance	CS.VO	CC	CC, ONLN

NON-CREDIT WORKFORCE DEVELOPMENT CERTIFICATE PROGRAMS	LOCATION CODE
Career Programs	
A+	CC
Child Development Associate (CDA)	CC
Cisco Certified Network Associate (CCNA)	CC
CCNA Security	CC
CCNA Voice	CC
CITRIX	CC
Clinical Research Coordinator	CC
CNC Machine Operator	OffC
Drinking Water Treatment Operator Certification	WTC EKG
Technician Certification	CC
Emergency Medical Technician	OFFC
Entrepreneurial Certificate	CC
Fiber Optic Cabling	CC
Firefighter	OFFC
Health Information Technologist	CC, WTC
Heating, Ventilation and Air Conditioning (HVAC)	OFFC
Industrial Maintenance Technician	OFFC
Introduction to Solar Installation	OFFC
Logistics Technician	OFFC
Medical Billing and Coding Certificate	CC, WTC
Medical Office Technologist	CC
Microsoft Certified Solutions Associate (MCSA)	CC
Microsoft Certified Solutions Expert (MCSE)	CC
Microsoft Office Specialist (MOS)	CC
Municipal Police Basic Training Curriculum (ACT 120	OFFC
Notary Public Training and Renewal	CC, WTC
Nurse Reactivation and Nurse Refresher	CC,OFFC
Paramedic	OFFC
Pharmacy Technician	CC, WTC
Private Security Academy	OFFC
Production and Inventory Management Certificate	CC
QuickBooks	CC, WTC
ServSafe Training and Certification	CC, WTC
Starting A Successful Woman-Owned Business Certificate Program	CC
Sustainable Building Advisor	CC
Veterinarian Assistant	CC
Wastewater Treatment Operator Certification	WTC

THE CORE CURRICULUM

The general education core contains the essence of what the faculty of Montgomery County Community College believe necessary for every graduate. It shapes how all students experience education at Montgomery County Community College and provides a common, shared exploration of knowledge, skills, and values that are the hallmark of an educated person.

The core is framed by thirteen learning goals encompassing the skills, knowledge, and values that Montgomery County Community College students will acquire through instruction and practice by the time of graduation. Approved in 2011, the College's competency-based core curriculum is incorporated into all academic programs.

The core is designed to help students communicate, solve problems, integrate knowledge, and place value on self and others. It provides the foundation essential to learning in all disciplines and gives students the tools necessary to sculpt a productive, informed future and a satisfying quality of life. The core education creates a community of learners and provides a set of academic experiences that are the basis for future intellectual pursuit.

WHAT DOES THE REVISED CORE MEAN FOR STUDENTS?

Enrolled before fall 2011: Students who enrolled in a program of study prior to September 2011, and did not change this course of study after the start of the fall 2011 term, will be able to meet the core requirements in place at the time they enrolled or may choose to meet the new core requirements in order to graduate.

Enrolled fall 2011 or later: All students enrolling or changing their course of study during or after the fall 2011 term will need to meet the College's new current core requirements regardless of the program in which they are enrolled.

The program of study for every program was designed by discipline faculty to incorporate the core requirements. By following their desired program of study, students will meet the core requirements. Program requirements as well as a list of specific courses that meet the new core requirements can be found on the Montgomery County Community College web site, at mc3.edu/academics/core-curriculum, or students may speak to an advisor in the Student Success Center or meet with a faculty member.

GENERAL EDUCATION CORE GOALS

SKILLS:
Academic skills prepare students for lifelong learning in a variety of instructional modes.

GOAL 1: Communication Skills
Use writing, speaking, reading, listening, and observational skills to understand, organize, receive and convey information.

GOAL 2: Analytic Skills
Employ logic, reasoning and analysis to solve problems.

GOAL 3: Quantitative Skills
Use mathematical concepts and standards and criteria to solve problems and make decisions.

GOAL 4: Computer Fluency
Use computers to collect, save, process, retrieve and transmit information and acquire those skills that are essential for working and living in a technological society.

GOAL 5: Information Literacy
Locate, evaluate, and use information from diverse sources.

KNOWLEDGE:
Knowledge empowers individuals to initiate change, achieve their potential, generate ideas, and serve the common good.

GOAL 6: Intellectual Heritage
Develop an understanding of the history of civilization, the evolution of cultures, and the ideas of great thinkers.

GOAL 7: Aesthetic Sensibility and the Arts
Develop an understanding of and gain an appreciation for artistic expression in various forms including fine art, music, literature, dance, theater, and the cinematic and electronic arts.

GOAL 8: Physical and Life Sciences
Develop an understanding of the natural and physical world and the role of science in society.

GOAL 9: Behavioral and Social Sciences
Develop an understanding of human behavior and social, political and economic constructs.

GOAL 10: Exercise and Health Science
Develop an understanding of physical fitness and health concepts.

VALUES:
Values, ethics and diverse perspectives encourage intellectual open-mindedness, and enable individuals to engage in society in responsible ways.

GOAL 11: Civic Responsibility
Demonstrate self-discipline, perseverance, and cooperation in the pursuit of personal success and positive civic engagement.

GOAL 12: Sensitivity to Global Perspectives and Cultural and Social Diversity
Develop an awareness of and receptivity to diverse perspectives, languages and values.

GOAL 13: Ethical Reasoning and Behavior
Base decisions on ethical principles.

COURSES MEETING GENERAL EDUCATION CORE GOALS

GOAL 1a: Written Communication
ENG 101, ENG 102, ENG 115, ENG 117, COM 230, SPC 125, SPC 225

GOAL 1b: Oral Communication
SPC 110, SPC 111, SPC 113, SPC 120, SPC 230, THA 105, THA 114

GOAL 2: Analytical Skills
ANT 100, ART 111, ART 121, ART 161, ART 171, AST 120, AST 121, BIO 115, BIO 120, BIO 121, BIO 140, CHE 121, CHE 131, CHE 151, CIS 110, CIS 111, CIS 155, ECO 110, ECO 121, ECO 122, EDU 100, ENG 102, ETP 110, ESW 206, ESW 220, ESW 235, ESW 245, GEO 110, GEO 135, GEO 210, GEO 220, GEO 235, GLG 115, GLG 120, GLG 121, GLG 125, GLG 151, HCP 120, MAT 103, MAT 106, MAT 131, MAT 140, MAT 188 & MAT 189 in combination, MAT 190, MGT 210, MUS 221, PHI 100, PHI 101, PHI 115, PHI 120, PHY 120, PHY 121, PHY 151, POL 101, POL 124, PSY 101, SOC 101, SPC 110, SPC 111, SPC 120, SPC 125, SPC 225, SPC 230

GOAL 3: Quantitative Skills
MAT 103, MAT 106, MAT 131, MAT 140, MAT 188 & MAT 189 in combination, MAT 190

GOAL 4: Computer Fluency
CAO 101, CIS 110, CIS 111, CIS 155, GEO 210, GEO 220

GOAL 5: Information Literacy (when paired with ENG 101)
AST 120, CIS 110, CIS 111, COM 200, COM 230, ECO 121, ECO 122, EDU 100, EDU 245, ENG 101, ENG 102, ENG 115, ENG 117, ENG 201, ENG 221, ESW 102, ESW 180, ESW 206, ESW 207, ESW 220, ESW 224, ESW 235, ESW 240, ESW 245, GEO 110, GEO 207, GEO 220, GEO 235, GLG 121, HCP 120, MUS 110, PHI 101, PHI 115, PHI 120, PHY 120, POL 101, SOC 101, SOC 103, SPC 110, SPC 111, SPC 120, SPC 125, SPC 202, SPC 225, SPC 230

GOAL 6: Intellectual Heritage
ART 101, ART 102, ART 103, ENG 201, ENG 212, ENG 221, ENG 222, ENG 246, HCP 120, HIS 101, HIS 102, HIS 122, HIS 203, HIS 205, HIS 213, HIS 219, HIS 234, HIS 235, HIS 250, HIS 260, MUS 110, PHI 101, PHI 120

GOAL 7: Aesthetic Sensibility & The Arts
ART 101, ART 102, ART 103, ART 111, ART 121, ART 161, ART 171, COM 103 & COM 163 in combination, COM 230, DAN 102, DAN 104, DAN 110, DAN 121, DAN 123, 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 248, ENG 255, ENG 256, ENG 257, ENG 265, ENG 266, ENG 275, GEO 220, HIS 101, HIS 121, MUS 110, MUS 140, MUS 146, MUS 221, MUS 260, MUS 261, MUS 262, MUS 263, THA 105, THA 114

GOAL 8: Physical & Life Sciences
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 120, PHY 121, PHY 151

GOAL 9: Behavioral & Social Sciences
ANT 100, ANT 101, ANT 104, ECO 110, ECO 117, ECO 121, ECO 122, EDU 100, ESW 207, ESW 255, GEO 110, GEO 130, GEO 207, GEO 235, HSW 105, HIS 101, HIS 102, HIS 203, HIS 205, HIS 213, HIS 219, HIS 234, HIS 235, HIS 250, HIS 260, POL 101, POL 124, POL 125, POL 202, PSY 101, PSY 137, PSY 200, PSY 206, PSY 214, PSY 232, PSY 255, SOC 101, SOC 103, SOC 105, SOC 224, SOC 230, SPC 115

GOAL 10: Exercise & Health Science
DAN 101, DAN 102, ESW 100, ESW 101, ESW 102, ESW 106, ESW 107, ESW 113, ESW 123, ESW 128, ESW 137, ESW 141, ESW 146, ESW 147, ESW 148, ESW 160, ESW 180, ESW 185, ESW 206, ESW 207, ESW 210, ESW 220, ESW 224, ESW 235, ESW 240, ESW 245, ESW 255, GEO 207, HCP 185, NUR 210, PSY 255

GOAL 11: Civic Responsibility
ANT 101, ANT 104, BIO 115, COM 100 & COM 160 in combination, ECO 117, ECO 121 & ECO 122 in combination, GEO 130, GEO 135, GEO 235, HSW 205, IDS 115, POL 101, POL 124, POL 125, POL 202, PSY 137, SPC 120, SPC 125

GOAL 12: Global Perspective & Diversity
ANT 101, ANT 104, ARA 101, ARA 102, ART 101, ART 102, ART 103, ART 121, ART 161, ART 171, ART 111, BIO 115, CHI 101, CHI 102, ECO 117, EDU 245, ENG 212, ENG 222, ENG 246, ENG 255, ESW 185, ESW 206, ESW 207, ESW 255, FRE 101, FRE 102, GEO 110, GEO 130, GEO 207, GEO 235, GER 101, GER 102, HCP 120, HCP 185, HIS 101, HIS 102, HIS 122, HIS 203, HIS 205, HIS 214, HIS 218, HIS 220, HIS 234, HIS 235, HIS 240, HIS 250, HIS 260, HSW 105, IDS 115, ITA 101, ITA 102, JPN 101, JPN 102, MGT 210, PHI 101, MGT 210, PHI 101, PHI 115, PHI 120, POL 101, POL 124, PSY 137, PSY 255, REA 110, SOC 101, SOC 105, SOC 224, SOC 230, SPA 101, SPA 102, SPA 230, SPC 111, SPC 115, THA 105, THA 114

GOAL 13: Ethical Reasoning & Behavior
ANT 104, BIO 115, CAO 175, CIS 111, CJS 205, COM 200, ECO 117, ETP 110, GEO 235, HCP 114, HCP 120, HIS 101, HIS 102, HIS 205, HIS 213, HIS 214, HIS 218, HIS 234, HIS 235, HIS 260, HSW 105, MAS 114, MGT 210, PHI 100, PHI 101, PHI 115, PHI 120, POL 202, PSY 137, PSY 255, SOC 103, SOC 105, SPC 115, SPC 202

ARTS AND HUMANITIES DIVISION

COMMUNICATION (A.A.)

Transfer Curriculum

Graduates will be able to pursue continued study beyond the 2- year A. A. degree or obtain entry-level positions as an event production manager, reporter, and correspondent.

Program Outcomes
A graduate should be able to:
- Demonstrate familiarity with the various disciplines within the Communication field.
- Demonstrate familiarity with the ethical basis for communicating with diverse audiences in multiple contexts to meet the goal(s) of the intended communication.
- Recognize and employ informative and persuasive strategies, assess reasoning and identify, evaluate and utilize evidence to communicate ideas to a specific audience.
- Demonstrate heightened awareness of the civic responsibilities of communicators in a free society.
- Apply rhetorical analysis and media literacy skills to advance civic responsibility.

Associate of Arts in Communication Degree

FIRST SEMESTER
COM 100	Mass Media and Society	2
COM 160	Media Literacy Workshop	1
ENG 101	English Composition I	3
Elective	Core Goal 6: Intellectual Heritage	3
Elective	Core Goal 3: Quantitative Skills	3
PSY 101	Introduction to Psychology	3

(15 Credit Hours)

SECOND SEMESTER
ENG 102	English Composition II	3
SPC 120	Public Speaking	3
THA 114	Introduction to Theatre	3
Elective*	Core Goal 4: Computer Fluency	3
Elective*	Core Goal 8: Physical and Life Sciences	4

(16 Credit Hours)

THIRD SEMESTER
Elective*	Communication or Speech	3
Elective*	Communication or Speech	3
Elective*	ECO, POL or GEO	3
Elective*	English	3
Discipline	History COM 210, 211, 213, 214, 216, or 217	3

(15 Credit Hours)

FOURTH SEMESTER
Elective*	Communication or Speech	3
Elective*	Communication or Speech	3
Elective*	Core Goal 13: Ethical Reasoning and Behavior	3
Elective*	English Literature	3

Elective*	Core Goal 10: Exercise and Health Sciences	2

(14 Credit Hours)

TOTAL SEMESTER CREDIT HOURS: 63-64

* Student must consult an advisor for recommended electives, to meet requirements at transfer institutions.

** Transfer requirements vary among four-year institutions. Please check with an advisor prior to selecting a math course

DIGITAL AUDIO PRODUCTION (A.A.S.)

The Digital Audio Production A. A. S. curriculum is designed for students planning to obtain a two-year degree in Digital Audio Production.

Graduates will be able to obtain entry-level positions as a sound technician, audio engineer, recording studio technician, game audio designer, sound engineer for animation and film, audio producer, sound design artist, digital audio editor, production manager, production assistant, theater sound designer, and multimedia developer.

The A. A. S. curriculum offers a comprehensive background and Digital Audio Production expertise comparable to the first two years at a media conservatory.

Program Outcomes
In addition to fulfilling the core curriculum of Montgomery County Community College, a successful graduate of the Digital Audio Production (A A.S.) degree will be able to:
- Apply a basic knowledge of the recording industry, communication and audio history and theory to practical use. Use professional sound recording techniques and tools to record, engineer and edit music as well as conceive, plan, write, record, produce and edit audio pieces, projects, packages, programs, and stories.
- Tell, write, record, engineer and otherwise present a story using professional digital audio production and recording industry techniques and equipment.
- Apply practical knowledge of terminology, process, procedures, and use of current technology to enter entry-level employment in the recording industry and digital audio field.

FIRST SEMESTER
COM 100	Mass Media and Society	2
COM 160	Media Literacy Workshop	1
THA 114	Introduction to Theatre	3
ENG 101	English Composition I	3
Elective	Core Goal 6: Intellectual Heritage and Core Goal 9: Behavioral and Social Sciences	3
SPC 110 or 120	Speech Requirement	3

(15 Credit Hours)

SECOND SEMESTER
COM 101	Survey of Mass Media Industries in the United States	2
COM 161	Media Industries Workshop	1
COM 104	Introduction to Audio Equipment	2
COM 164	Aural Experience Workshop	1
COM 153 or 159	Workshop Elective	1
Elective	Core Goal 8: Physical and Life Sciences	4
Elective	Core Goal 3: Quantitative Skills	3

(16 Credit Hours)

THIRD SEMESTER
Discipline History Elective
COM 213, 214, MUS 112, 113, 114, or 210....................................3
MUS 120   Music Fundamentals 3
COM 200   Ethic, Responsibility, Mass Medis, Law.....................3
COM 120 and 121 Introduction to Scriptwriting and Workshop.........3
OR
COM 123 and 124 Intro to Writing for Broadcast News
        and Workshop 3
COM 250 and 251 Introduction to Audio Production
        and Workshop 3
COM 253 or 259   Workshop Elective...1
                                (16 Credit Hours)

FOURTH SEMESTER
COM 230   The Movied, Meaning and Methods 3
COM 208   Introduction to Media Operations ....2 and
COM 209   Media Operations Workshop..................... 1
COM 256   Audio Production .... 2 and
COM 257   Digital Sound Production Workshop 1
COM 235   Current Issues in Mass Media 3
COM 290   Communication Capstone.......................................1
Elective   ANT 104, GEO 130, POL 101 or SOC 101 3
                                (16 Credit Hours)

TOTAL SEMESTER CREDIT HOURS: 63

DIGITAL BROADCASTING (A.A.S.)

The core Communication curriculum is designed to support students planning to obtain a 2-year (A. A. S.) degree in Digital Broadcasting.

Graduates will be able to obtain entry-level positions leading to those of producer or director. Entry- level positions include: camera operator, broadcast technician, photojournalist, videographer, video editor, production manager, unit production manager, assistant director, assistant producer, production assistant, grip, gaffer, technical director, multi-media artist, multimedia developer, broadcast news writer, scriptwriter, reporter, and correspondent.

The A. A. S. curriculum offers a comprehensive background and Digital Broadcasting expertise comparable to the first two years at a media conservatory.

Program Outcomes
In addition to fulfilling the core curriculum of Montgomery County Community College, a successful graduate of the Digital Broadcasting (A. A. S.) degree will be able to:
• Apply a basic knowledge of communication history and theory to practical use.
• Use professional techniques and tools to conceive, plan, design, write, produce and edit programs, projects, and visual and audio storytelling packages.
• Tell, write and otherwise present a story using video and audio production techniques.
• Apply practical knowledge of terminology, process, procedures, and use of current technology to enter entry-level employment in the broadcasting or electronic media field.

FIRST SEMESTER
COM 100   Mass Media and Society. ....2 and
COM 160   Media Literacy Workshop 1
SPC 110   Introduction to Speech-Communication or
SPC 120   Public Speaking 3
ENG 101   English Composition I 3
THA 114   Introduction to Theatre 3
Elective   Core Goal 6: Intellectual Heritage and
           Core Goal 9: Behavioral and Social Sciences 3
                               (15 Credit Hours)

SECOND SEMESTER
COM 101   Survey of Mass Media Industries in
           the United States...2 and
COM 161   Media Industries Workshop 1
COM 103   Introduction to Video Production Equip.. .... 2 and
COM 163   Visual Storytelling Workshop 1
COM 120 and 121 Introduction to Scriptwriting and Workshop.........3
OR
COM 123 and 124 Intro to Writing for Broadcast News
           and Workshop 3
COM 230   The Movies: Meanings and Methods 3
Elective   Core Goal 3: Quantitative Skills................................3
Elective   Core Goal 10: Exercise and Health Sciences............2
                               (17 Credit Hours)

THIRD SEMESTER
Discipline History Elective
Discipline   History ART 105, COM 210, 211, 216 or 217............ 3
COM 200   Ethics, Responsibility, Mass Media and the Law 3
COM 166 and 167 Introduction to Electronic
           Journalism and Workship 3
OR
COM 220 and 221 Scriptwriting and Workshop.............................. 3
COM 166   Introduction to Electronic Journalism . ...2 and
COM 167   Introduction to Electronic Journalism Workshop .. 1 or
COM 220   Scriptwriting .... 2 and
COM 221   Scriptwriting Workshop ....
COM 250/260/270 or 280   Production Elective ....2 and
COM 251/261/271 or 281   Production Workshop Elective..............1
Elective   Core Goal 8: Physical and Life Sciences 4
                               (16 Credit Hours)

FOURTH SEMESTER
Elective   Communication or Art 3
COM 208 and 209 Introduction to Media Operations
           and Workshop 3
OR
COM 223 and 224 Electronic Journalism
           Production and Workshop..3
OR
COM 248   Directing Actors..3
COM 235   Current Issues in Mass Media 3
COM 266, 276, or 283   Production Elective..................................2
COM 267, 277, or 284   Production Workshop Elective..................1
COM 290   Communication Capstone...1
Elective   ANT 104, GEO, 130, POL 101 or SOC 101 3
                               (16 Credit Hours)

TOTAL SEMESTER CREDIT HOURS: 64

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 fne arts.

Program Objectives
A graduate should be able to:
*   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.

FIRST SEMESTER
ART 111	Drawing I	3
ART 130	2-D Design Principles	3
ART 140	3-D Design Principles	3
ART 101	Art History	3
ENG 101	English Composition I	3
	(15 Credit Hours)	

SECOND SEMESTER
ART112	Drawing II	3
ART 131	2-D Color Theory ..	3
ART138	Digital Art I .	3
ART102	Art History II .	3
ART XXX	Studio Elective*	3
SPC 120	Public Speaking	3
	(18 Credit Hours)	

THIRD SEMESTER
ART	Studio Elective* .	3
ART	Studio Elective*..	3
ART XXX	Art History Elective*	3
ART 121	Painting I	3
MAT 106	Math Applications	3
	(15 Credit Hours)	

FOURTH SEMESTER
ART	Studio Elective*	3
ART	Studio Elective*	3
ESW XXX	Elective Core Goal 10 Exercise and Science	2-3
Elective	Core Goal 9 Behavior and Social Science Core Goal 10 Exercise & Health Science	3
Elective	Core Goal 8: Astronomy, Chemistry or Physics course that meets Physical and Life Sciences	4
	(15-16 Credit Hours)	

* (See advisor for course recommendations tailored to chosen transfer institutions and major.)

TOTAL SEMESTER HOURS CREDIT: 63-64

LIBERAL STUDIES (A.A.)

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

Program Outcomes
A graduate should be able to:
*   Demonstrate oral and written communication skills, including competency in information literacy and logical analysis.
*   Use mathematical concepts and standards and criteria to solve problems and make decisions.
*   Demonstrate technology skills essential for working and living in a technological society.
*   Demonstrate general knowledge across the broad categories of intellectual heritage, artistic expression, the natural and physical world, human behavior and physical fitness and health concepts.
*   Demonstrate personal engagement in civic life and an awareness of the impact of human activity in the world.
*   Explain diverse perspectives, cultures, and values.
*   Apply an ethical framework to make informed decisions.

CURRICULUM
Liberal Studies (A.A.)

FIRST SEMESTER
ENG 101	English Composition 1	3
Speech Elective	Core Goal1b: Oral Communication Skills	3
Math Elective	Core Goal 3: Quantitative Skills	3
	(Students may not take MAT 103 to meet this goal.)	
Elective	Core Goal 4: Computer Fluency	3
Elective	Core Goal 9: Behavioral and Social Sciences	3
(Students may not use a History Course to meet this requirement)		
	(15 Credit Hours)	

SECOND SEMESTER
ENG 102	English Composition II	3
HIS 101 or 102	History of Western Civilization I or II	3
Elective	Core Goal 8: Physical and Life Sciences	4
Elective	Core Goal 10: Exercise and Health Sciences	2
Elective	Core Goal 7: Aesthetic Sensibility and The Arts	3
	(15-16 Credit Hours)	

THIRD SEMESTER
Elective	Core Goal 11: Civic Responsibility	3
Elective	Core Goal 12: Global Perspectives and Diversity	3
Elective	Core Goal 13: Ethical Reasoning Behavior	3
Elective	Elective	3
Elective	Elective	3
	(15 Credit Hours)	

FOURTH SEMESTER

Elective	Elective	3
Elective	Elective	3
Elective	Elective	3
Elective	Elective	3
Elecitve	Elective	3

(15 Credit Hours)

TOTAL SEMESTER HOURS CREDIT: 60-61

MUSIC (A.A.)

Transfer Curriculum

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

A graduate of the music program will be able to:

- 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.

Program of Study (TOTAL CREDITS 62-63)

This program provides the basic musicianship training appropriate for a broad range of music programs. Those students who are intending to pursue perfomance-based majors are strongly encouraged to take weekly private lessons on their major instrument. Contact the music coordiantor for availability.

- All students must either pass a fundamental musicianship placement test OR take MUS 120 (Fundamentals) before taking any course marked with **
- Students enrolled in the Music AA program must earn a C or better in all MUS courses.
- The Music AA requires completion of a minimum of 33 credits of "major designated" music classes including 4 semesters of ensemble participation.

FIRST SEMESTER

MUS 221**	Music Theory 1	3
Elective	Core Goal 6: Intellectual Heritage and Core Goal 9: Behavioral and Social Sciences	3
ENG 101	English Composition I	3
Any Ensemble (College Choir, Chamber Choir, Jazz Lab Band, Performance Jazz Ensemble, Chamber Strings, Wind Ensemble).		1
MUS 150 or 170 Guitar Class 1 or Piano Class 1		1
Math Elective	Core Goal 3: Quantitative Skills (students may not take MAT 103)	3
Elective	Core Goal 10: Exercise and Health Sciences	2-3

(16-17 Credit Hours)

SECOND SEMESTER

MUS 231**	Aural Theory 1	3
MUS 210,211,212, 213, or 214** Music History.		3
ENG 102	English Composition II	3
Any Ensemble (College Choir, Chamber Choir, Jazz Lab Band, Performance Jazz Ensemble, Chamber Strings, Wind Ensemble).		1
MUS 151 or 171 Guitar Class 2 or Piano Class 2.		1
Elective	Core Goal 11: Civic Responsibility	3
MUS 140**	Intro to Digital Music Technology (Fulfills core goal 4: Computer Literacy)	3

(17 Credit Hours)

THIRD SEMESTER

MUS 222**	Music Theory II	3
Elective	Core Goal 1b: Oral Communication Skills	3
Any Ensemble (College Choir, Chamber Choir, Jazz Lab Band, Performance Jazz Ensemble, Chamber Strings, Wind Ensemble)		1
Applied elective (Guitar Class, Piano Class, Private lessons, or additional Ensemble)		1
Elective	Core Goal 12: Global Perspectives and Diversity	3
Elective	Core Goal 8: Physical and Life Sciences	4

(15 Credit Hours)

FOURTH SEMESTER

MUS 232**	Aural Theory 2	3
US 210,211,212, 213, or 214** Music History		3
Elective	Music	3
Elective	Core Goal 13: Ethical Reasoning and Behavior	3
Any Ensemble (College Choir, Chamber Choir, Jazz Lab Band, Performance Jazz Ensemble, Chamber Strings, Wind Ensemble)		1
Applied elective (Guitar Class, Piano Class, Private lessons, or additional Ensemble)		1

(14 Credit Hours)

TOTAL SEMESTER CREDIT HOURS: 62-63

SPECIAL NOTES:

Many four year music programs also require study of a foreign language as part of their curriculum. Students intending to transfer to those schools are advised to take one or two semesters of a foreign language, which can add three to six credits to the total.

GRADUATION REQUIREMENTS

- Students must achieve a minimum of level 2 proficiency on either the guitar or the piano. Students can begin their studies at a higher level by passing the proficiency exam for the previous level. Students who complete proficiency in one instrument are strongly advised to study the other instrument, participate in a second ensemble, or take additional elective courses in music theory, technology, or history.
- Students must earn a C or better in all MUS courses.
- The music department coordinator will maintain a file containing documentation of the progress of each student enrolled in he program. Materials demonstrating satisfactory completion of program outcomes will be submitted by instructors of the appropriate class. This file will be reviewed each semester to assess the individual student's progress. No degree will be awarded until all the required outcomes have been satisfactorily achieved.

DANCE (A.A.)

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

Program Outcomes
A graduate of the dance program will be able to:
- Demonstrate proficiency at the intermediate level in modern dance and ballet technique.
- Perform in-class improvisations alone, with a partner, and in a group with confidence and commitment to the movement.
- Demonstrate an understanding of the basic principles of dance composition.
- Learn and perform selected dance repertory with poise, concentration, and confidence.
- Demonstrate an understanding of 20th and 21st century American concert dance, its major figures, and their major choreographic works.
- Demonstrate an understanding of practical concerns of dance training including: the importance of proper technique; injury prevention; cardiorespiratory, strength and flexibility training; diet and nutrition; caring for the dancing body.

Students enrolled in the Dance A.A. program must earn a C or better in all DAN courses for graduation.

Curriculum

FIRST SEMESTER
DAN 101/ESW 101	Introduction to Dance Studies	3
DAN 104	Modern Dance I	3
ENG 101	English Composition I	3
Elective	Core Goal 3: Quantitative Skills (students may not take MAT 103 to meet this requirement.)	3
Elective	Core Goal 6: Intellectual Heritage	3

(15 Credit Hours)

SECOND SEMESTER
DAN 123	Ballet I	3
DAN 151	Dance Improvisation	3
ENG 102	English Composition II	3
MUSIC 120	Music Fundamentals..	3
Elective	Core Goal 4: Computer Fluency	3
Elective	ESW 147 Mat Pilates or 148 Hatha Yoga	2

(17 Credit Hours)

THIRD SEMESTER
DAN 223	Ballet II	3
DAN 161	Dance Repertory and Performance I	3
DAN 251	Dance Composition .	3
Elective	Core Goal 11: Civic Responsibility, Core Goal 12: Global Perspectives and Diversity, and Core Goal 13: Ethical Reasoning and Behavior	3
Elective	Core Goal 8: Physical and Life	4

(16 Credit Hours)

FOURTH SEMESTER
DAN 204	Modern Dance II	3
DAN 110	Introduction to Dance as Art in America	3
Elective	Dance* (Dan 102, 103, 121 or 122 may not be used to fulfill this requirement)	3
Elective	Core Goal 9: Behavioral and Social Sciences	3
Elective	Core Goal 1b: Oral Communication Skills	3

(15 Credit Hours)

This curriculum outline represents the minimum requirements for the A.A. in Dance degree. Students planning to transfer as third year dance majors may need to take additional dance courses. Check the requirements of the transfer institution. Students planning to transfer as dance majors are recommended to take at least two DAN technique courses per semester, which will require additional hours of study.

TOTAL SEMESTER HOURS CREDIT: 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
A graduate should be able to:
- 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 of 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.

Curriculum

FIRST SEMESTER
THA 105	Introduction to Acting I: Improvisation and Fundamentals	3
THA 114	Introduction to Theater	3
ENG 101	English Composition I	3
Elective	Core Goal 6: Intellectual Heritage and Core Goal 9: Behavioral and Social Sciences	3
THA 150	Theater Production Workshop I	3

(15 Credit Hours)

SECOND SEMESTER
THA 106	Introduction to Acting II: Scenestudy	3
THA 151	Theater Production Workshop II	3
COM 100	Mass Media and Society	2
COM 160	Media Literacy Workshop	1
Elective	Core Goal 4: Computer Fluency)	3
ENG 102	English Composition II	3

(15 Credit Hours)

THIRD SEMESTER
THA 201 or 205	Acting for the Camera or Directors Lab	3
THA 203	Theater Practicum	1
Math Elective	Core Goal 3: Quantitative Skills (students my not take MAT 103 to meet this goal)	3
Elective	Core Goal 10: Exercise and Health Sciences	3
Elective	Core Goal 8: Physical and Life Sciences	4

(14 Credit Hours)

FOURTH SEMESTER

THA 290   Capstone project (Independent Study) 1
Elective   Theater 3
             (THA 105, 106, 201, 114 , 150, 151, 203 or 299
             may not be used to fulfill this requirement)
Elective   Music, Art, Communications or Dance 3
Elective   Core Goal 11: Civic Responsibility 3
Elective   ECO, GEO or POL..3
Elective   Core Goal 13: Ethical Reasoning and Behavior........3
                                          (16 Credit Hours)

TOTAL SEMESTER HOURS CREDIT: 60

SPECIALTY CERTIFICATE IN PUBLIC RELATIONS (CERTIFICATE)

Purpose
The Specialty Certificate in Public Relations is designed to prepare students to engage in promoting or creating good will for individuals, groups, or organizations by preparing, writing, presenting and/or displaying favorable publicity material that can be released through various communications channels.

Depending on the student's related educational background, the Specialty Certificate in Public Relations can prepare students for careers as Public Relations Specialist (PR Specialist), Public Information Officer, Communications Specialist, Corporate Communications Specialist, Public Affairs Specialist, Public Relations Account Executive, Public Relations Coordinator, etc.

Program Outcomes
Upon successful completion of the Certificate, each graduate will be able to:
• Identify and discuss the theoretical framework used for public relations
• Differentiate the variety of tasks performed by public relations practitioners in the various professional contexts in which public relations is practiced
• Develop the skills essential to good public relations writing that are characterized byprecision, clarity and economy
• Employ the 4-step public relations process to the public relations goals of at least two clients
• Design public relations materials for at least two clients on campus or in the surrounding community in service learning projects

Curriculum

Strategic Written Communication Track: Designed for returning students seeking a career change after losing a Marketing, Advertising, Management or other business related job. In addition, Marketing, Management, Business Administration or other business related majors could add the specialty certificate to concentrate in Public Relations.

Strategic Corporate Communication Track: Designed for returning students seeking a career change after losing a Print Journalism or Broadcast Media related job. In addition, Communications majors could add the specialty certificate to concentrate in Public Relations.

REQUIRED COURSES
There will be a total of three required courses for eachtrack.

Required for both tracks:
SPC 125   Introduction to Public Relations 3
SPC 225   Writing for Public Relations Campaigns 3

Required course for Strategic Written Communication Track:
ENG 165   Journalism 3

Required course for Strategic Corporate Communication Track:
MKT 111   Principles of Marketing 3

ELECTIVE COURSES
Nine credits of electives will be selected with the help of the Discipline Coordinator/Director. The courses will be selected from the list below.

SPC 120   Public Speaking 3
SPC 202   Persuasion..3
SPC 230   Communication in Organizations 3
COM 100   Mass Media & Society 2
COM 160   Media Literacy...1
COM 103   Intro to Video Equipment 2
COM 163   Visual Story Telling Workshop..................................1
COM 123   Intro Writing for Broadcast News 2
COM 124   Broadcast News Writing Workshop 1
ART 148   Computer Graphics I 3
ART 149   Page Layout & Design..3
MKT 131   Advertising & Promotion 3
MKT 211   Electronic Advertising...3

BUSINESS AND ENTREPRENEURIAL INITIATIVES DIVISION

ACCOUNTING (A.A.S.)

(Not designed for transfer students)

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

Program Outcomes
A graduate should be able to:
• Analyze accounting transactions to determine appropriate valuation for recording and reporting purposes, performing each step in double entry accounting cycle.
• Analyze financial statements as they affect the profitability, liquidity, and solvency of the business organization.
• Demonstrate the ability to collect, structure, and report accounting information relevant for managerial planning and decision making.
• Demonstrate an understanding of legal terms as they apply to business situations.

Note: Students interested in preparing for the Certified Public Accountant (CPA) credential need a baccalaureate degree and should enroll in the Business Administration A.S. transfer degree program.

FIRST SEMESTER

ENG 101	English Composition I	3
ACC 110	Business Mathematics	3
ACC 111	Accounting Principles I	3
MGT 110	Introduction to Business	3
Elective	Core Goal 10: Exercise and Health Sciences	3

(15 credit hours)

SECOND SEMESTER

ENG 117	Writing for Business and Industry	3
ACC 112	Accounting Principles II	3
ACC 150	The Legal Environment of Business	3
CIS 110	Information Systems for Management	3
ECO 110	Elements of Economics	3

(15 credit hours)

THIRD SEMESTER

CIS 215	Decision-Making Using Spreadsheets	3
ACC 230	Cost Accounting	3
Elective	ACC, CAO, CIS, ECO, MGT, MKT, RES, or ETP 112	3
Elective	Core Goal 6: Intellectual Heritage	3
Elective	Core Goal 7: Aesthetic Sensibility and the Arts	3

(15 credit hours)

FOURTH SEMESTER

SPC 120	Public Speaking	3
ACC 221	Accounting Information Systems	3
ACC 241	Tax Accounting	3
MGT 210	Ethical Decision Making in Business	3
Elective	BIO 115, GEO 135, or ESW 224	3

(15 credit hours)

TOTAL SEMESTER CREDIT HOURS: 60

ACCOUNTING (CERTIFICATE)

Purpose
The Accounting Certificate program is designed to prepare students for an entry-level position in an organization working as an accounting clerk or bookkeeper.

Program Outcomes
A graduate should be able to:
- Demonstrate skills necessary to obtain an entry level position as a clerk or bookkeeper in an accounting department or small business
- Demonstrate required knowledge and skills to continue the educational process toward more advanced training leading to career advancement.
- Demonstrate the necessary knowledge and skills to enter into an Associate Degree career program in accounting.

Note: All courses can be applied to the Accounting A.A.S. degree.

FIRST SEMESTER

ENG 117 or SPC 230	Writing for Business and Industry, Communication in Organizations.	3
ACC 110	Business Math	3
ACC 111	Principles of Accounting I	3
MGT 110	Introduction to Business	3
CIS 110	Information Systems for Management	3

(15 credit hours)

SECOND SEMESTER

ACC 112	Accounting Principles II	3
ACC 150	[1]The Legal Environment of Business	3
CIS 215	Decision Making Using Spreadsheets	3
Elective	Elective	3

(12 credit hours)

THIRD SEMESTER

ACC 221	Accounting Information Systems	3

(3 credit hours)

1 ACC 151 - Business Law I may be substituted, if desired.

TOTAL SEMESTER CREDIT HOURS: 30

SPECIALTY CERTIFICATE IN ACCOUNTING (CPA READINESS)

The Specialty Certificate in Accounting is designed for experienced students who wish to gain an in-depth expertise in Accounting by pursuing an individually designed course of study of at least 18 credits. This Specialty Certificate can be used as part of the 36 accounting credit-hour requirement for individuals pursuing their Certified Public Accountant (CPA) license (150 total credit-hour educational requirement). Courses offered include:

ACC 111/112 – Accounting Principles I and II
ACC 151/152 – Business Law I and II
ACC 211/212 – Intermediate Accounting I and II
ACC 221 – Accounting Information Systems
ACC 230 – Cost Accounting
ACC 241/242 – Personal and Corporate Taxation
ACC 251/252 – Auditing I and II
ACC 261/262 – Advanced Accounting I and II

In consultation with the Accounting Coordinator, a minimum 18 credit sequence of courses to be taken at Montgomery County Community College will be designed. Final approval of your Specialty Certificate program and review of qualifying collegiate transcripts (minimum 30 credits) will be made by the Business and Entrepreneurial Initiatives Division Dean.

BUSINESS ADMINISTRATION (A.S.)

Transfer Curriculum

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
A graduate should be able to:
- Interpret financial statements representing the profitability, liquidity, and solvency of the business organization using appropriate vocabulary and analytical skills.
- Collect, structure, and report accounting information relevant for managerial planning and decision making.
- Develop the vocabulary and analytical skills appropriate for understanding the macroeconomic environment of business (economic growth, inflation, unemployment).
- Develop the vocabulary and analytical skills appropriate for understanding the microeconomic environment of business (markets and competition).
- Analyze the impact of the global environment as it relates to management decision making.
- Develop a marketing plan and apply marketing strategy planning details to target market and marketing mix variables.
- Apply relevant laws, regulations, and ethical considerations to U.S. business activity for potential liability, and legal protection and remedies.

FIRST SEMESTER
ENG 101	English Composition I	3
CIS 110	Management Information Systems	3
MAT 140	Finite Mathematics for Business	3
ACC 111	Accounting Principles I	3
ECO 121	Macroeconomics	3
		(15 Credit Hours)

SECOND SEMESTER
ENG 102	English Composition II	3
Elective[1]	Core Goal 6: Intellectual Heritage and Core Goal 13:Ethical Reasoning and Behavior	3
MAT 142	Calculus for Business	3
ACC 112	Accounting Principles II	3
ECO 122	Microeconomics	3
		(15 Credit Hours)

THIRD SEMESTER
Elective	Core Goal 1b: Oral Communication Skills	3
Elective[2]	Core Goal 7: Aesthetic Sensibility and the Arts and Core Goal 12:Global Perspectives and Diversity	3
Elective	Core Goal 8: Physical and Life Sciences	4
MGT 111	Principles of Management	3
MAT 131	Statistics I	3
		(16 Credit Hours)

FOURTH SEMESTER
ACC 150	Legal Environment of Business	3
Elective[3]	Elective ..	3
MKT 111	Principles of Marketing.	3
Elective	Core Goal 10: Exercise and Health Sciences	2-3
MAT 132	Statistics II.	3
		(14-15 Credit Hours)

1 Select one of the listed courses or any other course that meets both Core Goals 6 and 13: HCP 120, HIS 102, 205, 213, 234, 235, 260, PHI 101, or 120.
2 Select one of the listed courses or any other course that meets both Core Goals 7 and 12: ART 101, 102, 103, 111, 121, 171, THA 105, or 114.
3 If transferring to a 4-year Accounting program, select ACC 230 Cost Accounting.

Students should confer with their advisor or a counselor before or during the first semester to be certain that the specific electives taken are the best choices for the four year institutions of their choice.

TOTAL SEMESTER HOURS CREDIT: 60-61

CULINARY ARTS (A.A.S.)

Purpose
The culinary arts degree prepares individuals for a wide variety of entry level positions in the culinary arts industry. The program prepares students with necessary culinary and basic management skills that are utilized in today's hospitality industry. This program provides all of the educational components required for Certified Culinarian certification through the American Culinary Federation Education Foundation.

Program Outcomes
A graduate should be able to:
- Prepare and analyze classic and contemporary culinary dishes.
- Demonstrate and analyze the relation of food to health and nutrition.
- Prepare and analyze a variety of international cuisines.
- Demonstrate and analyze the use of proper purchasing, storage and costing techniques to profitably operate and create menus for a food service establishment.
- Demonstrate and analyze the ability to work in a variety of dining room environments.
- Demonstrate and analyze the knowledge and skills needed to serve a variety of beverages in a food service establishment.
- Prepare and analyze products for a retail environment.
- Demonstrate an understanding of the fundamentals of computer hardware, software, and communications as used in hospitality and culinary operations
- Demonstrate an understanding of mathematic skills related to hospitality and culinary operations.
- Demonstrate an understanding of communication skills necessary to communicate in professional hospitality and culinary operations.
- Successfully complete the National Restaurant Association ServeSafe Sanitation and ServeSafe Alcohol exams.
- Submit for Certified Culinarian (CC) status with the American Culinary Federation.

FIRST SEMESTER

CUL 110	Introduction to the Culinary Profession	2
CUL 111	Food Service Sanitation	2
CUL 120	Culinary Skill Development	3
CUL 130	Baking Skill Development	3
MAT 106	Math Applications	3
SPC 120	Public Speaking	3
	(16 credit hours)	

SECOND SEMESTER

CUL 121	Advanced Culinary Skill Development	3
CUL 220	Menu Planning/Costing/Design	3
CUL 114	Beverage Management	3
ENG 101	English Composition I	3
ESW 206	Basic Nutrition	3
	(15 credit hours)	

THIRD SEMESTER

CUL 281	Retail Service and Operations I	4
CUL 260	World Cuisines	3
CUL 151	Purchasing for Hospitality Operations	3
Elective	Core Goal 8	4
Elective	Must cover Core Goal 6, 9, 12, and 13	3
	(17 credit hours)	

FOURTH SEMESTER

CUL 282	Retail Service and Operations II	4
CUL 222	Quantitative Foods	4
CUL 221	Garde Manger	3
CUL 211	Hospitality Entrepreneurial Planning	3
CUL 241	Hospitality Management Techniques	3
CUL 298	Culinary and Baking & Pastry Degree Practicum	2
	(19 credit hours)	

TOTAL SEMESTER CREDIT HOURS: 67

BAKING & PASTRY ARTS (A.A.S.)

Professional Culinary Arts Concentration

Purpose
The Baking & Pastry Arts degree prepares individuals for a wide variety of entry level positions in the baking and pastry industry. The program prepares students with the necessary culinary and basic management skills that are utilized in today's hospitality industry. This program provides all of the educational components required for Certified Pastry Culinarian certification through the American Culinary Federation Education Foundation and Certified Journey Baker through the Retail Bakers of America.

Program Outcomes
A graduate should be able to:
- Prepare and analyze classic and contemporary baked goods.
- Prepare and analyze a variety of artisan breads.
- Prepare and analyze a variety of chocolates and confections.
- Prepare and analyze a variety of occasional cakes.
- Demonstrate and analyze the relation of food to health and nutrition.

- Demonstrate and analyze the use of proper purchasing, storage and costing techniques to profitably operate and create menus for a food service establishment.
- Demonstrate and analyze the ability to work in a variety of dining room environments.
- Prepare and analyze products for a retail environment.
- Demonstrate an understanding of the fundamentals of computer hardware, software, and communications as used in hospitality and culinary operations.
- Demonstrate an understanding of mathematic skills related to hospitality and culinary operations including basic math concepts, recipe conversions, product yielding, recipe costing, sale price and food cost, purchasing management, labor management, revenue management and prediction, income statements, and budgets.
- Demonstrate an understanding of communication skills necessary to communicate in a professional hospitality and culinary environment.
- Successfully complete the National Restaurant Association ServeSafe Sanitation, ServeSafe Alcohol exams.
- Submit for Certified Culinarian (CPC) status with the American Culinary Federation.
- Submit for Certified Journey Baker (CJB) status with the Retail Bakers of America.

FIRST SEMESTER

CUL 110	Introduction to the Culinary Profession	2
CUL 111	Food Service Sanitation	2
CUL 120	Culinary Skill Development	3
CUL 130	Baking Skill Development	3
MAT 106	Math Applications	3
SPC 120	Public Speaking	3
	(16 credit hours)	

SECOND SEMESTER

CUL 131	Artisan Breads	4
CUL 220	Menu Planning/Costing/Design	3
CUL 114	Beverage Management	3
ENG 101	English Composition 1	3
ESW 206	Basic Nutrition	3
	(16 credit hours)	

THIRD SEMESTER

CUL 281	Retail Service and Operations I	4
CUL 230	Chocolates and Confections	4
CUL 151	Purchasing for Hospitality Operations	3
Elective	Core Goal 8	4
Elective	Must cover Core Goal 6, 9, 12, and 13	3
	(18 credit hours)	

FOURTH SEMESTER

CUL 282	Retail Service and Operations II	4
CUL 231	Pastries and Plated Desserts	4
CUL 232	Occasional and Wedding Cakes	4
CUL 211	Hospitality Entrepreneurial Planning	3
CUL 241	Hospitality Management Techniques	3
CUL 298	Culinary and Baking & Pastry Degree Practicum	2
	(20 credit hours)	

TOTAL SEMESTER CREDIT HOURS: 70

CULINARY ARTS (CERTIFICATE)

Purpose
The Culinary Arts certificate prepares individuals for a wide variety of entry level positions in the culinary arts industry. The program gives students the necessary culinary and basic management skills that are utilized in today's hospitality industry. This program provides all of the educational components required for Certified Culinarian certification through the American Culinary Federation Education Foundation.

Program Outcomes
A graduate should be able to:
• Prepare and analyze classic and contemporary culinary dishes.
• Analyze the relation of food to health and nutrition.
• Demonstrate and analyze the use of proper purchasing, storage and costing techniques to profitably operate and create menus for a food service establishment.
• Demonstrate and analyze the ability to work in a variety of dining room environments.
• Demonstrate and analyze the knowledge and skills needed to serve a variety of beverages in a food service establishment.
• Prepare and analyze products for a retail environment.
• Demonstrate an understanding of mathematic skills related to hospitality and culinary operations including basic math concepts, recipe conversions, product yielding, recipe costing, sale price and food cost, purchasing management, labor management, revenue management and prediction, income statements, and budgets.
• Successfully complete the National Restaurant Association ServeSafe Sanitation exam.

FIRST SEMESTER
CUL 110	Introduction to the Culinary Profession	2
CUL 120	Culinary Skill Development	3
CUL 130	Baking Skill Development	3
CUL 111	Food Service Sanitation	2
CUL 151	Purchasing for Hospitality Operations	3

(13 credit hours)

SECOND SEMESTER
CUL 220	Menu Planning/Costing/Design	3
CUL 121	Advanced Culinary Skill Development	3
ESW 206	Basic Nutrition	3
CUL 241	Hospitality Management Techniques	3

(12 credit hours)

THIRD SEMESTER
CUL 281	Retail Service and Operations I	4
CUL 221	Garde Manger	3
CUL 222	Quantitative Foods	4
CUL 198	Culinary/Baking & Pastry Certificate Practicum	1

(12 credit hours)

TOTAL SEMESTER CREDIT HOURS: 37

BAKING & PASTRY ARTS (CERTIFICATE)

Purpose
The Baking & Pastry Arts certificate prepares individuals for a wide variety of entry level positions in the baking and pastry industry. The program gives students the necessary culinary and basic management skills that are utilized in today's hospitality industry. This program provides all of the educational components required for Certified Pastry Culinarian certification through the American Culinary Federation Education Foundation.

Program Outcomes
A graduate will be able to:
• Prepare and analyze classic and contemporary baked goods.
• Prepare and analyze a variety of artisan breads.
• Prepare and analyze a variety of chocolates and confections.
• Prepare and analyze a variety of occasional cakes.
• Demonstrate and analyze the relation of food to health and nutrition.
• Demonstrate and analyze the use of proper purchasing, storage and costing techniques to profitably operate and create menus for a food service establishment.
• Demonstrate an understanding of mathematic skills related to hospitality and culinary operations including basic math concepts, recipe conversions, product yielding, recipe costing, sale price and food cost, purchasing management, labor management, revenue management and prediction, income statements, and budgets.
• Successfully complete the National Restaurant Association ServeSafe Sanitation

FIRST SEMESTER
CUL 110	Introduction to the Culinary Profession	2
CUL 120	Culinary Skill Development	3
CUL 130	Baking Skill Development	3
CUL 111	Food Service Sanitation	2
CUL 151	Purchasing for Hospitality Operations	3

(13 credit hours)

SECOND SEMESTER
CUL 220	Menu Planning/Costing/Design	3
CUL 131	Artisan Breads	4
ESW 206	Basic Nutrition	3
CUL 241	Hospitality Management Techniques	3

(13 credit hours)

THIRD SEMESTER
CUL 232	Occasional and Wedding Cakes	4
CUL 230	Chocolates and Confections	4
CUL 231	Pastries and Plated Desserts	4
CUL 198	Culinary/Baking & Pastry Certificate Practicum	1

(13 credit hours)

TOTAL SEMESTER CREDIT HOURS: 39

Culinary and Baking & Pastry degree and certificate programs are held at The Culinary Arts Institute at 1400 Forty Food Road, Lansdale, PA 19446. Please visit our website at www.mc3.edu/culinary for more information on these programs.

ENTREPRENEURIAL STUDIES (CERTIFICATE OF COMPLETION)

Purpose
The 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
A graduate will be able to:
• Assess and identify viable business opportunities to pursue.
• Develop a sustainable Marketing Plan with realistic implementation capabilities.
• 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.

Curriculum

ETP 110	Entrepreneurial Essentials	3
ETP 111	Entrepreneurial Marketing ..	3
ETP 112	Entrepreneurial Accounting	3
ETP 113	Entrepreneurial Business Plan	3

TOTAL SEMESTER HOURS CREDIT: 12

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, 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
Upon successful completion of this program, graduates will be able to:
• Demonstrate effective oral, written, and electronic 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.

Curriculum

FIRST SEMESTER
ACC 110	Business Math	3
HCP 224	Medical Terminology	3
CIS 110	Info Sys for Management w/Computer Applications	3
ENG 101	English Composition I	3
MGT 111	Principles of Management	3
		(15 credit hours)

SECOND SEMESTER
BIO 103 or 130	Introduction to Human Anatomy and Physiology or Introductory Anatomy and Physiology	3-4
HCP 225	Health Insurance and Professional Billing	3
ESW 210 or 235	Holistic Health: Complementary and Alternative Health Practices or Personal Health and Wellness Education	3
MGT 131	Human Resources Management .	3
Elective[1]	Elective[1]	3
		(15-16 credit hours)

THIRD SEMESTER
HCP 228	Electronic Medical Records Management	3
ENG 117	Writing for Business and Industry	3
Elective	Core Goal 6: Intellectual Heritage and Core Goal 7: Aesthetic Sensibility and the Arts	3
MGT 160	Customer Relationship Management	3
Elective	Elective ..	3
		(15 credit hours)

FOURTH SEMESTER
HCP 114,120, 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
MGT 221[2]	Supervision	3
Elective	Elective	3
PSY 137	Introduction to Organizational Psychology	3
Elective	Core Goal 1b: Oral Communication Skills	3
		(15 credit hours)

1 MGT 110 Introduction to Business or MAT 106 Math Applications is recommended.
2 MAS 116 Medical Business Practices may be substituted.

TOTAL SEMESTER HOURS CREDIT: 60-61

The program provides a stackable educational career pathway for the Medical Office Assistant Certificate of Completion (CS.MOA) and the Medical Coding Certificate of Completion (CS.MC).   Students can apply all 19 Medical Office Assistant Certificate of Completion credits to the A.A.S. degree in Health Services Management. Students can apply all 18 credits in the Medical Coding Certificate of Completion to the Health Services Management A.A.S.   Medical Assisting graduates who would like to pursue additional educational opportunities and enhance their careers can apply 25 Medical Assisting certificate credits to the A.A.S. degree in Health Services Management. This program would also be attractive to those without prior coursework who want to pursue a management degree and a career in healthcare management.

Concentration in Medical Coding leading to a Certificate of Completion
• First Semester: HCP 224 Medical Terminology
• Second Semester: BIO 103 Introduction to Human Anatomy Physiology and HCP 226 Principles of Medical Coding I
• Third Semester Elective: HCP 227 Principles of Medical Coding II and HCP 228 Electronic Health Records Management
• Fourth Semester Elective: HCP 230 CPT Coding and Reimbursement Methods

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.

Concentration in Medical Office Assistant
leading to a Certificate of Completion
- First Semester: HCP 224 Medical Terminology and CIS 110 Information Systems for Management with Computer Applications
- Second Semester: HCP 225 Health Insurance and Professional Billing
- Third Semester Elective: HCP 228 Electronic Health Records Management
- Fourth Semester Elective: HCP 114 Medical Law and Ethics for Health Care Professionals and HCP 116 Medical Business Practices

The 19-credit Medical Office Assistant Certificate of Completion (CS. MOA) 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.

HOTEL & RESTAURANT MANAGEMENT (A.A.S)

Food Service Management Concentration

Purpose
The Hotel and Restaurant Management - Food Service concentration is designed to prepare the graduate for employment in an entry level food service management position including manager-in-training, dining room supervisor, line-cook, or other hospitality industry supervisory positions.

A broad range of career paths are available to graduates of this program including opportunities in casinos, recreation venues, retirement communities, the business and industry sector, and tourism organizations. The program provides a strong theoretical knowledge base as well as cooperative internship industry experience. Graduates also have the option to continue their education in this field at a four-year institution. (Transfer agreements are available at several four-year colleges, and most accept MCCC credits.)

Concentration Outcomes
- Demonstrate the ability to use professional written and oral communication skills and technology to successfully communicate.
- Recognize the impact of the hospitality industry in the global economy.

- Analyze and recognize the skill set needed for managers in the functions of marketing, menu planning, and human resources.
- Recognize the importance of customer service and working teams to accomplish a successful dining experience.
- Demonstrate knowledge of applicable regulatory agencies, the historical development of the hospitality industry, and future trends.
- Utilize and demonstrate problem-solving skills when working within the framework of the hospitality industry.

Hotel Management Concentration

Purpose
The Hotel and Restaurant Management - Hotel Management option is designed to prepare the graduate for employment in an entry level hotel management position including manager- in training, front desk, reservations, or hospitality industry supervisory positions. A broad variety of career paths are available to graduates of this program including opportunities in casinos, recreation venues, and tourism organizations. The program provides a strong theoretical knowledge base as well as cooperative internship industry experience. Graduates also have the option to continue their education in this field at a four-year institution. (Transfer agreements are available at several four-year colleges, and most accept MCCC credits.)

Concentration Outcomes
- Demonstrate the skills necessary to obtain an entry level position as a management trainee in the hotel sector of the industry.
- Demonstrate the basic knowledge and skills needed to continue the educational process toward more advanced training leading to career advancement.
- Demonstrate college level literacy in economics and business as a basis for making intelligent business, political, and personal economic decisions.

FIRST SEMESTER
ENG 101	English Composition I	3
MAT 106	Math Applications	3
HOS 111	Introduction to the Hospitality Industry ...	3
HOS 115	Management of Food & Beverage Service ..	3
HOS 198	Co-op Internship in Hotel/Restaurant I	3
Elective	Core Goal 10: Exercise and Health Sciences	2
		(17 Credit Hours)

SECOND SEMESTER
ENG 117	Writing for Business & Industry	3
ACC 105	Survey of Accounting or	
ACC 111	Accounting Principles I	3
HOS 130	Hospitality Sanitation and Safet	3
CIS 110	Information Systems for Mgt. w/ Computer Applications	3
Elective	Core Goal 6: Intellectual Heritage…	3
		(15 Credit Hours)

THIRD SEMESTER
HOS 220	Menu Planning, Costing and Design .	3
HOS 211	Basic Quantity Food Preparation .	4
HOS 231	Hospitality Marketing Management	3
HOS XXX2	Concentration Requirement 1.	3
HOS XXX3	Concentration Requirement 2.	3
		(16 Credit Hours)

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FOURTH SEMESTER

SPC Elective Core Goal 1b: Oral Communication Skills 3
HOS 214   Fundamentals of Special Event Management 3
HOS 261   Casino Management 3
HOS 241   Hospitality Management Techniques 3
ECO 110   Elements of Economics… 3
<div align="right">(15 Credit Hours)</div>

**TOTAL SEMESTER HOURS CREDIT: 63
(Proper sequencing is essential)**

Concentration Requirements:

Food Service Management
1. Students planning to transfer should take ACC 111.
2. HOS Elective
3. HOS 298- Co-op/Internship in Hotel/Restaurant II
(Food Service Management)

Hotel Management
1. Students planning to transfer should take ACC 111.
2. HOS 251 - Hotel Management
3. HOS 298 - Coop./Internship in Hotel/Restaurant II
(Hotel Management)

HOTEL/RESTAURANT/INSTITUTIONAL SUPERVISION (CERTIFICATE)

Purpose
The Certificate in Hotel/Restaurant/Institutional Supervision program prepares students for employment as a supervisor or entry-level management trainee in various hospitality operations or enables a student with previous hospitality industry experience to enhance his/her career path.

Program Outcomes
A graduate should be able to:
• Demonstrate basic knowledge of the terminology and
   practices of the hospitality, foodservice, and hotel industries.
• Demonstrate communications and interpersonal skills,
   attitudes, and work habits that are professional and ethical.
• Demonstrate the techniques of effective supervision.
• Be certified in Applied Foodservice Sanitation.
• Develop menus that are appropriate for a variety of
   hospitality operations.
• Produce and serve quantity food preparations.
• Demonstrate required knowledge and skills to continue the
   educational process toward more advanced training leading to
   career advancement.
• Demonstrate the necessary knowledge and skills to enter into an
   Associate Degree career program in Hotel or Restaurant Management.

FIRST SEMESTER

ACC 110   Business Math 3
HOS 111   Introduction to the Hospitality Industry 3
HOS 115   Management of Food and Beverage Service 3
HOS 130   Hospitality Sanitation and Safety 3
HOS 198   Coop/Internship in Hotel/Restaurant I 3
<div align="right">(15 credit hours)</div>

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SECOND SEMESTER

ENG 117   Writing for Business and Industry 3
HOS 220   Menu Planning / Costing / Design.............................3
CIS 110   Information Systems for Management.......................3
HOS 211   Basic Quantity Food Preparation 4
HOS   Elective .... 3 -4
<div align="right">(16-17 credit hours)</div>

TOTAL SEMESTER CREDIT HOURS: 31-32

MANAGEMENT (A.A.S.)

(Not designed for transfer students)

Management Concentration

Purpose
The Management concentration provides students with instruction in management theories, procedures, and organizational practices and is specifically designed to prepare the graduate for employment in an entry-level management position.

Program Outcomes
A graduate should be able to:
• Communicate effectively, efficiently, and professionally in the
   current business environment.
• Apply managerial theory and practice to the functional areas within
   an organization.
• Examine the social, legal, and ethical principles of management
   decision making in order to determine appropriate actions.
• Analyze the management skill set needed for managers to succeed
   within an organization.

Real Estate Concentration
Purpose
The Real Estate concentration provides students with instruction in management theories, procedures, and organizational practices and is specifically designed to prepare the graduate for employment in an entry-level real estate sales or management position.

Program Outcomes
A graduate should be able to:
• Communicate effectively, efficiently, and professionally in the
   current business environment.
• Apply managerial theory and practice to the functional areas within
   an organization.
• Examine the social, legal, and ethical principles of management
   decision making in order to determine appropriate actions.
• Demonstrate the ability to apply the fundamental concepts of real
   estate management.
• Apply the legal principles of real estate law as they pertain to the
   social and ethical environments.

Entrepreneurship Concentration

Purpose
The Entrepreneurship concentration provides students with instruction in management theories, procedures, and organizational practices and is specifically designed to prepare the graduate to launch successful businesses, small or large, profit or nonprofit.

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Program Outcomes

A graduate should be able to:

- Communicate effectively, efficiently, and professionally in the current business environment.
- Apply managerial theory and practice to the functional areas within an organization.
- Examine the social, legal, and ethical principles of management decision making in order to determine appropriate actions.
- Identify an entrepreneurial venture and explore the feasibility of pursuing it as a viable career.
- Demonstrate the ability to develop a comprehensive business plan including the key operational areas of accounting and marketing.
- Communicate effectively, efficiently, and professionally in the current business environment.

FIRST SEMESTER

ENG 101	English Composition I	3
CIS 110	Information Systems for Management …	3
ACC 1101	Business Math…	3
XXX	Concentration Requirement	3-4
MGT 110	Introduction to Business ..	3

(15-16 credit hours)

SECOND SEMESTER

ENG 117	Writing for Business and Industry …	3
SPC 120	Public Speaking ..	3
CIS 215[1]	Decision Making Using Spreadsheets	3
XXX	Concentration Requirement……	3
MGT 111	Principles of Management	3

(15 credit hours)

THIRD SEMESTER

ECO 110	Elements of Economics or	
ECO 121	Macroeconomics	3
Elective	Core Goal 6: Intellectual Heritage	3
Elective	Core Goal 7: Aesthetic Sensibility and the Arts .	3
XXX	Concentration Requirement…	3
ACC 150	The Legal Environment of Business or	
ACC 151	Business Law…	3

(15 credit hours)

FOURTH SEMESTER

Elective	ESW 224 Exercise Physiology, GEO 135 Physical Geography or BIO 115 Environmental Biology .	3
MGT 210[2]	Ethical Decision Making in Business	3
XXX	Concentration Requirement…	3
Elective[3]	Core Goal 10:Exercise & Health Sciences	2-3
ACC 105	Fundamentals of Accounting…	3

(14-15 credit hours)

1 ACC 110 in combination with CIS 215 meets Quantitative skills goal.
2 Prerequisites: MGT 110, ACC 150 or ACC 151 or equivalent.
3 In the Real Estate Concentration, Goal 10 can be satisfied with a 2 credit course. The Management and Entrepreneurship concentrations will use a 3 credit course.

TOTAL SEMESTER CREDIT HOURS: 60-61

Concentration Requirements

Management:
MGT 131 – Human Resource Management
MGT 221 – Supervision (prerequisite: MGT 110 or MGT 111)
MGT - Open Elective
MGT - Open Elective

Real Estate:
RES 101/102 – Real Estate Fundamentals and Real Estate Practice (prerequisite: RES 101)
RES 221 – Real Estate Law (prerequisites: RES 101 and RES 102)
RES 211 – Real Estate Finance or RES 241 – Appraisal of Residential Property (prerequisites: RES 101 and RES 102)
MGT/MKT – Open Elective

Entrepreneurship:
ETP 110 – Entrepreneurial Essentials
ETP 111 – Entrepreneurial Marketing
ETP 112 – Entrepreneurial Accounting
ETP 113 – Entrepreneurial Business Plan

BUSINESS MANAGEMENT (CERTIFICATE)

Purpose

The Business Management Certificate program is designed to prepare the graduate for employment in an entry level management trainee position such as assistant office manager or assistant department manager. All of the courses can be applied toward an associate degree in management.

Program Outcomes

The graduate should be able to:

- Demonstrate the skills necessary to obtain an entry level position as a management trainee, such as assistant office or department manager.
- Demonstrate the basic knowledge and skills needed to continue the educational process toward more advanced training leading to career advancement.
- Demonstrate the basic knowledge and skills needed to enter the second year of an associate degree program in management.

FIRST SEMESTER

ENG 101	English Composition I	3
ACC 110	Business Mathematics	3
MGT 110	Introduction to Business .	3
CAO 111	[1]Beginning Word Processing	3
MGT 111	Principles of Management	3

(15 credit hours)

SECOND SEMESTER

ENG 117	Writing for Business & Industry	3
CIS 110	Information Systems for Management	3
MGT 221	Supervision .	3
Elective	MGT	3
Elective	MGT	3

(15 credit hours)

1 Students possessing significant word processing experience may challenge or request a substitution for CAO 111.

TOTAL SEMESTER CREDIT HOURS: 30

MARKETING (A.A.S.)

(Not designed for transfer students)

Purpose
The Marketing program is designed to prepare the graduate for employment in an entry level position in marketing. Students will be prepared for career opportunities which include sales, junior product manager, and entry-level positions in advertising, entertainment and event marketing.

Program Outcomes
A graduate should:
- Communicate effectively, efficiently and professionally in written and oral presentations.
- Demonstrate knowledge and the application of marketing strategy planning, including target market and marketing mix variables.
- Acquire an understanding of how marketing integrates with other functional areas of the organization.
- Evaluate the impact of global markets on multimedia marketing strategies.
- Apply future trends and practices in utilizing new media in marketing.

FIRST SEMESTER
ENG 101	English Composition I	3
ACC 110	Business Mathematics .	3
MKT 111	Principles of Marketing	3
SPC 120	Public Speaking	3
MGT 110	Introduction to Business	3
	(15 credit hours)	

SECOND SEMESTER
ENG 117	Writing for Business and Industry	3
ACC 111	Accounting Principles I	3
ACC 150	The Legal Environment of Business	3
CIS 110	Information Systems for Management	3
MKT 131	Advertising & Promotion	3
	(15 credit hours)	

THIRD SEMESTER
CIS 215	Decision Making Using Spreadsheets	3
MKT 121	Personal Sales Management	3
Elective	Core Goal 6: Intellectual Heritage	3
MGT 111	Principles of Management .	3
ECO 110 or 121 Elements of Economics or Macroeconomics		3
	(15 credit hours)	

FOURTH SEMESTER
Elective	[1]MKT	3
MGT 210	Ethical Decision Making in Business	3
Elective	BIO 115, GEO 135, or ESW 224 ..	3
MKT 211	Electronic Marketing .	3
Elective	Core Goal 10: Exercise and Health Sciences	3
	(15 credit hours)	

1 MKT 198 Internship is strongly recommended.

TOTAL SEMESTER CREDIT HOURS: 60

MARKETING (CERTIFICATE)

Purpose
The Marketing Certificate program is designed to prepare the graduate for employment in an entry level position in marketing in such areas as sales, customer service, advertising and promotion, public relations, purchasing, and e-commerce. All of the courses can be applied toward an Associate Degree in Marketing.

Program Outcomes
The graduate should be able to:
- Demonstrate the knowledge necessary to obtain an entry-level position as a marketing trainee.
- Identify the marketing environment and its influence on satisfying customer needs and wants.
- Apply learned marketing skills with the aptitude necessary to continue the educational process toward career advancement.

FIRST SEMESTER
ENG 101	English Composition I	3
CIS 110	Info Sys for Management w/ Computer Applications	3
MGT 110	Introduction to Business .	3
MKT 131	Advertising and Promotion…	3
MKT 111	Principles of Marketing	3
	(15 credit hours)	

SECOND SEMESTER
ENG 117	Writing for Business & Industry .	3
SPC 110, 111 or Introduction to Speech Communication or		
230	Communication in Organizations	3
MKT 211	Electronic Marketing…	3
Elective	[1]MKT…	3
Elective	MKT	3
	(15 credit hours)	

1 MKT 198 Internship is strongly recommended.

TOTAL SEMESTER CREDIT HOURS: 30

OFFICE ADMINISTRATION (A.A.S.)

(Not designed for transfer students)

Purpose
The Office Administration curriculum is designed to prepare the graduate for an administrative support position in an office environment as an administrative assistant, marketing assistant, medical secretary, project coordinator, office/facilities manager, executive assistant, receptionist, customer service representative, front desk coordinator, or software trainer.

Program Outcomes
The graduate should be able to:
- Demonstrate knowledge of office procedures.
- Demonstrate current computer 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.
- Demonstrate effective communications skills.
- Demonstrate knowledge of appropriate professional behaviors.

FIRST SEMESTER

CAO 111[*]	Microsoft Word I 3
CIS 110	Information Systems for Management w/ Computer Applications 3
ENG 101	English Composition I 3
Elective	Core Goal 6: Intellectual Heritage… 3
	Core Goal 7:Aesthetic Sensibility and the Arts
MGT 110[1]	Introduction to Business 3

(15 credit hours)

SECOND SEMESTER

ACC 110	Business Math 3
CAO 112	Microsoft Word II 3
ART 148[2]	Graphic Design Applications or
CIS 244	PC Database Management Systems 3
CIS 215	Decision Making Using Spreadsheets......................3
ENG 117	Writing for Business and Industry 3

(15 credit hours)

THIRD SEMESTER

CAO/CIS 243	Integrated Office Software Applications 3
CAO 250	Proofreading and Editing 3
MGT 221[3]	Supervision 3
CAO 161	Office Procedures I 3
SPC 120	Public Speaking…...3

(15 credit hours)

FOURTH SEMESTER

ECO 110	Elements of Economics 3
CAO 198	Coop/Internship in CAO 1 3
CAO 245	Desktop Publishing… 3
Elective	Core Goal 8: Physical and Life Sciences……………4
Elective	Core Goal 10: Exercise and Health Sciences............2

(15 credit hours)

TOTAL SEMESTER CREDIT HOURS: 60

* Students should consider taking CAO 100-Computer Keyboarding to build their keyboarding skills and speed

1-3 The following courses may be substituted for students interested in pursuing the concentration in Virtual Assistance:

Virtual Assistance Concentration
[1]ETP 110 Entrepreneurial Essentials
[2]CAO 170 Virtual Office Careers and Technologies
[3]CAO 175 Introduction to Virtual Assistance

OFFICE ADMINISTRATION (CERTIFICATE)

Purpose
The 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 Degree in Office Administration.

Program Outcomes
The graduate should be able to:
• Demonstrate knowledge of office procedures.
• 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.

FIRST SEMESTER

ACC 110	Business Mathematics 3
CAO 111[*]	Microsoft Word I 3
CAO 245	Desktop Publishing 3
CIS 110	Information Systems for Management w/Comp. Apps. …...3
ENG 117	Writing for Business and Industry 3

(15 credit hours)

SECOND SEMESTER

CAO 112	Microsoft Word II 3
CAO 161	Office Procedures I 3
CAO/CIS 243	Integrated Office Software Applications 3
CAO 250	Proofreading and Editing..3
CIS 215	Decision Making with Spreadsheets 3

(15 credit hours)

* Students should consider taking CAO 100-Computer Keyboarding to build their keyboarding skills and speed

TOTAL SEMESTER CREDIT HOURS: 30

VIRTUAL ASSISTANCE CERTIFICATE OF COMPLETION

Purpose
The purpose of the Certificate of Completion in Virtual Assistance is to provide students with a specialty designation within the administrative assistant industry. This certificate provides students with the hands on and practical knowledge and skills needed to work as a virtual assistant, which is a different designation than the typical administrative assistant. The virtual assistant works remotely either from home or from a designated location. He or she is often an entrepreneur, with his/her own virtual assistant business, contracting with their own clients. However, many virtual assistants work for a placement agency that matches them up with clients seeking virtual assistance. Additionally, many employees are now being asked by their employers to work from home either on a partial or complete basis and these workers require training and guidance on how to do so. Regardless of the career path, this certificate allows students to prepare themselves for a career as a virtual assistant.

Program Outcomes
The graduate should be able to:
• Evaluate different types of virtual businesses and office careers.
• Complete a self-assessment to determine readiness and suitability for becoming a virtual entrepreneur.
• Determine appropriate communication skills necessary for work in a virtual office.
• Prepare a business plan that demonstrates the logistical, technological and promotional requirements of establishing and maintaining a virtual office.
• Prepare the licensing, insurance, and taxation requirements necessary for creating and operating a home-based virtual business.

- Demonstrate proficiency in the use of industry standard software and Internet resources to plan, participate in and facilitate business meetings and projects in a virtual environment.
- Describe the role, duties, skills and challenges of a virtual assistant.
- Create a business plan that established one's mission, goals, and objectives and integrates one's personal, professional and ethical standards as a virtual assistant.
- Determine one's sustainable competitive advantage in the virtual assistance industry by developing a marketing plan that allows one to grow and maintain a network of resources and clients.
- Prepare for the job market by assembling a virtual assistant skills and resources portfolio.
- Facilitate a virtual assistance simulation project.
- Apply an ethical framework to make informed decisions in day-to-day life as a virtual assistant.
- Identify their competition.
- Clarify their business vision and concept.

ETP 110   Entrepreneurial Essentials..3
CAO 170   Virtual Office Careers and Technologies 3
CAO 175   Introduction to Virtual Assistance.............................3

TOTAL SEMESTER CREDIT HOURS: 9

SPECIALTY CERTIFICATE

The Specialty Certificate is designed for experienced students who wish to gain in-depth expertise in a specific field by pursuing an individually designed intense course of study of at least 18 credits.

To qualify for this program you must have completed at least 30 credits of approved collegiate study in a discipline other than the one for which the Specialty Certificate is sought. In consultation with the appropriate Discipline Coordinator or Director a minimum 18 credit sequence of courses to be taken at Montgomery County Community College will be designed. Final approval of your Specialty Certificate program and review of qualifying collegiate transcripts will be made by the Business and Entrepreneurial Initiatives Division Dean.

A certificate can be obtained in the following areas of study:
- Accounting
- Hotel/Restaurant Management
- Marketing
- Management
- Office Administration
- Real Estate

NON-CREDIT COURSES

PRODUCTION AND INVENTORY MANAGEMENT CERTIFICATE

Purpose
The certification courses are recommended for operations staff from both the service and manufacturing sectors seeking CPIM, or those wanting additional skills development. The program consists of five courses that comprise the review for the Certificate in Production and Inventory Management credential exams.

Primary Goals
This course provides the competencies, skills sets, and core knowledge base for production and inventory management.

Admission Guidelines
This course is for individuals in the following occupations: Planner, Planner-Buyer, Senior Planner, Senior Planner–Buyer, Master Scheduler, Manufacturing Manager, Materials Manager, Supply Chain Manager, Planning Manager, Operations Manager, Plant Manager, Warehouse/Logistics Manager, and Inventory Manager.

Consideration for Certification
A certificate of completion is awarded by Montgomery County Community College upon successful completion of the course.

Articulation
At this time there is no articulation towards a credit degree.

SERVSAFE TRAINING AND CERTIFICATION

Purpose
ServSafe® training sets the industry standard in food safety training and certification.

Primary Goals
Provide required training and certification for food handlers as required by the State of Pennsylvania.

Admission Guidelines
ServSafe® Re-Certification requires a current certificate (issued less than 5 years from the date of the course you take) from ServSafe National Registry of Safe Food Professionals or Thompson Prometric to be presented to the instructor to take the course. This is an approved waiver for Chester County.

Consideration for Certification
A certificate of program completion will be awarded by the College. Upon successful completion, participants will receive their ServSafe Certification.

Articulation
At this time there is no articulation towards a credit degree.

STARTING A SUCCESSFUL WOMAN-OWNED BUSINESS CERTIFICATE

Purpose
This program is designed for women to develop their prospective business ideas into a successful business concept and plan. It is also geared towards women who own an enterprise but want to make it more viable.

Primary Goals
Students will go through a business planning process and understand the components of a successful business plan.

Admission Guidelines
There are no prerequisites for this program.

Consideration for Certification
A certification of program completion will be awarded by the College once a business plan is completed.

Articulation
At this time there is no articulation towards a credit degree.

HEALTH SCIENCES DIVISION

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 Goals
The Dental Hygiene Program at the College is designed to provide each student with experiences that facilitate the development of a competent dental hygiene practitioner.

Upon successful completion of the Program, each graduate will be able to:
• Demonstrate the knowledge and skills needed to provide dental hygiene care which meets professional standards and licensing examination eligibility
• Promote optimal oral health and disease prevention as related to the general health and wellness of 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 lifelong learning and commitment to professional development
• Demonstrate knowledge of legal responsibilities, ethical considerations and values integral to the practice of dental hygiene.

Approval/Accreditation Status
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. The Commission on Dental Accreditation can be contacted at (312) 440-2718 or at 211 East Chicago Avenue, Chicago, IL 60611.

Special Admission Guidelines
Students who wish to be considered for admission to the Program must complete a completed College Application, indicating Dental Hygiene as the major (DH.GS), and present credentials as outlined in the following guidelines:

1. All applicants must submit a final high school transcript or G.E.D. scores including one year of Chemistry with a laboratory component having earned a grade of "C" or better. Equivalent course taken at a post-secondary institution would be an acceptable substitute. Chemistry with a laboratory component must be successfully completed within 10 years prior to enrolling in Dental Hygiene courses.
2. All applicants must submit official college transcript(s), if applicable.
3. In addition, one of the following credentials must be submitted.
   A. ACT score composite of 18 or above, or
   B. SAT score of a minimum of 800 total, or
   C. SAT I or SAT Reasoning combined math and verbal/critical reading score of 920 total, or
   D. College transcript including 14 semester hours consisting of two 4 credit laboratory science courses and two 3 credit courses which may be from the general education component of the Dental Hygiene curriculum. Grades for the 4 courses must each be a "C" or better and result in a GPA of at least 2.5. The 14 credits will be used for evaluation purposes and are only transferable if successfully completed within the past 10 years. All science courses must be successfully completed within 10 years prior to enrolling in Dental Hygiene courses.
4. All applicants must take College placement tests in English, Mathematics, and Reading and must place above the developmental level prior to enrolling in Dental Hygiene courses.
5. To ensure that applicants are familiar with the work environment in which most hygienists are employed, a minimum of 6 hours observation in a dental office is required. Written verification from the dentist or dental hygienist, written on dental office letterhead, is required of each applicant to verify either current dental office employment or completion of the six hour observation in a dental office. Verification must be submitted to the Dental Hygiene Advisor, sconnoll@mc3.edu by January 31st prior to the fall semester that the student desires to enter the Dental Hygiene Program.
6. Due to class size limitations, the College does not guarantee continuous enrollment between non-Dental Hygiene and Dental Hygiene courses.
7. Following application to the Dental Hygiene Program, applicants are advised to take non-dental hygiene courses required by the Dental Hygiene Program (see Sequence of Courses) while awaiting Program acceptance. Due to class size limitations, the College does not guarantee continuous enrollment between non-dental hygiene and dental hygiene courses.

In addition to meeting the Dental Hygiene Program's Essential Functions and Special Admission Requirements, all applicants are required to submit an online Petition for Dental Hygiene Admission. The Petition for Dental Hygiene Admission demonstrates the applicant's attainment of the Dental Hygiene Program Special Admission Requirements.

Admission to the clinical component of the Dental Hygiene Program is based on a point system and ranking procedure. Points are awarded based on place of permanent residence, number of non-DHG courses completed, courses completed at Montgomery County Community College, course grades and date of application. A Total Point Score is derived for each applicant and used in ranking applicants who submit an online Petition for Dental Hygiene Admission for a given admission cycle.

The website www.mc3.edu/academics/areas-of-study/health-sciences/dental-hygiene provides the Petition as well as more detailed guidelines and information. Applicants are strongly urged to meet with the Dental Hygiene Advisor (215.641. 6686) prior to submitting the online Petition for Dental Hygiene Program Admission to verify completion of Special Admission Requirements as well as the accuracy of their records.

Academic Preparation
Applicants who do not have the necessary academic preparation for the Dental Hygiene Program may take preparatory courses at the College to strengthen their academic background. Advisors are available to assist students in selecting appropriate coursework.

Advanced Standing
Applicants who have successfully completed (grade "C" or better) course(s) in an ADA CODA accredited dental assisting or dental hygiene program or similar may qualify for course transfers or challenge examinations. Upon request, information is available from the Dental Hygiene Program Director.

Program Requirements
Dental Hygiene students are required to:

1. Attend the mandatory Dental Hygiene Program Orientation.
2. Demonstrate proof of computer literacy prior to enrolling in Dental Hygiene courses. Successful completion of one of the following will fulfill this requirement: demonstrate computer proficiency obtained through life experiences, demonstrate computer skills obtained at another academic institution including high school or acquired through on the job training, or complete a computer science course such as CIS 100.
3. Purchase all required dental hygiene textbooks, manuals, instruments, supply kits and loupes.
4. Purchase the Dental Hygiene Program uniform kit, including uniforms, uniform jacket, gowns, shoes and name pin.
   Note: no ear gauges, piercings other than the ear lobe, or visible tattoos are permitted while in uniform.
5. Purchase student liability insurance annually. A copy of each student's liability insurance policy must be kept on file by the program.
6. Assume all responsibility for transportation to and from enrichment/extramural dental site assignments.
7. Obtain and maintain current CPR certification until completion of the clinical courses by passing the American Red Cross' Professional Rescuer OR the American Heart Association's Health Care Provider course. A copy of each student's CPR certification must be kept on file by the program.
8. Have a comprehensive physical examination, which includes documentation of selected vaccinations and a urine drug screen within six months of entering the Program, verify immunity to Hepatitis B and rubella as well as provide record of a current tetanus shot. NOTE: Students in the Dental Hygiene Program may be exposed to blood-borne pathogens. Students are provided with a thorough knowledge and understanding of infectious diseases, the mechanism of disease transmission, the OSHA blood-borne standards, and CDC guidelines for infection control.
9. Submit application for Child Abuse History Clearance, FBI Clearance, and PA Criminal Record Check annually.
   NOTE: A Child Abuse History will and a Criminal Record and/or FBI Record may exclude the student from participating in the Program.
10. Submit documentation of an annual Influenza Vaccination.
11. Students are responsible for finding their own patients to satisfy their semester patient requirements.

Progression in Dental Hygiene
Candidates for the A.A.S. Degree in Dental Hygiene may progress within the program and be recommended to the PA State Board of Dentistry for licensure and eligibility to take the Dental Hygiene National Board and ADEX DH examination if the following requirements have been met:

1. Minimum grade of "C" in all dental hygiene (DHG) and related science (BIO) courses as prerequisite for courses at the next level.
2. Complete courses in prescribed sequence as identified under Sequence of Courses.

All students must complete the Dental Hygiene Program within four academic years of the date of initial enrollment in the program. Eligibility for re-admission to the Program is based upon space availability as well as meeting minimal specified requirements.

Licensure Considerations
Note: The Dental Law #216 of the State Board of Dentistry, Commonwealth of Pennsylvania in Section 4.1 states: The PA State Board of Dentistry has the authority to refuse, revoke or suspend the license of any applicant where the Board shall find that the applicant*
* Has been found guilty of a crime or misdemeanor involving moral turpitude or having been found guilty of a felony in violation of the laws of the Commonwealth or any other state. For purposes of this clause, the phrase "having been found guilty" shall include a finding or verdict of guilt, an admission of guilt or plea of nolo contender.
* Is unable to practice as a dental hygienist with reasonable skill and safety to patients by reason of illness, drunkenness, excessive use of controlled substances, chemicals or any type of material, or as a result of any mental or physical condition.

Additional reasons that the PA State Board of Dentistry may refuse a professional dental hygiene license to an applicant can be referenced in section 4.1 of the Dental Law #216 of the State Board of Dentistry, Commonwealth of PA. All questions related to licensure are to be directed to the Commonwealth of PA, State Board of Dentistry, P.0. Box 2649, Harrisburg, PA 17105-2649.

FIRST SEMESTER

ENG 101	English Composition I	3
BIO 140	Microbiology & Immunology .	4
BIO 131	Human Anatomy & Physiology I .	4
DHG 100	Theory and Practice of Dental Hygiene I	4
DHG 111	Dental Anatomy .	2
DHG 155	Dental Radiology .	2

(19 credit hours)

SECOND SEMESTER

DHG 158	Theory and Practice of Dental Hygiene II	5
DHG 159	Histology and Pathology of the 0ral Tissues	3
DHG 161	Periodontics I .	2
ENG 102	English Composition II	3
BIO 132	Human Anatomy & Physiology II .	4

(17 credit hours)

SUMMER SESSION I

DHG 224	Materials in Dentistry	2

(2 credit hours)

THIRD SEMESTER

DHG 226	Dental Pain Control	2

DHG 228	Theory and Practice of Dental Hygiene III	8
DHG 261	Periodontics II	2
PSY 101	Introduction to Psychology	3
	(15 credit hours)	

FOURTH SEMESTER

SPC 110/111	Introduction to Speech Communication	3
SOC 101	Introduction to Sociology	3
ESW 206	Basic Nutrition	3
DHG 253	Community Dentistry	2
DHG 258	Theory and Practice of Dental Hygiene IV	6
	(17 credit hours)	

TOTAL SEMESTER HOURS: 70 CREDITS

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

Upon completion of the program the graduate will be able to:
- 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.

FIRST SEMESTER

Elective	Core Goal 4: Computer Fluency	3
Elective	Core Goal 8: Physical and Life Science	3-4
ENG 101	English Composition I	3
ESW 102	Introduction to Exercise Science, Wellness, and Sport Studies	3
SOC 101	Introduction to Sociology	3
	(15-16 credit hours)	

SECOND SEMESTER

BIO 129[1]	Functional Human Anatomy and Physiology (grade of "C" or better)	4
Elective	Elective	3
ENG 102	English Composition II	3
ESW 206	Basic Nutrition	3
MAT 106 0R	Math Applications	
MAT 131[2]	Introduction to Statistics I	3
	(16 credit hours)	

THIRD SEMESTER

| Elective | Elective | 3 |
| Elective | Core Goal 7: Aesthetic Sensibility and the Arts | 3 |

ESW 222	Introduction to Kinesiology (Fall only)	3
ESW 224	Introduction to Exercise Physiology (Fall only)	3
SPC 120	Public Speaking	3
	(15 credit hours)	

FOURTH SEMESTER

Elective	Core Goal 6: Intellectual Heritage	3
Elective	Core Goal 13: Ethical Reasoning and Behavior	3
ESW 245	Safety and First Aid	3
ESW Elective	Elective	3
ESW 228	Trends in Exercise Science and Wellness (Spring only)	2
	(14 credit hours)	

1 Students in Athletic Training concentration take BIO 132 - Anatomy and Physiology II (grade of "C" or better).
2 MAT 131 recommended for the Teaching Health and Physical Education and Athletic Training concentrations.

TOTAL SEMESTER CREDIT HOURS: 60-61

Concentration in Teaching Health and Physical Education
(total program 61 credits)

First Semester

| Elective | CHE 121 - General Chemistry Inorganic 0R PHY 121 - General Physics I | 4 |

Fourth Semester

| ESW Elective | ESW 226 - Assessment of Human Fitness (Spring only) | 3 |

Concentration in Recreation and Sport Studies
(total program 60 credits)

Second Semester

| Elective | MGT 111 - Principles of Management | 3 |

Third Semester

| Elective | MKT 111 - Principles of Marketing | 3 |

Fourth Semester

| ESW Elective | ESW 215 - Prevention and Care of Athletic Injury (Spring only) | 3 |

Concentration in Athletic Training
(total program 62 credits)

First Semester

| Elective | BIO 131 - Human Anatomy and Physiology (grade of "C" or better) | 4 |

Third Semester

| Elective | CHE 121 - General Chemistry Inorganic | 4 |

Fourth Semester

| ESW Elective | ESW 215 Prevention and Care of Athletic Injury (Spring only) | 3 |

HEALTH & 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 students the opportunity to take the American College of Sports Medicine (ACSM) Certified Personal Trainer certification examination. Each student will earn and must maintain the American Heart Association Heartsaver Adult CPR/AED and First Aid certification. 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.

The breadth and depth of information in the Health and Fitness Professional Program of Study is supplemented by each student choosing electives to support a directed study course in one area of Health and Fitness. Graduates will have the competencies for employment in an entry-level position in the fitness/health industry and allied fields such as personal trainer, corporate wellness, YMCA, commercial recreation and fitness centers, recreational therapy, and retirement homes and communities. Upon successful completion of the Health and Fitness Professional program, students also have the option to continue their education in this field at a four year college or university.

Program Mission

The Health and Fitness Professional program has a mission that reflects the mission of Montgomery County Community College. At the core of this mission is providing a quality educational experience to each student through a variety of instructional techniques. Experiential learning will be emphasized by students conducting fitness/health promotions within the College and greater communities. The focus is to produce graduates who are prepared to be successful in an entry-level position within the health and fitness field.

Program Outcomes

Upon successful completion of the program, graduates will be able to:
- Apply the written Skill Component that includes health appraisals, fitness testing, and personal documentation of goals, results, and client programming
- Apply the exercise science Knowledge Component that includes anatomy and physiology, exercise physiology, human development, aging, risk factors, human behavior and psychology
- Apply the Ability Component that addresses applying knowledge and skills to Exercise prescription.

FIRST SEMESTER

ESW 102	Introduction to Exercise Science, Wellness, and Sport Studies	3
ENG 101	English Composition I	3
Elective	Core Goal 4: Computer Fluency	3
Elective	Core Goal 7: Aesthetic Sensibility & the Arts	3
ESW 146	Conditioning, Weight Training & Weight Control	2
PHI 101	Introduction to Ethics	3

(17 credit hours)

SECOND SEMESTER

BIO 129	Functional Anatomy and Physiology (grade of "C" or better)	4
ENG 102	English Composition II -OR	
ENG 115	Writing for Technical Communication - OR	
ENG 117	Writing for Business and Industry	3
ESW 148	Hatha Yoga –OR-	
ESW 147	Mat Pilates	2
ESW 206	Basic Nutrition	3
Elective	Core Goal 3: Quantitative Skills	3

(15 credit hours)

THIRD SEMESTER

ESW 222	Introduction to Kinesiology (Fall only)	3
ESW 224	Introduction to Exercise Physiology (Fall only)	3
ESW 245	Safety and First Aid	3
SPC 120	Public Speaking	3
ESW Elective	Elective	2-3

(14-15 credit hours)

FOURTH SEMESTER

Elective	Core Goal 9: Behavioral and Social Science	3
ESW 215	Prevention and Care of Athletic Injury (Spring only)	3
ESW 226	Assessment of Human Fitness (Spring only)	3
ESW 296	Practicum for the Health and Fitness Professional (Spring only)	3
ESW Focused		3

ESW 185 – Issues in Women's Health –OR-
ESW 210 – Holistic Health: Complementary and Alternative Health Practices –OR-
ESW 220 – Directing Fitness and Recreational Programs for Active and Aging Adults –OR-
ESW 235 – Personal Health and Wellness Education –OR-
ESW 240 – Principles of Coaching

(15 credit hours)

TOTAL SEMESTER CREDIT HOURS: 61-62

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 during day hours in a variety of community locations. The Medical Assisting Certificate Program is offered in a 3 continuous semester Day Option and a 4 continuous semester Evening Option. Regardless of the option chosen, 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 (CAAHEP) (www.caahep.org), upon the recommendation of the Medical Assisting Education Review Board (MAERB) Additional information regarding CAAHEP can be obtained by contacting the organization directly at 1361 Park Street, Clearwater, FL 33756, telephone (727) 210-2350.

Program Mission

The Medical Assisting Program has a mission consistent with the mission of Montgomery County Community College. The program recognizes that students differ in their needs, aspirations and interests. 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 Medical Assistants. The program is responsive to its communities of interest including students, graduates, faculty, employers, physicians and the health care community.

Program Outcomes

The goals of this program are to prepare graduates who will:
- 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
- Value life-long learning, problem solving, critical thinking and interpersonal communication as means of achieving personal and professional growth.

Admissions Guidelines

All applicants who wish to be considered for admission to the Medical Assisting Certificate Program must present credentials in accordance with the following requirements:
1. Submit a completed College application listing Medical Assisting (C.MA.GS) as the major.
2. Submit high school transcript or GED scores.
3. Submit official college transcript(s), if applicable.
4. Complete the College placement tests in English, Mathematics, and Reading and place above the developmental level in English and Reading and at or above MAT 011 prior to enrolling in MAS courses.

5. Submit a Medical Assisting Petition for Admissions form. The petition can be obtained at the College's Medical Assisting Certificate Program's web site. www.mc3.edu/academics/programs/ma-c.aspx

The Medical Assisting Certificate Program accepts students each academic year. Due to class size limitations, the College does not guarantee continuous enrollment between non-MAS and MAS courses. Eligibility for readmission and/or transfer to the Medical Assisting Certificate Program is based upon space availability as well as meeting the Admission Guidelines. Upon request, additional information is available from the Medical Assisting program administrator.

Program Requirements

Once accepted into the Medical Assisting Certificate Program, students are required to:
1. Purchase all required textbooks, manuals, supplemental supplies, uniforms, and liability insurance. Note: no ear gauges, piercings other than the ear lobe, or visible tattoos are permitted while in uniform.
2. Assume all responsibility for transportation to and from externship assignments including clinical experiences.
3. Obtain and maintain current American Heart Association or American Red Cross First Aid certification.
4. Obtain and maintain CPR certification in American Heart Association: CPR for the Health care Provider or American Red Cross: CPR for the Professional Rescuer.
5. Have a comprehensive physical examination which includes documentation of selected vaccinations and a urine drug screen, within six months of program matriculation.
6. Submit application for Child Abuse History Clearance, FBI Clearance, and PA Criminal Record Check. Note: a Child Abuse History will and a Criminal Record and/or FBI Record may exclude the student from participating in the Program.
7. Document proof of Computer literacy
8. Complete a national Medical Assisting certification examination prior to program completion

Day Option

FIRST SEMESTER
BIO 103	Introduction to Human Anatomy and Physiology	3
HCP 224	Medical Terminology	3
HCP 225	Health Insurance and Professional Billing	3
HCP 114	Medical Law and Ethics for Health Care Professionals.	3

(12 credit hours)

SECOND SEMESTER
PSY 206	Human Development – A Life-Span Approach	3
MAS 110	Laboratory Procedures for Medical Assistants	4
MAS 112	Medical Assisting – Clinical Assisting Procedures	5
HCP 116	Medical Business Practices	4

(16 credit hours)

THIRD SEMESTER
MAS 120	Professional Issues in Medical Assisting	1
MAS 130	Medical Assisting Practicum	5

(6 credit hours)

TOTAL PROGRAM HOURS: 34

Evening Option*

FIRST SEMESTER
HCP 224	Medical Terminology	3
HCP 225	Health Insurance and Professional Billing	3
HCP 114	Medical Law and Ethics for Health Care Professionals	3

(9 credit hours)

SECOND SEMESTER
BIO 103	Introduction to Human Anatomy and Physiology	3
PSY 206	Human Development – A Life-Span Approach	3
HCP 116	Medical Business Practices	4

(10 credit hours)

THIRD SEMESTER
MAS 110   Laboratory Procedures for Medical Assistants...........4
MAS 112   Medical Assisting – Clinical Assisting Procedures 5
<div align="right">(9 credit hours)</div>

FOURTH SEMESTER
MAS 120   Professional Issues in Medical Assisting...................1
MAS 130   Medical Assisting Practicum 5
<div align="right">(6 credit hours)</div>

TOTAL PROGRAM HOURS: 34

* The Evening Option is designed to be completed in 4 continuous semesters with 6 -10 credits per semester. Students may opt to complete the Medical Assisting Evening Option by completing one or two courses per semester. These students will work with the program administrator to plan their course sequence and must complete the program within a 3 year time frame. During the last semester of the Evening Option students in MAS 130 complete a 180 hour practicum experience during day hours at an affiliated clinical site.

MEDICAL CODING (CERTIFICATE OF COMPLETION)

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
Upon successful completion of this program, graduates will be able to:
• Use coding and classification systems in order to assign valid diagnostic and/or procedure codes for medical billing and reimbursement required by the Health Care 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.

Admission Guidelines
Complete the College placement tests in English, Mathematics, and Reading and place above the developmental level in English and Reading and at or above MAT 011.

FIRST SEMESTER
BIO 103   Anatomy and Physiology 3
HCP 224   Medical Terminology (1st 7 weeks) 3
HCP 226   Medical Coding I(2nd 7 weeks) 3

SECOND SEMESTER
HCP 227   Medical Coding II (1st 7 weeks)...............................3
HCP 228   Electronic Health Records Management 3
HCP 230   CPT Coding and Reimbursement Methods (2nd 7 wks.) ..3

MEDICAL LABORATORY TECHNICIAN (A.A.S.)

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.

*National Accrediting Agency for Clinical Laboratory Sciences 5600 N. River Road, Suite 720, Rosemont, IL 60018 www.naacls.org • 773-714-8880

Program Outcomes
Upon successful completion of the program, each graduate will be able to:
• 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.

Special Admission Guidelines
Students who wish to be considered for admission to the Medical Laboratory Technician program must present credentials matching the following guidelines:

Students must complete a college application. All students must submit a high school transcript or G.E.D., including one year each of biology and chemistry and two years of math, including algebra with grades of "C" or better (equivalent courses taken in college would be acceptable substitutes) and one of the following credentials:

A. ACT composite score of 18 or above and 16 English
B. SAT scores of 800 total
C. SAT I or SAT Reasoning combined math and verbal/critical reading score of 920 total or
D. College transcript including 14 semester hours consisting of two 4-credit science courses with laboratories and two 3-credit courses from the general education component of the MLT curriculum. Grades for the four courses must each be "C" or better and result in a GPA of at least 2.5.

Science courses must be successfully completed within 10 years prior to enrolling in MLT courses.

All students must take placement tests in English, mathematics, and reading and place above the developmental level prior to enrolling in MLT 110.

Admission to the program is selective and completion of minimum requirements does not guarantee acceptance. All applicants must submit an Online Petition for Admission to the MLT Program in February of the year they wish to be considered. Criteria such as completion of non-MLT courses, date of application and date of completion of minimum requirements may be used in the decision process. All students must complete the MLT program within four academic years of the date of initial enrollment in the program. Please contact MLT office at 215-641-6437 for further information.

Advanced Standing
Applicants who are CLAs or who have experience working in clinical laboratories may be eligible to obtain credit via challenge of certain MLT courses. Information is available from the Program Director.

Program Requirements
Students are required to purchase their own malpractice insurance, uniforms, and to provide their own transportation to and from all clinical assignments and enrichment site visits. In addition to having a physical examination, which includes documentation of selected vaccinations and urine drug screen within six months prior to entering the program, students must also provide evidence of immunity to Hepatitis B. Students must also complete a criminal background check and child abuse clearance. A criminal record may exclude the student from participation in the clinical year. Students in MLT courses may occasionally be required to act as subjects for laboratory tests such as venipuncture, capillary puncture, bleeding time, and urinalysis. Students must attend a mandatory orientation session. Note: no ear gauges, piercings other than the ear lobe, or visible tattoos are permitted while in uniform.

FIRST SEMESTER
MLT 110	Introduction for the MLT	4
CHE 131	Chemistry for the Technologies I	4
BIO 130	Introductory Anatomy & Physiology	4
ENG 101	[1]English Composition I	3
SOC 101	[1]Introduction to Sociology	3
	(18 credit hours)	

SECOND SEMESTER
MLT 123	Immunohematology Lecture	2
MLT 124	Immunohematology Laboratory	1
MLT 125	Hematology Lecture	2
MLT 126	Hematology Laboratory	1
CHE 132	Chemistry for the Technologies II	4
BIO 141	Clinical Microbiology I	4
ENG 102	[1]English Composition II	3
	(17 credit hours)	

THIRD SEMESTER
MLT 233	Clinical Chemistry Lecture	3
MLT 234	Clinical Chemistry Laboratory	2
MLT 235	Clinical Practicum in MLT I	3
BIO 241	Clinical Microbiology II	4
Elective	Core Goal 6: Intellectual Heritage	3
Elective	Core Goal 10: Exercise and Health Sciences	2 or 3
	(17-18 credit hours)	

FOURTH SEMESTER
MLT 244	Professional Issues in MLT	2
MLT 245	Clinical Practicum in MLT II	6
MLT 246	MLT Seminar	1
Elective	Core Goal 7: Aesthetic Sensibility & Arts	3
	(12 credit hours)	

1 Students who are part-time or employed may be encouraged to take these courses prior to formal enrollment in MLT and to see a counselor or faculty member for advising on course selection.

TOTAL SEMESTER CREDIT HOURS: 64-65

MEDICAL OFFICE ASSISTANT CERTIFICATE OF COMPLETION

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
Upon completion of this Certificate of Completion program the graduate will be able to:
- Employ a wide range of administrative office procedures to complete operational, insurance, managed care, and financial functions in the medical office setting
- Effectively manage all aspects of the electronic health record, including but not limited to: operational, insurance, managed care, and financial functions
- Use critical thinking skills to evaluate the impact of the legal and ethical issues of health care practices in the medical office environment.

Admission Guidelines
Complete the College placement tests in English, Mathematics, and Reading and place above the developmental level in English and Reading and at or above MAT 011.

FIRST SEMESTER
HCP 224	Medical Terminology	3
HCP 225	Health Insurance and Professional Billing	3
CIS 110	Information Systems for Management with Computer Applications	3
	(9 credit hours)	

SECOND SEMESTER
HCP 114	Medical Law and Ethics for Health Care Professionals	3
HCP 228	Electronic Health Records Management	3
HCP 116	Medical Business Practices	4
	(10 credit hours)	

TOTAL SEMESTER CREDIT HOURS: 19

NURSING (A.A.S.)

Purpose
The Nursing Program is committed to the preparation of caring professional nurses who employ critical thinking skills and the nursing process in meeting the human needs of clients in a variety of healthcare settings. Students develop competence in the art and science of nursing within an integrated curriculum which incorporates seminar, classroom, the College Nursing Laboratory, and clinical experiences. Graduates of this Accreditation Commission for Education in Nursing (ACEN), formerly NLNAC, accredited Nursing Program are prepared to complete the National Council Licensing Examination - Registered Nurse (NCLEX-RN). In addition to practicing as a Registered Nurse, graduates may also transfer credits to degree programs beyond the Associate in Applied Science (A.A.S.) degree in Nursing.

Program Outcomes
The Nursing Program graduate will be able to:
* Integrate critical thinking when incorporating knowledge from the sciences and humanities in the delivery of nursing to clients.
* Utilize the nursing process in meeting the healthcare needs of individuals of diverse sociocultural identities across the lifespan.
* Implement the roles of the associate degree nurse in structured settings.
* Demonstrate behaviors that reflect the values of nursing as a caring profession.

Approval/Accreditation Status
The Nursing Program is...
* Provisionally Approved by the PA State Board of Nursing
* Accredited by the ACEN (formerly NLNAC). As an additional resource for this information persons may contact,ACEN 3343 Peachtree Road NO, Suite 850, Atlanta, GA 30326, 404-975-5000 http://acenursing.org

Program Features
The Nursing Program incorporates an integrated curriculum design which can be completed on a full or part-time basis during day hours with the potential for occasional evening clinical experiences. Courses required by the Nursing Program curriculum (see Sequence of Courses) are taught throughout the year. Three classes are admitted to the clinical component of the Nursing Program each year (Fall, Spring and Summer). The availability of seats in each of the three admission cycles is based on the availability of clinical learning opportunities provided to the College by area healthcare agencies.

Special Admissions Requirements
Students who wish to be considered for admission to the clinical component of the Nursing Program must present credentials in accordance with the following requirements:
A. Submit a completed College application indicating Nursing as the intended major (NR.GS).
B. Submit high school transcript or GED score. Applicants must have completed work equal to a standard high school course with a minimum of 16 units including:
* 2 units of mathematics (1 of which is algebra).
* 2 units of science (1 unit of biology and 1 unit of chemistry with a minimum grade of "C") with related laboratory or equivalent. Applicants without high school biology and/or chemistry can satisfy this requirement by completing BIO 121 and/or CHE 121 with a grade of "C" or better.

C. In addition, one of the following must also be submitted:
1. ACT score composite of a minimum of 18
2. SAT score of a minimum of 800
3. SATI score of a minimum of 920
4. SAT Reasoning minimum critical reading and math combined score of 920
5. College transcript indicating at least eight (8) credits of lab science courses with a minimum grade of "B" in each course and six (6) credits selected from the Nursing curriculum with an overall minimum recalculated grade point average of 2.5.
D. Complete all science courses within 10 years prior to enrollment in the first nursing clinical course, except Anatomy and Physiology I & II, which must be completed within 5 years of enrollment.
E. Take the College's Placement Tests in English, Mathematics, and Reading and complete any required developmental courses with a grade of "C" or better.
F. Submit official college transcripts for credit evaluation before registering for any course at the College.

Admission Guidelines
Admission to the clinical component of the Nursing Program is very competitive and completion of minimum requirements does not guarantee admittance. After submitting the College application, applicants are advised to take non-nursing courses required by the Nursing Program curriculum (see Sequence of Courses) prior to submitting the online Petition for Admission to the clinical component of the Nursing Program. The online Petition for Admission demonstrates the applicant's attainment of the Nursing Program Special Admission Requirements and Sequence One courses (see Sequence of Courses). Admission to the clinical component of the Nursing Program is based on a point system and ranking procedure. Points are awarded based on place of permanent residence, number of required Nursing Program courses completed, courses completed at Montgomery County Community College, course grades, and the date of application. A Total Point Score is derived for each applicant and used in ranking applicants who submit a completed online Petition for Admission for a given admission cycle. The website http://mc3.edu/academics/areas-of-study/health-sciences/nursing provides a link to the online Petition for Admission and more detailed admission guidelines and procedures. To learn more about the Nursing Program, call 215-641-6551 (Central Campus) or 610-718-1906 (West Campus) for dates and location of Nursing Information Sessions.

Advanced Standing
A. Applicants considered for advanced standing include transfer students who were in good standing from collegiate professional nursing programs or diploma nursing programs, and Licensed Practical Nurses (LPNs). All advanced standing applicants must submit documents for credit evaluation and determination of placement in the Nursing Program.
B. Advanced standing applicants must meet all Special Admission Requirements and have successfully completed the equivalent of all courses in Sequences 1 and 2 of the Nursing Program curriculum.
C. Applicants submit a completed Petition for Advanced Standing Admission http://mc3.edu/academics/areas-of-study/health-sciences/nursing). Admissions for advanced standing applicants is on a space available basis.
D. LPN applicants:
1. must have graduated from a Practical Nurse Program and hold an unencumbered licensure as a practical nurse.
2. submit LPN transcript and any college transcripts.

3. receive credit for NUR 110.
4. must complete Anatomy & Physiology I & II (BIO 131, BIO 132). A minimum score of "B" may be used to meet Special Admission Requirements (8 credits of lab science courses with a minimum "B" grade in each course).
5. before registering for NUR 050 - Nursing Role Transition, schedule the Nursing Placement Test for LPNs by calling 215-641-6646. Results of the Nursing Placement Test for LPNs determines the applicant's placement in either NUR 112 or NUR 211.
6. obtain a score of "C" or better on the Nursing Placement Test for LPNs to be eligible for enrollment in NUR 211.

Note: All Sequence 3 courses must be completed prior to enrollment in NUR 211.

Program Requirements
Upon acceptance to the clinical component of the Nursing Program, students are required to:
A. Attend the mandatory Nursing Program Orientation.
B. Purchase student liability insurance annually (approx. $35).
C. Purchase the Nursing Program uniform, uniform jacket, shoes, hose, name pin (approx. $300). Note: no ear gauges, piercings other than the ear lobe, or visible tattoos are permitted while in uniform.
D. Purchase nursing laboratory supplies (approx. $55).
E. Assume all responsibilities for transportation to and from the healthcare agency to which they are assigned for clinical experience.
F. Have a physical examination, which includes documentation of selected vaccinations and a urine drug screen, within six months prior to entering the Nursing Program's clinical component and annually thereafter.
G. Maintain current CPR certification until completion of the clinical nursing courses by passing the American Heart Association's Health Care Provider OR the American Red Cross Professional Rescuer course.
H. Submit documentation of an Annual Influenza Vaccination.
I. Submit application for Child Abuse History Clearance, FBI Clearance and PA Criminal Record Check annually (approx. $75.). NOTE: a Child Abuse History will and a Criminal Record and/or FBI Record may exclude the student from participation in the clinical component of the Nursing Program.
J. Complete a summative standardized examination at the completion of the Nursing Program (approx. $45.

Progression in Nursing
Candidates for the A.A.S. Degree in Nursing may progress within the program and be recommended to the PA State Board of Nursing for licensure and eligibility to take the NCLEX-RN examination if the following requirements have been met:
A. Minimum grades of "C" in all nursing and related science courses.
B. Complete each sequence of the Nursing Program curriculum as identified under Sequence of Courses.
C Complete all sequences of the Nursing Program curriculum within three years of the date of first enrollment in the Program's clinical component.

Note: A student who withdraws from the clinical component of the Nursing Program and seeks readmission at a later date must successfully complete the requirements in effect when readmitted.

Licensure Considerations
The PA State Board of Nursing may refuse, suspend or revoke any license in any case where the Board shall find that the applicant...

• Has been convicted or has pleaded guilty or entered a plea of nolo contendere or has been found guilty by a judge or jury of a felony or a crime of moral turpitude, or has received probation without verdict, disposition in lieu of trial or an Accelerated Rehabilitative Disposition in the disposition of felony charges, in courts of this Commonwealth, the United States, or any other state, territory or country;
• Has committed fraud or deceit in securing admission to the practice of nursing or to the College's Nursing Program;
• Is unable to practice professional nursing with reasonable skill and safety to clients by reason of mental or physical illness or condition or physiological or psychological dependence upon alcohol, hallucinogenic or narcotic drugs or other drugs which tend to impair judgment or coordination, so long as such dependence shall continue.

For a complete list of reasons why the PA State Board of Nursing may refuse a professional nursing license to an applicant, refer to section 14 of the Professional Nurse Laws P.L. 651, No. 99. All questions related to licensure are to be directed to the Commonwealth of Pennsylvania, State Board of Nursing, P.O. Box 2649, Harrisburg, PA 17105-2649.

Sequence of Courses
Courses in the Nursing major are listed in sequential order. Some courses are required prior to taking other courses. In those cases where a non-nursing course (courses with prefix other than NUR) is listed in a given sequence, it must be taken with or prior to the Nursing course listed in the same sequence.

Sequence 1 —
Prior to Petitioning for Admission to the Nursing Program Clinical Component

BIO 131	Human Anatomy & Physiology I	4
	(minimum grade of "C" required)	
ENG 101	English Composition I	3
PSY 101	Introduction to Psychology	3
NUR 106	Concepts of Nursing	3
	(minimum grade of "C" required)	
		(13 credit hours)

Sequence 2 —
After Acceptance to the Nursing Program Clinical Component

BIO 132	Human Anatomy & Physiology II*	4
	(minimum grade of "C" required)	
ENG 102	English Composition II	3
NUR 110	Introduction to Nursing	8
	(minimum grade of "C" required)	
		(15 credit hours)

Prior to Admission to the Nursing Program Clinical Component for Advanced Standing into Sequence 3 or 4

NUR 050	Nursing Role Transition	3
	(minimum grade of "Pass" required)	
	(this course does not yield credits toward the degree)	

Sequence 3

BIO 140	Microbiology & Immunology*	4
	(minimum grade of "C" required)	
SOC 101	Introduction to Sociology	3
NUR 112	Nursing Care of Clients with Uncomplicated Health Care Needs	8
	(minimum grade of "C" required)	
		(15 credit hours)

Sequence 4

PSY 136	Personality 3	
Elective	Core Goal 6: Intellectual Heritage OR	
	Core Goal 7: Aesthetic Sensibility and the Arts**.......3	
NUR 211	Nursing Care of Clients with Complex	
	Health Care Needs 8	
	(minimum grade of "C" required)	
		(14 credit hours)

Sequence 5

Elective	Core Goal 6: Intellectual	
	Heritage OR Core Goal 7:	
	Aesthetic Sensibility and the Arts** 3	
NUR 212	Nursing Management 8	
	(minimum grade of "C" required)	
NUR 213	Professional Issues in Nursing...................................2	
	(minimum grade of "C" required)	
		(13 credit hours)

TOTAL SEMESTER CREDIT HOURS: 70

* Strongly recommended that 6-week summer science courses NOT be taken
concurrently with summer clinical nursing courses.
** Select a Core Goal #6 Course: Intellectual Heritage, and
Select a Core Goal #7 Course: Aesthetic Sensibility and the Arts

Note: In order to maximize the student s learning there are times when course
requirements may necessitate irregular scheduling, adjustments in section
assignments, or changes in placement for clinical experience. Students will be
informed of any changes as promptly as possible.

PHLEBOTOMY (CERTIFICATE OF COMPLETION)

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 of
the 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.

*National Accrediting Agency for Clinical Laboratory Sciences, 5600 N. River Road,
Suite 720, Rosemont, Il 60018 www.naacls.org 773-714-8880

Program Outcomes
The Phlebotomy Certificate of Completion program is designed to
provide the students with:
• The technical skills needed to competently and safely collect and
handle blood specimens from a wide variety of patients
• The interpersonal skills needed to interact with others
• The knowledge base needed to pass national certifying examinations
• An introduction to the healthcare professions with emphasis on
clinical laboratory science.

Admissions Guidelines
Admission is on a first come, first serve basis during the Fall and
Spring. Registrants must be high school graduates or hold a GED.
Please contact the MLT Office at 215-641-6437 for further information.
All applicants must submit an Online Petition for Admission found on
the Phlebotomy Technician web page.

Special Requirements
Students are expected to purchase malpractice insurance, program
uniforms and to provide their own transportation to and from clinical
assignments. Students must have a physical examination, which
includes documentation of selected vaccinations and urine drug
screen within six months of entering the program. Proof of Hepatitis
B vaccination is required or the student must sign a statement of
declination before participating in the clinical portion of the program.
Students must also complete a criminal background check and child
abuse clearance. Students must attend a mandatory orientation
session. Note: no ear gauges, piercings other than the ear lobe, or
visible tattoos are permitted while in uniform.

Course
MLT 106   Phlebotomy 4

TOTAL SEMESTER CREDIT HOURS: 4

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 achieved
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. This
program is accredited by the Joint Review Committee on Education
in Radiologic Technology (JRCERT), 20 N. Wacker Drive, Suite
2850, Chicago, IL 60602. Graduates are eligible to take the national
certifying examination administered by the American Registry of
Radiologic Technologists (ARRT).

Program Mission
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.

Program Goals and Student Learning Outcomes

The goals of this program are to produce:

1. Students who function as competent, entry-level professionals that meet the needs of the community.
   - Students will be able to adequately perform procedures at entry level competence.
   - Students will select appropriate technical factors for quality patient exams.
   - Students will demonstrate proper radiation practices.
2. Students and graduates who will demonstrate appropriate, professional communication skills.
   - Students will use appropriate vocabulary and language to orally convey information.
   - Students will use a systematic approach to locate and use information to plan and write professional papers.
3. Students/graduates who will develop and practice effective problem solving skills and critical thinking skills.
   - Students will demonstrate the ability to alter technical factors in response to various changes in the clinical setting
   - Students will produce solutions to real-world clinical problems
   - Students will evaluate radiographic images for appropriate positioning and image quality
4. Students/graduates who will conduct him/herself in a professional manner.
   - Students will recognize acceptable professional behaviors
   - Students will practice appropriate professional behaviors
   - Graduates will demonstrate an overall professional demeanor in the workplace
   - Students will discuss the importance of professional development or career advancement

Admissions Guidelines and Procedures

Students who wish to be considered for admission to the Radiography Program must present credentials in accordance with the following requirements:

1. Be at least 18 years of age to participate in any of the RAD courses. Students under the age of 18 may complete any prerequisite or co-requisite courses at the College level in accordance with College policy.
2. Submit a completed college application earmarking Radiography (RT.GS) as the major.
3. Submit high school transcript or GED scores. Applicants must have completed work equal to a standard high school course including:
   - 2 units of mathematics (1 of which is algebra)
   - 2 units of science (1 unit of biology and 1 unit of chemistry or physics with a minimum grade of "C" with related laboratory or equivalent. Applicants without high school biology and/or chemistry can satisfy this requirement by completing BIO 121 and/or CHE 121 with a grade of "C" or above.
4. Submit official college transcript(s), if applicable.
5. Submit one of the following:
   - ACT score composite of 18 or above, or
   - SAT score of a minimum of 800, or
   - SAT I or SAT Reasoning with a combined math and verbal/critical reading score of a minimum of 920 total, or
   - College transcript including 14 semester hours consisting of two 4 credit laboratory science courses and two 3 credit courses from the general education component of the Radiography curriculum. Grades for the 4 courses must each be a "C" or better and result in a GPA of at least 2.5. The 14 credits will be used for evaluation proposes.

6. All science and math courses must be successfully completed within 5 years prior to enrolling in Radiography courses.
7. All applicants must take the College placement tests in English, Mathematics, and Reading and must place above the developmental level prior to enrolling in Radiography courses.
8. Due to class limitations, the College does not guarantee continuous enrollment between non-Radiography and Radiography courses.
9. Submit an online Petition for Admission to the Radiography Program in January of the year you wish to be considered.
10. After application to the College, applicants are advised to take non-radiography courses required by the Radiography Program Curriculum (see Sequence of Courses) while awaiting Program acceptance.

The website http://www.mc3.edu/academics/areas-of-study/health-sciences/radiography provides the online Petition as well as more detailed guidelines and information. Applicants are strongly urged to meet with a Radiography Advisor (610-718-1944) prior to submitting the online Petition for Radiography Program Admissions to verify completion of Special Admission Requirements as well as the accuracy of their records.

Program Requirements

Once accepted into the Radiography Program, students are required to:

1. Purchase all required textbooks, manuals. (approx.$1100.00)
2. Adhere to the Radiography Dress Code, which requires purchasing Radiography Program uniforms to include scrubs, lab coat, shoes and positioning markers (approx. $150.00). Note: no ear gauges, piercings other than a single post in the ear lobes, or visible tattoos are permitted while in uniform. If a clinical site has a dress code more restrictive than that of the Radiography Program, students will adhere to the more restrictive code.
3. Purchase student liability insurance annually. (approx. $37.00/yr)
4. Submit application for Child Abuse History Clearance, FBI Clearance, and PA Criminal Record Check. Note: a Child Abuse History will and a Criminal Record and/or FBI Record may exclude the student from participating in the Program.
5. Assume all responsibility for transportation to and from the clinical agencies assigned.
6. Obtain and maintain current CPR certification by passing the American Heart Association's Health Care Provider OR the American Red Cross Professional Rescuer course.
7. Have a comprehensive physical examination, which includes documentation of selected vaccinations and a 10 panel urine drug screen, within six months of Program matriculation and annually thereafter.
8. Attend a mandatory Radiography Program Orientation.
9. Submit documentation of an Annual Influenza Vaccination.
10. All students must complete the Radiography Program within four academic years of the date of initial enrollment in the program.
11. Demonstrate proof of computer literacy prior to enrolling in Radiography Program. Successful completion of one of the following will fulfill this requirement: demonstrate computer proficiency obtained through life experiences; demonstrate computer skills obtained at another academic institution including high school or acquired through on the job training, or complete a computer science course such as CIS 100.

Progression in Radiography

Candidates for the A.A.S. Degree in Radiography may progress within the program and be recommended to the American Registry of Radiologic Technologists for certification and eligibility to take the ARRT examination if the following requirements have been met:

1. Minimum grades of "C" in all radiography and related science courses.
2. All students must complete the Radiography Program within four academic years of the date of first official enrollment in the program.

Consideration for Certification

The American Registry of Radiologic Technologists may not issue a certificate to an applicant who has been convicted of:
1. A felony
2. Any offense (misdemeanor or felony) indicating a lack of good moral character

All questions related to items #1 and #2 should be directed to the American Registry of Radiologic Technologists,1255 Northland Drive, St. Paul, MN 55120-1155, or www.arrt.org prior to Program application.

Sequence of Courses

Courses in the Radiography Program are listed in sequential order. Some courses are required prior to taking other courses. In those cases where a non-radiography course (course with prefix other than RAD) is listed in a given sequence, it must be taken with or prior to the Radiography course(s) listed in the same sequence. All RAD and BIO and MAT courses must be completed with a minimum grade of "C". **IMPORTANT NOTE:** The Radiography Program is a year-round, continuous program consisting of five sequential semesters. Students are admitted to the Program for the fall each year.

SEMESTER 1 Prior to Admission to the Radiography Program
BIO 131*	Human Anatomy & Physiology I	4
BIO 132*	Human Anatomy & Physiology II	4

SEMESTER 2 (FALL)
RAD 100	Introduction to Radiography and Patient Care	3
RAD 102	Radiographic Exposure and Tech I	3
RAD 104	Clinical Education I	3
RAD 111	Radiographic Procedures I	3
MAT 100, MAT 106 or higher		3

SEMESTER 3 (SPRING)
ENG 101	English Composition I	3
RAD 103	Radiographic Protection and Biology.	2
RAD 112	Radiographic Exposure and Tech II.	3
RAD 114	Clinical Education II	3
RAD 121	Radiographic Procedures II .	3

SEMESTER 4 (SUMMER)
ENG 102 or ENG 115 or ENG 117		3
RAD 124	Clinical Education III	4

SEMESTER 5 (FALL)
RAD 105	Radiation Physics	3
RAD 214	Clinical Education IV	4
RAD 221	Radiographic Procedures III	3
SPC 110/111	Introduction to Speech .	3

SEMESTER 6 (SPRING)
Elective	Core Goal 6: Intellectual Heritage.	3
PSY 101	Introduction to Psychology ..	3
RAD 224	Clinical Education V ..	4
RAD 230	Radiographic Pathology .	2
RAD 250	Professional Issues in Radiography	1

TOTAL PROGRAM HOURS: 70 CREDITS

* Courses must be completed in advance of admissions to the Radiography Program.

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 1361 Park Street, Clearwater, FL 33756, telephone 727-210-2350, www.caahep.org.

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 a four-semester, continuous program designed to prepare a competent entry-level surgical technologist in the cognitive (knowledge), psychomotor (skills), and affective (behavior) learning domains.

Program Goals

The Surgical Technology AAS degree Program prepares competent Surgical Technologists to perform their role within the operative team, while delivering care to patients from the community in multiple surgical environments including: General and Colorectal, Obstetric/Gynecologic, ENT, Ophthalmic, Maxillofacial, Cosmetic/Reconstructive Plastic, Neurosurgery, Genitourinary, Thoracic, Cardiac, Vascular, and Orthopedic surgeries.

Program Outcomes

Upon completion of the Program, graduates will be able to:
- 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.

Admissions Guidelines

Students who wish to be considered for admission to the Surgical Technology AAS Program must present credentials in accordance with the following requirements:

1. Submit a completed College application identifying Surgical Technology AAS (SR.GS) as the major.
2. Submit high school transcript or GED scores. Applicants must have completed at least one year of biology and chemistry, and two years of mathematics including one unit of algebra or equivalent. Applicants without high school biology and/or chemistry can satisfy this requirement by completing the College's BIO 121 or CHE 121 courses with grades of "C" or better. Both the Biology and Chemistry courses must be successfully completed within the past 10 years prior to enrolling in SUR courses.
3. Submit official college transcript(s), for credit evaluation, if applicable.
4. Complete the College placement tests in English, Mathematics, and Reading and place above the developmental level prior to enrolling in SUR courses.
5. Submit a SUR Petition for Admission.

The Surgical Technology AAS Program accepts students each academic year, in the Fall semester. Due to class limitations, the College does not guarantee continuous enrollment between non-SUR and SUR courses. All students must complete the Surgical Technology AAS Program within four academic years of the date of initial enrollment in the program.

Eligibility for readmission and/or transfer to the Surgical Technology AAS Program is based upon space availability as well as meeting specified requirements. Additional information is available on the College website or upon request from the Surgical Technology Program Coordinator.

Program Requirements

Once accepted into the A.A.S. Degree Program, students are required to:

1. Purchase all required textbooks, manuals, supplemental supplies, uniforms, and liability insurance.
2. Assume all responsibility for transportation to and from extramural assignments including clinical experiences.
3. Obtain and maintain current CPR certification in the American Heart Association's CPR for the Healthcare Provider or American Red Cross' CPR for the Professional Rescuer course.
4. Have a comprehensive physical examination, which includes a urine drug screen and documentation of an annual Influenza Vaccination, within six months of Program matriculation and annually thereafter.
5. Submit application for Child Abuse History Clearance and Criminal Record Check every two years. Note: A Child Abuse

History will and a Criminal Record may exclude the student from participation in the clinical component of the program.
6. Attend a mandatory Surgical Technology Program 0rientation.
7. Complete the Certified Surgical Technologist (CST) examination during the final semester of the program (approx. $300 for non AST member; $200 for AST member).

Sequence of Courses

All BIO and SUR courses must be taken and successfully completed (grade "C" or better) in the sequence listed. Each semester provides the building block for the following semester; therefore, each course in a given semester serves as a co-requisite for all other courses in that same semester. Concurrently, each semester serves as the prerequisite for continuing into the next semester.

IMPORTANT NOTE: 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.

FIRST SEMESTER
BIO 131	Anatomy & Physiology I ..	4
BIO 140	Microbiology & Immunology.	4
Elective	Core Goal 10: Exercise and Health Sciences	2
SUR 105	Surgical Technology I	7
		(17 credit hours)

SECOND SEMESTER
ENG 101	English Composition	3
BIO 132	Anatomy & Physiology II . .	4
SUR 106	Surgical Technology II	8
		(15 credit hours)

THIRD SEMESTER
ENG 102 or ENG 115 or ENG 117 ..		3
SPC 110	Introduction to Speech Communication	3
SUR 205	Surgical Technology III .	10
		(16 credit hours)

FOURTH SEMESTER
Elective	Core Goal 6: Intellectual Heritage and Core Goal 9: Behavioral and Social Sciences	3
Elective	Core Goal 7: Aesthetic Sensibility and the Arts	3
SOC 244	Sociology of Death and Dying	3
SUR 206	Surgical Technology IV. .	7
		(16 Credit Hours)

TOTAL SEMESTER CREDIT HOURS: 64

NON-CREDIT HEALTH CAREER PROGRAMS

CLINICAL RESEARCH COORDINATOR

Purpose
This course is designed for the medical or allied health professional considering a career or a change into the dynamic world of clinical research, in the medical office or hospital setting. It will provide the information necessary for a solid knowledge base to allow the professional to function as an entry level Clinical Research Coordinator.

Primary Goals
After completion of this course, students will be prepared to enter a medical/hospital setting as a Clinical Research Coordinator. The student will be able to develop the basic skills necessary for the management of clinical research trials, use the informed consent process, conduct patient screening, recruitment and enrollment, study follow up, drug/devise accountability, adverse event reporting, and source documentation and complete case reports.

Admission Guidelines
Existing healthcare professionals including RNs, LPNs, Allied Health Professionals, with computer skills, organizational skills and the ability to multitask.

Consideration for Certification
Students will receive a certificate of completion from the college.

Articulation
At this time there is no articulation towards a credit degree.

DENTAL HYGIENE LOCAL ANESTHESIA

Purpose
This course is designed to prepare licensed dental hygienists to administer local anesthesia. This course meets the requirements of the Pennsylvania State Board of Dentistry to apply for certification in the administration of local anesthesia in the practice of dental hygiene.

Program Description
Course content includes the mechanism of action, local anesthetic agents, vasoconstrictors, review of essential anatomy, armamentarium, patient evaluation, and local and systemic effects and complications. In addition, participants will perform safe and effective local anesthesia administration techniques on clinical partners under the supervision of qualified faculty.

This course is a hybrid course with six on-line modules that are synchronized with two at home sessions and three on-campus Friday evening sessions for hands-on administration of local anesthesia on student partners.

Primary Goals
To prepare licensed dental hygienists to administer local anesthesia and to become certified in the administration of local anesthesia in the practice of dental hygiene.

Admission Guidelines
Participants must submit a copy of a current dental hygiene licensure, a copy of current certification in BLS/CPR, and proof of liability insurance.

Recognition of Completion
Upon successful completion of this course, students can apply for certification in the administration of local anesthesia in the practice of dental hygiene from the Pennsylvania State Board of Dentistry.

NURSE REACTIVATION AND NURSE REFRESHER

Purpose
These programs are designed for Registered Nurses who hold either an active or inactive/lapsed Pennsylvania Registered Nurse license and wish to refresh their med-surg nursing knowledge and skills. Program completion assists in obtaining reinstatement of an inactive/lapsed Registered Nurse license by the Pennsylvania State Board of Nursing.

Program Description
The Nurse Refresher program is designed for Registered Nurses who have an active Pennsylvania RN license and who wish to refresh their skills. The program consists of two required program components: 60 hours of theory and 40 hours of on-campus clinical laboratory experience. Participants can also opt to complete an 80-hour hands-on, acute care clinical experience in an acute care med-surg unit under the guidance of a clinical mentor.

The Nurse Reactivation Program is approved by the Pennsylvania Board of Nursing for nurses who have an inactive/lapsed Pennsylvania Nurse license. This program consists of three required components: 60 hours of theory; 40 hours of on-campus clinical laboratory experience and 80 hours of hands-on, acute care clinical experience in a med-surg unit under the guidance of a clinical mentor.

Primary Goals
Reinstatement or renewal of Pennsylvania Registered Nurse license.

Admission Guidelines

Nursing Refresher (2 components): An active Pennsylvania Registered Nurse license.

Nursing Refresher (3 components): Submission of PA Child Abuse Clearance, PA Criminal Background Check, and FBI fingerprinting prior to commencement of course; submission of paperwork for physical examination and required drug screening; proof of Nursing Liability Insurance; proof of CPR certification or attendance at Healthcare Providers CPR Re-Certification course prior to commencement of course.

Nursing Reactivation: An inactive/lapsed Pennsylvania Registered Nurse license. Submission of PA Child Abuse Clearance, PA Criminal Background Check, and FBI Fingerprinting prior to commencement of course; submission of paperwork for physical examination and required drug screening; proof of Nursing Liability Insurance; proof of CPR certification or attendance at Healthcare Providers CPR Re-Certification course prior to commencement of course.

Consideration for Industry Certification
Nurse Reactivation Program: Upon satisfactorily completing the standardized comprehensive achievement test, individuals can apply to the Pennsylvania State Board of Nursing for reinstatement or renewal of their Pennsylvania Registered Nurse license.

Recognition of Completion

Nurse Refresher Program: Individuals will receive the required 30 CEUs to fulfill the Pennsylvania State Board of Nursing continuing education requirement. A certificate of program completion will also be awarded by the College.

Nurse Reactivation Program: At program completion, the nurse satisfactorily completes a standardized and comprehensive achievement test and results are submitted for reactivation or renewal of the Registered Nurse license to the Pennsylvania State Board of Nursing. Individuals will receive the required 30 CEUs to fulfill the Pennsylvania State Board of Nursing continuing education requirement. A certificate of program completion will also be awarded by the College.

Articulation
At this time there is no articulation towards a credit degree.

PHARMACY TECHNICIAN

Purpose
The skills learned while taking this course prepare the student for the National Pharmacy Technician Certification exam and to obtain entry-level positions in the retail and pharmacy industry.

Primary Goals
Upon completion of this program, the students will be prepared for the Pharmacy Technician Certification exam; able to assist pharmacists at an entry-level in multiple professional settings; able to work in, as well as understand, all aspects of the retail, home infusion, mail order, and institutional care pharmacy industry.
Admission Guidelines
Knowledge of basic math skills, high school graduate or GED equivalent.

Consideration for Certification
Upon successful completion of program, students can take the Pharmacy Technician Certification exam to become a Certified Pharmacy Technician (CPT). A certificate or program completion will be awarded by the College.

Articulation
At this time there is no articulation towards a credit degree.

SCIENCE, TECHNOLOGY, ENGINEERING, AND MATHEMATICS (STEM) DIVISION

BIOTECHNOLOGY (A.S.)

Transfer Curriculum

Purpose
This Program is designed to prepare students for transfer to a four-year college or university. The curriculum prepares the students primarily for advanced study in biotechnology, but is suitable for advanced study programs in biology, biochemistry, molecular biology, genetics, or chemistry, with an emphasis on issues associated with the biotechnology industry. In addition, the program is designed to enhance the students' understanding of the technology and processes utilized by the biopharmaceutical industry.

Program Outcomes
A graduate should be able to:
• Collect, analyze and interpret scientific data, using established research and statistical methods
• Demonstrate thorough knowledge and use of state-of-the-art scientific instrumentation used by laboratory personnel in both academic institutions and the biotechnology industry
• Demonstrate use and application of the scientific method to develop, organize, execute and interpret experiments in a logical and timely manner
• Demonstrate an understanding of the biotechnology manufacturing process.

FIRST SEMESTER
ENG 101	English Composition I	3
CHE 151	Principles of Chemistry I	4
BIO 151	Principles of Biology I	3
MAT 161	Precalculus I	4
Elective	Core Goal 6: Intellectual Heritage and Core Goal 9: Behavioral and Social Sciences	3

(18 credit hours)

SECOND SEMESTER
ENG 102	English Composition II	3
CHE 152	Principles of Chemistry II	4
BIT 120	Introduction to Biotechnology	4
BIT 123	Basic Techniques and Instrumentation for Biotech	3
Elective	Core Goal 4: Computer Fluency	3

(16 credit hours)

THIRD SEMESTER

CHE 261	Organic Chemistry I	4
MAT 131	Introduction to Statistics ..	3
Elective	Core Goal 11: Civic Responsibility	3
BIO 152	Principles of Biology II	4
BIT 220	Biotechnology Research	4

(18 credit hours)

FOURTH SEMESTER

CHE 262	Organic Chemistry II	4
BIT 230	Biotechnology Manufacturing	3
Elective	Core Goal 1b: Oral Communication Skills	3
Elective	Core Goal 10: Exercise and Health Sciences	2
Elective	Core Goal 12 Global Perspectives and Diversity and Core Goal 13: Ethical Reasoning and Behavior	3
Elective	Core Goal 7: Aesthetic Sensibility and the Arts	3

(18 credit hours)

TOTAL SEMESTER CREDIT HOURS: 70

BIOTECHNOLOGY (A.A.S.)

Career Track
(not designed for transfer)

Purpose
The Biotechnology A.A.S. program is designed to prepare graduates for employment into entry-level positions available at local biotechnology and pharmaceutical companies. The areas for career opportunities include (but are not limited to) basic research in a drug discovery environment, manufacturing, and clinical development. This program is intended to build upon basic principles of Biology and Chemistry acquired at the high school level. Graduates will be prepared for positions as biotechnology technicians and assistants, research laboratory assistants, manufacturing technicians, and media prep technicians.

Program Outcomes
A graduate should be able to:
- 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.

FIRST SEMESTER

ENG 101	English Composition I	3
MAT 100	Intermediate Algebra	3
BIO 121	General Biology I	4
CHE 131	Chemistry for Technology I.	4
Elective	Core Goal 4: Computer Fluency	3

(17 credit hours)

SECOND SEMESTER

ENG 115	Writing for Technical Communications	3
BIT 120	Introduction to Biotechnology	3
BIT 123	Basic Techniques and Instrumentation for Biotech	3
Elective	Core Goal 6: Intellectual Heritage and Core Goal 9: Behavioral and Social Sciences	3
CHE 132	Chemistry for Technology II	4

(16 credit hours)

THIRD SEMESTER

Elective	Laboratory Science Elective[1] .	4
BIO 140	Microbiology & Immunology	4
BIT 220	Biotechnology Research	4
Elective	Core Goal 1b: Oral Communication	3
MAT 131	Introduction to Statistics ...	3

(18 credit hours)

FOURTH SEMESTER

BIT 230	Biotechnology Manufacturing	3
BIT 240	Cell Culture Techniques[2]	3
BIT 242	Fermentation[2]	3
ESW Elective	Core Goal 10: Exercise and Health Science	2
Elective	Core Goal 11: Civic Responsibility, Core Goal 12: Global Perspective and Diversity and Core Goal 13: Ethical Reasoning and Behavior	3

(14 credit hours)

TOTAL SEMESTER CREDIT HOURS: 65

1 BIO 122, BIO 130, BIO 131, BIO 132, BIO 260, PHY 121 or PHY 122.

2 BIT 298 (Biotechnology Internship) for 6 credits, can be substituted in for BIT 240 and BIT 260.

COMPUTER NETWORKING (A.A.S.)

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

Program Outcomes
Upon successful completion of this program, graduates will be able to:
- Apply critical thinking, team building, and problem solving skills.
- Demonstrate effective oral and written communication.
- Describe OSI layers and their functionality.
- Analyze and solve computer hardware and software problems.
- Program and configure Cisco routers and switches.
- Design, implement, and maintain a LAN or WAN.
- Become proficient in Linux/UNIX system administration.
- Be prepared, with appropriate study, to take industry standard certification exams such as Network+, A+, MCP, CCNA and Security+.

FIRST SEMESTER

ENG 101	English Composition I	3
Elective	MAT 100 or Core Goal 3: Quantitative Skills	3
CIS 113	PC Maintenance and Support	3
CIS 155	PC Applications on Networks	3
CIS 170	Introduction to Networks	3

(15 credit hours)

SECOND SEMESTER

ENG 117	Writing For Business and Industry	
or ENG 115	Writing For Technical Communication	3
CIS 171	Routing and Switching Essentials	3
CIS 1101	Introduction to Problem Solving and Programming or	
CIS 111	Introduction to Computer Science	3
CIS 158	Windows Server Admin and Support	3
BIO 115	Environmental Biology	3

(15 credit hours)

THIRD SEMESTER

BIO 115	Environmental Biology	3
SPC Elective	Core Goal 1b: Oral Communication Skills	3
CIS 141	Introduction to Linux	3
CIS 172	Scaling Networks	3
CIS 258	Advanced Windows Server Admin & Support	3
ESW 207	Food and Culture	3

(18 credit hours)

FOURTH SEMESTER

CIS 172B	Connecting Networks	3
CIS 275	Network Security Essentials	
Or CIS 245	Database Management Systems/SQL	3
CIS 142	Linux Administration	
Or MGT 111	Principles of Management	3
Elective	Core Goal 6: Intellectual Heritage and Core Goal 7: Aesthetic Sensibility	3

(12 credit hours)

TOTAL SEMESTER CREDIT HOURS: 61

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).

Program Outcomes
Upon successful completion of this program, graduates will be able to:
- 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.

Curriculum

FIRST SEMESTER

CIS 155	PC Applications on Networks	3
CIS 170	Introduction to Networks	3
CIS 166	Introduction to Cloud Computing	3
CIS 167	Introduction to Data Storage and Storage Area Networks	3
CIS 158	Windows Server Administration and Support	3

(15 credit hours)

SECOND SEMESTER

CIS 168	Data Centers and Cloud Storage	3
CIS 171	Routing and Switching Essentials	3
CIS 258	Advanced Windows Server Administration and Support	3
CIS 203	VMware vSphere	3

(12 credit hours)

THIRD SEMESTER

CIS 141	Introduction to Linux	3
CIS 204	Citrix XEN Desktop and XEN App	3
CIS 205	Windows Server Hyper-V	3
CIS 206	Cloud Services	3

(12 credit hours)

TOTAL SEMESTER CREDIT HOURS: 39

*The Director of Information Technology Programs can waive CIS 155 if the student has taken CIS 110 or has equivalent knowledge.

COMPUTER SCIENCE (A.S.)

Transfer Curriculum

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
A graduate should be able to:
- 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.

Curriculum

FIRST SEMESTER

ENG 101	English Composition I	3
Elective	ANT 104, HIS 102, or HIS 205…	3
Elective	CIS 110 or CIS 155	3
CIS 111	Computer Science I: Programming and Concepts	3
Elective	BIO 121, CHE 121, or PHY 121 (part 1 of a 2 course series)	4

(16 credit hours)

SECOND SEMESTER

Elective	ART 101, ART 102, ART 103, MUS 110	3
Elective	BIO 122, CHE 122, or PHY 122 (part 2 of a 2 course series)	4
MAT 125	Discrete Mathematics	3
CIS 111 B	Computer Science II: Object-Oriented Programming	3
Elective	ENG 221, ENG 222	3

(16 credit hours)

THIRD SEMESTER

Elective	PSY 101, SOC 101	3
MAT 190	Calculus and Analytic Geometry I .	4
CIS 245	Database Management Systems/SQL	3
CIS 112	Computer Science III: Data Structures and Algorithms	3

(13 credit hours)

FOURTH SEMESTER

SPC 120	Public Speaking	3
Elective	CIS Elective	3
Elective	CIS Elective	3
CIS 126	Computer Architecture & Organization	3
Elective	Core Goal 10: Exercise and Health Sciences	3

(15 credit hours)

TOTAL SEMESTER HOURS CREDIT: 60

Students should confer with their advisor or a counselor before or during the first semester to be certain that the specific electives taken are the best choices for the four year institution(s) of their choice.

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+, Novell CNA, and Microsoft MCP). Graduates can expect to work as entry-level network engineers, administrators, or computer support technicians (although many employers require an associate's degree). This program involves extensive hands-on work in computer labs featuring state-of the-art equipment.

Program Outcomes

Upon successful completion of this program, graduates will be able to:
• Apply critical thinking, team building, and problem solving skills
• Describe OSI layers and their functionality
• Analyze and solve computer hardware and software problems
• Program and configure Cisco routers and switches

- Design, implement, evaluate and maintain a LAN
- Take industry standard certification exams such as Network+, A+,CNA, and MCP.

FIRST SEMESTER

CIS 113	PC Maintenance and Support .	3
CIS 155	PC Applications on Networks	3
CIS 170	Networking Fundamentals …	3
CIS 1101	Introduction to Problem Solving and Programming	
or CIS 111	Introduction to Computer Science	3
	(12 credit hours)	

SECOND SEMESTER

CIS 141	Introduction to Linux	3
CIS 258	Advanced Windows Server Admin & Support	3
CIS 171	Routing and Switching Essentials	3
CIS 245	Database Management Systems/SOL	3
	(12 credit hours)	

THIRD SEMESTER

Elective	CIS 142 Linux Administration Or	
CIS 172B	Connecting Networks .	3
CIS 257	Network Planning, Project Mgt & Implementation	3
	(6 credit hours)	

TOTAL SEMESTER CREDIT HOURS: 30

COMPUTER SCIENCE (A.S.)

Transfer Curriculum

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
A graduate should be able to:
- 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.

Curriculum

FIRST SEMESTER

ENG 101	English Composition I	3
Elective	ANT 104, HIS 102, or HIS 205…	3
Elective	CIS 110 or CIS 155	3
CIS 111	Computer Science I:	
	Programming and Concepts	3
Elective	BIO 121, CHE 121, or	
	PHY 121 (part 1 of a 2 course series)	4
	(16 credit hours)	

SECOND SEMESTER

Elective	ART 101, ART 102, ART 103, MUS 110	3
Elective	BIO 122, CHE 122, or	
	PHY 122 (part 2 of a 2 course series)	4
MAT 125	Discrete Mathematics	3
CIS 111 B	Computer Science II:	
	Object-Oriented Programming	3
Elective	ENG 221, ENG 222	3
	(16 credit hours)	

THIRD SEMESTER

Elective	PSY 101, SOC 101	3
MAT 190	Calculus and Analytic Geometry I .	4
CIS 245	Database Management Systems/SQL	3
CIS 112	Computer Science III:	
	Data Structures and Algorithms	3
	(13 credit hours)	

FOURTH SEMESTER

SPC 120	Public Speaking	3
Elective	CIS Elective	3
Elective	CIS Elective	3
CIS 126	Computer Architecture & Organization	3
Elective	Core Goal 10: Exercise and Health Sciences	3
	(15 credit hours)	

TOTAL SEMESTER HOURS CREDIT: 60

Students should confer with their advisor or a counselor before or during the first semester to be certain that the specific electives taken are the best choices for the four year institution(s) of their choice.

ELECTRONIC GAME AND SIMULATION DESIGN (A.A.S)

Purpose
The Electronic Game and Simulation Design program prepares graduates for employment as entry-level game designers, quality assurance testers or level designers for the electronic game/ simulation development industry.

Program Outcomes
A graduate should be able to:
- Plan, develop and produce working prototypes of electronic games/simulations that demonstrate the design elements for the particular game/simulation
- Develop electronic games/simulations using industry standard software tools and game design principles
- Demonstrate professional interpersonal skills and attitudes.
- Work and communicate effectively with others in a team development environment
- Demonstrate the basic knowledge and skills needed to continue the educational process toward more advanced training leading to career advancement.

FIRST SEMESTER

ENG 101	English Composition	3
MAT 161	Precalculus I	4
CIS 111	Computer Science I: Programming and Concepts	3
COM 100	Mass Media & Society	2
COM 160	Media Literacy Workshop …	1
CIS 176	Electronic Game & Simulation Design 1	3
	(16 credit hours)	

SECOND SEMESTER

COM 101	Survey of Mass Media Industries in US	2
COM 161	Media Industries Workshop	1
CIS 111B	Computer Science II: Object Oriented Programming .	3
CIS 177	Electronic Game & Simulation Design 2	3
PHY 121	General Physics I .	4

(13 credit hours)

THIRD SEMESTER

CIS 235	Object-Oriented Programming in C++	
or CIS 112	Data Structures & Algorithms	3
CIS 276	Electronic Game/Simulation Design 3	3
CIS 277	Electronic Game/Simulation Design 4	3
THA 105	Introduction to Acting	3
COM 120	Introduction to Scriptwriting	2
COM 121	Introductory Scriptwriting Workshop	1

(15 credit hours)

FOURTH SEMESTER

Elective	Core Goal 10: Exercise and Health Sciences	3
Elective	Core Goal 6: Intellectual Heritage	3
ECO 110	Elements of Economics	
or ECO 121	Macroeconomics	3
CIS 278	Electronic Game/Simulation Design 5	4
COM Elective	COM 103 or COM 104	2
COM Elective	COM 163 or COM 164	1

(16 credit hours)

TOTAL SEMESTER CREDIT HOURS: 60

ENGINEERING SCIENCE (A.S.)

Purpose

The Engineering Science program is a rigorous program of study in freshman/sophomore Engineering 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

A graduate should be able to:
- 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.

FIRST SEMESTER

ENG 101	English Composition I	3
EGR 111	Engineering Computations.	3
MAT 190	Calculus I	4
Elective	Core Goal 7: Aesthetic Sensibility and the Arts	3
PHY 151	Principles of Physics I ..	4

(17 credit hours)

SECOND SEMESTER

ENG 102, 115 or 117	English Writing Elective	3
MAT 201	Calculus II	4
PHY 152	Principles of Physics II ..	4
Elective	Core Goal1b: Oral Communication Skills	3
EGR 115	Engineering Graphics .	3

(17 credit hours)

THIRD SEMESTER

CHE 151	Principles of Chemistry I	4
Elective	Core Goal 6: Intellectual Heritage and Core Goal 9: Behavioral and Social Sciences	3
MAT 223	Differential Equations .	4
EGR XXX	Engineering Science Elective	4
Elective	Exercise Science and Wellness Elective .	2

(17 credit hours)

FOURTH SEMESTER

Elective	Core Goal 11: Civic Responsiblity	3
Elective	Core Goal 12: Global Perspectives and Diversity and Core Goal 13: Ethical Reasoning and Behavior	3
MAT 202	Calculus III	4
EGR XXX	Engineering Science Elective ..	4
ECO 121	Macroeconmics	3

(17 credit hours)

TOTAL SEMESTER CREDIT HOURS: 68

Recommended elective courses of study leading to a concentration in -

Electrical/Computer Engineering
EGR 210 - Digital Systems
EGR 211 - Circuits and Devices

Mechanical/Civil/Structural/Architectural Engineering
EGR 203 - Engineering Statics
EGR 204 - Engineering Dynamics

Additional Courses Recommended Prior to Transfer
CHE 152 - Principles of Chemistry II

ENGINEERING TECHNOLOGY (A.A.S.)

Purpose

The Engineering Technology program is designed to prepare graduates for career positions as engineering technicians in the advanced technology areas of instrumentation, communications, and 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

The graduate should be able to:
- Demonstrate the skills necessary to obtain entry level engineering technician positions in industry
- Demonstrate the ability to model simple engineering situations and to perform general calculations to analyze the model

- Demonstrate a thorough understanding of the functions of electrical and mechanical components and systems
- Identify component and system level problems by employing state-of-the-art test equipment and techniques
- Demonstrate project engineering skills including good oral communication and technical writing proficiency.

FIRST SEMESTER
EGT 190	Principles of Critical Thinking in Technology	3
EGR 115	Engineering Graphics	3
ENG 101	English Composition I.	3
PHY 121	General Physics I .	4
MAT 161	Precalculus I	4

(17 credit hours)

SECOND SEMESTER
EGR 111	Engineering Computations	3
ENG 115		
or 117	Writing Elective	3
PHY 122	General Physics II	4
MAT 162	Precalculus II	4
ESW 245	Safety and First Aid .	3

(17 credit hours)

THIRD SEMESTER
EGT XXX	Engineering Technology Elective	4
SPC 110,		
120 or 230	Speech Communications Elective	3
EGT XXX	Engineering Technology Elective	4
EGT XXX	Engineering Technology Elective	4

(15 credit hours)

FOURTH SEMESTER
EGT XXX	Engineering Technology Elective	4
EGT XXX	Engineering Technology Elective	4
Elective	Core Goal 6: Intellectual Heritage and Core Goal 9: Behavioral and Social Sciences	3
Elective	Core Goal 11: Civic Responsibility, Core Goal 12: Global Perspctives and Diversity and Core Goal 13: Ethical Reasoning and Behavior	3

(14 credit hours)

TOTAL SEMESTER CREDIT HOURS: 63

Recommended elective courses of study leading to a concentration in -

Communications Systems
EGT 210 - Digital Circuits
EGT 211 - AC/DC Circuits
EGT 230 - Analog Circuits
EGT 240 - Communication Systems

Instrumentation/Process Control Systems
EGT 210 - Digital Circuits
EGT 211 - AC/DC Circuits
EGT 230 - Analog Circuits
EGT 235 - Instrumentation and Control Systems

Mechanical Systems
EGT 203 - Applied Statics
EGT 204 - Applied Dynamics
EGT 212 - Applied Fluid Dynamics
EGT 213 - Applied Strength of Materials
EGT 215 - Applied Thermodynamics

ENGINEERING TECHNOLOGY (A.A.S)

Electrical Concentration

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
The graduate should be able to:
- 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.
- 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.

FIRST SEMESTER
EGT 190	Principles of Critical Thinking in Technology	3
ENG 101	English Composition I	3
EGR 115	Engineering Graphics	3
MAT 161	Precalculus I	4
PHI 121	General Physics I	4

(17 credit hours)

SECOND SEMESTER
EGR 111	Engineering Computations	3
MAT 162	Precalculus II .	4
PHY 122	General Physics II .	4
ENG 115		
or ENG 117	Writing Elective	3
ESW 245	Safety and First Aid.	3

(17 credit hours)

THIRD SEMESTER (mechanical or electrical concentration)
Elective	Mechanical or Electrical	4
Elective	Mechanical or Electrical	4
Elective	Mechanical or Electrical	4
SPC 120	Public Speaking	3

(15 credit hours)

FOURTH SEMESTER (mechanical or electrical concentration)
HIS 101		
or HIS 102	History of Western Civilization I or II	3
PHI 101	Fundamentals of Ethics	3
Elective	Mechanical or Electrical	4
Elective	Mechanical or Electrical	4

(14 credit hours)

TOTAL SEMESTER CREDIT HOURS: 63

Electives for Concentration in Electrical Concentration
EGT 210 - Digital Circuits
EGT 211 - AC/DC Circuits
EGT 230 - Analog Circuits
EGT 235 - Instrumentation and Control Systems
EGT 240 - Communication Systems

ENGINEERING TECHNOLOGY (A.A.S)

Mechanical Concentration

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
The graduate should be able to:
• 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.
• Apply theoretical attributes of mechanical 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.

FIRST SEMESTER
EGT 190	Principles of Critical Thinking in	3
ENG 101	English Composition I	3
EGR 115	Engineering Graphics.	3
MAT 161	Precalculus I ...	4
PHI 121	General Physics I ..	4

(17 credit hours)

SECOND SEMESTER
EGR 111	Engineering Computations	3
MAT 162	Precalculus II ..	4
PHY 122	General Physics II ..	4
ENG 115 or ENG 117	Writing Elective .	3
ESW 245	Safety and First Aid.	3

(17 credit hours)

THIRD SEMESTER (mechanical or electrical concentration)
Elective	Mechanical or Electrical	4
Elective	Mechanical or Electrical	4
Elective	Mechanical or Electrical	4
SPC 120	Public Speaking	3

(15 credit hours)

FOURTH SEMESTER (mechanical or electrical concentration)
HIS 101 or HIS 102	History of Western Civilization I or II	3
PHI 101	Fundamentals of Ethics	3

Elective	Mechanical or Electrical	4
Elective	Mechanical or Electrical	4

(14 credit hours)

TOTAL SEMESTER CREDIT HOURS: 63

Electives for Concentration in Mechanical Concentration
EGT 203 - Applied Statics
EGT 204 - Applied Dynamics
EGT 212 - Applied Fluid Dynamics
EGT 213 - Applied Strength of Materials
EGT 215 - Applied Thermodynamics

ENGINEERING TECHNOLOGY (A.A.S)

Nanofabrication Concentration

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 generally assist engineers in research, development and manufacture of the same.

Program Outcomes
The graduate should be able to:
• 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.

FIRST SEMESTER
EGT 190	Principles of Critical Thinking in Technology	3
ENG 101	English Composition I	3
EGR 115	Engineering Graphics..	3
MAT 161	Precalculus I	4
PHI 121	General Physics I ..	4

(17 credit hours)

SECOND SEMESTER
EGR 111	Engineering Computations	3
MAT 162	Precalculus II ..	4
PHY 122	General Physics II ..	4
ENG 115 or ENG 117	Writing Elective .	3
ESW 245	Safety and First Aid.	3

(17 credit hours)

THIRD SEMESTER (nanofabrication concentration)
EGT 230	Analog Circuits	4
CHE 150	Essentials of Chemistry.	4

SPC 120   Public Speaking 3
PHI 101   Fundamentals of Ethics 3
HIS 101   Core Goal 6, Core Goal 7 and Core Goal 9...............3
<div align="right">(17 credit hours)</div>

FOURTH SEMESTER (nanofabrication concentration)*
ESC 211   Material Safety and
              Equipment Overview for Nanofabrication 3
ESC 212   Nanofabrication Processes.....................................3
ESC 213   Thin Films in Nanofabrication 3
ESC 214   Lithography for Nanofabrication..............................3
ESC 215   Materials Modification in Nanofabrication.................3
ESC 216   Characterization, Packaging,
              and Testing of Nanofabricated Structures 3
<div align="right">(18 credit hours)</div>

TOTAL SEMESTER CREDIT HOURS: 69

*Courses are taught in Residence at Penn State Center for Nanofabrication Education and Utilization.

INFORMATION TECHNOLOGY (A.S.)

Transfer Curriculum

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
A graduate should be able to:
- 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 if visual design
- Describe the Open Systems Interconnection Reference Model (OSI) layers and their functionality
- Design and utilize databases.

Curriculum

FIRST SEMESTER
ENG 101   English Composition I... 3
Elective   Core Goal 6: Intellectual Heritage............................3
Elective   Core Goal 3: Quantitative Skills...............................3
CIS 111   Comp Sci I: Programming and Concepts....................3
ACC 111, MGT 110 or Accounting Principles I,
Introduction to Business MGT 111 or Principles of Management 3
<div align="right">(15 credit hours)</div>

SECOND SEMESTER
Elective   ACC, ECO, MGT, or MKT 3
Elective   Core Goal 1b: Oral Communication Skills 3
Elective   Mathematics..3
CIS 111B   Computer Sci II: Object-Oriented Programming 3
Elective   Core Goal 10: Exercise and Health Sciences...........2
<div align="right">(14 credit hours)</div>

THIRD SEMESTER
Elective   Core Goal 7: Aesthetic Sensibility and the Arts..........3
CIS 114   Web Design and Development 3
Elective   Core Goal 8: Physical and Life Sciences 3
CIS 170   Introduction to Networks...3
Elective   Core Goal 11: Civic Responsibility 3
<div align="right">(15 credit hours)</div>

FOURTH SEMESTER
Elective   Core Goal 12: Global Perspective............................3
Elective   Elective 3
Elective   Elective 3
Elective   Computer and Information Systems[1] … 3
CIS 244 or 245 PC Database Management Systems
              or Database Management Systems/SQ 3
<div align="right">(15 credit hours)</div>

[1] Recommended CIS Electives include CIS 112, CIS 155, CIS 141, CIS 151, CIS 245 or CIS 241

TOTAL SEMESTER HOURS CREDIT: 60

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, organismal biology, 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
Upon successful completion of this program, graduates will be able to:
- 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.

Curriculum

Traditional Life Science Concentration

FIRST SEMESTER
ENG 101   English Composition I...3
MAT 131   Intro to Statistics I 3
CHE 151   Principles of Chemistry I...4
BIO 151   Principles of Biology I...4
Elective   Core Goal 9: Behavioral and Social Sciences,
              Core Goal 12: Global Perspectives, and
              Core Goal 13: Ethical Reasoning.............................3
<div align="right">(17 credit hours)</div>

SECOND SEMESTER
ENG 102
or ENG 115   English Composition II or
              Writing for Technical Communication 3
MAT 190   Calculus and Analytic Geometry I 4

CHE 152   Principles of Chemistry II..4
BIO 152   Principles of Biology II..4
                                                        (15 credit hours)

THIRD SEMESTER
SPC 120   Public Speaking 3
Elective   Biology Lab Science (BIO 131, 140, 256, or 260)......4
Elective   Lab Science (CHE 261, PHY 151, GLG 151, or BIT).4
Elective   Core Goal 4: Computer Fluency 3
Elective   Core Goal 10: Exercise and Health Sciences........ 2-3
                                                        (16-17 credit hours)

FOURTH SEMESTER
Elective   Biology Lab Science
              (BIO 131, 132, 140, 256, or 260) 4
Elective   Lab Science
              (CHE 261,262,PHY 151,152,GLG 151, or BIT)..........4
Elective   General Elective or Science Elective 3-4
Elective   Core Goal 6: Intellectual Heritage, and
              Core Goal 7: Aesthetic Sensibility and the Arts 3
                                                        (14-15 credit hours)

TOTAL SEMESTER CREDIT HOURS: 62-64

Biomedical Science Concentration

FIRST SEMESTER
ENG 101   English Composition I...3
MAT 131   Intro to Statistics I 3
CHE 151
or CHE 121   Principles of Chemistry I or
              General Chemistry Inorganic 4
BIO 151
or BIO 121   Principles of Biology I or General Biology I 4
Elective   Core Goal 9: Behavioral and Social Sciences,
              Core Goal 12: Global Perspectives, and
              Core Goal 13: Ethical Reasoning and Behavior.........3
                                                        (17 credit hours)

SECOND SEMESTER
ENG 102
or ENG 115   English Composition II or
              Writing for Technical Communication 3
BIO 140   Microbiology and Immunology 4
CHE 152
or CHE 122   Principles of Chemistry II or General Chemistry II.....4
Elective   Core Goal 4: Computer Fluency 3
                                                        (14 credit hours)

THIRD SEMESTER
BIO 131   Anatomy and Physiology I 4
SPC 120   Public Speaking 3
Elective   Lab Science (CHE 261, PHY 151, BIO 152, or BIT)......4
Elective   General Elective or Science Elective 3-4
Elective   Core Goal 10: Exercise and Health Sciences........ 2-3
                                                        (16-18 credit hours)

FOURTH SEMESTER
BIO 132   Anatomy and Physiology II 4
Elective   General Elective or Science Elective 3-4
Elective   General Elective or Science Elective 3-4
Elective   Core Goal 6: Intellectual Heritage, and
              Core Goal 7: Aesthetic Sensibility and the Arts 3
                                                        (13-15 credit hours)

TOTAL SEMESTER CREDIT HOURS: 60-64

MATHEMATICS (A.A.)

Transfer Curriculum

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
Upon successful completion of the program, the graduate will be able to:
*   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).

FIRST SEMESTER
ENG 101   English Composition I 3
Elective   ANT 104, ECO 121, ECO 122, HIS 101,
              HIS 102, HIS 203, HIS 204, POL 124, PSY 101,
              SOC 101 or SOC 103..3
Mat 190   Calculus I..4
SPC 120   Public Speaking 3
CIS 111   Computer Science I 3
                                                        (16 credit hours)

SECOND SEMESTER
ENG 102   English Composition II...3
Elective*   Elective 3
MAT 201   Calculus II 4
MAT 211   Foundations of Mathematical Proof..........................3
Elective   MUS 110, ART 101, ART 102, ART 103,
              ART 111, ART 121, ENG 221 or ENG 222.................3
                                                        (16 credit hours)

THIRD SEMESTER
Elective*   Elective..3
PHY 151   Principles of Physics I 4
MAT 202   Calculus III...4
Elective   MUS 110, ART 101, ART 102, ART 103,
              ART 111, ART 121, ENG 221 or ENG 222.................3
                                                        (14 credit hours)

FOURTH SEMESTER
Elective*   Elective 3
HIS 102   History of Western Civ
OR HIS 205   History of U.S...3
MAT 220   Linear Algebra
OR MAT 223   Differential Equations..4
Elective*   [4]Elective 3/4
Elective*   [3]Core Goal 10: Exercise and Health Sciences........2/3
                                                        (15-17 credit hours)

1 A minimum of 16 credits in Mathematics must be completed with a grade of "C" or better. MAT 190, MAT 201, MAT 202, MAT 211 and either MAT 220 or MAT 223 are required. A student who must take both MAT 161 and MAT 162 to meet the course prerequisites for MAT 190 may need one additional summer session to complete an A.A. degree in Mathematics.

3 The Exercise Science and Wellness requirement may be taken in any semester.

4 If a student has taken MAT 190, MAT 201, MAT 202 and MAT 220 and wishes an additional mathematics course, MAT 223 or PHY 152 is recommended.

*Students should check with their advisor to determine electives.

TOTAL SEMESTER CREDIT HOURS: 61-63

PHYSICAL SCIENCES (A.S.)

Transfer Curriculum

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
A graduate should be able to:
- Prepare for and conduct scientific experiments
- Use and understand basic instrumentation
- Analyze and interpret scientific data
- Demonstrate an extensive problem-solving capability.

FIRST SEMESTER

ENG 101	English Composition I	3
MAT 190	[1]Calculus I	4
CHE 151	Principles of Chemistry I or	
PHY 151	[1]Principles of Physics I	4
Elective	Core Goal 4: Computer Fluency	3

(14 credit hours)

SECOND SEMESTER

ENG 102	English Composition II	3
MAT 201	[2]Calculus II	4
CHE 152	Principles of Chemistry II or	
PHY 152	[2]Principles of Physics II	4
Elective	Core Goal 13: Ethical Reasoning and Behavior	3
Elective	Core Goal 10: Exercise and Health Sciences	2

(16 credit hours)

THIRD SEMESTER

Elective	Core Goal 7: Aesthetic Sensibility and the Arts	3
Elective	Core Goal 6: Intellectual Heritage and Core Goal 9: Behavioral and Social Sciences	3
MAT 202	Calculus III	4
CHE 261	[4]Organic Chemistry I or	4
PHY 153	Modern Physics	3
Elective	[4]Free Elective	4

(18 credit hours)

FOURTH SEMESTER

Elective	Core Goal 11: Civic Responsibility and Core Goal 12: Global Perspectives and Diversity	3
Elective	Core Goal 1b: Oral Communication Skills	3

MAT 220	Linear Algebra or	
MAT 223	Differential Equations	4
CHE 262	[3]Organic Chemistry II or Lab Science	4

(14 credit hours)

1 MAT 190 is a corequisite for PHY 151.

2 MAT 201 is a corequisite for PHY 152.

3 Chemistry majors should take PHY 151 and PHY 152 as well as CHE 151, CHE 152, CHE 261, AND CHE 262. A Physics major should take CHE 151 and CHE 152 as well as PHY 151, PHY 152, PHY 153. Other suggested but not required electives can come from the following areas: biology, geology, or computer science.

*MAT 161 and MAT 162 should be considered by students needing a more comprehensive preparation for MAT 190, or the sequence MAT 188, MAT 189.

TOTAL SEMESTER CREDIT HOURS: 6

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 Associate in Applied Science degree in Computer Systems - Software Engineering Option.

CIS 111	Computer Science I: Programming & Concepts	3
CIS 111B	Comp. Sci. II: Object-Oriented Programming	3
CIS 235	Object Oriented Programming in C++	3
CIS 114	Web Design and Development	3
CIS 126	Computer Architecture & Organization	3
CIS 122	Visual Basic	3
Elective	CIS	3
CIS 151	Systems Analysis and Design	3
CIS 112	Comp. Sci. III: Data Structures & Algorithms	3
CIS136	C#	3

TOTAL SEMESTER CREDIT HOURS: 30

WEB DESIGN & DEVELOPMENT (A.A.S.)

Design Concentration

Purpose
The Web Design and Development AAS program Design Concentration prepares graduates for employment as entry-level Web site designers, information architects, and user experience designers.

Concentration Outcomes
A graduate should be able to:
- Design and develop interactive and standards-compliant Web sites that demonstrate modern Web development and visual design techniques

- Create Web sites that incorporate the fundamental principles of visual design
- Plan and manage the administrative and business processes for software development
- Display the foundation skills and professional practices necessary to succeed and grow in the Web design and development field
- Evaluate end-user needs and develop Web sites that adhere to usability and accessibility guidelines
- Evaluate end-user needs and develop Web sites that adhere to usability and accessibility guidelines
- Demonstrate the ability to work and communicate effectively with others in a team development environment.

Development Concentration

Purpose
The Web Design and Development Certificate program Development Concentration prepares graduates for employment as entry-level Web programmers and developers.

Concentration Outcomes
- Design and develop secure, scalable, and standards-compliant Web sites that demonstrate modern Web development and software engineering techniques
- Design and utilize databases to develop interactive Web sites and applications
- Demonstrate the fundamental principles of system administration
- Plan and manage the administrative 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 Web sites that adhere to usability and accessibility guidelines
- Demonstrate the ability to work and communicate effectively with others in a team development environment.

FIRST SEMESTER
ENG 101	English Composition I	3
Elective	[1]Mathematics	3
CIS 111	Computer Science I: Programming & Concepts	3
CIS 114	Web Design & Development	3
ART/CIS	Concentration Requirement 1	3

(15 credit hours)

SECOND SEMESTER
ENG 117	Writing for Business and Industry	
or ENG 115	Writing for Technical Communication	3
CIS 111B	Comp. Sci. II: Object Oriented Programming	3
Elective	Core Goal 9: Behavioral and Social Sciences and Core Goal 12:Global Perspectives and Diversity.	3
ART/CIS	Concentration Requirement II	3
ART/CIS 148	Computer Graphics I	3

(15 credit hours)

THIRD SEMESTER
SPC 120	Public Speaking	3
MGT 111	Principles of Management	3
CIS 140	Client-Side Web Development	3
ART/CIS	Concentration Requirement III	3
ART/CIS	Concentration Requirement IV	3

(15 credit hours)

FOURTH SEMESTER
Elective	Core Goal 8: Physical and Life Sciences	4
Elective	Core Goal 10: Exercise and Health Sciences	2
MGT 231	Project Management	3
Elective	Core Goal 6: Intellectual Heritage and Core Goal 7: Aesthetic Sensibility and the Arts	3
ART/CIS	Concentration Requirement V	3

(15 credit hours)

1 Any course approved to meet the Core Goal 3: Quantitative Skills. Students taking MAT 100 and CIS 111 will also satisfy this goal.

TOTAL SEMESTER CREDIT HOURS: 60

WEB DESIGN & DEVELOPMENT (CERTIFICATE)

Design Concentration

Purpose
The Web Design and Development Certificate program Design Concentration prepares graduates for employment as entry-level Web site designers, information architects, and user experience designers.

Concentration Outcomes
- Design and develop interactive standards-compliant Web sites that demonstrate modern Web development and visual design techniques.
- Create Web sites that incorporate the fundamental principles of visual design
- Plan and manage the administrative and business processes for software development
- Display the foundation skills and professional practices necessary to succeed and grow in the Web design and development field
- Evaluate end-user needs and develop Web sites that adhere to usability and accessibility guidelines
- Demonstrate the ability to work and communicate effectively with others in a team development environment.

Development Concentration

Purpose
The Web Design and Development Certificate program Development Concentration prepares graduates for employment as entry-level Web programmers and developers.

Concentration Outcomes
- Design and develop secure, scalable, and standards-compliant Web sites that demonstrate modern Web development and software engineering techniques
- Design and utilize databases to develop interactive Web sites and applications
- Demonstrate the fundamental principles of system administration
- Plan and manage the administrative 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 Web sites that adhere to usability and accessibility guidelines
- Demonstrate the ability to work and communicate effectively with others in a team development environment.

CIS 114	Web Design & Development	3
CIS 111	Computer Sci. I: Programming Concepts	3

ART/CIS	Concentration Requirement I	3
CIS 1118	Computer Sci. II: Object-Oriented Programming	3
ART 148	Computer Graphics I	3
ART/CIS	Concentration Requirement II	3
CIS 140	Client-Side Web Development	3
ART/CIS	Concentration Requirement III	3
ART/CIS	Concentration Requirement IV	3
ART/CIS	Concentration Requirement V	3

TOTAL SEMESTER CREDIT HOURS: 30

Concentration Requirements

Development Concentration

CIS 155	PC Applications for Networks	3
CIS 141	Introduction to Linux or	
or CIS 158	Windows Server Admin and Support	3
CIS 151	Systems Analysis & Design	3
CIS 245	Database Management Systems/SOL.......................	3
CIS 241	Server-Side Web Development	3

Design Concentration

ART 130	Two Dimensional Design	3
ART 135	Typography	3
ART 138	Digital Art I	3
ART 149	Computer Graphics: Page Layout & Design	3
ART 233	Visual Design for the Internet	3

SPECIALTY CERTIFICATE

The Specialty Certificate is designed for experienced students who wish to gain an in-depth expertise in a specific field by pursuing an individually designed intense course of study of at least 18 credits.

To qualify for this program you must have completed at least 30 credits of approved collegiate study in a discipline other than the one for which the Specialty Certificate is sought. In consultation with the appropriate Discipline Coordinator or Director a minimum 18 credit sequence of courses to be taken at Montgomery County Community College will be designed. Final approval of your Specialty Certificate program and review of qualifying collegiate transcripts will be made by the Business and Entrepreneurial Initiatives Division Dean.

A certificate can be obtained in the following areas of study:

•   Computer Information Systems
•   Computer Networking
•   Game Design

NON-CREDIT COURSES

COMPUTER TRAINING PROGRAMS

The computer training programs serve working professionals and students requiring industry certification, professional short term career training, and continuing education credits. We offer the following programs that provide preparation for industry certifications.

A+

Purpose
The A+ course is designed for students seeking career-oriented, entry-level hardware and software skills. Target students include those who want to prepare for careers in information and communication technology (ICT) and students who want to gain skills and working knowledge of how computers work, how to assemble computers, and how to troubleshoot hardware and software issues.

Primary Goals
The course covers the fundamentals of computer technology, networking, and security, and validates the communication skills and professionalism required of all entry-level IT professionals. Students will learn through hands-on scenarios in which troubleshooting and tools must be applied to resolve problems. This course covers the fundamentals of computer hardware and software as well as advanced concepts.

Admission Guidelines
There are no prerequisites for this course.

Consideration for Certification
The A+ course helps students prepare for the CompTIA 220-801 and 220-802 certification exams that lead to the A+ certification.

Articulation
Students who have successfully obtained the A+ certification and who enroll in Montgomery County Community College PC Maintenance and Support may be eligible for up to 3 credits towards the completion of the Computer Networking Certificate program.

ADOBE INDESIGN CS6

Purpose
The Adobe InDesign course is designed for students seeking a career in Desktop Publishing. Target students include those who want to prepare for careers in desktop design, computer graphics and multi-media.

Primary Goals
This short, 12 hour program covers the fundamentals of using InDesign software to teach students how to design and create vibrant newsletters, advertisements, and publications. The program covers familiarization with the advanced tools available in InDesign and using them to create and edit typo graphics for use in publications. This will help students that are looking at careers in Desktop Publishing or existing professionals that want to upgrade their skill sets.

Admission Guidelines
There are no prerequisites for this course.

Consideration for Certification
A certificate of program completion will be awarded by the College.

Articulation
At this time there is no articulation towards a credit degree.

ADOBE PHOTOSHOP CS6

Purpose
The Adobe Photoshop course is designed for students seeking a career in Digital Design. Target students include those who want to prepare for careers in computer graphics and multi-media.

Primary Goals
The program covers the fundamentals of using Adobe Photoshop CS6 software to teach students how to manipulate images that they have created or scanned. The program covers familiarization with the advanced tools available in Photoshop and using them to design, create and edit images. This will help students that are looking at careers in Digital Design or existing professionals that want to upgrade their skill sets. At the conclusion of the course, the student will be able to calibrate his/her system, understand resolution, import and export images and edit using colors, layers, masks, filters, and resizing.

Admission Guidelines
There are no prerequisites for this course.

Consideration for Certification
A certificate of program completion will be awarded by the College.

Articulation
At this time there is no articulation towards a credit degree.

AUTOCAD

Purpose
This program provides some of the basic two-dimensional AutoCAD commands and concepts and a more in-depth look into advancing the student to become a more seasoned and proficient CAD operator.

Primary Goals
These programs are for individuals who wish to learn basic 2-D AutoCAD® commands and concepts, from drafting board to high-tech design, and for those seeking advanced skills in AutoCAD. This will assist them in advancing their employment opportunities by learning a skill set that is desirable by employers.

Admission Guidelines
There are no prerequisites for this course.

Consideration for Certification
A certificate of program completion will be awarded by the College.

Articulation
At this time there is no articulation towards a credit degree.

CISCO CERTIFIED NETWORKING ASSOCIATE (CCNA)

Purpose
The Cisco Certified Networking Associate (CCNA) curriculum is designed for students who are seeking entry-level information and communication technology (ICT) skills. CCNA provides an integrated and comprehensive coverage of networking topics, from fundamentals to advanced applications and services, while providing opportunities for hands-on practical experience and soft-skills development.

Primary Goals
This program provides students with the skills needed to succeed in networking-related degree programs and helps them prepare for CCNA certification. It also helps students develop the skills necessary to fulfill the job responsibilities of network technicians, network administrators, and network engineers. It provides a theoretically-rich, hands-on introduction to networking and the Internet. The course covers topics such as router and switch configuration, IP addressing, network security and wireless.

Admission Guidelines
There are no pre-requisites for the course.

Consideration for Certification and Articulation
The program leads to the Cisco 200-120 CCNA and 100-101 CCENT industry certifications and also articulates to the CIS 170, 171, 172, and 172B courses.

Articulation
Students who have successfully obtained the CCNA certification and who enroll in the Montgomery County Community College Network Administration concentration of the Networking AAS program may be eligible for up to 12 credits towards the completion of the Networking AAS program.

CCNA SECURITY

Purpose
The Cisco Certified Network Associate Security curriculum is designed for students who are seeking the knowledge and skills needed to prepare for entry-level careers in Network Security. This is a hands-on program that emphasizes practical experience. CCNA Security aims to develop an in-depth understanding of network security principles as well as the tools and configurations available to secure small to medium sized networks. CCNA Security helps prepare students for the Implementing Cisco IOS Network Security (IINS) certification exam (640-554) leading to the Cisco CCNA Security certification.

Primary Goals
This program provides students with the skills needed to succeed in network security related degree programs and helps them prepare for IINS certification. The program is a hands-on, career-oriented e-learning solution with an emphasis on practical experience to help students develop specialized security skills, along with critical thinking and complex problem solving.

Admission Guidelines
The student should preferably have CCENT level routing and switching knowledge.

Consideration for Certification
This program leads to the 640-554 IINS Implementing Cisco IOS Network Security certification exam this is associated with the CCNA Security certification.

Articulation
Students who have successfully obtained the Cisco Security certification and who enroll in the Montgomery County Community College Network Administration concentration of the Networking AAS program may be eligible for up to 8 credits towards the completion of the Networking AAS program.

CCNA VOICE

Purpose
The Cisco Certified Network Associate Voice curriculum is designed for students seeking the knowledge and skills needed to prepare for entry-level careers in Unified Communications. This is a hands-on program that emphasizes practical experience. CCNA Voice aims to develop an understanding of telephony principles and the design and implementation of a small to medium sized IP Telephony solution.

Primary Goals
This program provides students with the skills needed to succeed in voice networking-related degree programs and helps them prepare for IIUC certification. It also helps students develop the skills necessary to fulfill the job responsibilities of voice network technicians, network administrators, and network engineers. It provides a theoretically-rich, hands-on introduction to Voice Over IP installations. CCNA Voice will equip students with the knowledge and skills needed to prepare for entry-level careers in Unified Communications.

Admission Guidelines
The student should preferably have CCNA-level traditional telephony knowledge.

Consideration for Certification
This program leads to the 640-461 ICOMM Unified communications certification exam that is associated with the CCNA Voice certification.

Articulation
At this time there is no articulation towards a credit degree.

CITRIX XenDesktop

Purpose
The CITRIX XenDesktop course is designed for students who are seeking entry level virtualization skills. This course provides the foundation necessary for administrators to effectively centralize and manage desktops in the datacenter and deliver them as a service to users anywhere using CITRIX XenDesktop. The course provides hands-on comprehensive coverage of configuring and implementing XenDesktop topics, from fundamentals to advanced applications and services.

Primary Goals
The program provides students with the skills needed to succeed in virtualization and cloud related programs and helps them prepare for the CCA certification. It also helps students develop the skills necessary to fulfill the job responsibilities of cloud technicians, virtual network administrators, and network engineers. It provides hands-on introduction to virtualization and virtual networking.

Admission Guidelines
Knowledge of Windows Server 2008 R2 and above.

Consideration for Certification
This program leads to the CITRIX Certified Administrator for XenDesktop certification. The student must get a minimum of 70% adjusted score to graduate. A certificate of completion is awarded by CITRIX.

Articulation
Students who have successfully obtained the CITRIX XenDesktop certification and who enroll in the Montgomery County Community College Cloud Computing Certificate may be eligible for up to 3 credits towards the completion of the Cloud Computing Certificate.

CITRIX XenServer

Purpose
The Citrix XenServer curriculum is designed for students who are seeking entry-level virtualization skills. The course provides hands-on comprehensive coverage of configuring and implementing XenServer topics, from fundamentals to advanced applications and services to include XenCenter and XenMotion.

Primary Goals
This program provides students with the skills needed to succeed in virtualization and cloud related programs and helps them prepare for the CCA certification. It also helps students develop the skills necessary to fulfill the job responsibilities of cloud technicians, virtual network administrators, and network engineers. It provides a hands-on introduction to virtualization and virtual networking.

Admission Guidelines
Knowledge of Windows Server 2008 R2 and above.

Consideration for Certification
This program leads to the CITRIX Certified Administrator for XenServer certification. The student must get a minimum of 70% adjusted score to graduate. A certificate of completion is awarded by CITRIX.

Articulation
At this time there is no articulation towards a credit degree.

CREATE YOUR OWN WEBSITE FROM START TO FINISH

Purpose
This course is designed for students and professionals who want to design and create a functional web site. Target students include those who want to prepare for careers in web design, computer graphics and multi-media

Primary Goals
This short 12 hour program starts with the fundamentals of Web design and moves up to the use of the Dreamweaver to create dynamic web pages. This will help students that are looking at careers in Web design and those who want to create and maintain their own web sites.

Admission Guidelines
There are no prerequisites for this program.

Consideration for Certification
A certificate of program completion is awarded by the College.

Articulation
At this time there is no articulation towards a credit degree.

HEALTH INFORMATION TECHNOLOGIST

Purpose
Utilizing official curriculum from Comp TIA, this program will train students to repair, maintain, secure PCs and mobile devices and install and troubleshoot operating systems. Students will also learn how to plan, configure and create small local area networks and configure wireless devices. They will be exposed to basic medical terminologies, medical business operations and network security. These courses will position students for employment in the rapidly growing health care IT field and entry level IT industry.

Primary Goals
The primary goals of this program are to prepare students for employment in the fast growing health care IT market in particular and entry level IT jobs in general.

Admission Guidelines
The student should have basic computer fluency.

Consideration for Certification
Students will also be prepared to sit for the A+, Net+ and HIT technician industry certification exams, giving them the opportunity to earn three reputed industry certifications. A certificate of program completion will be awarded by the College.

Articulation
Students who complete the A+ course may be eligible for up to 3 credits; the course articulates to the CIS 113

MICROSOFT CERTIFIED SOLUTIONS EXPERT (MCSE)

Purpose
The Microsoft Certified Solutions Expert (MCSE) certification reflects a unique set of skills required to succeed in a variety of job roles, such as systems administrator, network administrator, information systems administrator, network operations analyst, network technician, and technical support specialist.

Primary Goals
This program provides students with the hands-on training needed to complement exam preparation for certification. The MCSA consists of three courses covering topics in installing, configuring and administering Microsoft Windows 2012 server.

Admission Guidelines
One to twelve months of experience in working with a desktop operating system, a network operating system, and an existing network infrastructure.

Consideration for Certification
Upon passing the certification exam, students will receive the MCSA: Windows Server 2012 certification.

Articulation
At this time there is no articulation towards a credit degree.

MICROSOFT OFFICE SPECIALIST (MOS)

Purpose
Earning a Microsoft Office Specialist certification helps students differentiate themselves in today's competitive job market, broaden employment opportunities, and result in higher earning potential. For employers, the certification provides skill-verification tools that not only help assess a person's skills in using Microsoft Office programs, but also the ability to quickly complete on-the-job tasks across multiple programs in the Microsoft Office system.

Primary Goals
This course provides an excellent way to prepare for the certification exams and provides the hands-on job training skills in Microsoft Word, Excel, PowerPoint and Access. It is intended for students and information workers whose responsibilities will include the use of Microsoft Office products to organize, structure and manage data in organizations of every size.

Admission Guidelines
There are no pre-requisites for this course.

Consideration for Certification
Upon passing the certification exams, students receive the Microsoft Office Specialist (MOS) credential.

Articulation
Students who have successfully obtained the MOS certification and who enroll in the Montgomery County Community College Office Administration AAS may be eligible for up to 13 credits towards the completion of the Office Administration AAS.

QUICKBOOKS

Purpose
Participants will utilize QuickBooks to learn how to manage their small business finances. They will focus on accounts payable, accounts receivable, and learn to track information that is vital to running a business.

Primary Goals
Students in this program will learn the software that runs small businesses. Students will set up a company file, create invoices, write checks, prepare payroll and taxes, and create reports to handle the financial responsibilities of a small business.

Admission Guidelines
QuickBooks: none
QuickBooks Payroll: Students should have previous knowledge of QuickBooks software; familiarity of payroll laws and filing due dates applicable to their business for federal and state withholdings and unemployment.

Consideration for Certification
A certification of program completion will be awarded by the College.

Articulation
At this time there is no articulation towards a credit degree.

WASTEWATER TREATMENT OPERATOR CERTIFICATION

Purpose
This 180-hour program is certified by the PA Department of Environmental Protection to prepare entry-level operators with the skills, tools, and knowledge to meet the responsibilities of the job. Components of the course are offered as separate modules which may be applied toward an operator's experience requirements for certification.

Primary Goals
The primary goals of this course are:

- Understand the role of the treatment plan operation
- Understand basic wastewater treatment process
- Understand state and federal regulations

Admission Guidelines
Knowledge of basic math skills.

Consideration for Certification
Upon successful completion of the course, students are eligible to sit for the certification exam.

Articulation
At this time there is no articulation towards a credit degree.

SOCIAL SCIENCES DIVISION

Core Director's Credential

This program, consisting of three courses, (EDU 280, EDU 281, MGT 121) is designed for child care directors or assistant directors or those aspiring for directors' positions. The three courses satisfy Pennsylvania's requirements for the Core Director Certificate. Upon completion of the courses, the student sends documentation to the State, and the certificate is issued by the State.

Prerequisite Education and Experience

Prerequisite education and experience includes one of the following: a) bachelor's degree in early childhood education, child development, special education, elementary education or the human services field and one year experience working with children; b) bachelor's degree, including 30 credit hours in early childhood education, child development, special education, elementary education or the human services field and two years experience working with children; c) associate's degree in early childhood education, child development, special education or the human services field and three years experience working with children; or d) associate's degree in any other field, including 30 credit hours of early childhood education, child development, special education, elementary education, or the human services field and four years experience working with children.

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.

A four-course, twelve-credit Certificate of Completion in Homeland Security is available in conjunction with the A.S. degree in Criminal Justice. Interested students should contact the Program Director.

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

A graduate should be able to:

- 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.

FIRST SEMESTER

ENG 101	English Composition - I	3
SPC 120	Public Speaking	3
HIS 205	History of U.S. from 1877	3
CJS 100	Introduction to Criminal Justice	3
CJS 105	Criminal Law	3
	(15 credit hours)	

SECOND SEMESTER

ENG 221	Literature of the Western World – I	3
SOC 101	Introduction to Sociology	3
Elective	Math Elective: Core Goal 3: Quant. Skills*	3
CJS 107	Criminal Procedure & Rules of Evidence	3
CJS 205	Ethics and the Am. Criminal Justice System	3
Elective	Core Goal 10: Exercise & Health Sci.	2
	(17 credit hours)	

THIRD SEMESTER

Elective	(Core Goal 7 & TAOC Area 6)****	3
CJS 220	Criminology	3
Elective	Core Goal 8: Physical & Life Sciences**	4
Elective	Math Elective***	3
CIS 110	Introduction to Information Systems	3
	(16 credit hours)	

FOURTH SEMESTER

Elective	CJS Elective	3
CJS 235	Juvenile Justice	3
CJS 240	Corrections	3
Elective	Physical & Life Science**	4
POL 124	American National Government	3
	(16 credit hours)	

TOTAL SEMESTER CREDIT HOURS: 64

*MAT 103 or 106
** meet TAOC
*** MAT 100, 103, 0r 106
**** TAOC Area 6: ART 101, ART 102, ART 103, ART 111, ART 121, MUS 11, MUS 114, PHI 100, or PHI 221

Graduates of accredited Pennsylvania Municipal Police Academies are eligible for articulation of up to fifteen (15) credit hours toward the required courses for the A.S. degree in Criminal Justice. For further information contact the Program Director.

Students electing the Certificate of Completion in Homeland Security as a secondary credential will complete CJS 250 – Terrorism & Counterterrorism, CJS 251 – Introduction to Homeland Security, CJS 252 – Intelligence Analysis & Security Management, and CJS 253 – Transportation & Border Security. Any one of these courses may be applied in satisfaction of the CJS elective requirement in Semester 4. The other three will constitute additional courses beyond the basic AS degree requirements.

EDUCATION IN THE EARLY YEARS: BIRTH THROUGH FOURTH GRADE (A.A.)

Purpose
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.

Accreditation
The Education in the Early Years: Birth through Fourth Grade degree program at Montgomery County Community College has earned Accreditation from the National Association for the Education of Young Children (NAEYC) Commission on Early Childhood Associate Degree Accreditation. Additional information about the NAEYC Commission on Early Childhood Associate Degree Accreditation can be obtained by contacting the organization directly at 1313 L Street NW, Suite 500, Washington, D.C. 20005 │(202) 232-8777 │(800) 424-2460 │webmaster@naeyc.org.

Program Outcomes
Upon completion of the program graduates will be able to:
- 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.

FIRST SEMESTER
EDU 100	Introduction to Education	3
HIS 203,205	US History	3
MAT 103	Foundations of Mathematics I	3
ENG 101	English Compositions I	3
EDU 213	Working with Special Needs Students	3
	(15 credit hours)	

SECOND SEMESTER
ENG 221 or 222	Intro to Western Lit ...	3
EDU 210	Teaching Young Children	3
SPC 120	Public Speaking	3
EDU 245	Connecting Families, Schools and Communities	3
MAT 104	Foundations of Math II	3
Elective	See note below*	3
	(18 credit hours)	

THIRD SEMESTER
EDU 225	Guiding Children's Reading ...	3
EDU 240	Teaching English Language Learners .	3
PSY 200	Child Psychology	3
Elective	Core Goal 8: Physical and Life Sciences****	4
Elective	See note below**	3
	(16 credit hours)	

FOURTH SEMESTER
EDU 250	Student Teaching	6
EDU 233	Early Childhood Curriculum	3
EDU Elective	See note below***	3
	(12 credit hours)	

* Check with Transfer Institution and Elective must be TAOC approved course. PSY 101, 206, or 210 are recommended.

** Choose from – ART 101, 102, 103, 111, 121 or MUS 110

*** Possible Education electives are Teaching with Technology (EDU 120), Infant & Toddler Development (EDU 114), Teaching Math (EDU 227), Teaching Science (EDU 229), Art for Young Children (EDU 226).

**** Students must choose from AST 120/PHY 120/GLG 121, BIO 120, BIO 121, CHE 121, CHE 131 or PHY 121

TOTAL SEMESTER CREDIT HOURS: 61

EDUCATION IN THE MIDDLE YEARS: FOURTH THROUGH EIGHTH GRADE (A.A.)

Transfer Curriculum

Purpose
The Education in the Middle Years: Fourth through Eighth Grade program is comparable to the first two years of a four year college or university program in Middle Years/Elementary education. The student takes several professional education courses and will need to decide on one or two areas of concentration, depending on transfer institution. They will select other courses based on that decision.

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.

FIRST SEMESTER

ENG 101	English Composition I...3
EDU 213	Introduction to Special Education 3
Elective*	Core Goal 6: Intellectual Heritage............................3
Elective	Core Goal 3: Quantitative Skills...............................3
EDU 100	Introduction to Education… 3

(15 credit hours)

SECOND SEMESTER

EDU 120	Teaching with Technology 3
EDU 240	Teaching English Language Learners 3
PSY 204	Adolescent Psychology 3
Elective*	Elective 3
Elective*	Elective 3

(15 credit hours)

THIRD SEMESTER

Elective*	Elective 3
Elective*	Elective 3
Elective*	Elective 3
BIO 115	Environmental Biology 3
Elective	Core Goal 10: Exercise & Health Sciences 2-3

(14-15 credit hours)

FOURTH SEMESTER

Elective*	Elective 3
Elective	Core Goal 8: Physical & Life Sciences 3-4
Elective	Core Goal 1b: Oral Communication Skills 3
Elective	Core Goal 7: Aesthetic Sensibility and the Arts 3
Elective*	Elective 3

(16-17 credit hours)

TOTAL SEMESTER CREDIT HOURS: 60-62

*See advisor for specific course information/recommendations based on transfer institution program requirements.

EMERGENCY MANAGEMENT & PLANNING (A.A.S.)

Purpose
The Emergency Management & Planning AAS degree prepares students for technical, managerial, and 'command' careers in emergency management and planning, disaster preparedness, and homeland security. The curriculum focuses on the over-arching administrative, managerial, and planning skill-sets necessary for inter-agency and intergovernmental preparation and response.

Our graduates pursue and attain professional careers with:
- Local, state, and federal emergency planning agencies including municipal and county departments of public safety, the Pennsylvania Emergency Management Agency (PEMA), and the Federal Emergency Management Agency (FEMA)
- Agencies and companies operating in all sectors of emergency services delivery, including fire departments, police departments, hospitals, EMS services, and ambulance companies
- Private-sector companies and non-profit organizations fulfilling significant internal and public disaster preparedness and response roles, including companies such as Boeing, Lockheed-Martin, Merck, Sun Energy, American Red Cross, and others.

The Emergency Management & Planning Program is designed for those who are interested in pursuing careers in emergency services and emergency preparedness. It is also designed to foster a higher level of knowledge and competency for persons already engaged in these who want to advance their professional careers.

The Program also aims to facilitate transfer to the growing number of 4-year baccalaureate programs in Emergency Management that are available in our region and across the nation.

Within the framework of the Emergency Management & Planning AAS, a formal concentration is available in Homeland Security.

Program Outcomes
A graduate of the program will be able to:
- Explain the difference between "emergency planning" and "emergency management."
- Describe the regulatory and intergovernmental framework of emergency management and planning.
- Perform a variety of different roles and employ teamwork, team-building, and leadership skills in the context of incident management and planning exercises.
- Explain how planning affects and facilitates preparedness.
- Design an interactive planning process for companies and municipalities.
- Explain and differentiate between the principles of "Incident Command" and "Unified Command."
- Identify, evaluate, and respond to a range of specific hazardous conditions and scenarios in both individual and group exercises.
- Design a site safety plan.
- Apply "all-hazards" planning methodology in preparing for mass casualty events, including acts of terrorism.

FIRST SEMESTER

ENG 101	English Composition-I 3
Elective	Core Goal 3: Quantitative Skills................................3
FSC 100	Introduction to Fire Science 3
EMP 100	Emergency Planning 3
POL 124	American National Government 3

(15 credit hours)

SECOND SEMESTER

ENG 102	English Composition II...3
Elective	Core Goal 8: Physical and Life Sciences. 4
EMP 110	Incident Management 3
FSC 103	Fire Dept Org & Mgmt OR	
CJS 270	Police Dept Org &Admin 3
POL 125	State & Local Government or	
POL 231	Public Policy Management 3

(16 credit hours)

THIRD SEMESTER

HIS 102	History of Western Civilization II 3
FSC 102	Hazardous Materials 3
EMP 120	Search & Rescue 3
Elective	Core Goal 13: Ethical Reasoning & Behavior 3
CJS 250	Terrorism & Counterterrorism 3
Elective	Core Goal 7: Aesthetic Sensibility and the Arts 3

(18 credit hours)

FOURTH SEMESTER

EMP 210	Leadership & Influence in Em Response....................3
EMP 200	Seminar in Emergency Management 1
Elective	Core Goal 4: Computer Fluency 3
EMP 265	Public Safety Technology 3

SPC 110   Introduction to Speech Communication 3
ESW 245   Safety and First Aid 3

                                     (16 credit hours)

TOTAL SEMESTER CREDIT HOURS: 65

*The above curriculum will place the student within 2 additional FSC elective courses of qualifying for a FSC certificate as well as the EMP AAS degree.

Students electing the formal concentration in Homeland Security will elect the following modifications to the standard EMP AAS curriculum: CJS 251 – Introduction to Homeland Security, will replace EMP 120 – Search & Rescue; CJS 252 – Intelligence Analysis & Security Management, will replace EMP 210 – Leadership & Influence in Emergency Response; CJS 253 – Transportation & Border Security, will replace FSC 103 – Fire Department Organization & Administration.

EMERGENCY MANAGEMENT & PLANNING (CERTIFICATE)

Purpose
The EMP Certificate is designed to prepare students for entry level technical or administrative careers in the emergency response services that do not require a degree.

The EMP Certificate is also designed as a dual or second credential for Criminal Justice (CJS), Fire Science (FSC), and Emergency Medical Technology (EMT) majors who aspire to senior administrative, management, or command roles. It is designed to provide them with the necessary knowledge of the technical subject field, professional skills, and state-of-the-art techniques necessary to manage, coordinate, and plan for emergency response in both the public and private sectors.

Program Outcomes
The graduate should be able to demonstrate the knowledge and skills necessary to obtain or maintain entry level employment in the public or private field of emergency management & planning. The EMP Certificate Program is also designed to specifically augment the College's degree curricula in Criminal Justice and Fire Science by providing a highly relevant supplemental skill set.

FIRST SEMESTER
EMP 100   Emergency Planning 3
EMP 110   Incident Management 3
FSC 100   Introduction to Fire Science 3
ESW 245   Safety and First Aid 3
POL 125   State & Local Government or
POL 231   Public Policy Management..3

                                       (15 credit hours)

SECOND SEMESTER
EMP 120   Search & Rescue 3
EMP 210   Leadership & Influence in Em Response 3
FSC 102   Hazardous Materials 3
EMP 200   Seminar in Emergency Management 1
EMP 250   Terrorism & Counterterrorism...................................3
EMP 265   Public Safety Technology 3

                                       (16 credit hours)

TOTAL SEMESTER CREDIT HOURS: 31

* The EMP Certificate is designed to be worked on concurrently with the FSCAAS Degree.

FIRE SCIENCE (A.A.S.)

Purpose
The Fire Science AAS degree is designed to prepare students for technical, managerial, and 'command' careers in the public fire service and the private sector.

Our graduates pursue and attain professional careers in:

- The public fire service;
- Heavy industrial fire brigades;
- Fire control and suppression systems engineering and sales;
- Fire equipment sales and service;
- Civilian and military safety, rescue, and crash response teams;
- Local, state and federal public safety, emergency preparedness, and disaster recovery agencies.

While the public fire service in Pennsylvania has historically been volunteer-based, our larger cities have maintained professional, salaried departments for many decades. Many suburban departments and companies are also transitioning to salaried or 'combination' arrangements. The public fire service is steadily professionalizing, and new career paths are opening up all the time.

In the private sector, large industrial and manufacturing companies in our region – such as Sun Energy, Merck, Boeing, and Lockheed-Martin – retain their own, onsite industrial fire brigades. In addition to nationally-recognized certifications, a formal academic credential in Fire Science offers a significant competitive edge toward hiring or promotion. Montgomery County Community College's AAS degree in Fire Science is accredited by IFSAC – the International Fire Service Accreditation Congress.

Program Outcomes
A graduate should be able to:
- Demonstrate a thorough understanding of the field of fire science in both the public and private sectors.
- Demonstrate the necessary skills to effectively and efficiently work within the organizational structure of the fire science field.
- Demonstrate a working knowledge of the basic field strategy and tactics that relate to various kinds of specific fire situations.
- Be able to identify, classify, and respond to the various kinds of hazardous materials events.
- Demonstrate a thorough understanding of the laws and ordinances related to fire prevention, protection and mitigation, and alarm systems.
- Demonstrate a thorough understanding of fire prevention and suppression techniques.
- Demonstrate an understanding of the causes, motives, and methods of arson, and the tools and methodologies available in fire and arson investigation.

FIRST SEMESTER
ENG 101   English Composition I 3
FSC 100   Introduction to Fire Science 3
ESW 245   Safety & First Aid 3
Elective   Core Goal 6: Intellectual Heritage… 3
Elective   Core Goal 3: Quantitative Skills...............................3

                                       (15 credit hours)

SECOND SEMESTER
ENG 102   English Composition II..3
FSC 101   Emergency Scene Management 3
FSC 102   Hazardous Materials 3

FSC 103	Fire Dept Organization & Admin	3
POL 124	American National Government	3
		(15 credit hours)

THIRD SEMESTER

FSC 104	Building Construction	3
FSC 105	Fire Prevention & Code Enforcement	3
FSC 106	Fire Investigation	3
Elective	Core Goal 13: Ethical Reasoning & Behavior	3
CHE 121	General Chemistry	4
		(16 credit hours)

FOURTH SEMESTER

FSC 108	Fire Protection Systems	3
SPC 110	Speech Communication	3
FSC 265	Public Safety Technology	3
POL 125	American State & Local Govt.	3
Elective	Core Goal 4: Computer Fluency	3
Elective	Core Goal 7: Aesthetic Sensibility and the Arts	3
		(18 credit hours)

TOTAL SEMESTER CREDIT HOURS: 64

*Students who have successfully completed certain state or nationally-recognized training certifications coursework at a Commonwealth of Pennsylvania approved Fire Academy or other recognized institution or agency, may be eligible for up to 12 15 credits in Fire Science. Please contact the Director of the Criminal Justice Studies & Fire Science Programs for more information

FIRE SCIENCE (CERTIFICATE)

Purpose
The Fire Science Certificate is designed to prepare students for entry level technical or administrative careers in the emergency response services that do not require a degree.

The Fire Science Certificate is also designed as a dual or second credential for Emergency Management & Planning (EMP) majors who aspire to senior administrative, management, or command roles. It is designed to provide them with the necessary knowledge of the technical subject field, professional skills, and state-of-the-art techniques necessary to manage, coordinate, and plan for emergency response in the fire services in both the public and private sectors.

Program Outcomes
The graduate should be able to demonstrate the knowledge and skills necessary to obtain or maintain entry level employment in the public or private fire services.

The Fire Science Certificate Program is also designed to specifically augment the College's degree curricula in Emergency Management & Planning by providing a highly relevant supplemental skill set for those already working in the fire service or in similar capacities.

FIRST SEMESTER

ENG 101	English Composition I	3
FSC 100	Introduction to Fire Science	3
FSC 101	Emergency Science Management	3
FSC 102	Hazardous Materials	3
Elective	Speech, Computer, Math, or Science	3-4
		(15-16 credit hours)

SECOND SEMESTER

FSC 104	Building Constr for the Fire Sciences	3
FSC 265	Public Safety Technology	3
ESW 245	Safety and First Aid	3
POL 125	American State & Local Govt.	3
Social Science Elective (not Fire Science)		3
		(15 credit hours)

TOTAL SEMESTER CREDIT HOURS: 30-31

GENERAL STUDIES (A.G.S.)

Purpose
Students needing maximal flexibility in their academic program may wish to consider the Associate in General Studies. While students wishing to transfer after receiving the associate degree would be best served by completing an A.A. or A.S. degree, in some cases, students may need to pursue the A.G.S. degree. For students in this category, the College will award the A.G.S. degree after completion of 60 semester credits with a 2.0 grade point average or higher. Students graduating with this degree ARE NOT eligible to participate in Temple University's Core to Core program.

It is important that the students working on this degree consult with their academic advisor and/or counselor to ensure that maximal transferability of credits occurs.

Program Outcomes
The common outcomes for graduates in the Associate in General Studies curriculum include the development of:
• Vocational and/or transfer goals
• A college level proficiency in all completed course work
• A proficiency in using mathematical, reading, speaking, listening, and writing skills
• Individual and societal values and attitudes
• A positive attitude toward meaningful lifelong learning
• Problem solving skills
• An aesthetic awareness and appreciation
• An understanding of governments, economics, science and technology in both a global and local context so that informed judgments and decisions can be made.

Core Curriculum

REQUIRED CREDITS: 60

REQUIRED COURSES: Courses to meet 13 General Education Core Requirements (26-40 credits).

REMAINING CREDITS: Open Electives

RATIONALE: To develop a broad-based education.

Core Courses can be taken individually or in combination to meet the 13 General Education Core goals. Some courses meet more than one goal and can be used to satisfy the requirement of all goals identified. ENG 101 is a required course for all students.

GEOGRAPHIC INFORMATION SYSTEMS (CERTIFICATE OF COMPLETION)

This three course, nine credit series will prepare students to operate Geographic Information Systems. The courses utilize ESRI's ArcView software, the industry leader. By the end of this series, each student will have developed an electronic portfolio. Local job opportunities for GIS operators include:
• city and state management including utilities, transportation, zoning and planning;
• human services including hospital administration, public health and housing redevelopment;
• emergency services including dispatch, crime analysis and disaster response;
• natural sciences including hydrology and geology, forest and species management and air quality monitoring; and
• business services including marketing, location selection and real estate

• GEO 210—Introduction to Geographic Information Systems
• GEO 220—Map Design
• GEO 230—GIS Workshop

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
A graduate should be able to:
• Demonstrate the knowledge and skills needed to work in direct service delivery for 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.

FIRST SEMESTER
ENG 101	English Composition I	3
HSW 101	Introduction to Human Services & the Helping Profession	3
PSY 101	Introduction to Psychology	3
SOC 101	Introduction to Sociology	3
HSW/SOC 130	Introduction to Youth and Family	3
Elective	Core Goal 4: Computer Fluency	3
	(18 credit hours)	

SECOND SEMESTER
ENG 102	English Composition II	3
PSY 206	Human Development/Life Span Approach	3
HSW 102	Theories of Group Counseling	3
HSW/SOC105	Social Policy & Ethics in Human Services	3
HSW/SOC 254	Aging in the United States	3
Elective	Core Goal 10: Exercise and Health Sciences (Recommended ESW 245)	3
	(18 credit hours)	

THIRD SEMESTER
HSW 202	Theories of Individual Counseling	3
HSW/PSY 203	Assessment & Documentation in Human Services	3
HSW 205	Volunteer Administration	3
HSW 210	Professional Development in Human Services	3
PSY 215	Abnormal Psychology	3
HSW/PSY 219	The Drug and Alcohol Treatment Process: An Introduction	3
	(18 credit hours)	

FOURTH SEMESTER
HSW 211	Human Services Practicum	6
Elective	Core Goal 6: Intellectual Heritage	3

Elective	Core Goal 7: Aesthetic Sensibility & the Arts.............3
Elective	Core Goal 8: Physical and Life Sciences 3-4
	(16 credit hours)

TOTAL SEMESTER CREDIT HOURS: 70

Addictions Concentration
- Second Semester HSW 160 or PSY 217 or CJS 240 in place of HSW/SOC 254
- Second Semester HSW 220 in place of PSY 206

Child, Youth and Family Services Concentration
- Second Semester HSW/PSY 216 in place of HSW 254
- Second Semester CJS 235 in place of PSY 206
- Third Semester HSW 220 in place of HSW 219

Gerontology Concentration
- First Semester HSW 155 in place of HSW/SOC 130
- Second Semester HSW 206 in place of PSY 206
- Third Semester HSW/PSY 250 in place of HSW/PSY 219

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
The graduate should be able to:
- Demonstrate the theoretical knowledge and skills necessary to obtain entry level employment in an agency, facility or program for the treatment and/or prevention of addiction.
- Understand the basics of the screening, intake and orientation (client) procedures used in diverse settings.
- Demonstrate a theoretical knowledge of various assessmentmodels and their implication for evaluating a client and developing a treatment plan.
- Work with a client, consult with other professionals in treatment planning and, when necessary, make referrals.
- Understand the process of case management and coordination of services for the treatment of addictions,
- Write reports, write progress notes, "chart" a client's progress from intake to discharge, and keep accurate records,
- Respond, or know how to obtain assistance in responding, to clients in acute physical or emotional distress (crisis intervention),
- Demonstrate a knowledge of the major theories and skills of counseling, both individual and group, believed to be effective in treating addictions.
- Understand and demonstrate sensitivity to issues of cultural   diversity.

FIRST SEMESTER
| HSW 101 | Human Services I ....3 |
| PSY 217 | Drugs —Their Use and Abuse ....3 |

ENG 101	English Composition I...3
HSW 105	Social Policies/Ethics 3
HSW 210	Professional Development 3
HSW 102	Theories of Group Counseling OR
HSW 202	Theories of Individual Counseling 3
	(18 credit hours)

SECOND SEMESTER
HSW 203	Assessment/Documentation in Human Services 3
HSW/PSY 219	Drug and Alcohol Treatment Process 3
HSW 205	Volunteer Administration 3
HSW 220	Introduction to Adjunctive Therapie..........................3
HSW 211	[1]Services Practicum I 6
	(18 credit hours)

***Note:** The Pennsylvania Certification Board (PCB) certifies both addiction counselors and prevention specialists. Course work from this 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.

1 Work must be done in a drug and/or alcohol treatment or prevention agency and have faculty supervision.

Note: Substitutions must be approved by the Program Coordinator.

TOTAL SEMESTER CREDIT HOURS: 37

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 Outcome
The graduate should be able to:
- Demonstrate all of the skills and knowledge needed to obtain entry level employment in an agency or facility for the older adult. (HSW 102, 202 and 211 are restricted to Human Services majors, unless an exception is made by the Program Coordinator.)

FIRST SEMESTER
HSW 101	Intro to Human Services and Helping Profession 3
HSW 155	Introduction to Aging 3
HSW/ PSY 250	Psychology of Aging …...3
HSW 105	Social Policies/Ethics 3
HSW 210	Professional Development 3
ENG 101	[1]English Composition I 3
	(18 credit hours)

SECOND SEMESTER

HSW 203   Assessment/Documentation in Human Services. 3
HSW 206   Hospice: Concepts and Skills 3
HSW 205   Volunteer Administration..3
HSW/
SOC 254   Aging in the United States 3
HSW 211   [2]Human Services Practicum 6

                  (18 credit hours)

1 The student may be exempted from taking this course by meeting one of the following conditions: a) transfer an equivalent credit course from another college; b) pass successfully the CLEP Examination or Challenge Examination at Montgomery County Community College.

2 Students who are employed in a gerontological setting may use this agency for their supervised field placement with Program Coordinator's approval.

Note: Substitutions must be approved by the Program Coordinator

TOTAL SEMESTER CREDIT HOURS: 33

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
Graduates should be able to:
- 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 micro/macro perspective in human service delivery systems.

All courses apply to the Human Services A.A.S. degree.

FIRST SEMESTER

HSW 101   Human Services and Helping Profession 3
ENG 101   English Composition I...3
PSY 101   Introduction to Psychology 3
SOC 101   Introduction to Sociology 3
HSW 105   Social Policy and Ethics 3
HSW 210   Professional Development in Human Services 3

                  (18 credit hours)

SECOND SEMESTER

HSW 102   Theories of Group Counseling OR
HSW 202   Theories of Individual Counseling............................3
HSW 203   Assessment/Documentation in Human Services 3
HSW 205   Volunteer Administration
HSW 211   [1]Human Services Practicum.....................................6
Elective   Human Services Elective..3

                  (15 credit hours)

1 Work must be done in a human services agency with supervision provided

TOTAL SEMESTER CREDIT HOURS: 33

SECONDARY EDUCATION (A.A.)

Transfer Curriculum

Purpose
The Secondary Education program is designed to enable students to complete the first two years of a four year baccalaureate degree program and transfer to a four year college or university as Secondary Education majors. The program includes: (a) liberal arts courses, (b) professional education courses, and (c) specific subject matter courses.

Program Outcomes
A graduate should be able to:
- Transfer to a four year degree college or university.
- Select among career options open to an individual in the area of secondary education.
- Explain basic educational concerns such as tenure laws, teaching techniques, and organization and administration within the school and classroom setting.
- Understand the roles and responsibilities of a secondary schoolteacher based on field observations.
- Demonstrate knowledge of certification and tenure.

FIRST SEMESTER

ENG 101   English Composition I 3
[2]Elective   Core Goal 6: Intellectual Heritage............................3
EDU 100   Introduction to Education 3
Elective   [1]Core Goal 3: Quantitative Skills
          (MAT 103 or higher) 3
GEO 130,
135 or 137   Geography 3

                  (15 credit hours)

SECOND SEMESTER

ENG 102   English Composition II 3
Elective   History Elective 3
PSY 101   Introduction to Psychology 3
Elective   Elective..3
Elective   [2]Core Goal 4: Computer Fluency 3

                  (15 credit hours)

THIRD SEMESTER

Elective   [2]Core Goal 7: Aesthetic Sensibility and the Arts 3
HIS 203 or 205   History of United States 3
Elective   Core Goal 8: Physical and Life Sciences 4
PSY 204   Adolescent Psychology 3
Elective   [2]Core Goal 11: Civic Responsiblity 3

                  (16 credit hours)

FOURTH SEMESTER

Elective   [2]Core Goal 1b: Oral Communication Skills...............3
Elective   [2]Core Goal 12: Global Perspectives and Diversity 4
PSY 210   Educational Psychology 3
Elective   [2]Core Goal 13: Ethical Reasoning and Behavior 3
Elective   [2]Core Goal 10: Exercise and Health Sciences 2

                  (14 credit hours)

1 MAT 106 or MAT 108 is generally recommended (may not be appropriate for math/education or science/education majors). See an advisor before registering for a math course.

2 It is recommended that electives be selected according to the subject that the student plans to teach and/or according to requirements of the college to which the student plans to transfer.

TOTAL SEMESTER CREDIT HOURS: 60

HOMELAND SECURITY (CERTIFICATE OF COMPLETION)

Purpose
Homeland Security is a rapidly-growing area of employment opportunity. In order to facilitate an entrée toward a formal academic credential in the field, the College offers a four-course, twelve-credit Certificate of Completion that will, by itself, have job and career value.

This introductory program in Homeland Security is specially designed for students who may be seeking additional training to facilitate a career change. It may also appeal to students who are already working in the field, but who have no or limited prior college experience, and who are interested in enhancing their career advancement prospects.

Program Outcomes
Upon successful completion of the Certificate of Completion in Homeland Security, each graduate will be able to:

Classify the 'All-Hazards' roles, functions, and relationships among local, federal and international law enforcement, intelligence, and security agencies in fulfilling diverse homeland security missions.

Apply an operational knowledge of intelligence-gathering and analysis pertinent to homeland security and other threats facing government and the private sector.

Construct an in-depth case study analysis of an individual contemporary terrorist group or movement using open-source intelligence covering: history, geography, and culture; ideology and political or social objectives; leadership, organizational structure, and finances; major actions, alliances, and proxies; and national and international suppression efforts.

Create effective strategies for local, state, national and international law enforcement agencies, aimed protecting transportation systems, passengers and cargos, and international border crossing points.

Curriculum

The four courses comprising the Certificate of Completion are:
- CJS 250 – Terrorism & Counterterrorism
- CJS 251-- Introduction to Homeland Security
- CJS 252 – Intelligence Analysis & Security Management
- CJS 253 – Transportation & Border Security

TOTAL CERTIFICATE CREDITS: 12

SECURITY MANAGEMENT (CERTIFICATE OF COMPLETION)

Security Management is a growing workforce sector – even in today's challenging job market. Specific industries, such as the gaming industry and the financial services industry, are experiencing shortages of well-educated specialists in the field. This four-course, twelve-credit curriculum will prepare students to enter the supervisory and managerial ranks in the private and public security field.

- CJS 100 Introduction to Criminal Justice System
- CJS 200 Criminal Investigation
- CJS 275 Administering the Business of Security
- EMP 100 Emergency Planning

These courses are also fully applicable toward the Criminal Justice AAS degree for students who wish to go further in their studies.

SOCIAL SCIENCES (A.A.)

Transfer Curriculum
(includes anthropology, geography, history, political science, psychology, sociology)

Purpose
The Social Sciences Program is designed for students who plan to transfer to a four year college or university in majors such as Psychology, History, Political Science, Sociology, Anthropology, and Geography. Graduates often go on to pursue careers in fields such as law, government service, behavioral health, counseling, social science research, social work, and teaching. The types of possible careers for graduates are so varied that it is recommended that students consult their academic advisors, faculty and others frequently to explore opportunities. The Program is specific enough to help students begin to define themselves within a chosen major yet provides enough flexibility to permit them to meet transfer requirements of the colleges and universities to which they plan to transfer. Students should always check current transfer guidelines available in the Student Success Center when selecting courses.

Program Outcomes
A graduate in Social Sciences should be able to:
- Explain research methods used in the Social Sciences and evaluate conclusions derived from that research
- Articulate how the principles of Disciplines within Social Sciences can be used to explain social issues, to promote civic engagement, to inform public policy, and to delineate a global perspective on human events.
- Apply knowledge (concepts, theories and research) of the Social Sciences to self assessment, to defining and solving problems in everyday life, and to formulating career goals.
- Describe similarities and differences in the experience of humans in diverse cultures and civilizations over time including the impact of major historical events, political and social structures, and geography.
- Summarize the ideas that are interdisciplinary (common to the Disciplines within the Social Sciences) and those which distinguish one Discipline from another.

Curriculum

FIRST SEMESTER

ENG 101	English Composition I	3
HIS 102	History of Western Civilization	3
Elective	Mathematics (MAT 106 or higher)	3
Elective	Foreign Language	3
PSY 101	Introduction to Psychology	3

(15 credit hours)

SECOND SEMESTER

ENG 102 English Composition II...3
Elective History 3
SOC 101 Intro to Sociology 3
Elective Foreign Language 3
Elective Elective...3

(15 credit hours)

THIRD SEMESTER

Elective Speech 3
POL 101 or 124 Intro to Political Science or American National Gov 3
Elective Core Goal 8: Physical and Life Sciences 4
ANT 104 Cultural Anthropology 3
Elective Elective...3

(16 credit hours)

FOURTH SEMESTER

Elective Core Goal 4...3
Elective Geography 3
Elective Elective...3
Elective Core Goal 7...3
Elective Core Goal 10: Exercise and Health Sciences........ 2-3

(14-15 credit hours)

TOTAL SEMESTER CREDIT HOURS: 60-61

Students planning to major in Geography (Urban and Regional Planning), History or Psychology may select a concentration.

Geography: Urban and Regional Planning Concentration
• First Semester—GEO 130 in place of HIS 102;
• First Semester - MAT 106, 140 or 190 for Mathematics elective
• First Semester - ARA 101, CHI 101, CHI 102, FRE 101, FRE 102, FRE 201, FRE 202, GER 101, GER 102, GER 201, GER 202, ITA 101, ITA 102, JPN 101, JPN 102, JPN 201, SPA 101, SPA 102, SPA 201, SPA 202 for Foreign Language elective
• Second Semester—SOC 103 in place of SOC 101
• Second Semester - GEO 135 in place of Elective
• Second Semester - HIS 102 instead of History Elective
• Second Semester - HIS 160 in place of Foreign Language Elective
• Third Semester- POL 125 in place of POL 101 or 124
• Third Semester - AST 120, BIO 121, BIO 151, CHE 121, CHE 151, PHY 120, PHY 121 or PHY 151 for Core Goal 8 Elective
• Third Semester - GEO 137 in place of Speech Elective
• Third Semester - GEO 210 in place of other Elective
• Fourth Semester—GEO 220 in place of Geography Elective
• Fourth Semester - GEO 238 in place of Computer Fluency Elective
• Fourth Semester - SPC 120 in place of free Elective; ARA 101, CHI 101, CHI 102, FRE 101, FRE 102, FRE 201, FRE 202, GER 101, GER 102, GER 201, GER 202, ITA 101, ITA 102, JPN 101, JPN 102, JPN 201, SPA 101, SPA 102, SPA 201, SPA 202 in place of Core Goal 7 Elective

History Concentration
• First Semester - HIS 101 or HIS 121 in place of HIS 102
• Second Semester – HIS 102 or HIS 122 in place of History elective
• First Semester – MAT 103, 106, 140 or 190 in place of MAT 106 or higher
• Second Semester – SOC 101 or ANT 101 in place of SOC 101
• Second Semester – HIS 203 in place of Elective

• Third Semester – SPC 120 in place of Speech Elective
• Third Semester – HIS 205 in place of ANT 104
• Third Semester Elective —Any History elective in place of open elective
• Third semester – BIO 121, CHE 121 or PHY 121 for Core Goal 8 Physical and Life Science course
• Fourth Semester — choose any History course in place of open Elective
• Fourth Semester - GEO 110, GEO 130 or GEO 135 in place of Geography elective
• Fourth Semester BIO 121, 122 CHE 121 or CHE 122 or PHY 121 or PHY 122 in place of Core Goal 7: Aesthetic Sensibility and the Arts course

Psychology Concentration
• First Semester MAT 106 or MAT 103
• First Semester HIS 101 in place of HIS 102
• First Semester Foreign Language must take FRE 101, FRE 102, GER 101, GER 102, ITA 101, ITA 102 or SPA 101
• Second Semester PSY 206 or PSY 215 in place of Elective
• Second Semester HIS 102 in place of History Elective
• Second Semester SOC 101 or ANT 104 in place of SOC 101
• Second Semester PSY Elective in place of Foreign Language Elective
• Third Semester SPC 120 in place of Speech Elective
• Third Semester POL 124 in place of POL 101 or POL 124
• Third Semester BIO 120 or BIO 121
• Third Semester MAT 131 in place of ANT 104
• Third Semester PSY 206 or PSY 215 choose any Psychology course for the remaining Elective
• Fourth Semester Core Goal 4: Computer fluency for Mathematics, Science or Computer Science Elective
• Fourth Semester Elective must take ART 101, ART 102, ART 103, ART 111, ENG 221, ENG 222 or MUS 110
• Fourth Semester PSY 231 in place of Elective — Geography
• Fourth Semester PSY Elective in place of Elective

PUBLIC SAFETY AND SERVICES NON-CREDIT COURSES

COMPUTERIZED NUMERIC CONTROLS (CNC) MACHINE OPERATOR CERTIFICATE

Purpose
This program is designed to develop the knowledge and skills used in today's advanced manufacturing facilities. It is designed to prepare students for an entry-level position in this high-demand field.

Primary Goals
Upon successful completion, students will be able to execute a series of automated machine operations to produce metal, wood, or plastic components.

Admission Guidelines
• Attainment of a level 4 in reading, math and locating information on the KeyTrain assessment exams.

Consideration for Certification
Students who successfully complete all modules online and hands-on will qualify for the CNC Machine Operator Certificate issued by Montgomery County Community College and the CNC Turning: Operations and CNC Milling: Operations certificates issued by the National Institute for Metalworking Skills (NIMS).

Articulation
At this time there is no articulation towards a credit degree.

EMERGENCY MEDICAL TECHNICIAN BASIC CERTIFICATION COURSE

Purpose
A course designed to familiarize students with emergency medical care. The standards for this course are as mandated by the Pennsylvania Department of Health, the American Heart Association, the US Department of Transportation and National Standard Curriculum for EMT.

Primary Goals
The Basic EMT curriculum is a core curriculum of minimum required information to prepare students to seek qualification as an Emergency Medical Technician. The curriculum is intended to prepare a medically competent EMT to operate in the field. Enrichment programs and continuing education will help fulfill other specific needs for the EMT's basic education.

Admission Guidelines
Students must meet the requirement listed in the Functional Position Description for the EMT as determined by the PA Department of Health. Minimum age to enter is 15; however, students must be 16 in order to take the practical and written exam. A criminal history background check and malpractice insurance is required. Pre-registration is required. Students are required to perform in the pre-hospital setting under the guide of a BLS preceptor.

Consideration for Certification
Students who successfully complete all modules of this training course, both academic and practical, and who demonstrate an acceptable level of attendance shall receive a certificate of completion from Montgomery County Community College and shall be eligible for certification as Emergency Medical Technicians under the auspices of the Pennsylvania Department of Health. Upon successful completion and PA DOH EMT certification, the pre-hospital provider will be able to perform patient assessments, spinal immobilization, patient assisted medications, CPR and use of the automated external defibrillator (AED).

Articulation
Students who have successfully obtained EMT certification who enroll in Montgomery County Community College Fire Science or Emergency Management Planning degree programs may be eligible for credit awards based upon the certification.

MUNICIPAL POLICE BASIC TRAINING CURRICULUM (ACT 120)

Purpose
Acting under authority of the Municipal Police Officers' Education and Training Commission, Montgomery County Community College is authorized to conduct classes under PA Act 120 in Municipal Police Officer Training. The Academy provides its cadets with a basic knowledge of social, legal, political, and ethical contexts under which police services are provided as well as the technical and physical competency to perform their duties in the Commonwealth of Pennsylvania. The purpose of the Police Academy program is to allow candidates to successfully complete the mandated state curriculum which, in turn, allows them to be tested and certified by the state as municipal police officers.

Primary Goals
Goals for the program include ensuring that the students are provided with a basic understanding of the social, political, legal and ethical contexts within which police services are provided to give students realistic career expectations as well as a legitimate and useful motivation for the development of a professional police career. The program provides the students with the technical competency to perform the duties of a police officer in the Commonwealth of Pennsylvania to an acceptable level within standard professional norms.

Admission Guidelines
Admission to this training is open to sworn and unsworn personnel seeking a career in law enforcement. However, admission is contingent on the satisfactory results of a screening process. The screening process includes, and is not limited to, the following requirements: high school diploma or GED, psychological testing, criminal history background investigation, vocabulary and reading comprehension testing. Students must be eighteen years of age and pass a medical examination and pre-entrance physical fitness test.

Consideration for Certification
Certification is through the Municipal Police Officers' Education and Training Commission and is only granted after a student successfully completes the academy curriculum and the certification test that is administered by the Commission.

Articulation
Students successfully completing Act 120 training and who enroll in Montgomery County Community College's Criminal Justice Program may be eligible to receive up to 15 academic credits toward the completion of the Associate Degree program in Criminal Justice.

PARAMEDIC CERTIFICATION COURSE

Purpose
A course designed to familiarize the students with advanced life support. This course follows the National Standard Curriculum for training Advanced Life Support Technicians and prepares technically competent EMT-P's for State Paramedic certification.

Primary Goals
The course is made up of didactic, lab and clinical rotations. Goals for the course include developing the knowledge and skills involved with the administration of fluids intravenously, peripheral venipuncture, IM injections, preparation of drugs for subcutaneous IM and IV injections, endotracheal suctioning, establishing and maintaining an airway by endotracheal intubation and monitoring cardiac activity.

Admission Guidelines
Students must be current PA EMT's, have current CPR certification and have sponsorship from an ambulance company with letter of recommendation. A criminal history background check and

malpractice insurance is required. Insurance can be purchased under a group rate. Pre-registration is required. Interviews will be conducted as well as reading and math testing. Enrollment is limited to 30 students. Students must be 18 years of age and have one year of experience as EMTs.

Consideration for Certification
Students who successfully complete all segments of this training course, both academic and practical, and who demonstrate an acceptable level of attendance shall be eligible for certification as Paramedics under the auspices of Pennsylvania Department of Health and shall be awarded a certificate of completion by Montgomery County Community College upon successful completion of the course. Upon successful completion of the 1500-hour course and completion of clinical and field internship, the student will be eligible for the National Registry Practical and written test and PA DOH State certification.

Articulation
Students successfully completing the training may also be eligible to receive academic credits toward the Technical Studies degree program.

PRIVATE SECURITY ACADEMY

Purpose
Montgomery County Community College is authorized to conduct classes that provide the information to those individuals pursuing a career in private security. This program is collaborative between Montgomery County Community College and private security agencies. Courses will be instructed by personnel in both Law Enforcement and Private Security. Upon successful completion of this program, the student will possess the skills and knowledge sought after by employers in the private security field.

Primary Goals
The program provides the students with the technical competency to perform the duties of a private security agent to an acceptable level within standard professional norms. Goals for the program include ensuring that the students are provided with a basic understanding of the social, political, legal and ethical contexts within which private security services are provided and to impart realistic career expectations, as well as a legitimate and useful motivation, for the development of a professional career in the security field.

Admission Guidelines
Admission to this training is open to those interested in seeking a career in the private security field. Admission is contingent on the satisfactory results of a screening process. The screening process includes, and is not limited to, the following requirements: high school diploma or GED, criminal history background investigation, and possession of a valid driver's license. Students must be eighteen years of age and pass a pre-entrance medical examination.

Consideration for Certification
Certification is through the Public Services Training Unit of Montgomery County Community College and is only granted after a student successfully completes the academy curriculum and the certification tests that are administered by the staff.

Articulation
At this time there is no articulation towards a credit degree.

NOTARY PUBLIC TRAINING AND RENEWAL

Purpose
The College is one of only two colleges in the Commonwealth of Pennsylvania that is approved and authorized by the Department of State to provide a Notary Public Training Course. The course covers the powers, duties, and obligations of being a Notary in Pennsylvania and satisfies the requirement for new applicants and for renewal. This course satisfies the requirements of proof of completion of the three-hour state-approved notary public course.

Primary Goals
Upon completion of this course, students will be capable of fulfilling the powers, duties, and obligations of being a Notary in Pennsylvania.

Admission Guidelines
There are no admissions requirements to register for this class.

Consideration for Certification
Upon successful completion a certificate of completion is issued by the College.

Articulation
At this time there is no articulation towards a credit degree.

NOTARY SIGNING AGENT TRAINING

Purpose
The College is one of only two colleges in the Commonwealth of Pennsylvania that is approved and authorized by the Department of State to provide a Notary Public Training Course. Notary Signing Agents are currently commissioned Notaries Public with specialized training to assist in the closing of real estate transactions.

Primary Goals
Upon completion of this course, students will know how loan and escrow processes work; comprehend what lenders and borrowers expect from a signing agent; be able to demonstrate step-by-step procedures for executing loan documents.

Admission Guidelines
You must already be a Notary Public to register for this class.

Consideration for Certification
Upon successful completion a certificate of completion is issued by the College.

Articulation
At this time there is no articulation towards a credit degree.

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For a complete listing of programs including courses for continuing education credit, prep courses, and industry certification and licenses, go to **www.mc3.edu/continuingEducation**.
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COURSE DESCRIPTIONS

Insofar as possible, all courses offered by the College during the 2014-15 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
ARA - ARABIC
ART - ART/COMPUTER GRAPHICS
AST - ASTRONOMY
BIO - BIOLOGY
BIT - BIOTECHNOLOGY, BIOMANUFACTURING, AND MOLECULAR TECHNIQUES
CAO - OFFICE ADMINISTRATION
CHE - CHEMISTRY
CHI - CHINESE
CIS - COMPUTER AND INFORMATION SYSTEMS
CJS - CRIMINAL JUSTICE
COM - COMMUNICATION
COU - COUNSELING
CUL - CULINARY ARTS
DAN - DANCE
DHG - DENTAL HYGIENE
DRA - COMPUTER-AIDED DRAFTING AND DESIGN TECHNOLOGY
ECO - ECONOMICS AND FINANCE
EDU - EDUCATION
EGR - ENGINEERING SCIENCES
EGT - ENGINEERING TECHNOLOGY
EMP - EMERGENCY MANAGEMENT AND PLANNING
ENG - ENGLISH
ETP - ENTREPRENEURSHIP
ESC - NANOFABRICATION
ESL - ENGLISH AS A SECOND LANGUAGE
ESW - EXERCISE SCIENCE AND WELLNESS
FRE - FRENCH
FSC - FIRE SCIENCE
GLG - GEOLOGY
GEO - GEOGRAPHY
GER - GERMAN
HCP - HEALTH CARE PROFESSIONS

HIS - HISTORY
HON - HONORS
HOS - HOTEL AND RESTAURANT MANAGEMENT
HSW - HUMAN SERVICES
IDS - INTERDISCIPLINARY STUDIES
ITA - ITALIAN
JPN - JAPANESE
MAS - MEDICAL ASSISTING
MAT - MATHEMATICS
MGT - MANAGEMENT
MKT - MARKETING
MLT - MEDICAL LABORATORY TECHNICIAN
MUS - MUSIC
NUR - NURSING
PHI - PHILOSOPHY
PHY - PHYSICS
POL - POLITICAL SCIENCE
PSY - PSYCHOLOGY
RAD - RADIOGRAPHY
REA - READING/STUDY SKILLS
RES - REAL ESTATE
SCS - STRATEGIES FOR COLLEGE SUCCESS
SPA - SPANISH
SOC - SOCIOLOGY
SPC - SPEECH
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 met 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.

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 111 - Principles of Accounting I, or ACC 112 - Principles of Accounting II.)
Prerequisite: Students must have successfully completed or tested out of REA 017 or REA 011

ACC 110 BUSINESS MATHEMATICS..3-3-0
Students develop facility in the mathematical aspects of business such as fractions, percentages, bank reconciliations, equations, trade and cash discounts, simple and compound interest, present value, income taxes, stocks, and financial statement analysis.
Prerequisite: Successfully complete or test out of MAT 011 with a grade of "C" or better

ACC 111 ACCOUNTING PRINCIPLES I 3-3-0
Students will develop literacy in and skills in the application of the basic principles of financial accounting including accounting principles and practices, accounting systems for recording business transactions, an overview of the accounting cycle for service and merchandising enterprises, inventory systems, basic financial statements, and cash control, receivables, long-lived assets, and current liabilities
Prerequisite: Students must have successfully completed or tested out of REA 017 or REA 011.

ACC 112 ACCOUNTING PRINCIPLES II 3-3-0
Students will develop literacy in and skills in the application of the basic principles of financial and managerial accounting including liabilities, stockholder's equity, statement of cash flows, financial statement analysis, introduction to managerial accounting, job order costing, cost-volume-profit relationship, budgeting planning and control, and management decision making.
Prerequisite: ACC 111 with a minimum grade of C

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 of 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. (Also offered as CJS 120)
Prerequisite: ACC 111 with a minimum grade of C

ACC 150 THE 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 151 BUSINESS LAW I 3-3-0
Students learn the basic principles of contract law including the nature and classes of contracts, contractual capacity , consideration, the form of the contract, discharge of contracts and breaches of contract and remedies. The legal principles concerning personal property, bailments and the form of the sales contract, circumstances in which contracts for the sale of goods must be in writing, and the points of dif ference between general contract law and the law of sales will be examined.
Prerequisites: Students must have successfully completed or tested out of ENG 011 or ESL 011 and MAT 010 and REA 011 or REA 017.

ACC 152 Business Law II… 3-3-0
This course is designed to provide the student with a continuation of the basic principles covered in Business Law I. Course topics include and emphasis is placed on the specialized applications of negotiable instruments, agency, forms of business organizations, real property, credit and bankruptcy issues.
Prerequisite: ACC 151

ACC 198 CO-OP INTERNSHIP IN 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.
Prerequisites: ACC 112 - Accounting Principles II, 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.
Prerequisite: ACC 112 with a minimum grade of C

ACC 212 INTERMEDIATE ACCOUNTING II 3-3-0
Students will learn Generally Accepted Accounting Principles as applied to recording and reporting: current and long-term liabilities, stockholders' equity and earnings per share, investments, revenue recognition, income taxes, pensions and post-retirement benefits, leases, and accounting changes. Students will also construct the cash flow statement (direct method using full disclosure financial reporting).
Prerequisite: ACC 211 with a minimum grade of C

ACC 221 ACCOUNTING INFORMATION SYSTEMS....................3-3-0
In a hands-on environment, students learn the design and function of a computerized accounting information system, with the emphasis on providing information for external users and for management decision making. Students learn the principles of accounting information systems, including internal control and corporate governance, the relationship of computerized accounting systems to manual accounting systems, transaction processing, and report generating using an accounting software package, and the application of management decision-making tools using appropriate software.
Prerequisite: ACC 112 with a minimum grade of C

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.
Prerequisite: ACC 112 with a minimum grade of C

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.
Prerequisite: ACC 112 with a minimum grade of C

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.
Prerequisite: ACC 241

ACC 251 AUDITING I 3-3-0
Students will study the conceptual and applied aspects of auditing, current auditing standards, professional ethics, regulation, and legal liability inherent in the attest function. The evaluation and study of internal control, the nature of evidence, the use of statistical sampling and computers in the auditing process will be explored. Audit planning and documentation are practiced.
Prerequisite: ACC 112 with a minimum grade of C

ACC 252 AUDITING II.. 3-3-0
Students will apply auditing techniques in gathering evidence to support an audit report. Audit procedures will be applied to transaction cycles such as sales/cash receipts, acquisition/payment, payroll/personnel, inventory/warehouse, and capital acquisition/repayment. Statistical sampling approaches will be applied to the data in the transaction cycles and the composition of the account balances. Cash and other balance sheet accounts are studied. Completion of the audit process includes review of contingent liabilities, subsequent events, financial statement presentation and disclosures. Other assurances rendered by an auditor are discussed including compilations, reviews, operational audits, and governmental financial audits.
Note: ACC 251 and ACC 252 combined cover the scope of the Auditing section of the CPA exam.
Prerequisite: ACC 251 with a minimum grade of B-

ACC 261 ADVANCED ACCOUNTING I 3-3-0
Students will learn how to record and report transactions for corporations with separate divisions or subsidiaries, or for inter-company transactions, and then how to consolidate these separate entities into one set of financial statements. Also, students will record and report international transactions (including hedge accounting), and then consolidate the international subsidiaries with the parent firm's financial statements. Students will apply the financial reporting requirements of the Securities and Exchange Commission and the FASB's requirements for interim and segment reporting.
Prerequisite: ACC 212 with a minimum grade of B-

ACC 262 ADVANCED ACCOUNTING II 3-3-0
Students will learn to account for partnerships, state and local governments, private "not-for-profit" organizations, legal reorganizations, and estates and trusts.
Prerequisite: ACC 261 with a minimum grade of B-

ACC 298 CO-OP INTERNSHIP IN ACCOUNTING II....................3-0-15
This course consists of continued 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.
Prerequisites: ACC 198 and permission of the coordinator

ANTHROPOLOGY

ANT 100 INTRODUCTION 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.
(Core Goals 2 and 9)

ANT 101 INTRODUCTION TO ARCHEOLOGY 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.
(Core Goals 9, 11, and 12)
Prerequisite(s): Students must have successfully tested out of/or completed ESL 011 or ENG 011, and ESL 017 or REA 011 with a grade of "C" or better.

ANT 104 INTRODUCTION 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.
(Core Goals 9, 11, 12 and 13)
This course has an honors version. It offers qualified students an opportunity to complete a more intensive version of the course goals in a small classroom setting. Students should expect more in-depth reading, writing and oral assignments and classroom discussion.

ARABIC

ARA 101 ELEMENTARY ARABIC I 3-3-0
Elementary Arabic I is an introduction to the Arabic language. Students will learn how to construct basic phrases, elementary communication, and an introduction to the script, and focus on pronunciation. Students will encounter elements of the culture of the Arabic-speaking world.
Prerequisites: Students must have successfully completed or tested out of REA 011, REA 017, ENG 011 or ESL 011. (Core Goal 12)

ARA 102 ELEMENTARY ARABIC II 3-3-0
Elementary Arabic II is a continuation of Elementary Arabic I. Students will continue to study the basic language structures with emphasis on the usage of present, past and future verb tenses. The course will use a proficiency-oriented approach using the four skills: speaking, listening, reading and writing using the Arabic language.
Prerequisites: ARA 101 (Core Goal 12)

ART

ART 101 ART HISTORY I
(CAVE PAINTING TO 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.
Prerequisite: Students must have successfully completed or tested out of ENG 011 or ESL 011 and REA 017.Core Goals 6, 7 and 12)

ART 102 ART HISTORY II
(RENAISSANCE TO POST IMPRESSIONISM) 3-3-0
A survey of Western visual arts and architecture form 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: Students must have successfully completed or tested out of ENG011, ESL011, REA 017, REA 011.
(Core Goals 6, 7 and 12)

ART 103 ART HISTORY III (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, Pot Part, 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 student a broader perspective of human experience throughout Industrial, Post-Industrial and Information Ages.
Prerequisites: Students must have successfully completed or tested out of ENG011, ESL011, REA 017, REA 011.
(Core Goals 6, 7 and 12)

ART 104 HISTORY OF GRAPHIC DESIGN..................................3-2-0
A survey of visual communication from the earliest written language through contemporary graphic design. Emphasis will be placed on the developments in 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, Are Nouveau, Bauhaus, deStijl 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: Students must have successfully completed or tested out of ENG01 1, ESL011, REA 017, REA 011.

ART 105 FILM HISTORY: "THE SILENT ERA" 3-3-0
This course traces the Silent Cinema from its birth in the 19th century to the introduction of sound in the late 1920's. Topics covered include early experiments in motion photography, the emergence of the nickelodeons, the first film studios on the East Coast, the "star system," the "Movie Palaces" of the twenties, the emergence of Hollywood, and the impact movies had on the collective beliefs of twentieth century Americans. The course will also investigate the growth of Film as a new form of Modern Art, and the use of motion pictures as a vehicle for propaganda. Films studied include The Birth of a Nation, The Cabinet of Dr. Caligari, Metropolis, Ben Hur, The Sheik, The Jazz Singer, and the first film to win an Oscar – Wings.

ART 107 NON-WESTERN ART 3-3-0
This course is a survey of the artistic styles of Non-Western Art. Painting, sculpture and architecture are studied as individual works and in historical, social, geographical and religious contexts in which they were created including Buddhist and Hindu Art from China, India, Java, Japan and Korea, and the Arts of the Islamic World, Africa and the Americas.
Prerequisites: Students must have successfully completed or tested out of ENG01 1, ESL011, REA 017, REA 011.

ART 108 HISTORY OF PHOTOGRAPHY.....................................3-3-0
This course is an introduction to the history of photography The course will cover the technical beginnings of Photography through its maturity into a medium of artistic and personal expression. Photography's transformation into a digital medium will also be presented. Key historical movements and aesthetic theories will be presented and discussed using key works from photographers active in each time period. Students will also research and present papers exploring key historical concepts and individual photographers. Lecture, class discussion, and technical demonstrations.
Prerequisites: Students must have successfully completed or tested out of ENG01 1, ESL011, REA 017, REA 011.

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 .
Prerequisites: Students must have successfully completed or tested out of ENG01 1, ESL011, REA 017, REA 011.
(Core Goals 2, 7 and 12)

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. In addition to studio work, group discussions and critiques will be provided.
Prerequisite: ART 111 or permission of the instructor.

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 missing. 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.
(Core Goals 2, 7 and 12)

ART 122 PAINTING II .....……...............................3-2-2
An intensive 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.
Prerequisite: ART 121 or permission of the instructor.

ART 130 TWO-DIMENSIONAL DESIGN PRINCIPLES 3-2-2
An introduction to a wide range of artistic concepts and the ef ficient and practical use of materials. The course is intended to develop practical patterns for solving two-dimensional problems. Lectures, demonstrations, and studio work.

ART 131 COLOR THEORY 3-2-2
This courses 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.
Prerequisite: Students must have successfully completed or tested out of ENG01 1, ESL011, REA 017, REA 011.
ART 130 or permission of the instructor.

ART 135 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.
Prerequisite: ART 148 or permission of the instructor . Students must also have successfully completed or tested out of ENG 011, ESL, 017, and REA 011

ART 138 DIGITAL ART I 3-2-2
An introduction to imaging techniques intended for fine arts majors who wish to expand the scope of their work. Students will become familiar with a broad range of software applications and techniques.The fundamentals of computer-based imaging will be explored, challenging the students' imagination and expanding creative skills.
Prerequisites: ART 111, ART 130 or permission of the instructor.

ART 139 DIGITAL IMAGING 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.
Prerequisites: ART 138 or permission of instructor

ART 140 3-D PAGE LAYOUT AND DESIGN 3-2-2
Study of the elements and principles of designing three-dimensional forms in space. The course is intended to develop the conceptual skills related to three-dimensional thinking and the ability to produce creative and practical solutions used in resolving three-dimensional problems encountered in sculpture. Creative problem-solving through conceptualization, research, technical execution and presentation will be emphasized.
Prerequisite: ART 130 - Two Dimensional Design, or permission of the instructor

ART 141 3-D DESIGN/MATERIALS AND TECHNIQUES 3-2-2
The study of 3-D concepts, techniques and structure as it relates to the manipulation of various three-dimensional materials. Students will be introduced to a variety of materials and tools. Emphasis will be placed

on craftsmanship, the safe operation of tools and equipment and the development of a sculptural sensibility.
Prerequisite: ART 140 or permission of the instructor.

ART 145 INTRODUCTORY WOODWORKING 3-2-2
This introductory course will begin by looking at the medium as a biologic and non-static material. Students will be given a series of projects designed to aid in learning a safe approach to woodworking. Throughout the semester students will learn through readings, hands-on learning and instructor demonstrations. Assignments will include one- day material experimentation periods, carving and shaping exercises, surface treatment techniques and construction through the use of traditional joinery . In conjunction with the skill set of woodworking, students will be introduced to historic and contemporary design issues concerning woodworking and its placement within Craft as well as Fine Arts. Through the course's intent to combine concept with handwork, students will develop a new means of material expression. With the knowledge and skills acquired, students will be able to safely incorporate woodworking into their creative processes and better understand and achieve their goals, expectations and intentions as artists when using the medium of wood.
Prerequisites: Students must also have successfully completed or tested out of ENG 011, ESL 017, and REA 011.

ART 148 GRAPHIC DESIGN APPLICATIONS 3-2-2
Introduces students to the latest versions of leading software applications used in the field of graphic design. Students will create and manipulate images and text. Students will learn the benefits of different file formats and their applications in print and electronic media.

ART 149 PAGE LAYOUT AND DESIGN......................................3-2-2
A comprehensive course focusing on the exploration and management of text in specific design problems with a concentration on the grid, visual hierarchy, legibility and clarity of conceptual communication. Special emphasis will be placed on the complex interplay of visual meaning and form, style, and readability of typographic treatments.
Prerequisites:, ART 135, ART 148 or permission of instructor.

ART 151 BASIC PHOTOGRAPHY (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 . Students must supply their own adjustable camera and lens, film, photographic paper and some miscellaneous items.

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.
Prerequisite: ART 151 or permission of instructor.

ART 155 DIGITAL PHOTOGRAPHY I 3-3-0
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.
Prerequisites: Students must also have successfully completed or tested out of ENG 011, or ESL, 011, and REA 017

ART 156 DIGITAL PHOTOGRAPHY II 3-3-0
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.
Prerequisites: Students must have successfully completed or tested out of ENG01 1, ESL011, REA 017, REA 011.

ART 161 CERAMICS I 3-3-2
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.
(Core Goals 2, 7 and 12)

ART 171 PRINTMAKING I 3-2-2
An introduction to printmaking techniques including woodcut, relief, etching and lithography. 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 demonstration.
(Core Goals 2, 7 and 12)

ART 190 CAREER STRATEGIES FOR THE ARTIST. 3-3-0
Career Strategies for the Artist will provide students with practical information about building a career in the arts. Students will learn skills that will enable them to better market, manage and promote themselves and their art, whether it be working in-house for a company or starting their own freelance business. Topics include: career opportunities, portfolio presentation, copyright for print and the web, submitting artwork to galleries, licensing your artwork and more. Students will be able to identify and work towards professional goals in an art career. Throughout the semester students will also explore various professions and business practices within the arts.
Recommended but not required: completion of at least one art studio course.
Prerequisites: Students must have successfully completed or tested out of ENG01 1 or ESL011 and REA 017.

ART 197 IND STUDY IN ART I LEVEL I 3-3-0

ART 198 IND STUDY IN ART II LEVEL I 3-3-0

ART 199 IND STUDY IN ART III LEVEL I 3-0-6

ART 201 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.
Prerequisite: ART 111 or ART 130 or permission of the instructor.

ART 202 ILLUSTRATION II 3-2-2
A special study in advanced illustration techniques intended to develop both the drawing and design skills necessary to compete in this highly competitive field. Students will become familiar with a wide range of materials and techniques used by professional illustrators. The many dimensions of illustration will be explored while challenging the imagination and creative skills of the student.
Prerequisite: ART 111, ART 130, ART 201 or permission of the instructor.

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.
Prerequisite: ART 111 and ART 112 or permission of the instructor.

ART 213 PASTELS 3-3-0
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. This course will concentrate on the fundamentals of art, such as composition, with an emphasis on self-expression.
Prerequisite: ART 112, ART 130 or permission of instructor.

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.
Prerequisite: ART 121, ART 122 or permission of the instructor.

ART 222 WATERCOLOR PAINTING 3-2-2
An introduction to Watercolor, this course has been designed to focus on the basic technical aspects of W atercolor, including the study of color as it applies to this medium. Course work 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 setups and landscape subjects. Emphasis will be placed on composition as well as individual expression.
Prerequisite: ART 111

ART 224 PAINTING IN THE LANDSCAPE...................................3-3-0
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. W orking 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.
Prerequisite: ART 121 or permission of instructor

ART 231 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.
Prerequisites: ART 130, ART 135, ART 148, ART149 or permission of the instructor.

ART 232 GRAPHIC DESIGN II 3-2-2
Advanced problems in Graphic Design with an emphasis placed on developing an understanding of the production process. Projects will include developing corporate and product identity , packaging poster design and book design.
Prerequisites:, ART 135, , ART 148, ART 149, ART 231 or permission of the division.

ART 233 VISUAL DESIGN FOR THE WORLD WIDE WEB 3-2-2
An introduction to the visual design of web pages and imaging techniques specific to web-based technologies. A broad range of software applications used in building visually dynamic web pages will be addressed with an emphasis on the latest versions of Macromedia Dreamweaver and Flash. The methods and techniques of computer - based imaging and animation for the web will be explored while challenging the students' imagination. Emphasis will be placed on applying the fundamental principles of visual design to building a web page.
Prerequisites: ART 130, ART 135, ART 148, ART 149, or permission of the instructor.

ART 237 DIGITAL DESIGN: PORTFOLIO WORKSHOP 3-2-2
A "capstone" course for Graphic Design 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 graphic design professionals.
Prerequisites: ART 135, ART 148, and ART 231 or permission of the instructor.

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.
Prerequisites: ART 111, and ART 130.
Corequisites): ART 112 and ART 131

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..

ART 246 SCULPTURAL FABRICATION AND MOLD MAKING ...3-2-2
A workshop utilizing lectures, demonstrations and problems investigating the uses and properties of primary materials such as plasticine, plaster, glass, wood, plastic, etc. and the processes of modeling, moldmaking and other kinds of fabricating techniques associated with the forming of sculptural products.
Prerequisites: ART 245 - Sculpture: Clay Modeling
Or permission of instructor

ART 247 ADVANCED SCULPTURE 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 may be developed in depth.
ART 246 - Sculpture II: Sculptural Fabrication and Mold Making
Or permission of instructor

ART 261 CERAMICS II 3-2-2
A course intended to develop and extend clay-forming skills introduced in Ceramics I through conceptual 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.
Prerequisite: ART 161 or permission of the instructor.

ART 262 CERAMICS III 3-2-2
A continuing exploration of the clay medium demonstrating the more advanced techniques involved. This would include forming techniques as well as glaze testing and glazing skills.
Prerequisite: ART 261 or permission of instructor.

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.
Prerequisite: ART 161 or permission of instructor.

ART 266 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 kiln.
Prerequisite: ART 161 or permission of instructor.

ART 267 KILN BUILDING 3-2-2
This course covers the history , design, development and construction of kilns. It will introduce the student to the construction skills involved in building kilns, such as welding, mortaring bricks, cutting bricks, and working with refractory fiber materials. The course will culminate with the actual construction or rebuilding of a kiln.
Prerequisites: ART 161 or permission of instructor

ART 271 PRINTMAKING II 3-2-2
A continuation of ART 171 with an emphasis placed on the further development of skills learned in the introductory class. New media to be covered will include color intaglio, calligraphy , and lithography. Studio work and instruction.
Prerequisite: ART 171 or permission of the instructor.

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.
Prerequisite: ART 271 or permission of instructor

ART 275 PORTFOLIO AND PROFESSIONAL TECHNIQUES 3-2-2
This course will help students prepare a portfolio for transfer or employment in the field of art after graduation and teach them the necessary elements to mounting an exhibition. Lectures, demonstrations, trips, and individual consultation will provide students with the information and skills needed for the successful preparation of presentation portfolios in traditional and digital formats. Each student will be required to mount a one- or two-person exhibition of his or her own work in the College student gallery space.
Prerequisite: thirty or more credits in Art courses at MCCC or permission of the instructor.

ART 299 INDEPENDENT STUDY IN ART 3-0-6

ASTRONOMY

AST 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 of 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). (Also offered as GLG 121 and PHY120) Core Goals 2, 5 and 8)
Prerequisites: A minimum grade of "C" or better within 5 years in both MA T 011 and ESL 011 or ENG 011.

AST 121 ASTROBIOLOGY... 3-2-2
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. Core Goals 2 and 8)
Prerequisites: A minimum grade of "C" or better within 5 years in both MA T 011 and ESL 011 or ENG 011.

BIOLOGY

BIO 103 INTRODUCTION TO HUMAN
ANATOMY AND PHYSIOLOGY 3-3-0
This course is a non-laboratory descriptive study of the structure and function of the human body, while using a systems approach.
Students must have successfully completed or tested out of ESL 011, ENG 011, MAT 010, and REA 011 or REA 017.

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 man; the impact of man and contemporary cultures on the environment; and local pollution problems and possible solutions.
(Core Goals 2, 5, 11, 12 and 13)
This course has an honors version. It of fers qualified students an opportunity to complete a more intensive version of the course goals in a small classroom setting. Students should expect more in-depth reading, writing and oral assignments and classroom discussion.

BIO 120 CONCEPTS OF BIOLOGY 4-3-3
This course is 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 dif ferent 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. (Core Goals 2 and 8)

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. Students taking this course anticipate going on to: BIO 122, 131, 140 and/or 151. Please see the MCCC catalogue for descriptions of the above continuing courses.
Prerequisite: Students must have successfully completed or tested out of ENG 01 1, MAT 011, and REA 011 or REA 017
(Core Goals 2 and 8)

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 five kingdoms of organisms are discussed in terms of their structure, function, reproduction and adaptation. Laboratory experiences will include observation of organismal anatomy.
Prerequisite: BIO 121.

BIO 129 FUNCTIONAL HUMAN ANATOMY AND 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 W ellness degree programs. Dissection of preserved animal tissue is required.
Prerequisite: Students must have successfully completed or tested out of ESL 011 or ENG 011 and MAT 011, and REA 011 or REA 017

BIO 130 INTRODUCTORY ANATOMY AND PHYSIOLOGY 4-3-3
A one-semester course in which the structure and function of the eleven basic human systems is studied, with more emphasis placed on the circulatory , urinary, endocrine, and respiratory systems. Oriented toward students in the MLT curriculum. Dissection of preserved material is required.

BIO 131 HUMAN ANATOMY AND 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.
Prerequisites: Successful completion of High School Chemistry taken within the last five years, with a "C" or better , or CHE 121, CHE 131, CHE 150 or CHE 151 taken within the last five years with a "C" or better . Completion of BIO 121 within the past 5 years with a minimum grade of "C", or a passing grade on the MCCC Biology Placement Test.

BIO 132 HUMAN ANATOMY AND PHYSIOLOGY II 4-3-3
This course is a continuation of BIO 131 with study of the normal and pathological structure and function of the human body . Emphasis will be placed on circulatory , lymphatic, respiratory , digestive, urinary , endocrine and reproductive systems. Dissection of preserved animal material is required.
Prerequisite: BIO 131 with grade of: C; or better in last 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).
(Core Goals 2 and 8) Prerequisites: Students should have taken one year of high school chemistry and one year of high school biology with a grade of "C" or higher within the past 5 years. If a prospective student does not have this background, the instructor should be consulted for permission to register.

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.
Prerequisites: Students should have taken one semester of college level biology and chemistry (CHE131 or CHE151 and BIO121, BIO130 or BIO151) with a grade of "C" or higher . If a prospective student does not have this background, the instructor should be consulted before the student registers for the course.

**BIO 151 PRINCIPLES OF BIOLOGY I
(FOR THE SCIENCE MAJOR)** 4-3-3
An introduction to the study of life as it applies to all organisms. Primary emphasis is given to biological chemistry , metabolism, production and utilization of energy, basic cell structure and reproduction and the classical and molecular aspects of genetics. Laboratory requires hands on experiments related to the course content.
Prerequisites: Successful completion of college preparatory High School Chemistry and Biology taken within the last five years or   CHE 121 and BIO 121 with a "C" or better.

BIO 152 PRINCIPLES OF BIOLOGY II 4-3-3
(FOR THE SCIENCE MAJOR)
Emphasis is placed on the diversity of life from an evolutionary and ecological perspective. Domains, supergroups 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.
Prerequisite: BIO 151 with a grade of C or better.

BIO 199 INDEPENDENT STUDY IN BIOLOGY I 1-1-0

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)
Prerequisites: Students should have taken at least one semester of college-level chemistry and have completed BIO 141 (Clinical Microbiology I), with a grade of "C" or higher. A prospective student who does not have this background should consult the instructor before he or she registers.

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 ef fects, and restoration ecology . Labs will reinforce important classroom concepts and will include both computer-based mathematical models of species146 interactions and in-field experiences to acquaint students with the diversity of ecosystem types and ecological processes.
Prerequisites: BIO 151 and BIO 152 or equivalents, or BIO 115, BIO 121 and BIO 122 or equivalents or permission of the instructor   . A student must successfully complete or place out of ENG 0 II, ESL 0 II, MAT 0 II, REA 017 and REA011.

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.
Prerequisites: BIO152 and CHE151, "C" or better in both.

BIO 299 INDEPENDENT STUDY IN BIOLOGY II 2-2-0

BIOTECHNOLOGY, BIOMANUFACTURING, AND MOLECULAR TECHNIQUES

BIT 120 INTRODUCTION TO BIOTECHNOLOGY 4-3-3
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.
Prerequisite(s): High School Biology (college preparatory or higher) or a college biology course within the last 5 years With a grade "C" or better.
Co-requisite(s): BIT 123 – Techniques and Instrumentation in Biotechnology , or by permission of the instructor

**BIT 123 TECHNIQUES AND INSTRUMENTATION
FOR BIOTECHNOLOGY**...4-3-3

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.
Prerequisite(s): CHE 131 - Chemistry for Technology I, or
CHE 151 - Principles of Chemistry I (For the Science Major)
Co-requisite(s): BIT 120 – Introduction to Biotechnology, or by permission of the instructor.

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, plasmid design, purification and gel electrophoresis), and propagation and maintenance of bacteria and other cell types.
Prerequisites: BIT 120 and BIT 123 (with a grade of a "C" or better) and CHE 132 or CHE 152. Corequisite: BIT 230

BIT 230 BIOTECHNOLOGY MANUFACTURING 3-3-0
This course will provide an introduction to the manufacturing process, including a survey of proteins currently in production by biotechnology companies. It will provide information about the regulatory environment in which these proteins are produced, including an investigation of Standard Operating Procedures (SOPs) and current Good Manufacturing Practices (cGMP). This course is designed to cover the spectrum of activities involved in the manufacturing process including process development, upstream and downstream processing, validation, Quality Assurance and QC biochemistry and microbiology.
Prerequisites: BIT 120, BIT 123 Co-requisite: BIT 220

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 bioreactors for upstream processing and protein purification systems for downstream processing and quality control of protein production. Students with a science-related degree and/or biotechnology and pharmaceutical experienced may be able to complete this course as a stand-alone course.
Prerequisites: BIT 123 or permission of instructor.

BIT 240 CELL CULTURE TECHNIQUES 3-3-3
This course will allow students to gain theoretical and practical knowledge of culturing animal cells and the techniques used to maintain them in culture. The course will be oriented towards the role of cell/ tissue culture in the biopharmaceutical industry and the importance of Good Laboratory Practice and Good Manufacturing Practice. The students will gain hands on experience working aseptically with animal cells and with various equipment and instrumentation and vessels used for culturing animal cells.
Prerequisite: BIT 123 (with a grade of "C" or better), or permission of the instructor.

BIT 242 FERMENTATION .....…...3-3-3
This course will allow students to gain theoretical and practical knowledge of bacterial and yeast cells and the techniques used to maintain them in culture (i.e. "fermentation"). The course will be oriented to the role of fermentation in the biopharmaceutical industry and the importance of Good laboratory Practice and Good Manufacturing Practice. The students will gain hands on experience working aseptically with bacterial and yeast cells and the various equipment, instrumentation and vessels used in fermentation including a stir-tank bioreactor.
Prerequisite: BIT 123 (with a grade of "C" or better), or permission of the instructor.

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 biological 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.
Prerequisites: BIT 120, BIT 123, BIT 220, and 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.
Co-requisite: BIT 230

OFFICE ADMINISTRATION

CAO 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 30-35 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.)

CAO 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.
(Core Goal 4)

CAO 111 MICROSOFT WORD I 3-3-0
This course is designed to provide instruction in the use of the Microsoft Word word processing software. The course focuses on word processing functions including creating, saving, and retrieving documents, formatting, using tabs, spell check and thesaurus, block operations, printing, page numbering, split screen, find and replace, file maintenance, fonts, special print features and selected Microsoft Word desktop publishing theory and features. This course is especially appropriate for those with no previous computer experience. Completion of this course will prepare the student to continue with CAO 112, Microsoft Word II.

CAO 112 MICROSOFT WORD II...3-3-0
This course expands the word processing skills learned in CAO 1 11, Microsoft Word I. Advanced MS W ord features that are introduced include advanced table functions, text columns, macros, merging, sort/ select functions, styles, outlining, creating graphs, forms development, integration of Internet functions, and desktop publishing functions.
Prerequisite: CAO 111 or permission of instructor

CAO 161 OFFICE PROCEDURES I 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.

CAO 170 VIRTUAL OFFICE CAREERS & TECHNOLOGIES 3-3-0
This course explores careers and entrepreneurial business opportunities in the virtual office environment and identifies techniques and technologies needed by virtual office workers. Specific topics include types of virtual offices, technologies and skills needed in a virtual office, ways to establish and manage a virtual office, effective communication, business planning and marketing and job opportunities. This course also examines issues for career preparation for work in a virtual environment.

CAO 175 INTRODUCTION TO VIRTUAL ASSISTANCE 3-3-0
This introductory course explores the Virtual Assistant industry and is designed to assist those wanting to utilize their administrative assistant skills while working from a home office or an off-site office. Upon completion of this course, the student should be ready to create their home-based virtual assistant business. Some of the topics to be covered include: how to operate a VA business, services to offer, naming and marketing your business, defining your clients, determining rates to charge, writing a contract, establishing a web presence, self-employment considerations, certifications, client relationships, bookkeeping/collections, working efficiently and demonstrating ethical values as a virtual assistant.
(Core Goal 13)

CAO 198 CO-OP INTERNSHIP IN CAO I 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.
Prerequisite: Permission of coordinator.

CAO 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.
Prerequisite(s): CIS 110 - Information Systems for Management with Computer Applications, or CAO 101 – Business Software Essentials, or permission of coordinator or instructor.

CAO 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.

CAO 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.
Prerequisite(s): Students must have successfully completed or tested out of: ENG 011 or ESL 011, or Approval of instructor.

CAO 298 CO-OP INTERNSHIP IN CAO 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.
Prerequisites: CAO 198 and permission of coordinator.

CHEMISTRY

CHE 121 GENERAL CHEMISTRY INORGANIC
(FOR THE NON-SCIENCE MAJOR) 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.
(Core Goals 2 and 8) Prerequisite: One year high school Algebra or successful Completion or tested out of of MAT 011.

CHE 122 GENERAL CHEMISTRY ORGANIC 4-3-3
(FOR THE NON-SCIENCE MAJOR)
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 introductory 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.
Prerequisites: CHE 121 or equivalent college chemistry course, or recent high school chemistry and one year high school algebra or MAT 011.

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 analytical and biological chemistry and their applications to technology. Laboratory experiments will be performed so as to facilitate an understanding of the chemical principles and experimental techniques developed in the program.
(Core Goals 2 and 8) Prerequisite: High school Chemistry or equivalent (CHE 121).

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.
Prerequisite: CHE 131.

CHE 150 ESSENTIALS OF CHEMISTRY 4-3-3
A course designed to provide the chemical and mathematical background essential for success in CHE 151-152, the chemistry for science majors. The majority of students choosing CHE 150 will be those who have not had high school chemistry or who feel inadequate with their previous preparation. CHE 150 credits will count toward the associate degree at Montgomery County Community College but may not be transferable to other colleges.
Co-requisite: MAT 100.

CHE 151 PRINCIPLES OF CHEMISTRY I....................................4-3-3
(FOR THE SCIENCE MAJOR)
A study of the fundamentals of chemistry for the science major. An emphasis is placed on atomic structure, molecular structure, bonding, periodic law, reactions and weight relations, gases, changes of state, thermochemistry, and an introduction to organic chemistry. The laboratory includes experiments from topics discussed in lecture.
(Core Goals 2 and 8) Prerequisite: High school Chemistry or CHE 150.
Co-requisite: MAT 161 or MAT 170.

**CHE 152 PRINCIPLES OF CHEMISTRY II...................................4-3-3
(FOR THE SCIENCE MAJOR)**
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.
Prerequisite: CHE 151

CHE 199 INDEPENDENT STUDY IN CHEMISTRY......................3-3-0

CHE 261 ORGANIC CHEMISTRY I 4-3-3
This course covers the nomenclature, structure, properties and reactions of the important classes of organic compounds. Stereochemistry, reaction mechanism and syntheses are stressed. The laboratory demonstrates syntheses discussed during lecture.
Prerequisites: CHE 151 and CHE 152.

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.
Prerequisite: CHE 261.

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
(Core Goal 12)
Prerequisite: Students must have successfully completed or tested out of REA017 or REA 011, ESL 011 or ENG 011.

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.
(Core Goal 12)
Prerequisite: CHI 101 or equivalent.

COMMUNICATION

COM 100 MASS MEDIA AND SOCIETY 2-2-0
In this course students explore the impact of Mass Media on how we view, interpret, and evaluate our world. Students gain a basic understanding of the aesthetic, cultural, economic, and political forces that guide the creation and distribution of content via mass media. The course provides students with a clear understanding of the activities, roles, and issues related to mass media in today's society. Students explore how those issues have changed and will work to recognize and articulate the impact mass media have on diverse audiences.
(Core Goal 11 when taken with COM 160) Prerequisites:
Students must have successfully completed or tested out of ENG 01   1, ESL011, REA017, REA018. Co-requisite: COM 160.

**COM 101 SURVEY OF MASS MEDIA INDUSTRIES
IN THE UNITED STATES 2-2-0**
This course surveys the history and evolution of mass media in the United States. Students achieve a basic understanding of mass media industries and trends. They examine the technology and history of print, motion pictures, recording industries, radio, television, multimedia, the Internet and emerging digital media, and use reasoning and analysis to understand the future of mass media.
Prerequisite: COM 100. Co-requisites: COM 161, ENG 101.

**COM 103 INTRODUCTION TO VIDEO
PRODUCTION EQUIPMENT 2-2-0**
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.
(Core Goal 7 when taken with COM 163)
Prerequisite: COM 100. Co-requisite: COM 163.

COM 104 INTRODUCTION TO AUDIO EQUIPMENT....................2-2-0
This course introduces the theory and operation of audio equipment for video production, filmmaking, animation, music and radio. Students are introduced to sound theory and the basics of recording and editing and then complete assignments in basic equipment operation. Emphasis is placed on the fundamentals of audio production and storytelling with sound.
Prerequisite: COM 100. Co-requisite: COM 164.

COM 120 INTRODUCTION TO SCRIPTWRITING 2-2-0
In this introductory survey course, students analyze different forms and techniques used in narrative scriptwriting for film, television and radio. Emphasis is placed on the pitch, treatment, and appropriate format. Demographic information, media writing, techniques of dialogue, along with the structure of the narrative are stressed.
Prerequisite: COM 100.
Co-requisites: COM 121, ENG 102.

COM 121 INTRODUCTORY SCRIPTWRITING WORKSHOP........1-0-2
In this workshop students apply the basics of scriptwriting introduced in COM 120 to original and adapted material. Students are encouraged to develop a personal style by researching, writing, and editing character bibles and sketches, treatments, scenarios, pitches, log lines, tags, demographic statements and script scenes. Students write scripts to form for television, film, and radio that are also used in advertising, public relations, gaming, animation, and narrative drama.
Prerequisite: COM 160
Co-requisites: COM 120, ENG 102.

**COM 123 INTRODUCTION TO WRITING
FOR BROADCAST NEWS** 2-2-0
This course teaches students to organize, research and write coherent news stories for broadcast. It explores theory and practice to give students a foundation in the principles and practice of broadcast news reporting and writing. Students analyze written formats and styles used in radio and television newsrooms, write broadcast news copy and are introduced to professional information –gathering and interviewing techniques.
Prerequisite: COM 100.
Co-requisites: COM 124, ENG 102.

COM 124 BROADCAST NEWS WRITING WORKSHOP 1-0-2
In this workshop, students apply the basics of broadcast news writing learned in COM 123. They research, write and report television and radio news stories. Students write voiceovers and anchor readers and field packages. They learn to conduct interviews, choose sound bites and write broadcast copy using a variety of professional news styles.
Prerequisite: COM 160.
Co-requisites: COM 123, ENG 102.

COM 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 WRFM, 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, WRFM.
Prerequisite:COM 160.

COM 159 RECORDING INDUSTRY WORKSHOP.. 1-0-2
Recording Industry Workshop focuses on production for student- operated recording label and recording studio.. As part of this course students conceive, create, produce and distribute productions to the campus community, the College Radio Station, and other community-based media outlets. They participate in task-oriented workshops where they are introduced to the procedures, methods and operation of a recording studio. They obtain hands-on industry experience in production, marketing, promotion, distribution, public relations, product design and new media.
Prerequisite: COM 160.

COM 160 MEDIA LITERACY WORKSHOP 1-0-2
Students are introduced to the basic building blocks of storytelling and journalism. They gain a foundation level understanding of mass media by writing, producing and distributing aural and visual packages for digital media that help them better understand and interpret messages in today's media saturated world. Projects developed are distributed over class, school and student-based digital media.
(Core Goal 11 when taken with COM 100)
Prerequisite: ENG 011 or ESL 011 and REA 017 or REA 011. Co-requisite: COM 100.

COM 161 MEDIA INDUSTRIES WORKSHOP 1-0-2
Building on skills and insights obtained in COM 100 and COM 160, students explore how mass media issues such as press censorship, copyright infringement, privacy rights and fair trial, libel and defamation, digital manipulation and other contemporary problems impact mass media industries. To better understand and critically evaluate the implications of these issues on media industries, students use

observational and writing skills and develop and distribute their media-based stories about these concerns. Projects developed are distributed over class, school and student-based media.
Prerequisite: COM 160. Co-requisite: COM 101.

COM 163 VISUAL LITERACY WORKSHOP 1-0-2
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 COM 160 and 161 and apply the skills taught in COM 103 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.
(Core Goal 7 when taken with COM 103)
Prerequisite: COM 160. Co-requisite: COM 103.

COM 164 AURAL EXPERIENCE WORKSHOP 1-0-2
Students experience the interactive world of sound by implementing sound theory and production techniques on state of the art digital sound production equipment. In addition to production, emphasis is placed on aesthetic analysis of audio through a series of critical listening assignments and workshops where voice, sound effects, and music are combined to create theater of the mind.
Prerequisite: COM 160. Co-requisite: COM 104.

**COM 166 INTRODUCTION TO ELECTRONIC
JOURNALISM: RESEARCH AND REPORTING..........................2-2-0**
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. They learn how to find stories, edit words, and produce both the pictures and sound as they prepare for electronic distribution to a diverse audience. 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.
Prerequisites: COM 101, COM 120 or COM 123, and COM 103 or COM 104.
Co-requisite: COM 167.

**COM 167 INTRODUCTION TO
ELECTRONIC JOURNALISM WORKSHOP...............................1-0-2**
In this workshop students apply the basic skills obtained in COM 166. Students develop stories, edit words, and produce both the pictures and sound as they prepare their stories for electronic distribution to a diverse audience over College, student and community-based media.
Prerequisites: COM 161 and COM 121 or COM 123, and COM 163 or COM 164.
Co-requisite: COM 166.

**COM 199 INDEPENDENT STUDY/SPEECH
COMMUNICATION CREDITS** 1-0-0

**COM 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 media practitioners in broadcasting, advertising, public relations, publishing and filmmaking. The course builds on information obtained in COM 101 to provide a foundation in the theoretical principles of media ethics and the legal issues surrounding mass media, journalism, and content distribution.
(Core Goal 5 and 13)
Prerequisite: COM 101. Co-requisite: ENG 102.

COM 208 INTRODUCTION TO MEDIA OPERATIONS 2-2-0
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 for operating and programming media businesses.
Prerequisite: COM 101. Co-requisite: COM 209.

COM 209 MEDIA OPERATIONS WORKSHOP 1-0-2
Students apply what they learn in COM 208 to operate, manage, direct, and motivate a workforce of students and volunteers at co- curricular media and theater clubs: CAPG, the College Radio Station, and the Drama Club. They organize staff, 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.
Prerequisite: COM 161. Co-requisite: COM 208.

COM 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.
Prerequisite: COM 101. Co-requisite: ENG 102.

COM 211 HISTORY OF FILM II 3-2-2
This course will teach students how to research, analyze and comment on contemporary cinema.   Students examine significant aesthetic developments in narrative, documentary and experimental film history since WWII. Students gain a better understanding of the aesthetic, social, economic and technological developments that helped create specific film movements outside of the Hollywood studio system.   The course focuses on individual films and filmmakers of the period.
Prerequisite: COM 101.
Co-requisites: ENG 102, COM 210 or COM 230 (Successful completion suggested).

**COM 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, television, society and the recording industry Topics range from Rock and Roll's relationship to the birth of AM and FM radio to its influence on society and emerging technologies. Emphasis is placed on understanding Rock and Roll's impact in modern society.
Prerequisite: COM 101.
Co-requisite: ENG 102.

COM 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 and news promotion, and job development in the radio industry.
Prerequisite: COM 101. Co-requisite: ENG 102.

COM 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.
Prerequisite: COM 101 Co-requisite: ENG 102.

COM 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.
Prerequisite: COM 101. Co-requisite: ENG 102.

COM 220 SCRIPTWRITING...2-2-0
This class builds on scriptwriting skills introduced in COM 120. Students analyze film and television scripts, styles and genres, and develop their understanding of audience as they work to find a writing voice. Students develop an increased ability to present their ideas as they learn about varying methods and techniques of scriptwriting. They explore copyright, registration, employment, and guild issues and are introduced to the business of scriptwriting.
Prerequisites: COM 101 and COM 120. Co-requisite: COM 221.

COM 221 SCRIPTWRITING WORKSHOP.................................... 1-0-2
Students apply the information they learn in COM 220 while they work to complete a treatment, character bible, and script. During this workshop students read their work and listen to comments and critiques from their peers and faculty.
Prerequisites: COM 161 and COM 121. Co-requisite: COM 220.

COM 223 ELECTRONIC JOURNALISM PRODUCTION 2-2-0
Students build on previous production experience to develop more involved techniques of electronic reporting while planning and producing 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.
Prerequisites: COM 166. Co-requisite: COM 224.

**COM 224 ELECTRONIC JOURNALISM
PRODUCTION WORKSHOP..**...1-0-2
In this advanced class, students work in production teams using professional audio and video equipment to develop news and documentary programs. The programs produced are faculty and peer reviewed and presented as news-based productions ready for distribution over student, college, and community-based media.
Prerequisites: COM 167. Co-requisite: COM 223.

COM 230 THE MOVIES: MEANINGS AND METHODS 3-2-2
The popular arts of "the movies" and television are carefully prepared constructions of sights and sounds. W atching 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.
(Core Goal 1a, 5 and 7)

COM 235 CURRENT ISSUES IN MASS MEDIA..........................3-3-0
In this survey course students analyze current issues in mass media

by examining existing communication 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.
Prerequisites: COM 101. Co-requisite: ENG 102.

COM 248 DIRECTING ACTORS 3-2-2
This course is designed to inform future directors on the method, vocabulary and decorum for working on stage, television and film, Students become beginning directors who are introduced to the conventions and methods of acting and become better prepared to analyze text, clearly define a vision and communicate successfully with actors. The course consists of readings, discussion, exercises and in-class rehearsals. As part of the course, students are required to direct actors in a series of projects presented in class.
Prerequisites: THA 114 and either THA 105, COM 120 or COM 270.

COM 250 INTRODUCTION TO AUDIO PRODUCTION..................2-2-0
This course introduces students to the theory and practice of audio production. Students are introduced to audio production techniques including multi-track recording, mixing, editing, equalization, and signal processing. Emphasis is placed on the procedures and processes of preparing for and carrying out a basic audio production. Students act as the sound engineer, producer, director as well as other audio production roles.
Prerequisites: COM 101 and COM 104. Co-requisite: COM 251.

COM 251 SOUND DESIGN WORKSHOP 1-0-2
Sound Design Workshop focuses on the art of creating and inventing original sounds for video production, filmmaking, animation, music and radio. Emphasis is placed on audio postproduction through hands-on exploration the roles of sound editor and sound designer . In addition to production, students expand their aesthetic understanding and analysis of audio through a series of critical listening assignments and workshops.
Prerequisites: COM 161 and COM 164. Co-requisite: COM 250.

COM 253 CAMPUS RADIO WORKSHOP II 1-0-2
Campus Radio Workshop II builds on the experience, knowledge and skills acquired in COM 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, WRFM.
Prerequisite: COM 153
Co-requisite: COM 251 or COM 209.

COM 256 AUDIO PRODUCTION.. 2-2-0
This course explores the theory and practice of audio production.. Emphasis is placed on the technical application of multi-track 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.
Prerequisite: COM 250. Co-requisite: COM 257.

COM 257 DIGITAL SOUND PRODUCTION WORKSHOP 1-0-2
Digital Sound Production focuses on audio postproduction on state-of-the-art digital audio workstations. Students explore techniques for real-

time and processed audio plug-ins including reverb, delay , sampling, automation, MIDI sequencing, and virtual instruments. Students expand their aesthetic analysis of audio through a series of critical listening assignments and workshops.
Prerequisite: COM 251. Co-requisite: COM 256.

COM 259 RECORDING INDUSTRY WORKSHOP II 1-0-2
Recording Industry Workshop II builds on experience, knowledge and skills obtained in COM 159. In this Workshop, students are required to take leadership roles in creating and producing in a recording studio environment. They participate in the operation of the recording studio and take the lead on creating final product for distribution to the campus community. As a result, they obtain a more in-depth hands-on industry experience and take an increasingly active role in the operation of the student run recording studio.
Prerequisite: COM 159.
Co-requisite: COM 251 or COM 209.

COM 260 NEW MEDIA PRODUCTION 2-2-0
This course is an introduction to the theory and practice of New Media production. Students are introduced to new media production techniques for audio, video, broadband (internet) and distribution of content over emerging technologies. Students will examine examples from current programmers, technologists and interactive journalists. Emphasis is placed on the procedures and processes of preparing for , and carrying out a new media production.
Prerequisites: COM 101 and either COM 103 or 104 and either COM 120 or COM 123. Co-requisite: COM 261.

COM 261 NEW MEDIA PRODUCTION WORKSHOP. 1-0-2
Students experience the interactive world of new media by implementing theory and production techniques on state of the art digital equipment. They are introduced to new media production techniques for audio, video, broadband (Internet) and distribution techniques for content display and interaction over emerging technologies. Students conceive, 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.
Prerequisites: COM 161 and either COM 163 or COM 164 and COM 121 or COM 124. Co-requisite: COM 260.

COM 266 INTRODUCTION TO CIVIC JOURNALISM 2-2-0
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. Completed projects are distributed over student, College and community-based media.
Prerequisite: COM 166. Co-requisite: COM 267.

COM 267 CIVIC JOURNALISM WORKSHOP 1-0-2
In this workshop students develop production skills and practice the basics of Civic Journalism.They produce short-form news documentaries that are researched and developed in the co-requisite COM 266. Using professional digital production equipment, students submit proposals, review rough-cuts for approval, and edit their final for distribution via mass media to a diverse audience.
Prerequisite: COM 167
Co-requisite: COM 266

COM 270 INTRODUCTION TO VIDEO PRODUCTION 2-2-0
This course introduces the student to basic video and film production. Emphasis is placed on the procedures and processes of preparing for and carrying out a basic narrative shoot. Students act as producers-directorsThey pitch stories, write treatments and scripts, learn pre-production techniques, discuss the role of the director and producer , produce a one-minute, three-minute, and five-minute story, and submit production books for review.
Prerequisites: COM 103. Co-requisite: COM 271.

COM 271 VIDEO PRODUCTION WORKSHOP 1-0-2
Students produce three basic film video projects in documentary, news, and/or dramatic/comedic style developed in COM 270.They are responsible for creating their projects from inception to completion and for producing them individually and as a group using professional production procedures. All projects are developed for an audience. They are faculty and peer reviewed, evaluated, and presented as productions ready for distribution over various student, College, and community- based media.
Prerequisites: COM 161 and COM 163. Co-requisite: COM 270.

COM 276 VIDEO PRODUCTION 2-2-0
Students learn about video theory, aesthetics, and techniques while gaining hands-on experience. They explore and analyze the theory and practice of video as an art form, entertainment medium, and a creative communication tool. Students learn about idea and structure as they relate to story development. Students learn about advanced camera and editing techniques, compositing software, and streaming video for the Web as they prepare projects for production.
Prerequisite: COM 270. Co-requisite: COM 277.

COM 277 NARRATIVE WORKSHOP 1-0-2
In this workshop, students develop dramatic and documentary production skills and techniques by means of hands-on practicum and assignments. They explore and analyze emerging trends and learn to use advanced camera features and increase their understanding of more advanced lighting, and editing techniques. Students refine their story ideas and structure as they discuss story development and narrative style. Students learn about compositing, audio sweetening, and motion software and prepare single-camera narrative projects for production and distribution to a diverse audience over student, College and community-based media.
Prerequisite: COM 271. Co-requisite: COM 276.

COM 280 TECHNIQUES OF DIGITAL EDITING. 2-2-0
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. Students analyze techniques and emerging technologies used in dramatic and documentary storytelling.
Prerequisites: COM 101 and COM 103. Co-requisite: COM 281.

COM 281 DIGITAL EDITING WORKSHOP. 1-0-2
Students work to increase their ability and effectiveness as digital non-linear editors. They learn new skills and editing techniques by working as the assigned editor on their individual student and College-based projects. Through class discussions, lectures, demonstrations and group and individual critiques, students develop a more complete understanding of editing workflow , sound design, screen direction, continuity, pacing, and how to construct the dramatic structure used in visual storytelling.
Prerequisites: COM 161 and COM 163. Co-requisite: COM 280.

COM 283 LIVE VIDEO PRODUCTION 2-2-0
Students explore the creative process and aesthetics necessary for producing specialized work in multi-camera live studio programming. Emphasis is placed on designing, producing, directing, lighting, scheduling and budgeting for live programs, including 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 articulate aesthetics and determine trends.
Prerequisites: COM 101 and COM 103 and either COM 120 or COM 123. Co- requisite: COM 284.

COM 284 LIVE VIDEO PRODUCTION WORKSHOP 1-0-2
In this workshop, students learn about the principles of producing live television programming. Emphasis is placed on the process and aesthetics of directing live telecasts, including serial dramas and comedy, talk shows, sporting events, and political debates. Students learn basic live directing techniques, production design, and time management skills. Students produce their own creative projects individually and as part of a group.
Prerequisites: COM 161 and COM 163 and either COM 121 or COM 124. Co- requisite: COM 283.

COM 290 COMMUNICATION CAPSTONE 1-0-2
Communication Capstone is where students develop, produce and edit a major media-based project in this studio/lab workshop. Emphasis is placed on developing advanced skills in scripting, planning, organizing and executing media 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 and directors as the leader of their production crew . As part of this course, students organize and finish a complete portfolio of all their work that includes a resume, reel, personal statement and cover letter.
Prerequisites: COM 251 or 261 or 271 or 281

COM 299 INDEPENDENT STUDY IN COMMUNICATION 3-0-6

CULINARY ARTS

CUL 110 INTRODUCTION TO THE CULINARY PROFESSION ... 2-2-0
This course presents the professional culinary industry to Culinary Arts and Baking and Pastry Arts students. Students will be presented with a variety of career possibilities within the culinary industry.Students will learn communication and public speaking and interaction skills through interaction with guest industry speakers. Students will learn how to prepare a career outline, resume/CV , personal portfolio, and prepare for a professional job interview.. Students are required to wear professional dress for this class as prescribed in the course syllabus.
Co-requisite: CUL 120 or CUL 130

CUL 111 FOODSERVICE SANITATION 2-2-0
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. Students complete the ServSafe certification exam from the National Restaurant Association.

CUL 114 BEVERAGE MANAGEMENT……………………..……….3-3-0
This course will provide the student with the basic skills to manage inventory , control costs, and market an establishment that offers alcoholic beverages. It will introduce the student to the basic production processes and varieties of alcoholic and non-alcoholic beverages. The course will explain laws and procedures related to responsible alcohol service. Students successfully completing this course will complete the ServSafe Alcohol exam for certification.
Pre-requisite CUL 110

CUL 120 CULINARY SKILL DEVELOPMENT 3-1-4
This course presents the basic principles of food preparation for hotel, restaurant and industrial food catering establishments.. Topics covered include the identification, production, and evaluation of knife skills, stocks, classical sauces, soups, vegetables, sandwiches, salads and salad dressings. 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.

CUL 121 ADVANCED CULINARY SKILL DEVELOPMENT………….3-1-4
This course presents the fundamentals of food preparation related to protein cookery and finished plate development. Topics include the identification, production, and evaluation of beef, poultry , shellfish, finfish, breakfast foods and vegetarian cookery. Sanitary practices and compliance with laws and ordinances of the Department of Health are enforced. Students are required to have a professional chefs uniform to participate in class according to departmental uniform policies.
Pre-requisite: Students must have successfully completed or tested out of CUL 120

CUL 130 BAKING SKILL DEVELOPMENT 3-1-4
This course presents the basic principles of baking for hotel, restaurant and industrial food catering establishments. Topics covered include the identification, production, and evaluation of yeast leavened products, quick breads, pies, tarts, cookies, and basic cakes. Sanitary practices and compliance with laws and ordinances of the Department of Health are enforced. Students are required to have a professional chef uniform to participate in class according to departmental uniform policies.

CUL 131 ARTISAN BREADS...4-2-4
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.
Prerequisites: Students must have successfully completed or tested out of CUL 130

CUL 151 PURCHASING FOR HOSPITALITY OPERATIONS........3-3-0
This course is designed to give the students a background in basic techniques and procedures in all facets of purchasing in the hospitality industry. The course details the flow of goods, including inventory , forecasting, purchase specifications, purchasing, receiving, storing, inventory control, and issuing of food and beverage. Included in the course are the basic purchasing concepts that are useful to both managers and staff in the hospitality industry. (Also offered as HOS 151)
Prerequisites: HOS 111 or CUL 110

**CUL 198 CULINARY AND BAKING
& PASTRY CERTIFICATE..1-0-14**
This is a work-experience course in which the student is required to work a minimum of 200 hours in a college-approved commercial kitchen. This course requires weekly documentation in course management system once registered for course. Students meet with the CAI Career Coach for externship approval. Once approval is received students begin recording hours. Experience must be completed before or during the last semester of attendance in the program.
Prerequisites: CUL 110, CUL 111, CUL 120, CUL 130, and Approval of Career Coach or Director of the CAI

CUL 211 HOSPITALITY ENTREPRENEURIAL PLANNING… 3-3-0
This course presents the principles of entrepreneurial skills for marketing and developing business plans for the culinary industry. Students in this class will learn how to develop a marketing plan for a potential business to add to their portfolio of previously developed food menus, beverage menus, purchasing plans, etc. to build a business plan upon completion of this course.
Prerequisites: CUL 114, CUL 151, CUL 220

CUL 220 MENU PLANNING/COSTING/DESIGN 3-3-0
This course is designed to teach the student the importance of the menu as the single controlling document in hospitality operations. Topics include menu design and development, government regulations, pricing, and menu management.
Prerequisites: HOS 111 or CUL 110

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 salumi found in various cultures, hors d'oeuvre and canapés, decorative centerpieces, cheese production and use in recipes, and planning and preparation of a buffet for a special event. 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.
Prerequisites:Students must have successfully completed or tested out of CUL 121

CUL 222 QUANTITATIVE FOODS 4-2-8
This is a course in the preparation and service of a complete events menu. Students prepare meals for groups that hold their events on campus. Quality and quantity cooking is emphasized, as well as proper plating techniques. Special attention is given to the correct and efficient service techniques for banquets. Planned menus include appetizers, salads, entrees, desserts and beverages. 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.
Prerequisites: CUL 121

CUL 230 CHOCOLATES AND CONFECTIONS............................4-2-4
This course presents the principles of chocolate and confections for baking and pastry shops, hotel, restaurant, and food catering establishments. Topics covered include the identification, production, and evaluation of chocolates and confections utilizing traditional and modern methodology and technology. Students will learn the techniques of tempering, sugar cooking, hand dipping, and shell molding to

produce varieties of ganche, sugar confections, jellies, and nut-based confections. 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.
Prerequisites: Students must have successfully completed or tested out of "CUL130"

CUL 231 PASTRY AND PLATED DESSERTS.............................3-1-4
This course presents the skills of classical pastries, cakes and desserts. Students will prepare a variety of classical cookies, quick breads, pastry dough products, tarts, gateau, entremets, plated desserts, glace, and frozen desserts understanding their methodology and preparation. 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.
Prerequisites: Students must have successfully completed or tested out of "CUL230"

CUL 232 OCCASIONAL AND WEDDING CAKES........................4-2-4
This course presents the advanced principles of occasional and wedding cakes. Students will build upon the skills learned in earlier courses working toward developing advanced flavor profiles and decorative styles in occasional and wedding cakes. The class will culminate in the preparation of three-tier themed wedding cakes for display . 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.
Prerequisite: Students must have successfully completed or tested out of "CUL 230"

CUL 241 HOSPITALITY MANAGEMENT TECHNIQUES..............3-3-0
This course is designed to provide the student with an introduction to the basic personnel management functions in the operation of a food service or lodging operation. Included are personnel recruitment, selection, orientation, training, and development.
Prerequisites: HOS 151 and HOS 220 or CUL 151 and CUL 220 or permission of instructor.
Co-requisite(s): HOS 211 or CUL 211

CUL 260 WORLD CUISINES ……..3-1-4
This course presents the principles of traditional dishes of cuisines throughout the world. 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.
Prerequisites: Students must have successfully completed or tested out of CUL 121

CUL 281 RETAIL SERVICE AND OPERATIONS 1.......................4-2-8
This course presents the principles of retail culinary operations for Culinary Arts students. Students in this course will learn the practical application of restaurant production and service. This hands on course will involve production for the public for the college' s retail entities enforcing practical skills with public evaluation. Sanitary practices and compliance with laws and ordinances of the Department of Health are enforced. Students are required to have a professional chefs uniform to participate in class according to departmental uniform policies.
Prequisites: CUL 121 or CUL 131 and SPC 120, CUL 111, CUL 114, CUL 120

CUL 282 RETAIL SERVICE AND OPERATIONS 2.......................4-2-8
This course presents the principles of retail culinary operations for Culinary Arts students. Students in this course will learn the practical

application of restaurant concepts, location and design, business and marketing plans, financing, legal and tax matters, menus, and food and equipment purchasing. This hands on course will involve production for the public for the college' s retail entities enforcing practical skills with public evaluation. Additionally students will learn the dining room service skills and will interact directly with retail guests. Sanitary practices and compliance with laws and ordinances of the Department of Health are enforced. Students are required to have a professional uniform to participate in class according to departmental uniform policies.
Prerequisite: CUL 281

CUL 298 CULINARY AND BAKING
& PASTRY DEGREE PRACTICUM 2-0-28
This is a work-experience course in which the student is required to work a minimum of 400 hours in a college-approved commercial kitchen.This course requires weekly documentation in course management system once registered for course. Students meet with the CAI Career Coach for externship approval. Once approval is received students begin recording hours. Experience must be completed before or during the last semester of attendance in the program.
Prerequisites: CUL 110, CUL 111, CUL 120, CUL 130, and
Approval of Career Coach or Director of the CAI.

COMPUTER AIDED DRAFTING AND DESIGN TECHNOLOGY

DRA 110 INTRODUCTION TO DRAFTING 3-3-0
This course is an introductory course in Drafting and DesignThis course is designed to develop the basic competencies required in the field of Drafting and Design. Subject areas include: geometric construction, multi-view projection, section views, lettering and dimensioning. This course utilizes manual drafting skills and techniques.
Prerequisite: ENG 010 or ESL 010, REA 017 or REA 011, MAT 010
Co-requisite: DRA 115

DRA 115 COMPUTER-AIDED DRAFTING I 3-3-0
This course is designed to introduce drafting students or anyone with Drafting and Design experience to the use of the computer to create, manipulate, and revise architectural, mechanical and/or electrical drawings. The basic drawing and modification commands will be used to create drawings. The AutoCAD drafting and design software will be used in this course. (Also offered as CIS 117.)
Prerequisite: CIS 100
Co-requisite: DRA 110 or equivalent.

DRA 124 DRAFTING: ARCHITECTURAL I 3-3-0
This course provides the student with an introduction to Architectural Drafting and Design. The student will develop competencies in this area by drawing and designing plans for residential dwellings. The scope of this course includes: architectural design, plot plans and site development, window and door selection, detailing stairways, fireplace, chimney and roof construction. This course will use the AutoCAD Drafting and Design software with Architectural desktop application software.
Prerequisites: DRA 110, DRA 115, or permission of the instructor

DRA 134 DRAFTING: MECHANICAL I 3-3-0
A course that introduces Mechanical Drafting through the study of the following subjects: Working Drawings, Intersections and Developments, Gears and Cams, and Isometric and Perspective presentations.
Prerequisites: DRA 110, DRA 115, or permission of the instructor.

DRA 215 COMPUTER-AIDED DRAFTING II 3-3-0
Advanced computer-aided drafting course is designed to instruct CAD users in techniques for configuring programs to meet the special requirements of particular disciplines and to increase drawing productivity.
Prerequisites: CIS 117, DRA 115, equivalent work experience or permission of the instructor.

DRA 217 COMPUTER-AIDED DRAFTING III 3-3-0
This course is designed to provide an in-depth study of computer- aided drafting and design in three-dimensions. The course focuses on the understanding, construction, and manipulation of extrusion, wireframe, surface, and solid models using CAD. The course covers theory of 3D, displaying 3D models 3D extrusion, wireframe, solid modeling, and presentation of 3D models, plotting and rendering 3D drawings. The AutoCAD drafting program will be used. (Also offered as CIS 218.)
Prerequisite: CIS 217 or DRA 215 or equivalent.

DRA 224 DRAFTING: ARCHITECTURAL II 3-3-0
A continuation of the architectural drawing sequence, this course examines the topics of electrical systems, environmental systems, specifications and business dealings, architectural rendering and commercial architecture. Course offered during Fall semester.
Prerequisites, DRA 124 or permission from Instructor

DRA 225 DRAFTING: ARCHITECTURAL III 3-3-0
A course in structural drafting and design. Steel, wood and concrete are examined from the load bearing and stress standpoint. Mathematical computations as well as graphic representation form the essentials of this course. Course offered during Spring semester.
Prerequisite:, DRA 224 or permission of the instructor.

DRA 234 DRAFTING: MECHANICAL II 3-3-0
This course is designed to provide students with an introduction to electronic drafting and design. The familiarization of basic electronic terms and the identification of components and solid state devices in the electronic industry are essential in this course. The scope of this course includes: reading and drawing electronic schematic and logic diagrams with emphasis on using computer generated drawing aids, design of electronic printed circuit boards and rendering of associated drawings necessary for manufacture and assembly . This course will use the AutoCAD Drafting and Design software with mechanical desktop application software.
Prerequisites: DRA 134 or permission of the instructor

DRA 235 DRAFTING: MECHANICAL III 3-3-0
A course that emphasizes the practical application of acquired skills in the preparation of drawings related to the use of engineering process and material. Topics covered include fasteners, finishes, weld symbols, geometric tolerances, and process piping.
Prerequisites: DRA 234 or equivalent industrial experience or permission of the instructor.

DRA 240 CADD MANAGEMENT 3-3-0
In this course the student, working with the instructor , can pursue an in-depth study of management of computer-aided drafting in the field of computer-aided drafting and design.
Prerequisite: DRA 110, DRA 115, DRA 124, DRA 134, DRA 215, DRA 217, DRA 224, DRA 234.

DRA 299 INDEPENDENT STUDY IN DRAFTING 3-3-0

COMPUTER & INFORMATION SYSTEMS

SPECIAL ONE-CREDIT COURSES

Note: Graduation credit will not be awarded for CIS 100, 101 or 102 If A Student also completes CIS 110.

Textbooks for all one-credit CIS courses are to be purchased in advance at the College Bookstore.

CIS 100 INTRODUCTION TO PERSONAL COMPUTERS 1-1-0
This course teaches personal computer operations and applications. The PC will be used for hands-on experience in topics including personal computer operations and control (DOS), Windows, word processing, and electronic spreadsheets. 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.)
Prerequisite: CIS 100 or equivalent experience.

CIS 108 INTRODUCTION TO WEB PAGE DESIGN 1-1-0
This course introduces students to the fundamentals of World Wide Web 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. (This course may be taken on a Pass/No Pass (P/NP) basis only. The grade will not affect grade point average.)
Prerequisites: CI5 100 and CI5 106 or equivalents.

CIS 183 WEB PAGE DEVELOPMENT (DREAMWEAVER) 1-1-0
Students will learn high-level web page creation skills using the sophisticated Dreamweaver web page editor . Explore page creation, images, links, forms, tables and frames as well as advanced features such as DHTML, style sheets, layers, animation, site management and FTP. (This course may be taken on a Pass/No Pass (P/NP) basis only . The grade will not affect grade point average.)
Prerequisites: CI5106 and either CI5 108, CI5 181 or CI5 114 (or equivalent web page development experience).

CIS 184 WEB ANIMATION (FLASH).. 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 basics skills necessary to create simple graphic and text animations to be published on the web. (This course may be taken on a Pass/No Pass (P/NP) basis only . The grade will not affect grade point average.)
Prerequisites: CI5 106 or CI5 108 or CI5 181 (or equivalent web development experience) and CI5 148 or basic knowledge of a graphic editing program (Photoshop, Paint Shop Pro, etc.).

CIS 185 ADVANCED WEB ANIMATION (FLASH) 1-1-0
This course will develop advanced skills using Macromedia Flash to produce websites with creative designs, moving imagery and thought provoking animations. Students will learn and practice how to create movie clips, design a Flash website, create interactive buttons, menus and pre-loaders. Object-oriented programming techniques in ActionScript will be developed to utilize the many features in Flash. The course will emphasize the importance of usability, optimization, and performance. (This course may be taken on a Pass/No Pass (P/ NP) basis only. The grade will not affect grade point average.)
Prerequisite: CIS 184 or equivalent experience with Flash.

REGULAR SEMESTER COURSES

CIS 110 INFORMATION SYSTEMS FOR MANAGEMENT WITH COMPUTER APPLICATIONS 3-2-2
This course introduces non-computer science majors to the fundamentals of computer hardware, software, and their integration into management information systems. Included are hands-on applications using commercially prepared software on PCs including spreadsheets, databases, and elementary word processing.
(Core Goals 2 ,4 and 5)

Note: For students interested in becoming more familiar with the keyboard, mouse, Windows environment, etc. before taking this course, OFM 1   11-Beginning Word Processing-is recommended.
Note: Graduation credit will not be awarded for CIS 100,101,102, or 155 if student also completes CIS 110.

CIS 1101 INTRODUCTION TO PROBLEM SOLVING AND PROGRAMMING 3-2-2
This course prepares students with limited computing background to enter the field of information technology or computer science. Students develop the essential concepts for logic, design and problem solving skills used in computer programming. Students will apply these skills by developing complete graphical, event-driven programs using a visual language such as Microsoft Visual Basic. The emphasis on the course is to learn concepts and techniques that are common to most programming languages in developing business solutions. This course is also appropriate for non- information technology majors.
Prerequisite: MAT 011.

CIS 111 COMPUTER SCIENCE I: PROGRAMMING AND CONCEPTS 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.
(Core Goals 2, 4, 5 and 13)
Prerequisite: MAT 100 or MAT 115, with a "C' or better or equivalent, or Placing ABV 100 on the math placement test.

CIS 111B COMPUTER SCIENCE II: OBJECT-ORIENTED PROGRAMMING 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.
Prerequisite: CIS 111, with a "C' or better or equivalent experience in procedural programming techniques.

CIS 112 COMPUTER SCIENCE III: DATA STRUCTURES & ALGORITHMS 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.
Prerequisite: CIS 111B with a "C' or better, or equivalent object-oriented programming experience.

CIS 113 PC MAINTENANCE AND SUPPORT 3-2-2
Students develop the necessary skills to support personal computers by solving common computer 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:ESL 011 or ENG 011, and REA 017 or REA 011.

CIS 117 COMPUTER AIDED DRAFTING I 3-0-0
A course to introduce drafting students or anyone with drafting experience to the use of the computer to create, revise and manipulate architectural, mechanical and electrical drawings and drawing files. The commands of the AUTOCAD program are used. (Also offered as DRA 115)
Prerequisites: DRA 110 equivalent work experience or permission of the instructor .

CIS 120 TEACHING WITH TECHNOLOGY 3-3-0
This course will give students the opportunities to explore, utilize, evaluate, and integrate the computer and 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 computers and technology. (Also offered as EDU 120.)

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 Windows' controls, icons, bitmaps, DLL 's, VBX's, OLE, DDE and memory allocation. This course teaches the considerations of custom installation, structured programming, problem solving, and the uses of Visual BASIC as system prototyping tool, and the uses of Visual BASIC for live a systems development tool.
Prerequisites: CIS 111 or equivalent experience.

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.
Prerequisite: CIS 111 or equivalent, with a grade of "C" or better.

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 and CIS 114 or their equivalents.

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.
Prerequisite: CIS 155 or equivalent experience.

CIS 142 LINUX ADMINISTRATION..3-2-2
This course provides extended knowledge of the Linux Operating System. Advanced features and benefits of this operating system 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.
Prerequisite: CIS 141 or equivalent experience.

CIS 151 SYSTEMS ANALYSIS AND DESIGN 3-3-0
Introduces students to the latest versions of leading software applications used in the field of graphic design including Abode Illustrator, Adobe Photoshop and Quark Xpress. Students will create and manipulate images and text and learn techniques for exporting files into different formats for use across platforms, in multiple applications and for the web.
Prerequisite: CIS 111 or equivalent business experience.

CIS 155 PC APPLICATIONS ON NETWORKS 3-2-2
This course will provide an overview of Microsoft Office and several desktop operating systems, which are typically supported on a local area network. Software covered will include command line interfaces, Excel, Word, PowerPoint, Access, and Windows. Additional topics will include the Internet, alternative desktop operating systems, networking basics, software licensing, file management, hardware selection, software integration, and viruses. The impact of running and supporting this software on a network will be emphasized.
(Core Goals 2 and 4)

CIS 156 NETWARE ADMINISTRATION AND SUPPORT..............3-2-2
This course will provide an introduction to Local Area Network (LAN) technology by teaching the fundamental skills needed to manage a Novell NetWare network effectively. NetWare concepts and utilities will be taught through a combination of lecture, hands- on assignments, and projects. This course is designed to prepare students to take the CNA exam.
Prerequisites: CIS 155 and CIS 170 or equivalent experience.

CIS 158 WINDOWS SERVER ADMINISTRATION AND 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 2008 R2 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.
Prerequisite(s): CIS 155 and CIS 170, or equivalent experience

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 exam.

CIS 167 INTRODUCTION TO DATA STORAGE AND STORAGE AREA NETWORK..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 all the objectives of the CompTIA Storage + certification exam.
Prerequisite(s): CIS 170 or equivalent knowledge.

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.
Prerequisite(s): 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.

CIS 171 ROUTING AND SWITCHING ESSENTIALS (CISCO 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.
Prerequisite: CIS 170 or Cisco CCNA 1 from any Cisco Academy.

CIS 172 LAN SWITCHING & WIRELESS TECHNOLOGIES (CISCO SEMESTER 3)...4-3-2
This course provides students with the necessary skills to design, implement, and configure network switches and wireless LANs in a converged switched network environment. Students will learn about the appropriate protocols and technologies to build a secure and ef ficient small-to-medium sized network. The implementation of Virtual LANs, VTP, and Inter-VLAN routing will be discussed.
Prerequisites: CIS 170 or Cisco semesters 1 from any authorized Cisco Academy.

CIS 172B ACCESSING THE WAN (CISCO SEMESTER 4)...3-2-2
This course covers a variety of WAN related concepts and technologies. Students will learn how to evaluate, design, build, and maintain an enterprise network. Areas discussed will include W AN security, protocols, and addressing. A focus is placed on troubleshooting and resolving a number of WAN specific issues.
Prerequisites: CIS 171 and CIS 172 or Cisco Semester 2 and 3 from any authorized Cisco Academy.

CIS 176 GAME DESIGN PRACTICE & 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 or MAT 115, with "C" or better or placing above (ABV) MAT 100 on the math placement test.

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 203 VMWARE VSPHERE..3-2-2
This hands-on virtualization training course will explore the installation, configuration, and management of VMware vSphere, which consists of VMware vSphere ESXi and VMware vCenter Server . Completion of this course satisfies the prerequisite for taking the VMware Certified Professional 5 exam.
Prerequisite(s): CIS 158

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.
Prerequisite(s):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 new features of Hyper-V in Windows Server 2012. After completing this course students will be able to install, configure, and administer Hyper-V in Windows Server 2012 and will also be able to describe the High Availability features built into Hyper-V in Windows Server 2012.
Prerequisite(s): CIS 158

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.
Prerequisite(s): CIS 166 Introduction to Cloud Computing

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 or CIS 155 or equivalent experience.

CIS 217 COMPUTER-AIDED DRAFTING II 3-3-0
Advanced computer-aided drafting course is designed to instruct CAD users in techniques for configuring programs to meet the special requirements of particular disciplines and to increase drawing productivity. (Also offered as DRA 215.)
Prerequisite: CIS 110, DRA 110, CIS117/ DRA 115, equivalent.work experience or permission of instructor

CIS 218 COMPUTER-AIDED DRAFTING III................................ 3-3-0
This course is designed to provide an in-depth study of computer aided drafting and design in 3-Dimensions.   The courses focuses on the understanding, construction and manipulation of extrusion, wireframe, surface and solid models using CAD. The scope of the course includes: theory of 3D, display 3D models, 3D extrusion, wireframe, solid modeling, and a presentation of 3D models, plotting and rendering 3D Drawings. The course will use the   AutoCAD Drafting and Design Software with application software. (Also offered as DRA 217.)
Prerequisite: CIS217 / DRA 215 or permission of instructor

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 Microsoft Project. 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. (Also offered as MGT 231.)
Prerequisites: CIS 110 & MGT 111 or equivalent business experience.

CIS 235 OBJECT-ORIENTED PROGRAMMING 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 over- loading,

object-based abstract data structures (link lists, stacks, collections) and event-oriented program control.
Prerequisites: CIS 111 or equivalent.

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 with a C or better , or prior object-oriented programming experience and permission of the Instructor. Experience with C or C++ programming is recommended but not required.

CIS 240 ANDROID APPLICATION DEVELOPMENT 3-3-2

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 with a C or better , or prior object-oriented programming experience and permission of the Instructor.

CIS 241 SERVER-SIDE WEB DEVELOPMENT. 3-2-2

Students will learn how to develop dynamic web sites using the server-side technologies ASP.Net and Visual Basic .Net. The architecture of ASP.Net and the range of Web-based applications that can be developed using Microsoft's Visual Studio will be discussed. Students will gain hands-on experience with Visual Basic .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.
Prerequisites: CIS 140 and CIS 111B or permission of the instructor Prior experience with the Visual Basic programming language is recommended but not required.
Corequisite: CIS 245

CIS 243 INTEGRATED OFFICE SOFTWARE APPLICATIONS 3-3-0

In order to further develop word processing, spreadsheet, database, presentation graphics, and Internet skills, this course reviews, extends, integrates, and applies concepts previously learned. Desktop scanners and the Internet will be used to incorporate images into Microsoft Office documents. Decision making and critical thinking skills will be practiced through the use of simulations of typical documents and procedures as employed in the professional world. (Also offered as OFM 243.)
Prerequisite: CIS 110 or OFM 112 or permission of coordinator or instructor.

CIS 244 PC DATA BASE MANAGEMENT SYSTEMS 3-2-2

This course is designed to introduce the student to the concepts involved in designing and using Microsoft Access. Topics to be covered in the course will include discussions of various types of data base structures and manipulations of the data base through the data base language.
Prerequisite: CIS 110 or CIS 155.

CIS 245 DATA BASE MANAGEMENT SYSTEMS/SQL 3-2-2

This course is designed to introduce the student to the concepts involved in designing and using a data base management system. Topics to be considered in the course will include discussion of various types of data base structures, manipulations of a data base structure through applications, query techniques, and an investigation into a data base language.
Prerequisites: CIS 111 or CIS 1101 and either, CIS 110, CIS 155, or CIS 244

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.
Prerequisite: CIS 244 or CIS 245 with "C" or better, or equivalent experience.

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.
Prerequisite (s): CIS 171, CIS 141, and CIS 258 or Permission of the Instructor

CIS 258 ADVANCED WINDOWS SERVER ADMINISTRATION AND SUPPORT 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.
Prerequisite: CIS158 - 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 capstone course prepares students to take appropriate industry certifications in the security field.
Prerequisites: CIS 171 and CIS 158 with C or better or equivalent experience. CIS 141 and CIS 156 recommended.

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, with a C or better.

CIS 277 GAME DESIGN STUDIO 3-2-2
This is the first of the two Electronic Game & Simulation Design capstone courses. Students will work in teams to design a game using industry standard tools and procedures. The design of levels, characters, stories, game mechanics, user interfaces, and puzzles will be explored in depth along with techniques for usability and quality assurance testing. Students will be required to prototype and test small segments of their game to prove the viability of their design. All materials produced in this class will be used as the basis for developing a complete and functional game in Electronic Game & Simulation Design 5: Production Studio.
Co-requisite: CIS 276.

CIS 278 GAME PRODUCTION STUDIO 4-2-4
This is the second of two Electronic Game & Simulation Design capstone courses. Students will work in teams to build a fully functional electronic game using industry standard tools and procedures. Students will use the materials produced in Electronic Game & Simulation Design Development 4: Design Studio (CIS 277) as the basis for the game they will build in this course.
Prerequisites: CIS 276 and CIS 277 with a grade of C or better.

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.

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 response to crime.

CJS 105 CRIMINAL LAW 3-3-0
An introduction to the origin and function 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 interpretations 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.
Prerequisutes: CJS 100 and CJS 105

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. (Also offered as ACC 120)
Prerequisite: ACC 111 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.
Prerequisite: CJS 100

CJS 201 INTRODUCTION TO CRIMINAL FORENSICS 4-3-1
This course will familiarize students with the basic principles and uses of forensic science in the context of theAmerican 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. Completion of a CHE or BIO lab course prior to CJS 201 is recommended, but not required.

CJS 205 ETHICS AND THE 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 ethical decision making. The course will focus upon the judicial system as an institution, the philosophy of the legal system-criminality , liability, and corrections, the role of law enforcement, and current legal issues.
(Core Goal 13) Prerequisite: CJS 100

CJS 220 CRIMINOLOGY 3-3-0
A study of crime and delinquency patterns, their causes, and remedial measures, emphasizing the social, economic, and psychological forces

involved, including the role of treatment and law enforcement. (Also offered as SOC 220)
Prerequisites: CJS100

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 casual theories, and an overview of programs aimed at delinquency prevention and control.
Prerequisite: CJS 100

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.
Prerequisite: CJS 100

CJS 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. Ef fective 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. (Also offered as EMP 250, POL 250, and SOC 250)
Prerequisite: A passing grade in at least one introductory level course in any of the following: CJS,HIS,POL, or SOC.

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 a 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.
Prerequisite: CJS 251

CJS 253 TRANSPORTATION & 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.
Prerequisite: CJS 251

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. (Also offered as SOC 255.)
Prerequisites: CJS 100 or SOC 101, or permission of the Division Dean. CJS

CJS 260 SPECIAL STUDIES IN CRIMINAL JUSTICE 3-3-0
This course will explore topics and areas within the criminal justice field. Subject matter will vary from each semester and reflect an in-depth study of the particular issues being examined. A seminar approach will be employed in this course.
Prerequisites: CJS 100

CJS 265 PUBLIC SAFETY TECHNOLOGY 3-3-0
This course focuses on current themes in public safety technology including 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. (Also offered as EMP 265 & FSC 265)
Prerequisite: FSC 100, EMP 100 or CJS 100, or permission of the Instructor or Director.

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.

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 ef fective 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.

CJS 280 COMPARATIVE CRIMINAL JUSTICE SYSTEMS.......... .3-3-0
The course examines the evolution and operation of criminal justice systems in other nations and cultures. The course will focus on the development of criminal justice in response to social, historical and political factors. Beginning with a brief history of the world's legal systems, followed by an analysis of their key procedural and substantive similarities and differences. The course will then turn to a range of other associated topics including the administration and function of police, corrections and courts, the impact of customary law and immigration on heterogeneous cultures, and the increasing internationalization of both the incidence of crime and the administration of criminal justice.
(Also offered as POL 280.)
Prerequisites: CJS 100 or POL 101, or permission of the Division Dean.

CJS 299 INDEPENDENT STUDIES IN CRIMINAL JUSTICE 3-3-0

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. (Also offered as ESW 101)
(Core Goal 10)
Prerequisites: Students must have successfully completed or tested out of REA 017, REA 010, ESL 010, ENG 010. (Also offered as ESW 101)

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.
(Core Goals 7 and 10)
Prerequisites: Students must have successfully completed or tested out of REA 017 or REA 011 and ESL 010 or ENG 010.

DAN 103 FUNDAMENTAL 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.
Prerequisite: Completion of DAN 102 with a grade of C or better.

DAN 104 MODERN DANCE I 3-3-0
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.
(Core Goal 7)
Prerequisites: Completion of DAN 103 with a grade of C or better or permission of instructor.

DAN 110 INTRODUCTION TO DANCE AS ART IN AMERICA. ... 3-3-0
This course of fers 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, Jose Limon, 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. Through movement activities, students will gain a kinesthetic understanding of various dance styles and will explore the art and craft of dance making as they use movement to articulate their personal vision of dance. The class will attend a live dance performance and write about their experiences.
(Core Goal 7)
Prerequisites: Students must have successfully completed or tested out of REA 017, REA 011, ESL 011, ENG 011.

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.

(Core Goal 7)
Prerequisites: Students must have successfully completed or tested out of REA 017, REA 011, ESL 010, ENG 010.

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: Completion of DAN 121 with a grade of C or better.

DAN 123 BALLET I 3-3-0
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.
(Core Goal 7)
Prerequisites: Completion of DAN 122 with a grade of C or better or permission of instructor.

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: Students must have successfully completed or tested out of REA 017, REA 011, ESL 010, ENG 010.

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: Completion of DAN 131 with a grade of C or better.

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: Students must have successfully completed or tested out of ENG 010 or ESL 010 and REA 010 or REA 017.

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: Completion of DAN 134 with a minimum grade of a C.

DAN 151 DANCE IMPROVISATION 3-3-0
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.
(Core Goal 7)
Prerequisites: Students must have successfully completed or tested out of REA 017, REA 011, ESL 011, ENG 011. DAN 101 recommended as Prerequisites or co-requisite.

DAN 155 DANCE PERFORMANCE ENSEMBLE I 3-3-0
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.

DAN 156 DANCE PERFORMANCE ENSEMBLE II 3-3-0
This course introduces students to the process of preparing for and presenting a dance concert. Each student will choreograph and/ or preform 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.

DAN 157 DANCE PERFORMANCE ENSEMBLE III 3-3-0
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.

DAN 158 DANCE PERFORMANCE ENSEMBLE IV 3-3-0
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.

DAN 161 DANCE REPERTORY AND 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: DAN 104 Modern Dance I or permission of instructor.Students should have previous dance experience and the ability to learn and perform new material. The instructor will evaluate each student's preparedness in the first week of classes.
Co—Requisite: Students must be enrolled in a dance technique course during the same semester.

DAN 162 DANCE REPERTORY AND 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 or permission of instructorStudents should have previous dance experience and the ability to learn and perform new material. The instructor will evaluate each student's preparedness in the first week of classes. Co-Requisite: Students must be enrolled in a dance technique course during the same semester.

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 or permission of instructorStudents should have previous dance experience and the ability to learn and perform new material. The instructor will evaluate each student's preparedness in the first week of classes. Co-Requisite: Students must be enrolled in a dance technique course during the same semester.

DAN 164 DANCE REPERTORY AND PERFORMANCE IV...........3-1-2
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.
Prerequisite(s): DAN 163
Co-requisite(s): Students must be enrolled in a dance technique course during the same semester.

DAN 204 MODERN DANCE II 3-3-0
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.
Prerequisites: Completion of DAN 104 with a grade of C or better.

DAN 205 MODERN DANCE III.................................... 3-3-0
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.
Prerequisites: Completion of DAN 204 with a grade of C or better.

DAN 206 MODERN DANCE IV 3-3-0
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.
Prerequisites: Completion of DAN 205 with a grade of C or better.

DAN 223 BALLET II 3-3-0
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.
Prerequisites: Completion of DAN 123 with a grade of C or better.

DAN 224 BALLET III 3-3-0
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.
Prerequisites: Completion of DAN 223 with a grade of C or better.

DAN 225 BALLET IV 3-3-0
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.
Prerequisites: Completion of DAN 224 with a grade of C or better.

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.
Prerequisites: Completion of DAN 151 with a grade of C or better.

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 the prevention of dental 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.
Prerequisites: Completion of Special Admission Guidelines and admission to the Dental Hygiene Program. Corequisites: DHG 111 and DHG 155

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: Completion of Special Admission Guidelines and admission to the Dental Hygiene Program. Corequisites: DHG 100 and DHG 155

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, processing, 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.
Prerequisites: Completion of Special Admission Guidelines and admission to the Dental Hygiene Program. Corequisites: DHG 100 and DHG 111

**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.
Prerequisites: All first semester courses in the Dental Hygiene Program of Study
Corequisites: DHG 159 and DHG 161

**DHG 159 HISTOLOGY AND PATHOLOGY OF
THE 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: All first semester courses in the Dental Hygiene Program of Study   .
Corequisites: DHG 158 and DHG 161

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 students 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: All first semester courses in the Dental Hygiene Program of Study   .
Corequisite: DHG 158

DHG199 IND. STUDY IN DENTAL HYGIENE 3-3-0

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, finishing and polishing 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.
Prerequisites: All second semester courses in the Dental Hygiene Program of Study.

DHG 226 DENTAL PAIN CONTROL 2-1-3
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 analgesia administration, patient considerations and legal issues will be discussed.
Prerequisites: DHG 224. CorequisitesE: DHG 228 and DHG 261

**DHG 228 THEORY AND PRACTICE OF
DENTAL HYGIENE III 8-4-16**
The 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, condition and drugs of importance in clinical dentistry. Further, this course is designed to broaden the realm of clinical procedures performed by the dental hygiene student and to enhance the student's abilities to integrate basic, dental and psychosocial   sciences in evaluating, planning and implementing a comprehensive dental hygiene treatment plan for varied patient populations.
Prerequisites: DHG 224. Co-requisites: DHG 226 and DHG 261

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: All third semester courses in the Dental Hygiene Program.
Corequisite: DHG 258

**DHG 258 THEORY AND PRACTICE OF
DENTAL HYGIENE IV...6-2-16**
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.
Prerequisites: All third semester courses in the Dental Hygiene Program of Study   .
Corequisite: DHG 253

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: All second semester courses in the Dental Hygiene Program of Study.
Co-requisite: DHG 228

DHG 271 PROFESSIONAL ISSUES IN DENTAL HYGIENE I 1-1-0
The course is a self-directed, instructor guided research course that enhances student knowledge in a variety of dental and dental hygiene topic areas. Students will choose from a variety of topics suggested by and in collaboration with the instructor . The topic list will be generated following evaluation of current research and issues in dentistry and dental hygiene. Topics may include evidence-based treatment planning, product evaluation, trends in patient education strategies, impact of periodontal disease on systemic conditions, and periodontal disease evaluation using recently released American Academy of Periodontology guidelines; emphasis is placed on using technology in order to conduct research.
Co requisite: Current student or graduate of an accredited dental hygiene program with an active license.

ECONOMICS AND FINANCE

ECO 110 ELEMENTS OF ECONOMICS 3-3-0
Students will develop economic literacy in both macro economics (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.
(Core Goals 2 and 9)
Prerequisites: Students must have successfully completed or tested out of: ENG 011 or ESL 011, and MAT 010

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 scare resources in a market economy. Topics include water and air pollution, energy climate change, national parks, and human health issues.
(Core Goals 9, 11, 12 and 13)
Prerequisite: students must have successfully completed or tested out of MAT 011, ENG 011 or ESL 011, and REA 017 or REA 011.

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.
(Core Goals 2, 5 and 9) (ECO 121 and ECO 122 together meet Core Goal 11)
Prerequisites: Students must have successfully completed or tested out of ENG 011 or ESL 011, and MAT 011

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.
(Core Goals 2, 5 and 9) (ECO 121 and ECO 122 together meet Core Goal 11)
Prerequisite: Students must have successfully completed or tested out of ECO 110 or ECO 121.

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: Students must have successfully completed or tested out of MAT 011 and ECO 110, or ECO 121, or ECO 122

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: Students must have successfully completed or tested out of ACC 111 and ECO 110, or ECO 121, or equivalent.

ECO 221 MONEY AND 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.
Prerequisite: ECO 121 and ECO 122

EDUCATION

EDU 100 INTRODUCTION TO EDUCATION 3-3-0
This course is designed to give prospective teachers an introduction to education, including historical, ethical, legal, and theoretical perspectives, cultural influences, as well as classroom management techniques. While in class, students will participate in various instructional strategies both individually and in group settings. The course requires students to complete 20 hours of field experience/observation in an early childhood, elementary, or secondary school setting in order to reflect on present-day practices and the diverse roles and responsibilities of teachers in today's world. This experience will help prospective teachers to confirm their career choice. Students will also apply for all necessary child care background clearances.
(Core Goals 2, 5 and 9)

EDU 114 INFANT AND TODDLER DEVELOPMENT. 3-3-0
This course is designed to acquaint students and parents with the growth and developmental patterns of infants and toddlers. It will enable students to explore the manner in which children learn to relate to their environment. In addition, best methods of building relationships and interactions with infants and toddlers will be studied.

EDU 120 TEACHING WITH TECHNOLOGY................................ 3-3-0
This course will give students the opportunities to explore, utilize, evaluate, and integrate the computer and 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 computers and technology. (Also offered as CIS 120.)

EDU 140 DAY CARE PRACTICUM 6-15-0
This course provides field experience for students in the Certificate

Programs in Day Care. Students spend 15 hours per week in a day care center under the direction of a staff member. They learn how to communicate with young children, plan an appropriate program, establish a routine and deal effectively with parents. Students will be supervised by a faculty member from the college. Students are responsible for transportation.

Prerequisite: Students should complete other requirements in the child care certificate program prior to registering for this course. Co-requisite: It is strongly recommended that this course be taken in conjunction with EDU 233, Early Childhood Curriculum. If, for any reason, the student is not able to do that, s/he should discuss this issue with the Coordinator of Education.

EDU 210 TEACHING YOUNG CHILDREN:
AN INTRODUCTION TO EARLY CHILDHOOD EDUCATION 3-3-0

This course is an introduction to the field of early childhood education and care. It provides a broad overview to the history, philosophy and theories of development as they relate to current best teaching practices. With the increased attention to different kinds of educational standards, the course is directly linked to the NAEYC Learning Standards, the Code of Ethics and the P A Learning Standards for Early Childhood. 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 will be stressed. The development of observation skills combined with practical experience will aid the student in documentation of young children's thinking and behavior during the field experience component of the class. Health and safety in the early childhood environment, classroom management strategies, and communication skills will also be discussed. Throughout the course, discovering who you are in the lives of children will assist in the process of becoming an early childhood professional.

EDU 213 WORKING WITH SPECIAL NEEDS STUDENTS 3-3-0

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.

EDU 224 MUSIC FOR YOUNG CHILDREN 3-3-0

A study of the musical development of children and the materials that will best reveal the creativity in each child will be discussed. Topics covered include the child's voice and singing, listening, body movement and Orff-based performance experiences. Students will learn how to make music an important addition to the curriculum.

EDU 225 GUIDING CHILDREN'S READING DEVELOPMENT 3-3-0

This course covers the full range of teaching reading from emergent literacy skills through elementary school. Included in the course are both theory and practical applications of emergent literacy, word recognition skills, different approaches to teach reading and diagnostic techniques. Students are given practical experience and learn to design reading lessons for children.

Prerequisite: EDU 100

EDU 226 ART FOR YOUNG CHILDREN 3-3-0

The developmental stages of children's art will be explored. Emphasis will be placed on the creative expression of young children through basic art media. Attention will be given to the correlation of art with other school activities.

EDU 227 TEACHING MATHEMATICS TO CHILDREN 3-3-0

This course is designed to teach students how to teach mathematics skills from pre-numbers through elementary school skills. Math readiness skills, the four basic math processes, fractions, geometry, decimals, and the metric system are covered. The course also teaches students to use manipulatives in the teaching of mathematics.

EDU 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.

Prerequisite: EDU 100

EDU 229 TEACHING OF SCIENCE IN THE
PRESCHOOL AND ELEMENTARY GRADES.............................. 3-3-0

A course dealing with the content, methods and materials used in the teaching of science to children. Students will participate in hands-on science activities.

EDU 233 EARLY CHILDHOOD CURRICULUM
AND ADMINISTRATION 3-3-0

Early Childhood Curriculum is a comprehensive course that addresses all aspects of teaching young children based on the framework of the Creative Curriculum. The Creative Curriculum defines what to teach, why the content and skills are appropriate and where, when and how to teach effectively. It is linked to assessment and families, and based in current theory and research. We explore both the Infant/Toddler and Preschool age groups. Throughout the course, students will be exposed to various approaches to curricula with emphasis on emergent curriculum. Students will be expected to develop appropriate curricular strategies to be used in any early childhood program.

It is highly recommended that this course be taken with EDU 140 or EDU 250.

EDU 245 CONNECTING FAMILIES,
SCHOOLS AND COMMUNITIES 3-3-0

This course, designed for Education majors, will allow students to explore the concept of family, beginning with an understanding of their own families and moving on to 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.

(Core Goals 5 and 12)

Prerequisite: Students must have successfully tested out of ENG 010 or ESL010, ENG 011 or ESL 011, REA 010 or REA 014, REA 011 or REA 017 and ENG 101

EDU 250 STUDENT TEACHING **6-15-0**
This course provides field experience for students in the Education in the Early Years Program: Birth through Fourth Grade. It acts as a capstone course for this program. Students spend 15 hours per week observing, planning and implementing their plans in an early childhood classroom under the daily supervision of an experienced teacher. A faculty member from the College oversees the entire placement, 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. Transportation is the responsibility of the student. 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 of student teacher supervisor.)
Pre-requisite: All required courses in the Education in the Early Years Program: Birth through Fourth Grade should be taken prior to this course or at the discretion of the Education coordinator. Co-Requisite: EDU 233

EDU 299 INDEPENDENT STUDY IN EDUCATION **3-3-0**

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 an 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 **3-2-2**
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 and EMP 110.

EMP 210 LEADERSHIP& INFLUENCE IN EMERGENCY 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 and EMP 110.

EMP 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. (Also offered as POL 250, SOC 250, and CJS 250.)
Prerequisite: A passing grade in at least one introductory level course in any of the following: CJS, HIS, POL, or SOC.

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. (Also offered as CJS 265 and FSC 265.)
Prerequisite: FSC 100, EMP 100 or CJS 100, or permission of the instructor or director.

EMP 299 INDEPENDENT STUDY IN EMERGENCY PLANNING.....3-3-0

ENGINEERING SCIENCE

EGR 102 INTRODUCTION TO ENGINEERING 3-3-0
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. V arious forms of technical communication are emphasized.
Prerequisite: Students must have successfully completed or tested out of MA T 011 and REA 011

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.
Prerequisite: MAT 100 or equivalent.

EGR 115 ENGINEERING GRAPHICS 3-2-2
This course covers the basics of graphical solid-model design from conception through to final product. Drawing dimensioning and tolerancing are also discussed, as is the solution to 3D problems and spatial analysis through descriptive geometry.
Prerequisite: MAT 100 or equivalent.

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.
Prerequisite: EGR 111, EGR 115, MAT 190 or equivalent and PHY 151.

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.
Prerequisites: EGR 203 Co-requisite: MAT 201

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.
Prerequisites: EGR 111 and PHY 152

EGR 211 CIRCUITS AND DEVICES. 4-3-3
This course covers the fundamental laws and procedures of electric circuit analysis including Kirchhof f's laws, superposition, and Thevenin's and Norton's theorems. Elementary transients, sinusoidal steady-state analysis, impedance, power transfer and operational amplifiers are covered.
Prerequisites: EGR 111, MAT 190 Corequisites: MAT 201 and PHY 152

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.
Prerequisites: EGR 203 and MAT 201

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
Prerequisites: EGR 211 Linear Electrical Systems I, MA T 201 Calculus II, PHY152 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.

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.

EGR 299 INDEPENDENT STUDY IN ENGINEERING 3-3-0

ENGINEERING TECHNOLOGY

EGT 110 BASIC ELECTRONICS 4-3-3
This course introduces students to fundamental electronic circuits and devices. Topics covered include Ohm's law, series-parallel circuits, LRC circuits, magnetism and the sine wave. Devices studied include resistors, capacitors, inductors, relays, transformers, semiconductor diodes, transistors, and thyristors. Laboratory experiments supplement classroom theory.
Prerequisite: MAT 011 or equivalent.

EGT 190 PRINCIPLES OF CRITICAL
THINKING 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 technology student's ability to troubleshoot" 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.
Prerequisites: High School graduate.

EGT 203 APPLIED STATICS 4-3-3
This course covers Newton's 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.
Prerequisites: EGT 190, MAT161 and MAT 162 or equivalent, and PHY 121 or equivalent.

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.
Prerequisites: EGT 190, MAT 161 and MAT 162 or equivalent, and PHY 121 or equivalent.

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.
Prerequisites: EGT 190. PHY 122 or equivalent. MAT 161 or equivalent.

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.
Prerequisites: EGT 190, PHY 122 or equivalent, MAT 161 and 162 or equivalent.

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.
Prerequisites: EGT 190, MAT 116, MAT 161 and MAT 162 or equivalent, PHY 121 and PHY 122 or equivalent, and EGR 10.

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.
Prerequisites: EGT 190, EGT 203, PHY121 or equivalent, MAT116, MAT 161 and MAT 162 or equivalent, EGR 103.

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 laboratories experiences.
Prerequisites:
EGT 190 - Principles of Critical Thinking in Technology
MAT 161 - Precalculus I, and
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 systems reinforce the material covered in class.
Prerequisites:
EGT 190 - Principles of Critical Thinking in Technology
PHY 122 - General Physics II, or equivalent

MAT 161 - Precalculus I, and
MAT 162 - Precalculus II
or
MAT 115 - Applied Algebra/Trigonometry I, and
MAT 116 - Applied Algebra/Trigonometry II, or equivalent

EGT 235 INSTRUMENTATION AND 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.
Prerequisites: EGT 190, PHY 121 and PHY 122 or equivalent, MAT 161 and 162 or equivalent, EGR 111 or equivalent.

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.
Prerequisites:
EGT 190 - Principles of Critical Thinking in Technology
EGT 210 - Digital Devices EGT 211 - AC/DC Circuits EGT 230 - Analog Devices
PHY 121 - General Physics I, and
PHY 122 - General Physics II, or equivalent

MAT 161 - Precalculus I, and
MAT 162 - Precalculus II
or
MAT 115 - Applied Algebra/Trigonometry I, and
MAT 116 - Applied Algebra/Trigonometry II, or equivalent
EGR 111 - Engineering Computations, or equivalent

ENGLISH

*ENG 010 BASIC WRITING I 0-3-0
ENG 010 uses sentence and paragraph writing and readings to focus on grammar, sentence structure, and punctuation. The course is required of all students whose scores on the placement test indicate a need for intensive review of basic sentence skills. ENG 010 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.
*Placement into developmental courses restricts college level course choices.

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.
Prerequisite(s): 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: "Placement test score of 2 or 3, or agrade of "C" or better in ENG010.
*Placement into developmental courses restricts college level course choices.

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.
(Core Goals 1a and 5)
Prerequisites: Students must have successfully completed or tested out of REA 017 or REA 011, ESL 011 or ENG 011 with a grade of "C" or better.
This course has an Honors version. It of fers qualified students an opportunity to complete a more intensive version of the course goals in a small classroom setting. Students should expect more in-depth reading, writing and oral assignments and classroom discussion.

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.
(Core Goals 1a, 2 and 5)
Prerequisite: Students must have successfully completed or tested out of ENG 101 with a grade of "C" or better . This course has an honors version. It of fers qualified students an opportunity to complete a more intensive version of the course goals in a small classroom setting. Students should expect more in-depth reading, writing and oral assignments and classroom discussion.

ENG 115 WRITING FOR TECHNICAL COMMUNICATION **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.
(Core Goal 1a and 5)
Prerequisites: ENG 101 with a grade of "C" or better (replaces ENG 102, with departmental approval, for two-year career technical students and for students who plan to transfer to a four-year technical institution).

ENG 117 WRITING FOR BUSINESS AND 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 with a grade of "C" or better.

ENG 199 INDEPENDENT STUDY IN COMPOSITION **3-0-6**

ENG 201 SURVEY OF ENGLISH LITERATURE I...................... **.3-3-0**
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.
(Core Goals 5, 6 and 7)
Prerequisites: C or better in ENG 101 or equivalent

ENG 202 SURVEY OF ENGLISH LITERATURE II...................... **3-3-0**
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.
(Core Goal 7)
Prerequisites: C or better in ENG 101 or equivalent

ENG 211 SURVEY OF AMERICAN LITERATURE I **3-3-0**
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.
(Core Goal 7)
Prerequisites: C or better in ENG 101 or equivalent
This course has an honors version. It of fers qualified students an opportunity to complete a more intensive version of the course goals in a small classroom setting. Students should expect more in-depth reading, writing and oral assignments and classroom discussion.

ENG 212 SURVEY OF AMERICAN LITERATURE II................... **3-3-0**
A chronological survey of American literature from the Civil W ar to the present. Significant works of American writers are studied for their literary value and in their historical and philosophical contexts.
(Core Goal 7)
Prerequisites: C or better in ENG 101 or equivalent.

ENG 221 LITERATURE OF THE WESTERN WORLD I 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.
(Core Goals 5, 6 and 7)
Prerequisites: C or better in ENG 101 or equivalent

ENG 222 LITERATURE OF THE WESTERN WORLD II 3-3-0
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 Molière to the present are studied.
(Core Goal 6,7 and 12)
Prerequisites: C or better in ENG 101 or equivalent

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 are 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 skill in the use of storytelling and dramatization. Students will learn how to assess the quality and appropriateness of children's literature for various ages.
Prerequisite: EDU 100

ENG 235 POETRY 3-3-0
The 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.
(Core Goal 7)
Prerequisites: C or better in ENG 101 or equivalent

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.
(Core Goal 7)
Prerequisites: C or better in ENG 101 or equivalent.

ENG 237 DRAMA 3-3-0
The aim of the course will be 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.
(Core Goal 7)
Prerequisites: C or better in ENG 101 or equivalent

ENG 238 THE LITERARY VISION OF FILM 3-3-0
This course focuses on film as a mode of literary expression. After 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 related to film are not studied.
(Core Goal 7)
Prerequisites: C or better in ENG 101 or equivalent .

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.
(Core Goal 7)
Prerequisites: C or better in ENG 101 or equivalent.

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.
(Core Goal 6, 7, and 12)
Prerequisites: C or better in ENG 101 or equivalent

ENG 248 NATIVE AMERICAN LITERATURE 3-3-0
Students read a variety of Native American literature, including autobiographies, fiction, poetry , and drama, focusing primarily on writing since 1970. In addition to this focus, students learn background historical and cultural material.
(Core Goal 7)
Prerequisites: C or better in ENG 101 or equivalent

ENG 255 WOMEN IN LITERATURE 3-3-0
This course will analyze the image of women in literary works. 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.
(Core Goals 7 and 12)
Prerequisites: C or better in ENG 101 or equivalent

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.
(Core Goal 7)
Prerequisites: C or better in ENG 101 or equivalent

ENG 257 CONTEMPORARY LITERATURE 3-3-0
Contemporary Literature is a course 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.
(Core Goal 7)
Prerequisites: C or better in ENG 101 or equivalent

ENG 265 CREATIVE WRITING 3-3-0
This course entails the study and practice of the basic techniques of fiction, poetry, and drama. Students study and practice to sharpen literary writing talent with emphasis on originality, style, content and form. Class enrollment limited to 19 students.
(Core Goal 7)
Prerequisites: C or better in ENG 101 or equivalent

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.
(Core Goal 7)
Prerequisites: ENG 265 or portfolio approved by instructor.

ENG 275 SHAKESPEARE..3-3-0
The 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.
(Core Goal 7)
Prerequisites: C or better in ENG 101 or equivalent

ENG 285 SOPHOMORE LITERATURE STUDIES 3-3-0
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: C or better in ENG 101 or equivalent.

ENG 299 INDEPENDENT STUDY IN LITERATURE 3-3-0

ENGLISH AS A SECOND LANGUAGE

*ESL 003 ENGLISH AS A SECOND LANGUAGE I. 0-6-0
This semi-intensive (two hours a day, five days a week for seven weeks) ESL course introduces the student to the alphabet and basic vocabulary of the English language that will help them to talk about themselves, their families, jobs, shopping, and their new community. The course assumes that students are literate in their native language. 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: Appropriate placement test score.
*Placement into developmental courses restricts college level course choices.

*ESL 004 ENGLISH AS A SECOND 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 with grade of "C'or better or appropriate placement test score.
*Placement into developmental courses restricts college level course choices.

*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 with grade of "C'or better or appropriate placement test score.
*Placement into developmental courses restricts college level course choices.

*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 with grade of "C'or better or appropriate placement test score.
*Placement into developmental courses restricts college level course choices.

ESL 009 ORAL/AURAL SKILLS 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 course is a prerequisite for ESL students who plan to take SPC 1 10. 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 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 sentence structures: word order, word choice, sentence combining and punctuation. Students will build upon their sentence skills to develop a unified paragraph of at least seventy- five words in length

utilizing topic sentences. This is a required course for students who have successfully completed ESL 006. 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 with grade of "C" or better or appropriate placement test score. *Placement into developmental courses restricts college level course choices.

*ESL 011 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 with grade of "C" or better or appropriate placement test score. *Placement into developmental courses restricts college level course choices.

ESL 014 VOCABULARY AND READING COMP. DEVELOP. I....... 0-3-0
This course is designed to increase the non-native English speaking student's general English vocabulary, so that he/she will be better able to comprehend written materials at the post-secondary level. Students will use texts of narrative non-fiction to build their knowledge of the American English language. Expanding vocabulary through a study of idioms, roots, and affixes is also included. 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. (Also offered as REA 014).
Prerequisites: Students must have successfully completed or tested out of:
ESL 006 - English as a Second Language II Or by permission of the instructor

ESL 017 VOCABULARY DEVELOPMENT II 0-3-0
Vocabulary Development 11 is designed to prepare the more advanced non-native English speaking student to become ready to succeed in a college curriculum. The materials are at an intermediate to advanced level. The student will read cross-cultural stories, passages, essays, and explore readings from American authors, learn about American culture through the readings and respond to them orally and in writing. The student will also be responsible for learning extensive new vocabulary from their text. 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. (Also offered as REA 017)
Prerequisites: Students must have successfully completed or tested out of: REA 014 - Vocabulary and Reading Comprehension Development I

ENTREPRENEURSHIP

ETP 110 ENTREPRENEURIAL ESSENTIALS 3-3-0

This course will enable students to evaluate the entrepreneurial venture for themselves, as well as assist them in launching their new business. Students will examine fundamental elements of the entrepreneurial process including personal, sociological, and environmental considerations. The course will provide students with a framework for selecting, funding, and starting their new venture. In addition, critical factors for starting a new enterprise will be explored.
(Core Goals 2 and 13)
Prerequisites: Students must have successfully completed or tested out of developmental courses.

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: Students must have successfully completed or tested out of developmental courses.

ETP 112 ENTREPRENEURIAL ACCOUNTING 3-3-0
This course will provide the student with an overview of business financial management. Emphasis is placed on financial statement analysis, management of cash flow, risk and return, and sources of financing. Upon completion, students should be able to interpret and apply the principles of financial management to their own entrepreneurial venture.
Prerequisites: Students must have successfully completed or tested out of developmental courses.

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: Students must have successfully completed or tested out of developmental courses.

EXERCISE SCIENCE AND WELLNESS

ESW 100 FOUNDATIONS OF PHYSICAL EDUCATION 2-1-2
This course is designed to acquaint the student with concept 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.
(Core Goal 10)

ESW 101 INTRODUCTION TO DANCE STUDIES 3-1-2
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, cardio/respiratory fitness and endurance, strength training, stretching for flexibility, diet and nutrition, and caring for the dancing body. (Also offered as DAN 101)
(Core Goal 10)

**ESW 102 EXERCISE SCIENCE, WELLNESS,
AND SPORT STUDIES.** 3-3-0
This course is designed to orient students to various fields of study in Exercise Science and Wellness. The course is designed as an entry level course for majors. It provides an introduction to the profession through a broad range of classroom presentation and field experiences in several areas of professional specialization such as teaching, exercise science, sport management, and health and wellness. The course prepares ESW majors to develop an educational and professional plan. Open to majors and non-majors.
(Core Goals 5 and 10)

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.
(Core Goal 10)

ESW 107 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.
(Core Goal 10)
Prerequisites: Students must have successfully completed or tested out of: ENG 011 or ESL 011, ENG 010 or ESL 010, REA 011 or REA 017, REA 010 or REA 014

ESW 113 RACQUETBALL AND BADMINTON 2-1-2
This course is designed to develop and improve students' competence in the skills of racquetball and 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.
(Core Goal10)

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.

ESW 123 GOLF.. 2-1-2
This course is designed to introduce the student 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.
(Core Goal 10)

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.
(Core Goal 10)

ESW 137 INTRODUCTION TO TENNIS 2-1-2
The introductory level of tennis course 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.
(Core Goal 10)

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.
(Core Goal 10)

**ESW 146 CONDITIONING, WEIGHT TRAINING,
AND WEIGHT CONTROL.**..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.
(Core Goal 10)

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.
(Core Goal 10)
Prerequisites: Students must have successfully completed or tested out of ESL 009, ESL 011. ENG 011, REA 017, and REA 011.

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 guidelines for advanced study will also be discussed.
(Core Goal 10)

ESW 160 MARTIAL ARTS AND 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.
(Core Goal 10)

**ESW 180 HEALTH AND WELLNESS FOR THE
WHOLE PERSON** 3-3-0
The course is a blend of traditional health-related topics such as sexuality, nutrition, drugs, death education, consumerism, emotional health, and fitness with the more modern concepts and practices of holistic, humanistic, and wellness education. This course is designed to assist students in making decisions in all areas that affect their personal health.
(Core Goals 5 and 10)

ESW 185 ISSUES IN WOMEN'S HEALTH 3-3-0
This survey course will introduce students to the unique needs of women in issues related to health and wellness. The relationship of

historical, political, biological, socio-cultural and psychological factors that influence women's health and wellness will also be examined. Topics such as reproductive and sexual health, cardiovascular disease, obesity, diabetes, cancer, stress and abuse will be explored from a holistic perspective. Students will complete an individualized plan to improve their personal health and wellness as the final activity for this course. (Also offered as HCP 185).
(Core Goals 10 and 12)

ESW 199 INDEPENDENT STUDY IN EXERCISE SCIENCE AND WELLNESS 1-0-0

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 to enable the students to succeed in implementing good nutrition in their own lives.
(Core Goals 2, 5, 10 and 12)

ESW 207 FOOD & CULTURE 3-3-0
This survey course will introduce 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. (Also offered as GEO 207)
(Core Goals 5, 9, 10 and 12)

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: Students must have successfully completed or tested out of ENG 011, ESL 009, ESL 011, REA 017, and REA 011.

ESW 210 HOLISTIC HEALTH: COMPLEMENTARY AND 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. (Also offered as NUR 210.)
(Core Goal 10)

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, behavior, 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, mediation, breathing, journaling, guided imagery, aromatherapy, music and art therapies and humor within a holistic framework. (Also offered as NUR 214)
Completion of ESW/NUR 210 - Holistic Health: Complementary and Alternative Health Practices and/or ESW 208 - Integrative Nutrition is recommended but not required.
Prerequisites: Students must have successfully completed or tested out of ENG 101, ESL 009, ESL 011, REA 017, REA 011.

ESW 215 PREVENTION AND 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.
Prerequisite: BIO 129 or equivalent recommended.

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.
(Core Goals 2, 5 and 10)

ESW 222 INTRODUCTION TO KINESIOLOGY 3-3-0
This course is designed to introduce the students to the basic fundamentals of human movement through the study of joint movements. It will incorporate 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 and daily living activities in sport, dance and exercise.
Prerequisites: BIO 129 with grade of "C" or better OR BIO 131 AND BIO 132 with grade of "C" or better in each course

ESW 224 INTRODUCTION TO EXERCISE PHYSIOLOGY. 3-3-0
An introductory course in exercise physiology designed primarily for the student interested in the fitness specialist, fitness management or personal exercise training certification programs. The course is designed to provide the student with an understanding of acute and chronic responses to exercise. Particular attention will be placed upon an understanding of muscular bioenergetics and metabolism as well as the cardiopulmonary and musculoskeletal responses to physical

exercise. Special topics to be addressed include training techniques, ergogenic aids in sport, and performance at environmental extremes. (Core Goals 5 and 10)
Prerequisites: BIO 129 with grade of "C" or better OR BIO 131   AND BIO 132 with grade of "C" or better in each course.

ESW 226 ASSESSMENT OF HUMAN FITNESS 3-3-0
This course is designed to introduce the student to the use of health assessment technology and testing mechanisms needed to assess physical fitness status of the apparently healthy population.   The five (5) components of physical activity: Cardio Respiratory Endurance; Muscular Fitness; Body W eight and Composition; Flexibility; and Neuromuscular Relaxation will be addressed.
Prerequisites: ESW 224 and PE.FIT major designation or permission of the ESW Coordinator

ESW 228 TRENDS IN EXERCISE SCIENCE AND WELLNESS 2-2-0
This capstone course in the Exercise Science and W ellness 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: Students must have successfully completed or tested out of the previous three semesters in the ESW AS program of study.

ESW 235 PERSONAL HEALTH AND WELLNESS EDUCATION 3-3-0
This course is designed for individuals in teacher preparation, health care professions, allied health careers, counselors, and for those with special health interests. The course helps students understand and integrate strategies for change which include promoting personal, community and global health behavior changes. The course explores each domain of health and wellness: physical, social, emotional, environmental, sexual, and spiritual. Specific topics covered include managing stress, healthy relationships and sexuality, addictive substances, nutrition essentials, weight management, personal fitness, chronic disease, the aging process, and complementary and alternative medicine.
(Core Goals 2. 5 and 10)

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.
(Core Goals 5 and 10)

ESW 245 SAFETY AND 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.
(Core Goals 2, 5 and 10)
Prerequisites: Students must have successfully completed or tested out of ENG 011, ESL 009, ESL 011, REA 017, REA 011.

ESW 246 CARDIO PULMONARY RESUSCITATION FOR THE HEALTH CARE PROFESSIONAL 1-1-0
The Cardio Pulmonary Resuscitation (CPR) for the Health Care 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. These healthcare providers include but are not limited to various health career students, nurses, emergency medical technicians, respiratory therapists, medical assistants, public safety of ficials and other health care personnel. (Also offered as HCP 246.)

ESW 255 HUMAN SEXUALITY 3-3-0
A survey of the major topics of human sexuality with emphasis placed on: sexual development, functioning, behavior , gender identification, reproduction, interpersonal relationships, health, historical and cultural sex studies, and sex education. (Also offered as PSY 255.)
(Core Goals 9, 10, 12 and 13)

ESW 296 PRACTICUM FOR THE HEALTH AND FITNESS PROFESSIONAL 3-1-4
Integrating a seminar and practicum experience in this course serves as the capstone course for the Health and Fitness Professional   AAS program. 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 is eligible to apply for certification exams.
Prerequisites: Completion of semesters 1, 2 and 3 of the Health and Fitness Professional curriculum.
Corequisite: ESW 215

ESW 299 INDEPENDENT STUDY IN EXERCISE SCIENCE AND WELLNESS 2-0-0

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, fire protection and fire control and extinguishment; a career orientation; current legislative developments; and a review of current and future fire protection problems.

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; communications problems, command and control.
Prerequisite: FSC 100.

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.
Prerequisite: FSC 100.

FSC 103 FIRE DEPARTMENT ORGANIZATION AND ADMINISTRATION **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.
Prerequisite: FSC 100.

FSC 104 BUILDING CONSTRUCTION FOR FIRE SCIENCE **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.
Prerequisite: FSC 100.

FSC 105 FIRE PREVENTION AND CODE ENFORCEMENT .... **.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.
Prerequisite: FSC 100.

FSC 106 FIRE INVESTIGATION **3-3-0**
The topics covered include: causes of fires, arson laws, investigative techniques, recognition and preservation of evidence, interrogation of witnesses, reports, court procedure, testimony, and legal opinions.
Prerequisite: FSC 100.

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.
Prerequisite: FSC 100.

FSC 110 SPECIAL STUDIES IN FIRE SCIENCE.......................... **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 student and the community along with the future development of the program.
Prerequisites: FSC 100

FSC 265 PUBLIC SAFETY TECHNOLOGY .... **.3-3-0**
This course will focus on current themes in public safety technology, to include such topics as: Computerized 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. (Also offered as CJS 265 &EMP 265.)
Prerequisite: FSC 100, EMP 100, or CJS 100, or permission of the instructor or director.

FSC 299 INDEPENDENT STUDY IN FIRE SCIENCE AND PUBLIC SAFETY **3-3-0**

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: Students must have successfully completed or tested out of REA 017 or REA 011, ESL 011 or ENG 011(Core Goal 12)

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. (Core Goal 12)
Prerequisite: FRE 101 or equivalent.

FRE 190 INTRODUCTORY FRENCH FOR BUSINESS.......... ...... **3-3-0**
A continuation of FRE 101, focusing on the French language in the context of business without foregoing the necessary skills for daily life. The systematic presentation and analysis of each topic of the world of business will develop all four basic language skills: speaking, listening, writing, and reading, In addition, presentations of the latest trends in French business practice and culture, supported by selected sites on the internet, will help students to become up-to-date with French business practices in North America. The extensive use of audiovisual material will be continued. Active participation of the students is highly recommended.
Prerequisite: FRE 101 or equivalent

FRE 199 INDEPENDENT STUDY IN FRENCH.......... .... **3-3-0**

FRE 201 INTERMEDIATE FRENCH I. **3-3-0**
Continuation of the language structures. Dialogues and skits give the student practice in conversation and composition. Exploration of the culture of the French-speaking world will be continued.
Prerequisite: FRE 102.and/or FRE 190 or equivalent (2 years of high school French)

FRE 202 INTERMEDIATE FRENCH II.. 3-3-0
A continuation of FRE 201, with readings of selected writers, and discussions and compositions in French related to the readings.
Prerequisite: FRE 201 or approval of instructor

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 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. This class is taught in French. Outside reading is required.
Prerequisite: FRE 202 oru Approval of instructor.

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. This class is taught in French. Outside reading is required.
Prerequisite: FRE 251 or approval from instructor

FRE 299 IND STUDY IN FRENCH... 3-3-0

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.
(Core Goals 2, 5, 9 and 12)

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.
(Core Goals 2, 5, 9, 11 and 12)
This course has an honors version. It of fers qualified students an opportunity to complete a more intensive version of the course goals in a small classroom setting. Students should expect more in-depth reading, writing and oral assignments and classroom discussion.

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.
(Core Goals 2 and 11)
Prerequisites: Students must have successfully completed MAT 011 with a minimum grade of "C" or achieved a Math placement test recommendation of "UND 116" or "ABV 100".

This course has an honors version. It of fers qualified students an opportunity to complete a more intensive version of the course goals in a small classroom setting. Students should expect more in-depth reading, writing and oral assignments and classroom discussion.

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 AND CULTURE 3-3-0
This survey course will introduce 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. (Also offered as ESW 207)
(Core Goals 5. 9, 10 and 12)

GEO 210 INTRODUCTION TO GEOGRAPHIC INFORMATION SYSTEMS 3-3-0
This introduction to Geographic Information Systems is structured to develop knowledge of various geographic location systems and skill in basic geographic analysis with ArcView 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.
(Core Goals 2 and 4)
Prerequisites: Students must have successfully completed or tested out of MAT 011, REA 011, CIS 100 or permission of instructor

GEO 220 MAP DESIGN IN GEOGRAPHIC INFORMATION SYSTEMS (GIS) 3-3-0
This course is an introduction to the art and science of cartography and geographic information systems and is structured to develop skills in design and use of analytical and computer-mapping systems. This course transfers to West Chester University and the Pennsylvania State University (Main Campus) as a Geography Elective.
(Core Goals 2, 4, 5 and 7)
Prerequisites: Students must have successfully completed or tested out of MAT 011, REA 011, CIS 100 or permission of instructor.

GEO 230 GEOGRAPHIC INFORMATION SYSTEMS (GIS) APPLICATIONS.... 3-3-0
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.
Prerequisite: GEO 210 or GEO 220

GEO 235 SUSTAINABLE CLIMATE COMMUNITIES 3-3-0
This course enables students to participate in building more sustainable communities in the face of changing climates. Students will analyze the science of climate change and research the forces creating the diversity of opinions, competing ethical systems and economic interests around

this topic. This course includes service learning, climate modeling and secondary social science research.
(Core Goals 2, 5, 9, 11, 12 and 13)
Prerequisite: Students must have successfully completed or tested out of REA 011 and must have successfully completed or tested out of ESL 011 or ENG 011.

GEO 238 INTRODUCTION TO URBAN AND 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.
Prerequisite: GEO 137

GEO 299 INDEPENDENT STUDY...3-3-0

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 field trips and Saturday field trips will be taken.
Pre-requisite: MAT 011
(Core Goals 2 and 8)

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.
(Core Goals 2 and 8)

GLG 121 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 of 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).
(Also offered as AST 120 and PHY 120.)
(Core Goals 2, 5 and 8)
Prerequisites: A minimum grade of "C" or better within 5 years in both MAT 011 and ESL 011 or ENG 011.

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.
Prerequisite: Students must have successfully completed or tested out of MAT 011, ESL 011 or ENG 011, and REA 011.
(Core Goals 2 and 8)

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 GLG 152 are designed to accommodate requirements of a 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.
Prerequisiite: MAT 011 (Core Goals 2 and 8)

GERMAN

GER 101 ELEMENTARY GERMAN I 3-3-0
Elementary German I will focus on mastering the basic communicative situations in German. 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. Active participation of the student is essential for success in this class.
(Core Goal 12)
Prerequisite: Students must have successfully completed or tested out of REA 017 or REA 011, ESL 011 or ENG 011

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.
Prerequisite: GER 101 or approval of instructor.
(Core Goal 12)

GER 111 THE WORLD OF GERMANY I 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 199 INDEPENDENT STUDY IN GERMAN 3-3-0

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.
Prerequisite: GER 102 or equivalent (two years of high school German).

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.
Prerequisite: GER 201 or equivalent.

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. This class is taught in German. Outside reading is required.Prerequisite: GER 202 or approval of instrctor.

GER 252 ADVANCED GERMAN II 3-3-0
Advanced German II is a continuation ofAdvanced 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. This class is taught in German. Outside reading is required.
Prerequisite: GER 251 or approval of instructor

GER 299 INDEPENDENT STUDY..3-3-0

HEALTH CARE PROFESSION

HCP 105 CAREERS IN HEALTHCARE 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 which 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 MEDICAL LAW AND ETHICS FOR HEALTH CARE PROFESSIONALS 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.
(Also offered as MAS 114.)
(Core Goal 13)

HCP 116 MEDICAL BUSINESS PRACTICES...............................4-3-2
The course builds a solid foundation in Medical Office Administrative Assisting and introduces students to the administrative procedures and business practices commonly performed in medical business practices. Emphasis on medical ethics, communication skills, operational functions and workplace dynamics will help prepare the student for entry level office management. Course specific competency evaluations must be successfully completed by the student. (Also offered as MAS 116.)
Pre-requisites: Students must have completed or successfully tested out of MAT 010, ENG 011 and REA 011

HCP 120 ETHICAL ISSUES AFFECTING CONSUMERS AND THE HEALTH CARE 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.
(Also offered as PHI 120.)
(Core Goals 2, 5, 6, 12 and 13)

HCP 185 ISSUES IN WOMEN'S HEALTH 3-3-0
This survey course will introduce students to the unique needs of women in issues related to health and wellness. The relationship of historical, political, biological, socio-cultural and psychological factors that influence women's health and wellness will also be examined. Topics such as reproductive and sexual health, cardiovascular disease, obesity, diabetes, cancer, stress and abuse will be explored from a holistic perspective. Students will complete an individualized plan to improve their personal health and wellness as the final activity for this course.
(Also offered as ESW 185).
(Core Goals 10 and 12)

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, pharmacokinetics, pharmacodynamics, drug toxicity, and therapeutic monitoring.
(Also offered as NUR 220).

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 develop fundamental concepts for the meaning of various medical nomenclature. Accurate spelling, medical definitions, and medical abbreviations are key elements to this course.
Prerequisite(s): Students must have successfully completed or tested out of:ENG 011, or ESL 011 or permission of the coordinator

**HCP 225 HEALTH INSURANCE AND
PROFESSIONAL BILLING** 3-3-0
This course is designed to introduce the student to the health insurance industry and the accurate processing of health insurance claims. The course will explore the basic concepts of health insurance and related federal healthcare legislation, and examine several health insurance models. Students will develop a basic knowledge of national diagnosis and procedural coding and learn the process of completing insurance claims.

HCP 226 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 Care Portability and Accountability Act (HIPAA) including the validation of coded clinical information. The ICD-10-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-10-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.
Prerequisite(s): Students must have successfully completed or tested out of REA 011.
HCP 224 Medical Terminology
Co-requisite(s): BIO 103

HCP 227 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 Care 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.
Prerequisite(s): HCP 226 Principles of Medical Coding I.

HCP 228 ELECTRONIC HEALTH RECORDS MANAGEMENT.....3-3-0
The course provides the student with a comprehensive understanding of electronic health record management and utilization. Emphasis on the creation, use, and maintenance of electronic health records, along with an introduction to the terminology and technology associated with the operational use of these records provides the student with the necessary skills to perform these operations in a medical office setting.
Prerequisites: Students must have successfully completed or tested out of REA 011 & HCP 224.

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.
Prerequisite(s): HCP 226 Principles of Medical Coding I
Co-requisite(s): HCP 227 Principles of Medical Coding II

**HCP 246 CARDIO PULMONARY RESUSCITATION
FOR THE HEALTH CARE PROFESSIONAL** 1-1-0
The Cardio Pulmonary Resuscitation (CPR) for the Health care 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 oreign-body airway obstruction (FBAO). It is intended for individuals who provide healthcare to clients in a wide variety of venues. These healthcare providers include but are not limited to various health career students, nurses, emergency medical technicians, respiratory therapists, medical assistants, public safety of ficials and other health care personnel. (Also offered as ESW 246.)

HISTORY

**HIS 101 HISTORY OF WESTERN CIVILIZATION I
ANCIENT MEDIEVAL & 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.
(Core Goals 6, 7, 9, 12 and 13)
Prerequisites: Students must have successfully tested out of/or completed ESL 011 or ENG 011 and REA 011 or REA 017.
This course has an honors version. It of fers qualified students an opportunity to complete a more intensive version of the course goals in a small classroom setting. Students should expect more in-depth reading, writing and oral assignments and classroom discussion.

**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 W est on the rest of the world through imperialism, totalitarianism and conflict. The Cold W ar and the modern period conclude the course.
(Core Goals 6, 9, 12 and 13)
Prerequisites: Students must have successfully tested out of/or completed ESL 011 or ENG 011 and REA 011 or REA 017.
This course has an honors version. It of fers qualified students an opportunity to complete a more intensive version of the course goals in a small classroom setting. Students should expect more in-depth reading, writing and oral assignments and classroom discussion.

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.
(Core Goal7)

HIS 122 WORLD CIVILIZATIONS 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 1500The interrelationships between the civilizations of Asia, Africa, Europe and the Americas

provide many opportunities for comparison of their varied histories.This course will help students gain a clearer understanding of a complicated, interdependent modern world.
(Core Goals 6 and 12)

HIS 160 HISTORIC PRESERVATION 3-3-0
This is a one-semester course on historic preservation in the United States. Topics include the history of historic preservation, a brief survey of architecture, the relationship of archaeology and material culture to historic preservation and an overview of the National Register of Historic Places and the requirements and benefits of listing a property in the National Register. The role of local, state and federal governments and the role of the individual in historic preservation will be explored.

HIS 203 HISTORY OF THE UNITED STATES: TO 1877...............3-3-0
A survey of the political, social, economic, and intellectual history of the United States from pre-Columbian Native Americans through the period of the Civil War and Reconstruction.
Prerequisites: Students must have successfully tested out of/or completed ESL 011 or ENG 011, and ESL 017 or REA 011 (Core Goals 6, 9 and 12)

HIS 205 HISTORY OF THE UNITED STATES: 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 20th Century. (HIS 205 can be taken without taking HIS 203.)
Prerequisites: Students must have successfully tested out of/or completed ESL011 or ENG 011, and ESL 017 or REA 011. (Core Goals 6, 9, 12 and 13)

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 AND 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 contexts. Stress will be given to the revolutionary changes brought about by the war , especially those affecting African-Americans. Causes of the Civil War and how it evolved into a war against slavery, will be studied.
(Core Goals 6, 9 and 13)

HIS 214 AFRICAN-AMERICAN HISTORY AND CULTURE 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 justice, and the Civil Rights movement through the modern era.
(Core Goals 6, 9, 12 and 13)

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 3-3-0
This course provides a survey 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.
Prerequisites: One semester of Western Civilization OR consent of the instructor
(Core Goals 12 and 13)

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.
(Core Goals 6 and 9)

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.
(Core Goal 12)
Prerequisites: Students must have successfully tested out of/or completed ESL 011 or ENG 011, and ESL 017 or REA 011.

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.
(Core Goals 6, 9, 12 and 13)

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.
(Core Goals 6, 9, 12 and 13)

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.
Prerequisite: Students must have successfully completed or tested out of ENG011 or ESL011, and REA 017 or REA 011.

HIS 241 THE HOLOCAUST: FROM ANTI-SEMITISM TO THE "FINAL SOLUTION" 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 THE 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 19th and 20th centuries. The national histories of Turkey, Iran, the Arab states, and Israel are examined. Attention is given to the role of the Great Powers in the Middle East. (Core Goals 6, 9 and 12)

HIS 260 HISTORY OF RUSSIA 3-3-0

This course covers the period of Russian history from the beginning of the nineteen-century to present times. The course begins with the brief history of Russia before 1800s and then proceeds to look at changes in the social, economic and political structure of pre- revolutionary Russia, as well as the formation of the Soviet Union, its break-up in 1991 and the post-Soviet period. (Core Goals 6, 9, 12 and 13)

HIS 299 INDEPENDENT STUDY IN HISTORY 3-3-0

HONORS

Honors Colloquia are 1-credit interdisciplinary seminars that focus on a specific theme of interest. Themes vary each semester. Honors Scholarship students are required to complete three 1-credit colloquia in order to complete honors program requirements. Students not enrolled in the honors program are welcome to enroll in colloquia with instructor approval on a space available basis.

HON 101 HONORS COLLOQUIUM I 1-1-0

This is the first one-credit course in a series of three. The Honors Colloquium provides Honors students with an opportunity to explore and acquire a comprehensive understanding of a variety of classic and contemporary issues. Each Honors Colloquium explores a theme from the perspective of multiple scholarly disciplines. Honors students are introduced to interdisciplinary perspectives on the chosen theme utilizing student/faculty led presentations and discussions, guest speakers, films, museum visits, and on and off-campus fine arts presentations, as appropriate. Open only to students enrolled in the Honors Programs. Prerequisites: None.

HON 102 HONORS COLLOQUIUM II 1-1-0

This is the second one-credit course in a series of three. The Honors Colloquium provides Honors students with an opportunity to explore and acquire a comprehensive understanding of a variety of classic and contemporary issues. Each Honors Colloquium explores a theme from the perspective of multiple scholarly disciplines. Honors students are introduced to interdisciplinary perspectives on the chosen theme utilizing

student/faculty led presentations and discussion, guest speakers, films, museum visits, and on and off-campus fine arts presentations, as appropriate. Open only to students enrolled in the Honors Program. Prerequisites: None.

HON 103 HONORS COLLOQUIUM III 1-1-0

This is the third one-credit course in a series of three. The Honors Colloquium provides Honors students with an opportunity to explore and acquire a comprehensive understanding of a variety of classic and contemporary issues. Each Honors Colloquium explores a theme from the perspective of multiple scholarly disciplines. Honors students are introduced to interdisciplinary perspectives on the chosen theme utilizing student/faculty led presentations and discussion, guest speakers, films, museum visits, and on and of f-campus fine arts presentations, as appropriate. Open only to students enrolled in the Honors Programs.

HOTEL/RESTAURANT MANAGEMENT

HOS 111 INTRODUCTION TO THE HOSPITALITY INDUSTRY 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. Co-requisite(s): HOS 116 – Principles of Customer Service and Bar Management; for Hospitality Management students only.

HOS 115 MANAGEMENT OF FOOD AND BEVERAGE SERVICE 3-3-0

This course is designed to give the student an introduction to the basic management controls for a full-service dining room of fering food and beverages. Included are food and beverage service techniques, dining room personnel control procedures, and cash and charge accounts. Also, the student will be required to serve at several dinners prepared by the Food Preparation class.

HOS 130 HOSPITALITY SANITATION AND SAFETY 3-3-0

This course provides a comprehensive training program in food service sanitation practices. SERVSAFE (the only program recognized by the National Restaurant Association and required by Montgomery County) certification is achieved upon successful completion of the certification examination. In addition, students learn basic safety techniques, equipment assembly and cleaning, and basic knife skills. The course is restricted to hospitality and culinary arts majors only. Prerequisite(s): HOS 198 - Cooperative Internship in Hotel/Restaurant I, or as a co-requisite. Must be taken in the first year

HOS 198 COOPERATIVE INTERNSHIP IN HOTEL/RESTAURANT I 3-0-15

This is a work-experience course in which the student is required to work a minimum of 225 hours in a college-approved commercial kitchen. Prerequisite(s): Permission of the instructor

HOS 199 INDEPENDENT STUDY IN HOSPITALITY MANAGEMENT I 3-0-6

HOS 211 BASIC QUANTITY FOOD PREPARATION...................**4-3-2**
This course is designed to introduce students to basic food preparation, safety and sanitation principles and practices through preparation of several meals during the semester that are sold to the public.
Prerequisite(s): HOS 120, or permission of Coordinator/instructor

HOS 214 FUNDAMENTALS OF
SPECIAL EVENT MANAGEMENT. **3-2-10**
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. Note: To be taken in the last semester.
Prerequisites: HOS 111, HOS 116, HOS 120, HOS 212, HOS 220, and HOS 231 or permission of Coordinator/instructor.

HOS 220 STRATEGIES OF HOSPITALITY PROFITABILITY
AND MENU MANAGEMENT..**3-3-0**
This course is designed to teach the student the importance of the menu as the single controlling document in the vast variety of hospitality operations. Topics include menu design and development, government regulations, pricing, and menu management, purchasing, receiving, inventory and variations related to industry sectors such as lodging operations, business and industry operations, and other segments. Students will complete a menu and operation guide as a group project which will be presented to the class. (Also offered as CUL 220)
Prerequisite(s): HOS 111 - Introduction to the Hospitality Industry.

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 Manage First program. Students will complete a group marketing project with in-class presentation.
Prerequisite(s): HOS 111 – Introduction to the Hospitality Industry HOS 116 – Principles of Customer Service and Bar Management, or permission of the Coordinator/instructor.

HOS 241 APPLIED HUMAN RESOURCES MANAGEMENT **3-3-0**
This course is designed to provide the student with an introduction to the basic human resources and supervisory functions in the operation of a hospitality operations. Included are personnel recruitment, selection, orientation, training, and development. Students will have the opportunity to earn a certificate of completion from the National Restaurant Association's Manage First program. To be taken in the last semester
Prerequisite(s): HOS 231, or permission of Coordinator/instructor

HOS 251 HOTEL MANAGEMENT **3-3-0**
This course is designed to provide the students with an introduction to the basic control procedures and management responsibilities for the Front Office Department and the Housekeeping Department of a commercial hotel or other lodging destination. (to be taken in the last semester).
Prerequisite(s): HOS 111 - Introduction to the Hospitality Industry HOS 116 – Principles of Customer Service and Bar Management, or permission of Coordinator/instructor

HOS 261 CASINO AND GAMING MANAGEMENT........................**3-3-0**
This course provides students with an overview of casino management. The casino/gaming entertainment industry will be examined through its history, games and physical operations. The social and legal implications of the casino/gaming entertainment industry will be discussed. Class trips will be taken to casino hotels in the Greater Delaware Valley or New Jersey. To be taken in the last semester .
Prerequisite(s): Students must have successfully completed or tested out of: MAT 011, REA 017, REA 018, ESL 011, ENG 011 plus completed HOS 111, HOS 231 or permission of the Coordinator/instructor.

HOS 298 COOPERATIVE INTERNSHIP IN
HOSPITALITY MANAGEMENT II...**2-0-10**
This is a work-experience course in which the student is required to work a minimum of 150 hours in a college-approved hospitality position in the student's area of specialization. The position may be a paid or unpaid situation. Student must seek approval from the program Coordinator or instructor for externship approval. Once approval is received, students begin recording hours. Experience must be completed during the last semester of attendance in the program.
Prerequisite(s): HOS 111, HOS 116, HOS 220, HOS 231, and HOS 212.

HOS 299 INDEPENDENT STUDY IN HOSPITALITY
MANAGEMENT II **3-0-6**

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 service 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 service profession. Open to all majors.

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.
Prerequisite: HSW 101.

HSW 105 SOCIAL POLICY AND 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. Open to all majors. (Also offered as SOC 105)
(Core Goals 9, 12 and 13)

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. (Also offered as SOC 130.) Open to all majors.

HSW 155 INTRODUCTION TO AGING 3-3-0
This basic, overview course is designed to introduce and sensitize the student to those personal and social forces which have impact on the lives of older adults in contemporary America. Commonly held attitudes about older persons and aging will be examined, along with current theories and prominent bodies of knowledge associated with biological, psychological and sociological aspects of aging. Roles which older adults assume in various settings and institutions as well as the responses of society to older adults will be emphasized. Open to all majors.

HSW 160 THE MIDDLE YEARS 3-3-0
This course explores the developmental stages of the middle years of the life span: the twenties, thirties, forties, and fifties.The course covers the major psychosocial 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. Open to all majors.

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 and their use in various settings. Students develop their own theory of helping, explain its relationship to existing theories and demonstrate its application(s).
Pre-requisite: HSW 101.

HSW 203 ASSESSMENT AND
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. (Also offered as PSY 203)
Pre-requisite: HSW 101, ENG 101. Students must have successfully completed these courses with a grade of "C" or higher.

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. Open to all majors.
(Core Goal 11)

HSW 206 HOSPICE: CONCEPTS AND 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 the 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 attitudes 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. Open to all majors.

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.
Pre-requisites: HSW 102 or 202, and HSW/PSY 203

HSW 211 HUMAN SERVICES PRACTICUM I 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. Restricted to HSW majors.
Prerequisites: ENG 101, HSW 210, and an overall GPA of a "C" or better in both Program and College courses. Coordinator approval required.

HSW 216 ASSESSMENT AND TECHNIQUES FOR
CHILDREN AND YOUTH 3-3-0
This course is designed to develop 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. (Also offered as PSY 216.)
Prerequisite: HSW 101

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. Students will improve interviewing and intervention skills with drug/alcohol clients; and be able to discuss and compare individual, group, and family treatment approaches. Students will describe the levels of service available to drug/alcohol clients and their families; use AA, AL-ANON and other support groups as treatment allies. Students will appreciate the impact of sex, age, ethnicity, race and religion on the treatment process; and understand the American Psychiatric Associations (DSM IV) assessment of substance use disorders, anti-social personalities and depression. Open to all majors. (Also offered as PSY 219.)

HSW 220 INTRO TO ADJUNCTIVE THERAPIES 3-3-0
A survey of adjunctive therapies and activities that enhance the therapeutic poetry, psychodrama and biofeedback. Open to all majors.

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. This course is open to all majors. (Also offered as PSY 250.)
Prerequisite: HSW 155 or PSY 101 or SOC 101.
For the Gerontology Certificate, HSW/PSY250 will be substituted for HSW 102 or 202 to meet prerequisite for HSW 210.

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. (Also offered as SOC 254.)
Prerequisite: HSW 155 or PSY 101 or SOC 101

HSW 299 INDEPENDENT STUDY IN HUMAN SERVICES 3-3-0

INTERDISCIPLINARY STUDIES

IDS 115 ISSUES OF RACE AND ETHNICITY 3-3-0
This course analyzes the realities and mythologies that surround the issue of race 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 the problems relating to the issue of race.
(Core Goals 11 and 12)

ITALIAN

ITA 101 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.
(Core Goal 12)

ITA 102 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
(Core Goal 12)
Prerequisite: ITA 101 or approval of coordinator or fulltime faculty member who teaches Italian.

ITA 199 ITALIAN INDEPENDENT STUDY. 3-3-0

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.
Prerequisite: ITA 102 or approval of instructor

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.
Prerequisite: ITA 201 or equivalent.

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 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.
Prerequisite: ITA 202 or approval of instructor

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 or approval of instructor

ITA 299 IND STUDY IN ITALIAN.. 3-3-0

JAPANESE

JPN 101 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.
(Core Goal 12)
Prerequisite(s): Students must have successfully completed or tested out of REA017 or REA 011, ESL 011 or ENG 011.

JPN 102 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.
(Core Goal 12)
Prerequisite: JPN 101 or approval of instructor

JPN 199 INDEPENDENT STUDY IN JAPANESE 3-3-0

JPN 201 INTERMEDIATE JAPANESE I (CONVERSATIONAL) 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 or equivalent and permission of instructor.

JPN 202 INTERMEDIATE JAPANESE II (CONVERSATIONAL) 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 or equivalent and permission of instructor.

JPN 299 INDEPENDENT STUDY IN JAPANESE 3-3-0

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 and other topics that students will encounter both on the job and in any advanced studies.

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 141 PRINCIPLES OF RISK MANAGEMENT
AND 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 CO-OP INTERNSHIP IN MANAGEMENT I 3-0-15
This course consists of employment in a college-approved business 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.
(Full time students only - with permission of instructor).

MGT 210 ETHICAL DECISION MAKING IN BUSINESS 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.
(Core Goals 2, 12 and 13)
Prerequisites: MGT 110 or MGT 111 and ACC 150 or 151, or equivalents.

MGT 221 SUPERVISION 3-3-0
Students will develop the skills and knowledge necessary to grow into a supervisory position in a business environment. Students will integrate the knowledge gained in basic business courses and refine the basic supervisory and management skills learned in these courses. Students learn how to supervise effectively in a business environment.
Prerequisite: MGT 110 or MGT 111.

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. (Also offered as CIS 231.)
Prerequisites: CIS 110 & MGT 111 or equivalent business experience.

MGT 298 CO-OP INTERNSHIP IN MANAGEMENT II 3-0-15
This course consists of continued employment in a college-approved business 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. (Full- time students only-with permission of instructor.)
Prerequisites: MGT 198.

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, 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 AND 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 CO-OP INTERNSHIP IN MARKETING I 3-0-15
This course consists of employment in a college-approved distributive 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. (Full-time students only-with permission of instructor.)

MKT 211 ELECTRONIC MARKETING 3-3-0
This course is designed to provide a structured and comprehensive look at the complex and challenging areas of Electronic Marketing. Classic marketing principles will be applied to Electronic Marketing. Students will learn how to maximize the power of Electronic Marketing in the business world and assess the opportunities available with Electronic 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 Electronic Marketing solutions into marketing strategies.
Prerequisites: MKT 111 or equivalent experience.

MKT 298 CO-OP INTERNSHIP IN MARKETING II 3-0-15
This course consists of continued employment in a college-approved distributive organization to enable the student to gain insight into the 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 (Full-time students only-with permission of instructor.)
Prerequisites: MKT 198.

MATHEMATICS

MAT M99 TOPICS IN MATHEMATICS 1-1-0
Readings are chosen for current interest and mathematical content in areas of mathematical applications in social sciences, economics, or natural sciences. The content, objectives and format will be available to students prior to preregistration for those semesters in which this course is offered.

*MAT 010 FUNDAMENTALS OF ARITHMETIC 0-3-0
A fundamental course in basic mathematical skills. This course does not offer degree credit. Topics include 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: An Arithmetic Accuplacer Test Score of 0 to 72.
*Placement into developmental courses restricts college level course choices.

*MAT 010B REVIEW OF THE FUNDAMENTALS
OF ARITHMETIC 0-1-0
A fundamental course in basic mathematical skills. This course does not offer degree credit. Topics include operations on signed numbers, fractions, decimals, percents, and other arithmetic and pre-algebraic topics. Upon successful completion of the final exam in this course with a grade of 70% or higher, students will be eligible to enroll in MAT 011 (Beginning Algebra). 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: An Arithmetic Accuplacer Test Score of 41 to 72.
*Placement into developmental courses restricts college level course choices.

*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, solutions of quadratic equations, graphing, 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. Students taking an on line section (YO) of MAT 011 will need to submit materials by fax or as an attachment in email. Graphs may need to be faxed. Course materials will be presented in an electronic format.
Prerequisites: Math placement test recommendation of MAT 011 or MAT 010, with a minimum grade of "C."
*Placement into developmental courses restricts college level course choices.

MAT 011B BEGINNING ALGEBRA WITH REVIEW OF ARITHMETIC **0-4-0**
This is a first course in algebra with a significant review of arithmetic. The course reviews arithmetic operations with decimals and fractions, measurement and basic geometry. It introduces the beginning concepts of algebra through applications. Algebraic topics include signed numbers, algebraic terminology, basic operations on algebraic expressions and exponents, solution of linear equations and inequalities, simple factoring, algebraic fractions, quadratic equations, slope, graphs of linear and quadratic equations, and word problems. The course is appropriate for students with a weak math background and who need of a review of arithmetic. The TI-30X calculator is recommended for the 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: Math placement test recommendation of MAT 011 or MAT 010, with a minimum grade of "C."

MAT 100 INTERMEDIATE ALGEBRA **3-3-0**
An intermediate algebra course which 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 131, MAT 140, and/or MAT 161. Topics include a brief review of introductory algebra, factoring, algebraic fractions, radicals, fractional exponents, the Pythagorean Theorem, function notation, graphing, quadratic equations, logarithms, systems of linear equations, and word problem applications. A graphics calculator is required for class, homework, and testing. Classroom instruction and programs will be presented using a TI-84 Plus.
Prerequisites: Math placement test recommendation of "UND 116" (under MAT 116) or MAT 011 / 011b, with a minimum grade of "C."

MAT 100B INTERMEDIATE ALGEBRA WITH REVIEW... .... **3-3-0**
An intermediate algebra course which reviews and extends the topics from a beginning algebra or algebra I course. It is appropriate for students who had algebra I in high school but are not prepared for MAT 100, Intermediate Algebra. MAT 100B is an alternative to the sequence MAT 011, MAT 100. MAT 100B covers the same topics as MAT100 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. It will prepare students for MAT 115, MAT 125, MAT 131, MAT 140 and/or MAT 161. Topics include a review of introductory algebra, introduction of functions, factoring, algebraic fractions, radicals, fractional exponents, the Pythagorean Theorem, function notation, graphing, quadratic equations, logarithms, systems of linear equations, and word problem applications. A graphing calculator is required. Instruction will be presented using a TI-84.
Prerequisites: Students must have successfully completed or tested out of: Math placement test recommendation of "MAT 100B"

MAT 103 FOUNDATIONS OF MATHEMATICS I **3-3-0**
This course is to give students an understanding of the foundations of math for Elementary Education students. Topics include sets, logic, number bases and the structure of the number system from naturals to the reals. This course does not satisfy the MAT 100 Prerequisites requirement for MAT 125, MAT 131, MAT 140, or MAT 161.
(Core Goals 2 and 3)
Prerequisites: Math placement test recommendation of "UND 116" (under MAT 116) or ABV 100 (above MAT100) or MAT 011/011b, with a minimum grade of "C."
Note: Check with a counselor regarding transfer equivalency.

MAT 104 FOUNDATION 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 Prerequisites requirement for MAT 125, MAT 131, MAT 140 or MAT 161.
Prerequisites: MAT 103 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 probability, statistics, math of finance, linear programming and at least one of the following topics: matrix algebra, game theory, graph theory, or an introduction to technology. A calculator is required for this course: see instructor. This course does not satisfy the MAT 100 Prerequisites requirement for MAT 125, MAT 131, MAT 140 or MAT 161. Students taking an on line section (YO) of MAT 106 will need to submit materials by fax or as an attachment in email. Graphs may need to be faxed. Course materials will be presented in an electronic format.
(Core Goals 2 and 3)
Prerequisites: Math placement test recommendation "UND 116" (under MAT116) or "ABV 100" (above MAT 100) or MAT 011/011b , with a minimum grade of "C ."

MAT 108 MATHEMATICS CULTURE AND 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 Prerequisites requirement for MAT 125, MAT 131, MAT 140 or MAT 161.
Prerequisites: Math placement test recommendation "UND 116" (under MAT 116) or "ABV 100" (above MAT 100) or MAT 011/011b, with a minimum grade of "C."

MAT 115 APPLIED ALGEBRA/TRIGONOMETRY I. **4-4-0**
An introductory level mathematics course designed to provide a strong mathematical base for technical work that involves measurements, conversions, and related computation. The course covers right angle geometry, algebra, trigonometry, exponents, graphing, and the applications of these to various technological areas. The use of calculators and computers is integrated with traditional methods of problem solving. A graphing calculator is required for class, homework and testing. Classroom instruction and programs will be presented using a graphing calculator.
Prerequisites: Math placement test recommendation "UND 116" (under MAT 116) or "ABV 100" (above MAT 100) or MAT 011/011b, with a minimum grade of "C."

MAT 116 APPLIED ALGEBRA/TRIGONOMETRY II. **4-4-0**
A continuation of MAT 115 with emphasis on algebra and trigonometry along with their application to the technical field. Topics will include complex numbers, graphs of trigonometric functions, vectors and oblique triangles, rational and irrational roots, matrices, and topics involving analytical geometry. A graphing calculator is required for class, homework and testing. Classroom instruction and programs will be presented using a graphing calculator.
Prerequisite: MAT 115 with a minimum grade of "C."

MAT 117 APPLIED CALCULUS **4-4-0**
A first course in technical calculus. Topics include limits, differentiation and integration of algebraic and transcendental functions. Methods include curve sketching, maximum and minimum problems, curvilinear motion related rates, and Simpson's Rule. Numerous applications from

many fields of technology are included, to indicate where and how math is used in technical fields. A computer component is integrated into the course. A graphing calculator is required for class, homework and testing. Classroom instruction and programs will be presented using a graphing calculator.
Prerequisite: MAT 116 with a minimum grade of "C."

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 with minimum grade of "C," MAT 100 or MAT 100b, with minimum grade of "C" or math placement test recommendation of "ABV 100".

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.
(Core Goals 2 and 3)
Prerequisites: Students must have successfully completed or tested out of: Math placement test recommendation of "ABV 100" (above MA T 100) or MAT 100, MAT 100b, MAT 104 or MAT 106 with a minimum gade 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, chi-square distribution, 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, with 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 breakeven points; matrices and systems of linear equations; graphing; linear programming; simplex method; mathematics of finance; and model building. A graphing calculator is required for classes, homework, and testing. Classroom instruction and programs will be presented using a TI-84 Plus.
(Core Goals 2 and 3)
Prerequisites: Math placement test recommendation of "ABV 100" above MAT100 or MAT 100, with a minimum grade of "C."

MAT 142 CALCULUS FOR BUSINESS &
SOCIAL SCIENCE 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.
Prerequisite: MAT 140 with a minimum grade of "C," or consent of instructor.

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, complex numbers, and systems of equations. A graphing

calculator is required for class, homework and testing. Classroom instruction and programs will be presented using a TI-84 Plus.
Prerequisite: Math placement test – Level 2 recommendation, or MA T 100 with a minimum grade of "C"

MAT 162 PRECALCULUS II 4-4-0
A continuation of MA T 161 including the following topics exponential and logarithmic functions. Trigonometry including: 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 for class, homework and testing. Classroom instruction and programs will be presented using a TI-84 Plus.
Prerequisite: MAT 161 with a minimum grade of a "C."

MAT 170 ALGEBRA AND TRIGONOMETRY 4-4-0
A course to precede the calculus sequence. The topics include polynomial, trigonometric, and logarithmic functions, the binomial theorem, complex numbers, polar graphing. A graphing calculator is required for class, homework and testing. Classroom instruction and programs will be presented using a graphing calculator..
Prerequisites: Math placement test level 2 recommendation.
Note: MAT 170 is a very fast-paced course that should only be taken as a review by students who have a strong high school background in both algebra and trigonometry This course should not be taken by students who have had MA T 161 and 162 which together form its equivalent. In addition, students who have just completed MAT 100 should not take this course.

MAT 188 CALCULUS WITH A REVIEW OF FUNCTIONS 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 MA T 189 cover similar topics as the sequence MAT 161, MAT 162, and MAT 190 but at a faster pace. Together with MA T 189 the course covers all of the material in MAT 190, Calculus I. MA T 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.
(In combination with MAT 189 Core Goals 2 and 3)
Note:: You must pass both MA T 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: MAT100 or MAT100B with a B or better and high school trigonometry or permission of instructor , or Math placement "ABOVEMA T 116" and high school trigonometry or permission of instructor, or MAT116 with a C or better.

MAT 189 CALCULUS WITH A REVIEW OF FUNCTIONS II 4-4-0
This course is a continuation of MA T 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.
(In combination with MAT 188 Core Goals 2 and 3)
Prerequisites: MAT 188 with a minimum grade of "C".

MAT 190 CALCULUS AND 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.
(Core Goals 2 and 3)
Prerequisites: Math placement test level 2 recommendation or MAT 161 and MAT 162, or MAT 170 with a minimum grade of "C."

MAT 199 INDEPENDENT STUDY IN MATHEMATICS 1-4-0

MAT 201 CALCULUS AND 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 and 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.
Prerequisite: MAT 190 with a minimum grade of "C."

MAT 202 CALCULUS AND ANALYTIC GEOMETRY III 4-4-0
This is the third course in the Calculus sequence. It is designed primarily for students who will major in mathematics, science, engineering or business. Topics include polar coordinates, vector analysis, solid analytic geometry, partial derivatives and multiple integrals with applications. A graphing calculator is required for class, homework and testing. Classroom instruction and programs will be presented using a TI-92/ Voyage 200.
Prerequisite: MAT 201 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.
Prerequisite: MAT 190 with a minimum grade of "C."

MAT 220 LINEAR ALGEBRA WITH 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-92/Voyage 200.
Prerequisite: MAT 201 with a minimum grade of "C."

MAT 223 DIFFERENTIAL EQUATIONS 4-4-0
A course primarily in ordinary 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-92/Voyage 200.
Prerequisite: MAT 201 with minimum grade of "C".

MAT 299 INDEPENDENT STUDY IN MATHEMATICS ....…...........1-4-0

MEDICAL ASSISTING

MAS 110 LABORATORY PROCEDURES FOR
MEDICAL ASSISTANTS 4-3-2
This comprehensive course introduces the student to the purpose, techniques and recording 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, microbiology and immunology testing. Course specific competency evaluations must be successfully completed by the student.
Pre-requisites: Students must have completed or successfully tested out of MAT 010, ENG 011 and REA 011
Co-requisite: BIO 103, HCP 224

MAS 112 MEDICAL ASSISTING-CLINICAL
ASSISTING PROCEDURES 5-4-2
The course builds a solid foundation in Medical Assisting and introduces students to the clinical procedures commonly performed in a medical office. This course explores anatomy and physiology, medical terminology, common pathology and diseases, diagnostic treatment modalities, infection control practices, and patient care techniques. Course specific competency evaluations must be successfully completed by the student.
Pre-requisites: Students must have completed or successfully tested out of MAT 010, ENG 011 and REA 011
Co-Requitee: BIO 103, HCP 224

MAS 114 MEDICAL LAW AND ETHICS
FOR HEALTH CARE PROFESSIONALS 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.
(Also offered as HCP 114.)
(Core Goal 13)

MAS 116 MEDICAL BUSINESS PRACTICES 4-3-2
The course builds a solid foundation in Medical Office Administrative Assisting and introduces students to the administrative procedures and business practices commonly performed in medical business practices. Emphasis on medical ethics, communication skills, operational functions and workplace dynamics will help prepare the student for entry level office management. Course specific competency evaluations must be successfully completed by the student. (Also offered as HCP 116.)
Pre-requisites: Students must have completed or successfully tested out of MAT 010, ENG 011 and REA 011

MAS 120 PROFESSIONAL ISSUES IN
MEDICAL ASSISTING 1-1-0
This course explores professional development issues essential for Medical Assistants. It prepares graduates to value life-long learning, problem solving, critical thinking and interpersonal communication as means of achieving personal and professional growth. Students prepare for job interviews, write a resume and explore career advancement skills.
Prerequisites: Completion of the Medical Assisting Admission Guidelines and admission to the Medical Assisting Program, MAS 110, MAS 112, HCP/MAS 114, and HCP/MAS 116.

MAS 130 MEDICAL ASSISTING PRACTICUM 5-2-12
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.
Prerequisites: Completion of the Medical Assisting Admission Guidelines and admission to the Medical Assisting Program, MAS 110, MAS 112, HCP/MAS 114, and HCP/MAS 116.
Co-requisites: MAS 120 - Professional Issues in Medical Assisting

MEDICAL LABORATORY TECHNICIAN

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).
Prerequisite: 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.
Prerequisites: Attainment of Medical Laboratory Technician Selective Admissions Criteria and Admission into the Program. Successfully complete or test out of MAT 011 with a grade of "C" or better.

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.
Prerequisite: MLT 110 with a grade of "C" or better.

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.
Prerequisite: MLT 110 with a grade of "C" or better.

MLT 125 HEMATOLOGY LECTURE 2-2-0
Comprehensive course in the fundamentals of theory and practice in clinical hematology and hemostasis, 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, BIO 130, and CHE 131, each with a grade of "C" or better.

MLT 126 HEMATOLOGY LABORATORY 1-0-3
The student develops 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.
Prerequisites: MLT 110, BIO 130, and CHE 131, each with a grade of "C" or better.

MLT 233 CLINICAL CHEMISTRY LECTURE 3-3-0
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, BIO 130, CHE 132, each with a grade of "C' or better.

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.
Prerequisites: MLT 110, BIO 130, CHE 132, each with a grade of "C' or better.

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.
Prerequisites: MLT 123, MLT 124, MLT 125, MLT 126, and BIO 141, each with a grade of "C" or better.

MLT 244 PROFESSIONAL ISSUES IN
MEDICAL LABORATORY TECHNOLOGY 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: MLT235
Co-requisites: MLT245 or permission from the Program Director.

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.
Prerequisites: MLT 233, MLT 234, MLT 235, and BIO 241, each with a grade of "C" or better.

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: MLT233, MLT 234, MLT 235, and BIO 241, each with a grade of "C" or better.

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 of 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 will be required to attend a live concert (approved by the instructor) and, following specific guidelines, prepare a written review of that concert experience.
(Core Goals 5, 6 and 7)
Prerequisites: Students must have successfully completed or tested out of ESL 011, ENG 011, REA 017, and REA 011.

MUS 111 POPULAR MUSIC IN AMERICA 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: Students must have successfully completed or tested out of ESL 011, ENG 011, REA 017, and REA 011.

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: Students must have successfully completed or tested out of ESL 011, ENG 011, and REA 011, or REA 017.

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: Students must have successfully completed or tested out of ESL011, ENG 011, REA 017, and REA 011.

MUS 114 INTRO 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 based on 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: Students must have passed or tested beyond ESL 011, ENG 011, and REA 011.

MUS 120 MUSIC FUNDAMENTALS 3-3-0
A study of music fundamentals for those with little or no musical background. Sight singing and elementary ear training skills will be developed, as well as a knowledge of notation, intervals, rhythm, melody, and harmony.

Prerequisites: Place into ENG 010 or ESL 010 or complete ESL 006. Place into "UNDER 116" or complete MAT 011 or above. Place into REA101 or complete REA 011 or above.

MUS 133 COLLEGE CHOIR I 3-3-0
A 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.

MUS 134 COLLEGE CHOIR II 3-3-0
A 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.

MUS 135 COLLEGE CHOIR III 3-3-0
A 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.

MUS 136 COLLEGE CHOIR IV 3-3-0
A 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.

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.
(Core Goal 7)
Prerequisite: MUS 120 with a "C' or better, or permission of the department.

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, 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. No previous computer programming experience is required.
Prerequisites: Students must have successfully completed or tested out of ESL 011, ENG 011, REA 017, and REA011, and MUS 140 or permission of the instructor

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 both the pedagogical 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.
(Core Goal 7)
Prerequisite(s): Students must have successfully completed or tested out of ENG 011 or ESL 011.

Students must have successfully completed or tested out of REA 011 or REA 017
Students must have successfully completed or tested out of MAT 011

MUS 150 GUITAR CLASS 1 1-1-2
Guitar Class 1 is a course designed to establish a basic understanding of the guitar as an accompanying and solo 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 and a research project, students will also learn about the history and repertory of the guitar within both western and other cultures.
Prerequisites: Students must have successfully completed or tested out of ESL 011, ENG 011, REA 017, and REA 011.

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 and a research project, students will also learn about the history and repertory of the guitar within both western and other cultures.
Prerequisites: Students must have successfully completed or tested out of ESL 011, ENG 011, REA 017, and REA 011. MUS 150 with a "C' or better, or permission of the instructor.

MUS 152 COMMERCIAL AND 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.
Prerequisites: Students must have successfully completed or tested out of ESL 011, ENG 011, REA 017, and REA 011. MUS 150 with a "C' or better, or permission of the instructor.

MUS 160-163 JAZZ LAB BAND I, II, III, IV 1-0-3
Jazz Lab Band I, II, III, and IV are elective courses in musical performance open to players of woodwinds, brass, keyboard, 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.
Prerequisites: Students should have basic performance ability on their instrument and a basic ability to read music. The instructor will evaluate each student's preparedness in the first week of classes. Prior Jazz experience is helpful but not required.

MUS 170 PIANO CLASS 1 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.
Prerequisites: Students must have successfully completed or tested out of ESL 011, ENG 011, MAT 011, REA 017, and REA 011.

MUS 171 PIANO CLASS 2 1-1-2
The second in a series of four classes designed to give students a complete orientation to keyboard skills. Students can begin with Piano Class 2 if they pass the level 1 proficiency test. To provide for the proper level of individual attention, the class size will be limited to 16.
Prerequisites: and MUS 170 or success on the Level 1 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. Students can begin with Piano Class 3 if they pass the level 2 proficiency test. To provide for the proper level of individual attention, the class size will be limited to 16.
Prerequisites: MUS 171 or success on the Level 2 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. Students can begin with Piano Class 4 if they pass the level 3 proficiency test. To provide for the proper level of individual attention, the class size will be limited to 16.
Prerequisites: MUS 172 or success on the Level 3 proficiency exam.

MUS 180 APPLIED MUSIC LESSONS 1......................................1-0-3
Through this course, credit is earned for private instruction on the students chosen instrument or voice. The student registers for lessons through the Continuing Education division of the college. Lessons are generally available for Piano, V oice, Guitar, and various band and orchestral instruments. Check with the department for current availability. After completing the semester of lessons, the student earns credit through the completion of the college Credit By Examination process. Open by permission of the individual instructor.

MUS 181 APPLIED MUSIC LESSONS 2 1-0-3
Through this course, credit is earned for private instruction on the students chosen instrument or voice. The student registers for lessons through the Continuing Education division of the college. Lessons are generally available for Piano, V oice, Guitar, and various band and orchestral instruments. Check with the department for current availability. After completing the semester of lessons, the student earns credit through the completion of the college Credit By Examination process. Open by permission of the individual instructor.
Prerequisite: MUS 180

MUS 190 - 193 CHAMBER STRINGS I, II, III , IV 1-0-3
Chamber Strings I, II, III, IV are performance courses 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
Prerequisite: Each course requires the previous course in the sequence

MUS 194-197 WIND ENSEMBLE I, II, III, IVV 1-0-3
Wind Ensemble I, II, III, IV are performance courses for students who want the opportunity to participate in a symphonic band setting. The course focuses on developing techniques 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.
Prerequisite: Each course requires the previous course in the sequence.

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 Bob, 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: Students must have successfully completed or tested out of ESL 011, ENG 011, REA 017, and REA 011.

MUS 211 WESTERN MUSIC HISTORY 1:
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. MUS 120 (Fundamentals) is recommended but not required.
Prerequisites: Students must have successfully completed or tested out of ESL 011, ENG 011, REA 017, and REA 011.

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. MUS 120 (Fundamentals) is recommended but not required.
Prerequisites: Students must have successfully completed or tested out of ESL 011, ENG 011, REA 017, and REA 011.

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. MUS 120 (Fundamentals) is recommended but not required.
Prerequisites: Students must have successfully completed or tested out of ESL 011, ENG 011, REA 017, and REA 011.

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 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. MUS 120 (Fundamentals) is recommended but not required.
Prerequisites: Students must have successfully completed or tested out of ESL 011, ENG 011, REA 017, and REA 011.

MUS 221 MUSIC THEORY 1 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.
(Core Goals 2 and 7)
Prerequisite: MUS 120 with a C or better, or permission of the coordinator.

MUS 222 MUSIC THEORY 2 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, modulation. An introduction to instrumentation and composition will be included.
Prerequisites: MUS 221 or permission of the Music coordinator.

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 with a "C' or better, or permission of the Music coordinator.

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. Students are encouraged to enroll simultaneously in MUS 222 (Music Theory 2).
Prerequisite: MUS 231 with a "C" or better, or permission of the Music coordinator.

MUS 233-236 CHAMBER CHOIR I, II, III, IV. 1-0-3
Chamber Choir I, II, III & IV are performance courses 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 in the College Choir.
Prerequisites: Permission of the instructor (audition required.)

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.
Prerequisite: MUS 120 with a C or better, or permission of the department.

MUS 241 THE BUSINESS OF MUSIC... 3-3-0
Course will provide students with an overview of the current state of the Music Industry . Students will also acquire a 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: Students must have successfully completed or tested out of ENG 011, ESL 011, REA 017, REA 011, and MAT 011. Recommended but not required: MUS 140 and/or MUS 240.

MUS 260-263 PERFORMANCE JAZZ ENSEMBLE I, II, III, IV 1-0-3
Performance Jazz Ensemble I,II, III, IV are intermediate-level courses in Jazz performance open to experienced players of saxophone (alto, tenor, and baritone), trumpet, trombone, keyboard, guitar , bass, and drums. Enrollment in these classes 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.)
(Core Goal 7)
Prerequisite: Each course requires the previous course in the sequence.

MUS 299 INDEPENDENT STUDY IN MUSIC. 3-0-6

NANOFABRICATION

***ESC 211 MATERIAL, SAFETY AND
EQUIPMENT OVERVIEW 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 21   1, 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.

*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 21   1, 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.

*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 21   1, 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.

*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 team problem solving will be stressed.

*ESC 215 MATERIALS MODIFICATION
IN 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 team problem solving will be stressed.

*ESC 216 CHARACTERIZATION, PACKAGING,
AND TESTING 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 21   1, 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.

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 College's Nursing Program. 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 offered on a pass/no pass (P/ NP) basis only. The grade will not affect grade point average.
Prerequisites: Practical Nursing Licensure and Nursing Placement Examination for LPNs.

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.
Co-requisites: BIO 131, ENG 101 and PSY 101

NUR 110 INTRODUCTION TO NURSING 8-5-9

This course is designed to develop caring attitudes and behaviors towards self and others and to 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.
Prerequisites: All Sequence 1 courses.
Co-requisites: All Sequence 2 courses.

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 seen uncomplicated health care needs. There will be an emphasis on developing skills necessary to function as a member of the health care team. Clinical experiences will occur in a variety of settings.
Prerequisites: All Sequence 2 courses. Co-requisites: All Sequence 3 courses.

NUR 210 HOLISTIC HEALTH: COMPLEMENTARY AND 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. (Also offered as ESW 210).
(Core Goal 10)

NUR 211 NURSING CARE OF CLIENTS WITH COMPLEX HEALTH CARE NEEDS 8-4-12

This course focuses on the use of the nursing process to assist clients across the lifespan experiencing frequently seen complex health care needs. There will be an emphasis on increasing autonomy within an expanded scope nursing practice. Clinical experience will occur in a variety of settings.
Prerequisites: All Sequence 3 courses. Co-requisties: All Sequence 4 courses

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.
Prerequisites: All Sequence 4 courses.
Co-requisites: NUR 213

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 health care 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: All Sequence 4 courses. Co-requisites: NUR 212

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, behavior, 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, mediation, breathing, journaling, guided imagery, aromatherapy, music and art therapies and humor within a holistic framework. (Also offered as ESW 214)
Prerequisites: Students must have successfully completed or tested out of ENG 011, ESL 009, ESL 011, REA 017, REA 011.

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 pharmacokinetics, pharmacodynamics, drug toxicity, and therapeutic monitoring.
(Also offered as HCP 220).

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 the death penalty.
(Core Goals 2 and 13)

PHI 101 FUNDAMENTALS OF 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 be 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 ongoing 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. This 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 pluralistic.
(Core Goals 2, 5, 6, 12 and 13)
Prerequisite: Students must have successfully completed or tested out of ENG 01 1 or ESL 011.

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 to the basics of modern formal logic. This course has an Honors version. It offers qualified students an opportunity to complete a more intensive version of the course goals in a small classroom setting. Students should expect more in-depth reading, writing and oral assignments and classroom discussion.

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: The issues of cloning and genetic engineering; the issue of drug use and drug addiction; the issue of same-sex sexual relations and same-sex marriage; the issue of the use of non-human inhabitants of this planet for research and for food; the issue of punishment and the death penalty; the issues of euthanasia and assisted suicide; the issues of

racism, sexism, ageism, and affirmative action. Alternative versions of this course may focus on topics such as justice, beauty, truth, and ultimate reality.
(Core Goals 2, 5, 12 and13)

PHI 116 HISTORY OF PHILOSOPHY.. .3-3-0
A history of philosophy from the origins of scientific and philosophical thought in Ionia to the flowering of learning in Alexandria: a study of medieval philosophy: the teaching of the major philosophers of the Renaissance and eighteenth century, a view of the nineteenth centurt, with emphasis on central issues such as social philosophy, the philosophy of history, evolution, the theory of knowledge, and the the scientific method; a study of the major contemporary philosophic movements in the West, including pragmatism. Idealism, realism, existentialism, logical positivism, linguistic analysis.
Prerequisite: Students must have successfully completed or tested out of ENG 01 1 or ESL 011.

PHI 117 ASIAN PHILOSOPHY 3-3-0
An introduction to the major Philosophical traditions of China, India, and Japan, including Hinduism, Buddhism, Confucianism, Taoism. In each tradition attention will be paid to both historical and contemporary investigations into the nature of reality, the nature of the self, the nature of knowledge, ethics, and death.

PHI 120 ETHICAL DECISIONS AFFECTING CONSUMERS AND THE HEALTH CARE 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. (Also offered as HCP 120.)
(Core Goal 2, 5, 6, 12 and 13)

PHI 199 INDEPENDENT STUDY 3-3-0

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 the ideas, cultic and ethical practices, and philosophical systems of: Hinduism, Buddhism, Jainism, Sikhism, Judaism, Christianity, Zoroastrianism, Islam, Confucianism, Shintoism, and Taoism.

**PHI 216 MAJOR FIGURES IN PHILOSOPHY:
CLASSICAL AND MEDIEVAL 3-3-0**
This course provides in-depth readings in four major philosophers of the ancient and medieval periods: Plato, Aristotle, Augustine and Aquinas. Students will read Plato's "The Republic" and selected dialogues, and major portions of Aristotle's works on "first philosophy" and ethics. Portions of Augustine's Confessions will also be examined as well as significant passages from Aquinas's works. Critical assessments of each philosopher will also be presented and examined.
Prerequisite: Philosophy 100 or PHI 116 recommended.

PHI 299 INDEPENDENT STUDY 3-3-0

PHYSICS

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 of 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).
(Also offered as AST 120 and GLG 121)
(Core Goals 2, 5 and 8)
Prerequisites: A minimum grade of "C" or better within 5 years in both MA T 011 and ESL 011 or ENG 011.

**PHY 121 GENERAL PHYSICS I.. 4-3-3
(ALGEBRA-BASED)**
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.
(Core Goals 2and 8)
Prerequisite: High school algebra or MAT 011.

**PHY 122 GENERAL PHYSICS II... 4-3-3
(ALGEBRA-BASED)**
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 the student to the basic concepts of modern physics.
Prerequisite: High school algebra or MAT 011. (PHY 121 is strongly recommended, but not required.)

**PHY 151 PRINCIPLES OF PHYSICS I 4-3-3
(CALCULUS-BASED)**
This calculus-based course, designed for 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.
(Core Goals 2and 8)
Co-requisite: MAT 189 or MAT 190.

**PHY 152 PRINCIPLES OF PHYSICS II.. 4-3-3
(CALCULUS-BASED)**
A 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 geo-metrical and physical optics, as applied to reflection, refraction, polarization, interference, and diffraction.
Prerequisities: MAT 189 or MAT 190 and PHY 151.
Co-requisites: MAT 201.

**PHY 153 MODERN PHYSICS 3-3-0
(FOR THE SCIENCE MAJOR)**
A one semester course covering an introduction to the basic concepts underlying modern physics. Topics include the theories 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 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 modern physics.
Prerequisities: MAT 201 and PHY 152.

PHY 199 INDEPENDENT STUDY IN PHYSICS............................3-3-0

POLITICAL SCIENCE

POL 101 AN INTRODUCTION TO POLITICAL SCIENCE 3-3-0
This course is an introduction to the field of political science and its various divisions including the study of political systems, institutions, processes and behavior. The purpose of the course is to sensitize the students to the promise and limits of political analysis and prepare them to pursue more advanced courses.
(Core Goals 2, 5, 9, 11 and 12)
This course has an honors version. It offers qualified students an opportunity to complete a more intensive version of the course goals in a small classroom setting. Students should expect more in-depth reading, writing and oral assignments and classroom discussion

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. For students in the Criminal Justice Curriculum, POL 124 is required.
(Core Goals 2, 9, 11 and 12)

POL 125 AMERICAN STATE AND LOCAL GOVERNMENT 3-3-0
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.
(Core Goals 9 and 11)

POL 202 CONSTITUTIONAL LAW: CIVIL LIBERTIES.................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. POL 124 is recommended.
(Core Goals 9, 11 and 13)

**POL 231 INTRODUCTION TO PUBLIC
POLICY MANAGEMENT 3-3-0**
Principles of management applied to the public agency setting. An introduction to the theory and practice of public policy management,

including in part: agency organization and structure; planning; budgetary and fiscal considerations; policy formulation and execution within the constitutional framework; human resource issues; and administrative law. Specific applications to health & human services, administration of justice, environmental, and regulatory functions of government, at federal, state, and local levels, will be considered.
Prerequisite: ENG 101

POL 250 TERRORISM AND 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.
(Also offered as EMP 250, SOC 250, and CJS 250.)
Prerequisites: One introductory level course in any of the following:
CJS, HIS, POL or SOC.

POL 251-252 GOVERNMENT INTERN I & II 3-3-0
Each of the above two Government Intern courses is a combination of 15 hours of classroom work and 120 hours of practical field work. In order to qualify for the course, the student must obtain sponsorship by a recognized institution which has contacts with some level of government as part of its professional function. The institution will appoint an advisor responsible for overseeing the day-to-day work of the student. The overall responsibility for the program will be with the Coordinator of History and Political Science.
Prerequisites: Successful completion of one three-credit Political Science course and/or approval of Division Dean. For further information, contact the Social Sciences Division Dean.

POL 280 COMPARATIVE CRIMINAL JUSTICE SYSTEMS 3-3-0
The course examines the evolution and operation of criminal justice systems in other nations and cultures. The course will focus on the development of criminal justice in response to social, historical and political factors. Beginning with a brief history of the world's legal systems, followed by an analysis of their key procedural and substantive similarities and differences. The course will then turn to a range of other associated topics including the administration and function of police, corrections and courts, the impact of customary law and immigration on heterogeneous cultures, and the increasing internationalization of both the incidence of crime and the administration of criminal justice.
(Also offered as CJS 280.)
Prerequisites: CJS 100 or POL 101, or permission of the division head.

POL 299 INDEPENDENT STUDIES IN POLITICAL SCIENCE 3-3-0

PSYCHOLOGY

PSY 101 INTRODUCTION TO PSYCHOLOGY............................ 3-3-0
Basic preparation for advanced work in pure and applied psychology through an acquaintance with the fundamental principles of human behavior. The nature of psychology, biosocial basis of behavior, individual differences, dynamics of behavior , personality and mental health will be examined.
(Core Goals 2, 5 and 9)

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.
(Core Goals 9, 11, 12 and 13)

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 backbone to the course. Research and its application to child development is also included. Historical relevance and cultural dif ferences are also embedded throughout the course.
(Core Goal 9)
Prerequisite: PSY 101

**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. (Also offered as HSW 203)
Pre-requisite: ENG 101, HSW 101, with a grade of "C" or higher.

PSY 204 ADOLESCENT PSYCHOLOGY **3-3-0**
The effect of experiences in childhood and of cultural institutions on puberty is examined. Included are major areas of progression and regression of personality, central conflicts and methods of coping with stress, characteristics of adolescent phases of development.

PSY 206 HUMAN DEVELOPMENT A LIFE-SPAN APPROACH.... 3-3-0
A study of human development from conception to death. The physical, social, psychological and cognitive aspects of life-span development will be examined. The major theories of human development, as well as the age-and age stage-related changes and potential crisis will be given careful attention.
(Core Goal 9)

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., motivation, curiosity, creativity, and intelligence) related to children's learning and cognitive development are explored.

PSY 214 SOCIAL PSYCHOLOGY **3-3-0**
An examination of the function of the individual in social groups and the mutual influences of one upon the other . Emphasis is placed upon the processes of communication, persuasion, attitude and opinion formation and change, the structure and function of small groups and the techniques employed in measuring these phenomena.
(Core Goal 9)

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 AND TECHNIQUES FOR
CHILDREN AND YOUTH** **3-3-0**
This course is designed to develop 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. (Also offered as HSW 216.)
Prerequisites: HSW 101

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
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 assessment of substance use disorders, anti-social personalities and depression. (Also offered as HSW 219.)

PSY 231 RESEARCH METHODS IN PSYCHOLOGY **4-3-2**
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 and MAT 131

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.
(Core Goal 9)

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 communication skills will be designed to enable students to translate psychological theories and helping techniques to everyday family and job-related encounters with older adults. Open to all majors. (Also offered as HSW 250.)
Prerequisite: HSW155 or PSY101 or SOC 101.

PSY 255 HUMAN SEXUALITY... 3-3-0
A survey of the major topics of human sexuality with emphasis on: sexual development, functioning, behavior; gender identification, reproduction, interpersonal relationships, health, historical and cultural sex studies, and sex education.
(Also offered as ESW 255.)
(Core Goals 9, 10, 12 and 13)

PSY 299 INDEPENDENT STUDY IN PSYCHOLOGY 3-3-0

RADIOGRAPHY

RAD 100 INTRODUCTION TO RADIOGRAPHY AND 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: Completion of selective admissions guidelines and admission to the Radiography Program.
Co-requisites: All second semester courses in the Radiography Program of Study.

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 radiographs. Film and digital imaging with related accessories will be discussed. Demonstrations and student experimentation will be included in the application of the theory.
Prerequisites: Completion of selective admissions guidelines and admission to the Radiography Program.
Co-requisites: All second semester courses in the Radiography Program of Study.

RAD 103 RADIATION PROTECTION AND BIOLOGY 2-2-0
This course is designed to present an overview of the basic principles of radiation protection. 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. Basic principles regarding exposure will be discussed. Radiation health and safety requirements of federal and state agencies will also be incorporated.
Prerequisites: All second semester courses in the Radiography Program of Study
Co-requisites: All third semester courses in the Radiography Program.

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 Introduction to Radiography and Patient Care (RAD 100), Procedures I (RAD 1 11), and Radiographic Exposure and Technique I (RAD 102). Students will be oriented to ethics and laws as they pertain to radiographers, 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.
Prerequisites: Completion of selective admissions guidelines and admission to the Radiography Program.
Co-requisites: All second semester courses in the Radiography Program of Study.

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: All fourth semester courses in the Radiography Program of Study. Co-requisites: All fifth semester courses in the Radiography Program of Study.

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 extremities.
Prerequisites: Completion of selective admissions guidelines and admission to the Radiography Program.
Co-requisites: All second semester courses in the Radiography Program of Study.

RAD 112 RADIOGRAPHIC EXPOSURE AND TECHNIQUE II 3-2-2
This course is a continuation of RAD 102. More comprehensive examination of production of quality radiographs is discussed. Students will be exposed to the practical applications of quality control and assurance in radiology departments. Class discussion, laboratory demonstration and simulation will be utilized.
Prerequisites: All second semester courses in the Radiography Program of Study.
Co-requisites: All third semester courses in the Radiography Program of Study.

RAD 114 CLINICAL EDUCATION II. 3-0-15
This clinical course is a continuation of Clinical Education I. Emphasis

is place 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.
Prerequisites: All second semester courses in the Radiography Program of Study   .
Co-requisites: All third semester courses in the Radiography Program of Study.

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 extremities 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.
Prerequisites: All second semester courses in the Radiography Program of Study.
Co-requisites: All third semester courses in the Radiography Program of Study.

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.
Prerequisites: All third semester courses in the Radiography Program of Study.
Co- requisites: All fourth semester courses in the Radiography Program of Study.

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.
Prerequisites: All fourth semester courses in the Radiography Program of Study.
Co-requisites: All fifth semester courses in the Radiography Program of Study.

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 and sinuses and contrast media studies. Special studies including, 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.
Prerequisites: All fourth semester courses in the Radiography Program of Study.
Co-requisites: All fifth semester courses in the Radiography Program of Study.

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.
Prerequisites: All fifth semester courses in the Radiography Program of Study.
Co-requisites: All sixth semester courses in the Radiography Program of Study.

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: All fifth semester courses in the Radiography Program of Study.
Co-requisites: All sixth semester courses in the Radiography Program of Study.

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: All fifth semester courses in the Radiography Program of Study.
Co-requisites: All sixth semester courses in the Radiography Program of Study.

READING AND COGNITIVE DEVELOPMENT

*REA 010 ELEMENTS OF READING 0-3-0
Reading 010 is a developmental course designed to help students process the skills of word recognition, word analysis, vocabulary building, and basic comprehension of reading passages. 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.
Prerequisite: Reading placement test recommendation of REA 010.
*Placement into developmental level courses restricts college level course choices.

*REA 011 FUNDAMENTALS OF COLLEGE READING. 0-3-0
This is a course designed to develop higher level reading comprehension skills necessary at the college level. Interpretative and analytical comprehension of sentences, paragraphs, and selections of increasingly complex materials are included. The development of 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.
Prerequisite: Students must have successfully completed or tested out of REA 010.
*Placement into developmental level courses restricts college level course choices.

*REA 014 VOCABULARY AND READING COMPREHENSION DEVELOPMENT I....................................... .0-3-0
This course is designed to increase the non-native English speaking student's general English vocabulary , so he/she will be better able to comprehend written materials at the post secondary level. Students will use texts of narrative non-fiction to build their knowledge of the American English language. Expanding vocabulary through a study of idioms, roots, and affixes is also included. 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. (Also offered as ESL 014.)
Prerequisite: Students must have successfully completed or tested out of:
ESL 006 - English as a Second Language II Or by permission of the instructor
*Placement into developmental level courses restricts college level course choices.

***REA 017 VOCABULARY AND READING
COMPREHENSION DEVELOPMENT II 0-3-0**
Reading Comprehension Development II is designed to prepare the more advanced non-native English speaking student to become ready to succeed in a college curriculum. The materials are at an intermediate to advanced level. The student will read cross-cultural stories, passages, essays, and explore readings from American authors, learn about American culture through the readings and respond to them orally and in writing. The student will also be responsible for learning extensive new vocabulary from their text. 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.
(Also offered as ESL 017.)
Prerequisite: Completion of REA014 or equivalent.
*Placement into developmental level courses restricts college level course

**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.
(Core Goal 12)
Prerequisites: Students must have successfully completed or tested out of REA 011 ore REA 017 with a minimum grade of a "C."

REAL ESTATE

RES 101 REAL ESTATE FUNDAMENTALS... 2-2-0
Student will learn the language, principles, and laws that govern the business of real estate. Emphasis is on the underlying concepts of Land, Property, Rights in Realty and the means, methods, and laws that govern the conveyance of these rights. This is one of the two courses required by the State of Pennsylvania for licensure as a real estate salesperson.

RES 102 REAL ESTATE PRACTICE 2-2-0
Students will learn the basic techniques, procedures, regulations, and ethics involved in real estate transactions along the forms and documents used including the related mathematics. This is one of the two courses required by the State of Pennsylvania for licensure as a real estate salesperson.
Prerequisite: RES 101.

RES 131 RESIDENTIAL PROPERTY MANAGEMENT 3-3-0
In addition to building a solid foundation of residential property management fundamentals, this course introduces students to concepts and issues that are shaping the theory and practice of residential property management. Students discuss the history of real estate management, the techniques of operating real property, and the scope of real estate management.
Prerequisite(s):
RES 101 - Real Estate Fundamentals
RES 102 - Real Estate Practice

RES 132 NON-RESIDENTIAL PROPERTY MANAGEMENT 3-3-0
In addition to building a solid foundation of non-residential property management fundamentals, this course introduces students to concepts and issues that are shaping the theory and practice of residential property management. Students discuss the history of real estate management, the techniques of operating real property, and the scope of real estate management.
Prerequisite(s):
RES 101 - Real Estate Fundamentals
RES 102 - Real Estate Practice

RES 151 REAL ESTATE SALES..3-3-0
This course introduces students to the residential real estate sales profession; in addition, the course navigates students through a complete prospecting, listing, and sales cycle for a residential real estate transaction.
Prerequisite(s):
RES 101 - Real Estate Fundamentals
RES 102 - Real Estate Practice

**RES 152 REAL ESTATE BROKERAGE
AND OFFICE MANAGEMENT 3-3-0**
This course will delineate the factors involved in the planning and organization of a real estate brokerage business. Emphasis will be placed on office structure, business and human resource management, business ethics, and legal issues.
Prerequisite(s): RES 151 - Real Estate Sales

RES 171 REAL ESTATE CONSTRUCTION.................................3-3-0
The purpose of this course is to provide the student with an overview of the history and current trends in the residential construction market, to explore principles of real estate property development including the various architectural styles and structural systems, and to take the student through the construction process beginning with site selection and ending with delivery of the property to the buyer.
Prerequisite(s):
RES 101 - Real Estate Fundamentals
RES 102 - Real Estate Practice

RES 198 CO-OP INTERNSHIP IN REAL ESTATE I. 3-0-15
This course consists of employment in a college-approved real estate organization to enable the student to gain insight into the selling, appraising, financing, or managing of real estate. 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.
Prerequisites: RES 101 and RES 102 and permission of coordinator.

RES 211 REAL ESTATE FINANCE 3-3-0
Students will learn the commonly used real estate financing instruments as well as the basic structures of real estate financial institutions and their policies. Topics include sources of funds, form and use of financing instruments, and the role of the government in the mortgage field.
Prerequisites: RES 101 and RES 102.

RES 221 REAL ESTATE LAW 3-3-0
Students will learn the basic legal concepts needed by persons involved in real estate practice. Included are the nature and importance of deeds, agreements of sale, leases, judgments, liens, and other encumbrances on title, title insurance, and closing procedures.
Prerequisites: RES 101 and RES 102.

RES 241 APPRAISAL OF RESIDENTIAL PROPERTY 3-3-0
Students learn the principles involved in the appraisal of residential properties. Emphasis is placed on the types of appraisals, analysis of sales, neighborhood analysis, basic construction design, and preparation and use of appraisal reports.
Prerequisites: RES 101 and RES 102.

RES 242 APPRAISAL OF INCOME PRODUCING PROPERTY....... 3-3-0
This is a course designed to acquaint the student with the principles of appraising income-producing property. Topics will include highest and best use analysis, overview of income capitalization, gross income and expense analysis, direct capitalization, yield capitalization, internal rates of return and measures of investment performance.
Prerequisite(s): RES 241 - Appraisal of Residential Property

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 are explored with respect to the history of societal development as well as current social trends.
(Core Goals 2, 5, 9 and 12)
This course has an honors version. It offers qualified students an opportunity to complete a more intensive version of the course goals in a small classroom setting. Students should expect more in-depth reading, writing and oral assignments and classroom discussion.

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.
(Core Goals 5, 9 and 13)

**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. (Also offered as HSW 105)
(Core Goals 9, 12:and 13)

SOC 130 INTRODUCTION TO YOUTH AND FAMILY SYSTEMS 3-3-0
The introductory course examines children and youths 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 have on the various units in the family system. (Also offered as HSW 130.)

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, including the role of treatment and law enforcement.(Also offered as CJS 220)
Prerequisites: CJS 100

SOC 224 MINORITIES IN THE UNITED STATES 3-3-0
This course is designed to study the historical and contemporary experiences of major ethnic, racial, religious minorities in the United States. Course examines the reasons for their migrations, problems encountered, and prohibitions preventing some from participating in the mainstream of American life. Focus is both sociological and historical.
Prerequisite: SOC 101
(Core Goals 9 and 12)

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.
(Core Goals 9 and 12)

SOC 244 SOCIOLOGY OF DEATH AND 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 AND 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.
(Also offered as EMP 250, POL 250, and CJS 250.)
Prerequisite: Introductory level course in any of the following: CJS,HIS,POL, or SOC

SOC 254 AGING IN THE UNITED STATES 3-3-0
This course is an in-depth exploration of 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. (Also offered as HSW 254)
Prerequisite: HSW155 or PSY101 or SOC 101.

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. (Also offered as CJS 255.)
Prerequisites: CJS 100 or SOC 101, or permission of the Division Dean

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.
(Core Goal 12)

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. SP A 102 promotes understanding of Hispanic culture.
(Core Goal 12)
Prerequisite: SPA 101 or approval from the coordinator or a full-time faculty member who teaches Spanish.

SPA 111 THE WORLD OF SPAIN. **3-3-0**
Taught entirely 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 own society. The student will learn about the complex customs and personalities, and the unity and diversity of the Spanish people. Lectures and class discussions will be supplemented by audiovisual aids and individual research.

SPA 112 THE WORLD OF LATIN AMERICA **3-3-0**
This course, also taught in English, will introduce the student to a group of neighboring countries which are of vital concern to the United States. The diversity of each country as well as the unifying characteristics of personality, customs and culture in Latin America as a whole will be analyzed. Lectures, class discussion, films and other audiovisuals, as well as individual research, will be used.

SPA 127 SPANISH FOR HEALTH CARE
AND RELATED FIELDS **3-3-0**
A primarily conversational course designed to teach students to communicate with Spanish-speakers in health-related matters, as well as in situations involving emergencies, accidents, family and job problems. Professional manuals, pamphlets, newspaper articles, and other pertinent materials will serve as the basis for instruction.

SPA 199 INDEPENDENT STUDY IN SPANISH .... **.3-3-0**

SPA 201 INTERMEDIATE SPANISH I .... **.3-3-0**
A concentrated review of Spanish grammar as well as exercises in speaking, reading and composition. Selected readings on Spanish culture and literature as a basis for developing skills.
Prerequisites: SPA 102 or approval from the coordinator or a full-time faculty member who teaches Spanish.

SPA 202 INTERMEDIATE SPANISH II **3-3-0**
A continuation of SPA 201 with extensive practice in selected readings, composition and conversation on a more advanced level.
Prerequisites: SPA 201 or permission of the instructor.

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 or equivalent, or consent of the instructor.

SPA 216 SPANISH CONVERSATION II **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 215 or consent off the instructor.

SPA 230 SPANISH: FILMS, CULTURE,
AND CONVERSATION **3-3-0**
This course explores films representing the broad spectrum of Hispanic experience. Course study includes Hispanic America and Spain as depicted in movies with a cultural, historical and political background. Classes will be conducted in Spanish.
(Core Goal 12)
Prerequisites: SPA 202. Students must have successfully completed or tested out of ENG 011 or ESL 011, REA 017 or REA 011.

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.
Prerequisite: SPA 202 or equivalent.

SPA 252 ADVANCED SPANISH II **3-3-0**
Advanced Spanish II is a continuation of Advanced Spanish I. It is a course designed to improve proficiency in written and oral Spanish. Students will continue to study the contemporary culture of Spain and the Spanish-speaking countries 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: SPA251 or approval of instructor.

SPA 299 INDEPENDENT STUDY IN SPANISH **3-3-0**

SPEECH COMMUNICATION

SPC 110 INTRODUCTION TO 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 the 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.
(Core Goals 1b, 2 and 5)
Prerequisites: Students must have successfully completed or tested out of ENG 011, REA 011 or REA 17 and ESL 011. Successful completion of ESL 009 is required for students who place into ESL courses.

SPC 111 CROSS-CULTURAL EMPHASIS: INTRODUCTION TO SPEECH COMMUNICATION 3-3-0
This course covers the same material, uses the same textbook and has comparable assignments as SPC 110. The major difference is that students have the opportunity to learn about diversity and inter-cultural communication through experience, not just theoretical discussion. American students are assigned partners from a class of non-native speakers of English for conversation activities outside of class. These students already know how to read and write English; they are taking a course to improve their listening and conversation skills. Students in SPC 111 will learn about their own communicative practices through their conversations with their partners and by applying concepts form the course to their experience. This course is not recommended for students for whom English is a second language.
(Core Goals 1b, 2, 5 and 12).
Prerequisites: Students must have successfully completed or tested out of ENG 011, REA 011 or REA 17 and ESL 011. Successful completion of ESL 009 is required for students who place into ESL courses.

SPC 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. (Core Goal 1b)
Prerequisites: Students must have successfully completed or tested out of ENG 011, REA 011, REA 17 or ESL 011. Successful completion of ESL 009 is required for students who place into ESL courses.

SPC 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 dif ferences, 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.
(Core Goals 9, 12 and 13)
Prerequisites: Students must have successfully completed or tested out of ENG 011, REA 011 or REA 17 and ESL 011. Successful completion of ESL 009 is required for students who place into ESL courses.

SPC 120 PUBLIC SPEAKING 3-3-0
A human performance course which stresses the theory , preparation, practice and criticism of informative and persuasive speeches. Previous speech training and/or experience is recommended.
(Core Goals 1b, 2, 5 and 11)
Prerequisites: Students must have successfully completed or tested out of ENG 011, REA 011 or REA 17 and ESL 011. Successful completion of ESL 009 is required for students who place into ESL courses.

SPC 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.
(Core Goals 1a, 2, 5 and 11)
Prerequisites: Students must have successfully completed or tested our of the ENG 011 or ESL 011, REA 011 or REA 017 ENG 101 and SPC110 or SPC111 or SPC120.

SPC 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. Assignments will focus on both oral and written persuasion with the goal of engaging students in the role that persuasive messages play in their lives.
(Core Goals 5 and 13)
Prerequisites: Students must have successfully completed or tested our of the ENG 011 or ESL 011, REA 011 or REA 017. SPC 110 or SPC 111 or SPC 120 and ENG 101

SPC 203 HUMAN COMMUNICATION THEORY 3-3-0
This course introduces students to theories of communication. The nature of—and differences between—social scientific and humanistic theories will be discussed. A focus will be the research methods used to develop and /or test communication theories. The course is geared towards 2nd year students with limited exposure to communication coursework.
(Core Goal 9)
Prerequisites: Students must have successfully completed SPC 120 and ENG 101.

SPC 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.
(Core Goals 1a, 2 and 5)
Prerequisite: SPC 125.

SPC 230 COMMUNICATION IN ORGANIZATIONS 3-3-0
A performance course which introduces and builds the communication skills necessary for working 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 member of the community who are involved in organizations.
(Core Goals 1b, 2 and 5)
Prerequisites: Students must have successfully completed or tested out of ENG 011, REA 011 or REA 17 and ESL 011. Successful completion of ESL 009 is required for students who place into ESL courses.

STRATEGIES FOR COLLEGE SUCCESS

SCS 101 STRATEGIES FOR COLLEGE SUCCESS...................... 2-2-1
An introduction to academic success strategies, including an orientation to college life, self-assessment and goal setting, study skills and time management, familiarization with college resources, and appreciation of cultural diversity . 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 two or more developmental courses as a result of the placement tests.
Prerequisite: Successful completion of ESL 010 is required for students who place into ESL courses

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 technique 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.
Prerequisites: Attainment of surgical technology selective admissions criteria and admission into the Program. Acceptance into the Surgical Technology Program.
Co-requisite: BIO 131 and BIO 140.

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.
Prerequisites: BIO 131, BIO 140 and SUR 105 Co-requisite: BIO 132

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 orthopedics. 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 af ford the student the opportunity to directly apply didactic information. The patient profile is also discussed with consideration given to age specific needs during 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.
Prerequisite: SUR 106
Co-requisites: ENG 102, ENG 115 or ENG 117

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 in SUR105, 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.
Prerequisite: SUR 205
Co-requisite: SOC 244

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, 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 theatre performances.
(Core Goals 1b, 7 and 12)
Prerequisites: Students must have successfully completed or tested out of REA 017 or REA 011, ESL 011 or ENG 011.

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 theatre performances.
Prerequisites: Students must have successfully completed or tested out of completed THA105, or have prior experience or training in the art of acting (upon permission of instructor). Students must have successfully completed or tested out of REA 017 or REA 011, ESL 011 or ENG 011.

THA 114 INTRODUCTION TO THEATRE 3-3-0
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 theatre performances.
(Core Goals 1b, 7 and 12)
Prerequisites: Students must have successfully completed or tested out of REA017 or REA 011, ESL 011 or ENG 011.

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.
Prerequisites: Students must have successfully completed or tested out of REA 017 or REA 011, ESL 011 or ENG 011.

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.
Prerequisites: Students must successfully complete THA 150 or receive permission from the instructor, and successfully completed or tested out of REA 017 or REA 011, ESL 011 or ENG 011.

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 theatre performances.
Prerequisites: Completion of THA 105 and THA 106 with a grade of C or better. Students must have successfully completed or tested out of REA 017 or REA 011, ESL 011 or ENG 011

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.
Prerequisites: Completion of THA 150 and THA 151 with a grade of C or better. Students must have successfully completed or tested out of REA 017 or REA 011, ESL 011 or ENG 011

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 a scene (directed within class time and using student actors), as well as the presentation of the conceptualization of a full length piece.
Prerequisites: Completion of THA 105, THA 114 and THA 150 with a grade of C or better.

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 theatre performances.
Prerequisites: Completion of THA 105 and THA 106 with a grade of C or better.

THA 251 MASK FOR THE ACTOR 3-2-2
This course is an upper level course in acting technique, investigating the use of masks, voiced and unvoiced, through improvised scene work and related exercises. Students will build half-masks and full masks and use these to explore the range of physical expression and characterization the body offers. Students will be required to attend live theatre performances.
Prerequisites: Completion of THA 105 and THA 106 with a grade of C or better.

THA 252 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.
Prerequisites: THA 105 and MUS 120 with a grade of "C" or higher.

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As the tax-exempt, designated charitable arm of the College, the Foundation's purpose is to raise funds to assist the College in developing programs, facilities and services that will enhance and enrich student life and maintain a tradition of excellence.

The Foundation's objectives are to:
• Enhance College resources by building partnerships with business and community leaders.
• Develop an exemplary pattern of giving, setting a standard of excellence for support from College family, alumni and friends.
• Provide educational and cultural enrichment for the College family and community.
• Finance scholarships for deserving students in need.
• Encourage creativity and innovation through an internal grants program for faculty, administrators, staff and students.

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Over 20,000 students have either graduated, received a certificate, or notified the Alumni Office that they have 30 credits or more and would like to be considered an alumnus/a. All receive a copy of Currents, the alumni newsletter. Currents outlines who is in the news; what's new in the curriculum; how classmates and faculty are doing; when Cultural Affairs programs are happening and where legislation effects the College. Changes of address notification are encouraged. Please keep in touch with the alumni office, 215-641-6359.

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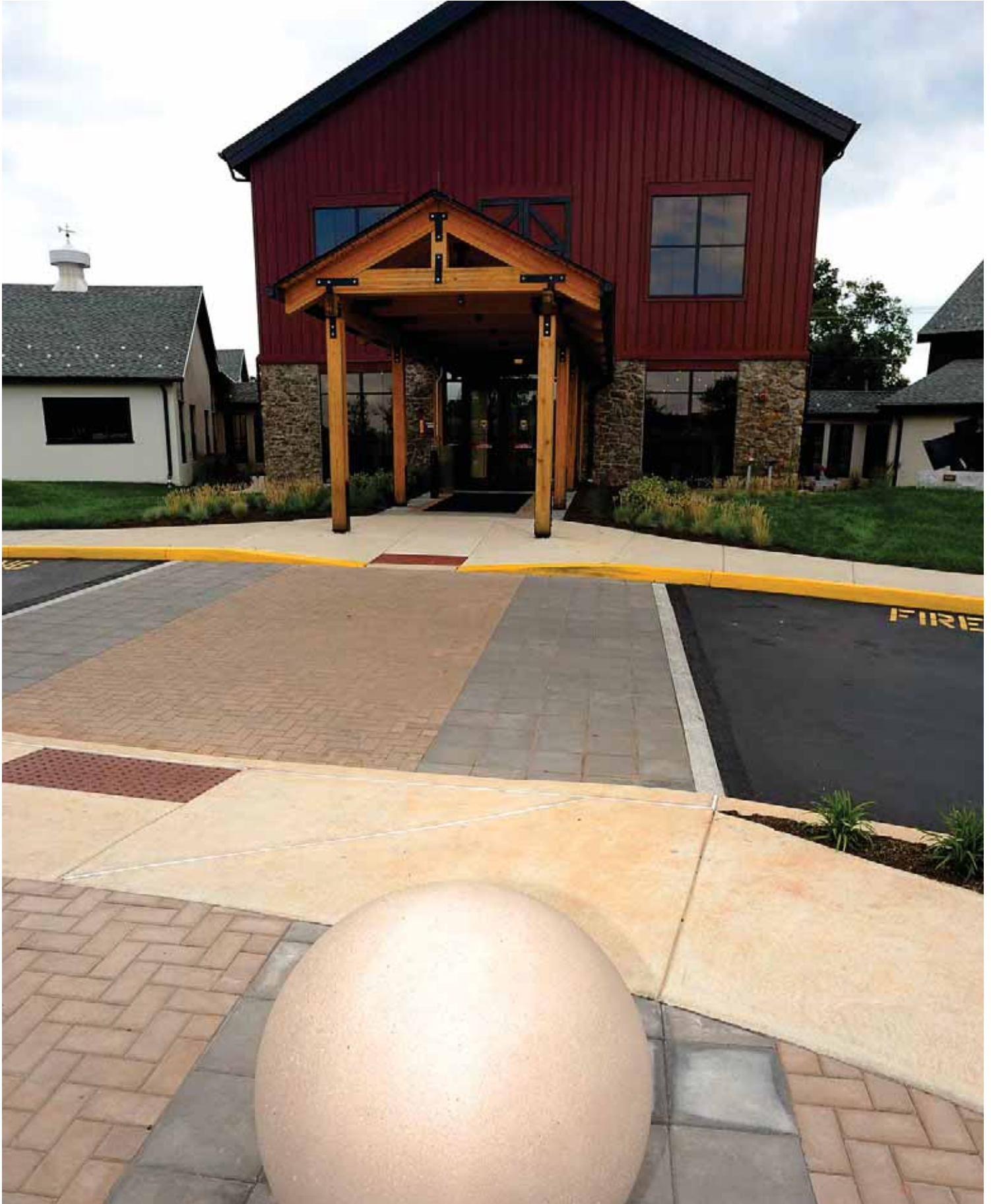
ACADEMIC CALENDAR

FALL SEMESTER (2014)

Opening Day 8/26/2014

Classes Begin 8/27/2014

Labor Day - NO CLASSES....................................9/1/2014

Thanksgiving Holiday .... 11/26 - 11/30/2014

Classes End 12/8/2014

Reading Day 12/9/2014

Final Examinations .... 12/10 - 12/16/2014

Grades Due @ 11:59pm................................ 12/17/2014

SPRING SEMESTER (2015)

Martin Luther King Day - NO CLASSES 1/19/2015

Classes Begin 1/21/2015

Spring Break - NO CLASSES .... 3/16 - 3/22/2015

Classes End 5/5/2015

Reading Day...5/6/2015

Final Examinations ....5/7 - 5/12/2015

Grades Due @ 11:59pm......................................5/13/2015

Commencement 5/21/2015

SUMMER SEMESTER (2015)

Classes Begin 5/14/2015

1st 6-Week Begins/10-Week Sessions Begins 5/18/2015

Commencement - NO CLASSES........................5/21/2015

Memorial Day - NO CLASSES 5/25/2015

1st 6-Week Session Ends*..................................6/29/2015

NO CLASSES week of ....6/30 - 7/5/2015

1st 6-Week Session Grades Due @ 11:59pm 6/30/2015

2nd 6-Week Session Begins 7/6/2015

10-Week Session Ends*...8/2/2015

10-Week Session Grades Due @ 11:59pm 8/3/2015

2nd 6-Week Session Ends*.................................8/16/2015

2nd 6-Week Session Grades Due @ 11:59pm 8/17/2015

Classes End 8/26/2015

Reading Day...8/27/2015

Final Examinations 8/28/2015

Grades Due @ 11:59pm.......................................8/29/2015

*6-Week and 10-Week Sessions do not have dedicated dates for Final Exams

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Montgomery County Community College is your best local resource for higher education. With campuses in Blue Bell and Pottstown, the college is a leader in providing dual enrollment opportunities, workforce development and continuing education to the County. We have been recognized by Achieving the Dream as a Leader College in 2011.

The College's comprehensive curriculum includes 85 associate degree/certificate programs in 59 areas of study, in the fields of healthcare, business, science, technology , the liberal arts, social sciences, education, fine arts and performing arts, including eight complete degrees offered entirely online.