Middlesex's Edison Campus is located on a beautiful 200-acre campus that's home to 13,000 students, and our facilities include 27 well-equipped academic buildings, a state-of-the-art Performing Arts Center and a spacious Physical Education Center. Of course, our people know us best. So read on to see what students — both past and present — have to say about Middlesex.

"I started college at a large university but dropped out because I felt so lost. I came to Middlesex hoping to find myself and find the right career," said **Roma Vyas. "Since** I had an interest in science, I took some general courses and loved them. My teachers made themselves so available. Then I was accepted into the prestigious nursing program. This past semester was amazing — stressful, overwhelming and extremely rewarding."

"A career as a dental hygienist was something I planned for a long time," said **Brittany Mastrola**. "I also knew that the best place for my education was Middlesex and was so proud when I was accepted. Because I was in the top 20% of my high school class, I was awarded a full-tuition NJ STARS scholarship. I'm maintaining my scholarship, working hard, enjoying my classes. My experience at Middlesex has been a good one."

"Middlesex was a stepping stone for me, it surpassed all of my expectations," said **Jason Rubin**, honors graduate, class of 2003. "It gave me the chance to explore so many options until I found what I liked — accounting. I met superior professors and administrators who cared about me and gave me many opportunities. I came with an Academic Excellence Award scholarship and I left with a full-tuition scholarship to Montclair State, where I'm graduating with honors this spring."

"Twenty years ago I came to the United States from Colombia, and when I got to Middlesex, I didn't speak any English," said **Maria Palacios**. "I needed so much help and the people in The Educational Opportunity Fund Office were so supportive. At first I was a full-time ESL student, I worked full-time cleaning houses and I was a full-time wife and mother. I have worked very hard and will graduate this fall (with a 4.0 GPA) with a degree in radiography."

Whether you're interested in Middlesex because of an associate's degree, transfer program, low fees or convenient location, we're proud to be considered as part of your academic future. At Middlesex, we measure our success by the success of our students. And because of that, we give you all the tools you need to succeed.

"I came alone from Korea and I needed to learn English," said **Bo-Ram Kim**. "Everyone was very kind to me. When I started studying accounting, it came easily to me so I volunteered to help others. I tutored, sometimes as many as 10 at a time, I led study groups and helped with the Accounting Club. I was very happy at Middlesex. Now I will be getting my degree in accounting from Temple University."

I came to Middlesex to become ready for a larger school," said **Asmor Green**. "First, I had to take basic skills math and English and then I took all the general courses. Slowly but surely I began to feel ready to make the move and now I'm transferring to NJIT in the fall, confident of my skills and my schooling. I worked at a lot of jobs on campus and I won't have to take any loans to pay for my bachelor's degree."

"I always knew I wanted to go to medical school and I love learning new things," said **Melissa Melendez**. "Originally my major was biology but after taking organic chemistry, I changed it to chemistry. I've had the opportunity to work as a laboratory aide in the chemistry department, do volunteer tutoring, I'm president of the chemistry club and I'm a vice president of Phi Theta Kappa. I'm already involved in a research project at Rider University, where I'll be transferring this fall."

"I get tired of things easily so I have to have a lot of interests and a lot of abilities," said **Keith Jean-Pierre**. "I'm very happy at Middlesex. I'm taking a lot of business and finance courses that will help me build the career I dream about — in investment and real estate. I've also gained extraordinary computer skills that I can apply to everything. I've set the goals of graduating from Middlesex and then transferring for a bachelor's degree as fundamental to my success."

MIDDLESEX COUNTY COLLEGE

2005 - 2008 Catalog

MAIN CAMPUS
2600 Woodbridge Avenue
P.O. Box 3050
Edison, New Jersey 08818
732.548.6000

NEW BRUNSWICK CENTER
140 New Street
New Brunswick, NJ 08901
732.745.8866

PERTH AMBOY CENTER
60 Washington Street
Perth Amboy, NJ 08861
732.324.0700

Foreword:

This catalog provides information for students, faculty, and administrators regarding the College's policies, requirements, course offerings, schedules and activities. Tuition and fees in this catalog are subject to change without notice at any time at the sole discretion of the administration. Such changes may be of any nature, including but not limited to the elimination of programs, classes, or activities; the relocation or modification of the content of any of the foregoing; and the cancellation of a schedule of classes or other academic activities. Payment of tuition or attendance in any class shall constitute a student's acceptance of the administration's rights as set forth above. The Office of the Registrar prepares the catalog. Any questions about its contents should be directed to the Registrar in Chambers Hall.

The most current information can be found on the MCC website: www.middlesexcc.edu

Middlesex County College

Affirmative Action and Compliance Statement

Middlesex County College is firmly committed to a policy of Equal Opportunity and Affirmative Action. The College will implement this policy to assure that the educational programs, activities, benefits and employment opportunities offered by the College are available to all persons regardless of race, color, national or ethnic origin, ancestry, age, religion, sex, affectional or sexual orientation, marital status, veteran status or disability in accordance with applicable State and Federal laws. Inquiries regarding compliance may be directed to the Affirmative Action Office, Middlesex County College, Chambers Hall Building, Edison, New Jersey 08818-3050.

Accessibility for Persons with Disabilities

Middlesex County College provides reasonable accommodation for qualified individuals with disabilities. The campus facility is accessible to students with mobility impairments. Students requesting information regarding policies and procedures should contact the Counselor for Students with Disabilities at 732.906.2546.

ACCREDITATION

The Middle States Association of Colleges and Secondary Schools accredits Middlesex County College. Inquiries may be sent to:
Commission on Higher Education
Middle States Association of Colleges and Schools
3624 Market Street, Philadelphia, PA 19104, 267.284.5000

Other accreditation include

Accreditation Commission of the Accreditation Board for Engineering and Technology, 111 Market Place, Suite 1050, Baltimore, MD 21202-4012, telephone 410.347.7700. American Dental Association Commission on Accreditation, Joint Review Committee on Education in Radiology Technology, American Medical Association Committee on Allied Health Education and Accreditation, and National League for Nursing and the National Accrediting Agency for Clinical Laboratory Sciences, 8410 W Bryn Mawr, Suite 670 Chicago, IL 60631, 773.714.8880. The Dietetic Technology Program is granted accreditation by the Commission on Accreditation for Dietetics Education of the American Dietetic Association, 120 South Riverside Plaza, Suite 2000, Chicago, IL 60606-6995, 312.899.0040, and our Paralegal Studies Program is approved by the American Bar Association.

Vision, Mission, Goals and Objectives

VISION

- Middlesex County College puts learning first and measures its success only by the success of its students. All members of the College community contribute to student success.

MISSION

- The mission of Middlesex County College is to provide a quality, affordable post secondary education responsive to the needs of the community and accessible to all who can benefit from it. We emphasize academic excellence and student success through a student-centered and innovative life-long learning environment for our diverse population.

GOALS

- To offer quality transfer-oriented associate degree programs to students who desire to complete the first two years of a baccalaureate degree program.
- To offer quality, technologically current associate degree career curricula and certificate programs which prepare students for employment and advancement in their chosen occupations.
- To provide access to education for a diverse population.
- To offer general education courses which foster an appreciation of knowledge, values and diversity that contribute to the development of intellectual, personal, and social skills.
- To offer community education programs and services which meet students' needs for self-development and occupational advancement and which respond to business, industry, and community needs.
- To offer a comprehensive range of student and learning support services, stressing student development, appropriate placement in courses and curricula, and the promotion of intellectual and social development consistent with the needs of our students.
- To offer opportunities which encourage self-awareness, personal growth, successful academic performance, and career development.
- To foster ethics and high standards of conduct among our college community.
- To promote within our college community an understanding of and respect for all people of diverse cultures and diverse abilities.
- To promote open communication within our college as well as with our external constituencies.
- To encourage participatory and information-based decision-making in our College.
- To encourage students to take an active role in their local, national, and global communities, including an appreciation for social and environmental issues.
- To integrate the use of technology throughout the College to enhance student learning, to facilitate student access to College services, and to improve organizational effectiveness.
- To foster the pursuit of life-long learning among faculty, staff, and students.
- To enhance and enrich the social, cultural, professional, and recreational life of our communities by offering special events and the use of College facilities.
- To provide a safe, comfortable, and aesthetically pleasing learning and working environment.

OBJECTIVES

- Maintain the currency of transfer articulation agreements and develop new ones.
- Respond to the changes and requirements of baccalaureate curricula.
- Assess periodically curricular requirements and offerings to ensure that they reflect current job market and transfer needs.
- Provide instructional approaches and student services which accommodate differences in student needs, abilities, and learning styles.
- Assess periodically the educational and employment needs of local employers.
- Develop students' abilities to think critically and to use oral and written language effectively.
- Develop students' abilities to define and solve problems through analytical thinking and by synthesizing knowledge from a variety of sources.
- Develop students' abilities to appreciate, understand, and use technology and library resources effectively.
- Assess periodically community education offerings to ensure that they are responsive to community needs, interests, and priorities.
- Foster within the academic community an understanding of global issues, the needs of diverse populations, and their impact upon a broad variety of disciplines.
- Offer assistance and services to students with special needs, and assure compliance with pertinent legal requirements, such as the Americans with Disabilities Act.
- Allow the community easy access to programs and services of the College by setting policies and tuition rates accordingly.
- Provide counseling and advising services responsive to the educational, career, and personal needs of students.
- Encourage student involvement and leadership through collegiate governance, co-curricular activities, and service learning opportunities.
- Offer special services to meet the needs of our diverse student body.
- Offer developmental programs and support services to meet the College preparatory needs of students.
- Offer job placement services to meet the needs of students and graduates.
- Provide opportunities for students to participate in intercollegiate sports.
- Provide a variety of venues for performing arts and cultural experiences.
- Offer professional development and evaluation programs for faculty, administrators, and staff that are responsive to the needs of the College.
- Maintain a climate of mutual trust and open and candid communication among students, faculty, staff, administrators, and the Board of Trustees.
- Involve faculty, staff, and students in determining College policies affecting them.
- Assess programs and services for improvement and accountability.

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FALL 2005

August	29	Faculty Orientation & Meetings; First Day of Faculty Obligation; Faculty Development
August	31	Final Registration; New Student Orientation & Advisement by Faculty
September	1	Final Registration; New Student Orientation & Advisement by Faculty
September	5	Labor Day – College Closed
	6	Classes Begin – Fall Semester
October	10	Columbus Day – College Closed
November	11	Veteran's Day – College Closed
	24-27	Thanksgiving – College Closed
December	16	Last day of Classes
	19-21	Specially Scheduled Final Examinations
December	22	Winter Recess

SPRING 2006

January	16	Martin Luther King Day – College Closed
	17	Faculty Orientation & Meetings; First Day of Faculty Obligation
	18 & 19	Final Registration; New Student Orientation & Advisement by Faculty
	23	Classes Begin – Spring Semester
February	20	Presidents Day – College Closed
March	11	Spring Recess Begins – No classes
	18	Weekend Classes resume and will meet on March 18 & 19
	20	Regular Classes Resume
April	14-16	Good Friday/Easter – College Closed
May	9	Last day of classes
	10-12	Specially Scheduled Final Examinations
	15	Professional Development Day
	16	Last day of Faculty Obligation
	25	Graduation

PROPOSED ACADEMIC CALENDAR FALL 2006

August	30	Final Registration; Faculty Orientation & Meetings; First Days of Obligation
August	31	Final Registration; Mandatory Day for Faculty Development; New Student Orientation & Advisement by Faculty
September	4	Labor Day – College Closed
	5	Classes Begin - Fall Semester
October	9	Columbus Day – College Closed
November	10	Veteran's Day – College Closed
	23-26	Thanksgiving – College Closed
December	14	Last Day of Classes
	15, 18 & 19	Specially Scheduled Final Examinations
	20	Winter Recess Begins

SPRING 2007

January	15	Martin Luther King Day – College Closed
	16	Faculty Orientation & Meetings; First Day of Faculty Obligation
	17 & 18	Final Registration; New Student Orientation & Advisement by Faculty
	22	Classes Begin – Spring Semester
February	19	Presidents' Day – College Closed
March	10	Spring Recess Begins – No classes
	17	Weekend Classes resume and will meet on March 17 & 18
	19	Regular Classes Resume
April	6-8	Good Friday/Easter – College Closed
May	8	Last day of Classes
	9-11	Specially Scheduled Final Examinations
	14	Last day of Faculty Obligation
	24	Graduation

PROPOSED ACADEMIC CALENDAR FALL 2007

August	29	Faculty Orientation & Meetings; First Days of Faculty Obligation; Final Registration; New Student Orientation & Advisement by Faculty
	30	Faculty Development; Mandatory Day for Faculty; Final Registration; New Student Orientation & Advisement by Faculty
September	3	Labor Day – College Closed
	4	Classes Begin – Fall Semester
October	8	Columbus Day – College Closed
November	9	Veteran's Day – College Closed
	22-25	Thanksgiving – College Closed
December	17	Last Day of Classes
	18, 19 & 20	Specially Scheduled Final Examinations
	25	Winter Recess Begins

SPRING 2008

January	21	Martin Luther King Day – College Closed
	23	Faculty Orientation & Meetings; First Day of Faculty Obligation
	23 & 24	Final Registration; New Student Orientation & Advisement by Faculty
	28	Classes Begin – Spring Semester
February	18	Presidents' Day – College Closed
March	8	Spring Recess Begins – No classes
	15	Weekend Classes resume and will meet on March 15 & 16
	21-23	Good Friday/Easter - College Closed
May	13	Last day of Classes
	14-16	Specially Scheduled Final Examinations
	16	Last day of Faculty Obligation
	22	Graduation

DIRECTORY INFORMATION

Office	Building	Telephone
Academic Advising Center	Johnson Learning Center	732.906.2596
Admissions and Recruitment Office	Chambers Hall	732.906.4243
Bursar	Chambers Hall	732.906.2572
Corporate and Community Education	West Hall	732.906.2556
Counseling and Career Services	Edison Hall	732.906.2546
Financial Aid Office	South I	732.906.2520
Health Services	South II	732.906.2530
The Institute	Instructional Resources Center	732.906.4681
Physical Education Center	Physical Education Center	732.906.2558
Office of the Registrar	Chambers Hall	732.906.2523
Testing Center	Johnson Learning Center	732.906.2508

Academic Standards and Regulations

GENERAL EDUCATION AT THE COLLEGE

Because Middlesex County College strives to educate its students as total persons, it is strongly committed to general education. The purpose of general education at the College is to develop competencies which enable students to function effectively as informed, articulate, thinking and responsible members of society and to foster in them a commitment to comprehensive personal growth.

The competencies and attitudes necessary to achieve the aims of general education are:

Communication Skills

Possession of reading, writing, speaking, listening and comprehension skills in English to enable students to interpret and communicate ideas and information as college educated people.

Mathematical Skills

Possession of basic arithmetic, algebraic and statistical skills necessary for students to deal quantitatively with problems.

Information-Gathering Skills

Familiarity with the sources of information and information gathering techniques pertaining to library and non-library sources to enable students to seek and obtain information when needed.

Problem-Solving and Decision-Making Skills

Capability to define and analyze problems, frame questions, evaluate available solutions and choose a desirable course of action so that students can deal with problems and make decisions effectively.

Organizational Ability

Ability to set goals and priorities and organize time and resources, so that students can identify and pursue their goals effectively and efficiently.

The Arts and Literature

Recognition of the relation of literature and of the visual and performing arts to life and ability to understand and enjoy them so that students can develop the aesthetic dimension of their lives.

Clarification of Values

Exposure to diverse moral, ethical and legal issues so that students can clarify their own values and make responsible choices.

Ambiguity and Differences

Understanding of the relativity and plurality of values and beliefs to enable students to develop respect for and an ability to function with ambiguity and differences.

Interpersonal Relationships

Understanding of individual and group behavior and of interpersonal skills so that students can function successfully in their multiple roles in society.

Physical and Mental Health

Understanding of the human body and mind and their care, of stress and stress coping mechanisms and of the impact of physical activity on both physical and psychological well-being.

Historical Perspective

Knowledge of major national and international historical events and intellectual movements and of how the past affects the present.

Global Perspective

Understanding of cultural, political, economic and language differences as well as the interdependence of the world's people.

Local, National and International Issues

Familiarity with contemporary events, trends, issues and ability to see their personal relevance so that students can act as responsible members of the human community.

Economic Awareness

Ability to function as intelligent consumers with knowledge of the marketplace and ability to manage personal finances with knowledge of external economic factors.

Principles and Methods of Natural Science

Familiarity with the history and major developments of science and an understanding of the scientific method of inquiry and the impact of science on our lives.

Technological Awareness

Familiarity with the capabilities, potential and ethical problems of information systems and other technology and the ability to interact with this technology so that students can understand its impact on society.

Ecological Systems

Understanding of the uses and abuses of the physical environment so that students will be responsive to the environment and its impact on the quality of life.

Lifelong Learning

Capability and motivation to learn even after completing formal education so that students can continue their self-directed intellectual growth.

Interrelatedness of Knowledge

Ability to see the interconnections and wholeness of knowledge, to integrate disparate kinds and to relate them to one's own life.

Other Highly Desirable Components of General Education

- Competency in a foreign language
- Active participation in the arts
- Knowledge of higher mathematics
- Computer programming ability

Humanities & Social Science Electives

Every humanities and social science elective is noted as such in the official course description included in this catalog.

Humanities and social science electives in this catalog are marked GE HUM for Humanities and GE SS for Social Science under the following course code designations:

- HUMANITIES

  AFS COM ENG GER ITA MUS SPA SPE
  ART DAN FRE HIS LNC PHI SPE THE

- SOCIAL SCIENCE

  AFS ECO POS PSY SOC SSC

Not all courses with those course codes are approved as electives; the course description must include the General Education (GE) designation.

Diversity Electives

Every diversity elective is noted as such in the official course description included in this catalog.

Diversity electives in this catalog are marked GE DIV for diversity under the following course code designations:

- DIVERSITY

  AFS ART BIO COM DAN ENG ENV FRE GER HED
  HIS LNC MUS POS PSY SOC SPA

Not all courses with those course codes are approved as electives; the course description must include the General Education (GE) designation.

SKILL ASSESSMENT AND PLACEMENT

Middlesex County College believes appropriate skills assessment and placement in all basic learning areas is vital to student success in every course offered at the College. In addition, we believe that each class experience is enhanced by the enrollment of prepared students. Our evaluation policy is in place for all students; full-time, part-time, part-time undeclared, and for those taking an occasional course for their own purposes.

A college placement test is given to determine skill levels and to help place students in the courses appropriate to their backgrounds and needs. All full-time students must be evaluated in reading, writing and mathematics prior to enrolling for their first semester of study. Part-time students, including those who are non-matriculated, must be evaluated in reading, writing, and mathematics prior to enrolling in their second semester of study. No one may enroll in English or mathematics courses without completing the placement test or being granted an exemption from the placement test.

Students whose first language is not English must take the English as a Second Language placement test, including an interview. At that time, students will be placed in English as a Second Language courses or directed to take the College Placement Test.

PLACEMENT TEST EXEMPTIONS

Middlesex County College may exempt the following students from the College Placement Test:

- Students who already hold an associate's, bachelor's or master's degree from a regionally accredited U.S. college or university.
- A student whose foreign degree has been equated to a U.S. bachelor's degree by a certified evaluation service should be exempt from taking the Accuplacer test. Furthermore, it is recommended that students in this category be allowed to submit a TOEFEL score which can be used in lieu of full ESL placement test. The cutoff scores and additional testing determined by the ESL department.
- Students who score 500 or higher on the SAT Verbal or the SAT Math may be exempt in one or more categories. Valid scores are current for at least five years old.
- Students who are enrolled in the English as a Second Language Program (ESL) must take the ESL Placement Test first.
- Students who take the ESL Placement Test followed by an oral interview may be exempt from ESL courses. If so, the student must then make an appointment to take the College Placement Test.
- Non-native speakers of English who did not complete four years of high school English at an accredited U.S. high school must take the ESL Placement Test.
- Students who have attended a regionally accredited U.S. college or university and have completed one semester of English composition or one semester of college-level math with a grade of "C" or better may be exempt from certain categories of the College Placement Test.
- Students who score 650 or higher on the SAT II English test may be exempt from the writing portion of the College Placement Test. Scores may be no more than five years old.
- Students enrolled in another college who are attending Middlesex as visiting students may be exempt from testing by submitting a "Visiting Student Letter" each semester.
- Students with foreign degrees who wish to enroll in one or two computer science courses as "Undeclared" students may be temporarily exempt from placement testing after presenting a WES evaluation of their credentials.
- PAA scores will not be accepted as a basis for exempting prospective students from the college placement test.

DEVELOPMENTAL EDUCATION POLICIES

Overall Policy

Students take developmental courses based upon the results of the College Placement Test. The following policies are designed to provide the best academic path for students who are working to achieve college level skills in reading, writing, math computation and elementary algebra.

Students must complete required developmental courses as early as possible. Early remediation helps ensure success in other college courses. No credit-bearing courses in English or mathematics may be taken prior to successful completion of required remedial courses in these areas.

1. Full-time students must satisfactorily complete all required developmental courses in the first two semesters of study. If a student's major requires a second level of algebra, one semester will be added to the time allowed for completion. Appropriate level developmental courses are taken in sequence, and all areas must be addressed each semester until all are completed. Students who are required to include developmental courses may carry no more than a combined total of 15 credits or credit equivalents. Students who wish to take more than 15 credits may do so only by submitting an appeal to their dean.
2. Part-time students must satisfactorily complete all required developmental courses in the first four semesters of study. However, at least one of the required courses must be included in each registration until all are completed.

   Completion of developmental requirements should be in the following order:

   a. Reading courses
   b. Writing courses
   c. Mathematics Computation
   d. Elementary Algebra
   e. Intermediate Algebra (when required for the major)
3. Students needing the first reading course, RDG 009, may not register for credit-bearing courses, other than appropriate mathematics courses, until the RDG 009 requirement is satisfied.
4. Students required to take both RDG 009, Reading Skills for College I and RDG 011, Reading Skills for College II, must enroll in the appropriate reading course each semester, until each course is successfully completed with a grade of "C" or better.
5. Students enrolled in the following degree and certificate programs who need remediation in algebra must successfully complete MAT 014, Algebra II with a grade of "C" or better before they may enroll in any credit-bearing mathematics course.

   Business Administration Degree Designed for Transfer
   Civil/Construction Engineering Technology
   Computer Science
   Electronic and Computer Engineering Technology
   Engineering Science
   Mechanical Engineering Technology
   Mecomtronics
   Respiratory Care
   Science Transfer – Biology, Chemistry, Mathematics or Physics

- Completion Standards for Developmental Courses
  Students needing remediation in the following areas must earn a grade of "C" or better in these courses before advancing to the next level:

BIO 010	Basic Biology
CHM 010	Basic Chemistry
ENG 009	Writing Skills for College I
ENG 010	Writing Skills for College II
MAT 010	Basic Mathematics
MAT 013	Algebra I
MAT 014	Algebra II
RDG 009	Reading Skills for College I
RDG 011	Reading Skills for College II

6. The Student Success Course (SSD 101) is open to all students.
   a. SSD 101 is mandatory for all students required to take two or more developmental courses.
   b. Students who have earned more than 24 college credits may take SSD 101 with a dean's approval.

ADVANCED STANDING

College Credit by Examination

There are several programs at the College through which applicants may earn credit for knowledge gained in nontraditional ways. The Credit by Examination Program (CBE) and the College Level Examination Program (CLEP), described below, are such programs.

Applicants for these programs include anyone who:

- Has extended work experience and wishes to demonstrate it
- Has taken courses at a non-accredited educational institution and wishes to earn college credit
- Has taken courses through correspondence, television or adult education programs, or in the military service
- Has done extensive independent study and wishes to earn college credit.
- Applicants are encouraged to consult the Testing Center or a counselor in the Department of Counseling and Career Services about these test opportunities to determine which program would best serve their needs.

The policies of four-year institutions vary with respect to accepting the College Level Program (CLEP) and Credit By Examination Program (CBE). All applicants who plan to transfer from Middlesex County College are advised to consult the registrar at the prospective transfer college regarding the individual institutional policy on accepting transfer credit earned by CLEP and CBE. Policy statements of those New Jersey colleges that have a formal policy on this matter are on file in the Department of Counseling and Career Services.

Credit by Examination (CBE)

This program provides the opportunity to achieve course credit for specific courses offered at the College. There are examinations for courses in every division at the College and the offerings are updated frequently. Information (including an application form, the current listing of courses offered through this program, and dates and fees) is available in the Testing Center.

College-Level Examination Program (CLEP)

College credit can be awarded for the College Level Examination Program (CLEP). *For further information, call the Testing Center, 732.906.2508. For Modern Language CLEP Credit Granting Policy* *see page 67.*

Advanced Placement Exams

The College may grant credit for Advanced Placement Examinations (minimum grade of 3.0). The Advanced Placement Program, sponsored by the College Entrance Examination Board, offers students the opportunity to pursue college-level study while in secondary school and receive advanced placement and/or credit upon entering college.

Upon successful completion of the AP exam, applicants should have the official scores sent to the Office of the Registrar for evaluation. These scores may be requested by writing to:

Advanced Placement Examination Program
College Entrance Examination Board
Princeton, NJ 08541-6671

Certified Professional Secretary Certificate

The College grants up to 30 credits for achieving the rank of CPS. This means that one has passed all parts of the CPS Examination and has the required work experience. The Certificate is awarded by The International Association of Administrative Professionals, 10502 NW Ambassador Drive, P.O. Box 20404, Kansas City, MO 64195-0404.

The following is a list of courses for which you will be awarded transfer credit:

BUS 101	Business Organization & Management	3 credits
BUS 107	Computer Applications for Business	3 credits
BUS 115	Mathematics of Finance	3 credits
BUS 201	Business Law I	3 credits
ECO 201	Principles of Economics I	3 credits
OAD 101	Document Processing I	3 credits
OAD 102	Document Processing II	3 credits
OAD 208	Office Admin Cooperative Work Exp	3 credits
OAD 211	Contemporary Office Procedures	3 credits
OAD 213	Administrative Office Management	3 credits

CREDIT FOR NONCOLLEGIATE EDUCATIONAL PROGRAMS

Middlesex grants transfer credit for certain noncollegiate educational programs in accordance with the recommendation of the American Council on Education contained in *"The National Guide" or "A Guide to Educational Programs in Noncollegiate Organizations."* These credits are granted consistent with graduation requirements for college-level courses as determined by responsible academic departments with the concurrent approvals of the chair and dean.

CREDIT FOR EDUCATIONAL EXPERIENCES IN THE ARMED SERVICES

Middlesex grants transfer credit for coursework taken in the armed services in accordance with the recommendations of the American Council on Education contained in *"A Guide to the Evaluation of Educational Experiences in the Armed Services."* These credits are granted consistent with graduation requirements for college-level courses as determined by responsible academic departments with the concurrent approvals of the chair and dean. Middlesex believes that physical education concepts and skills are developed through appropriate course offerings. These essential offerings are directed toward a lifelong pursuit to ensure wellness and wise use of leisure time. For this reason basic military training is not accepted as a waiver or for credit toward physical education courses.

DANTES TESTS

Students who have taken United States Armed Forces Institute (USAFI)/ Defense Agency for Non-Traditional Education (DANTES) courses and/ or tests in college-level subjects at other institutions may request that college credit be applied to their degree requirements at Middlesex. No final decision is made until the scores have been received from DANTES.

These scores may be sent to the Office of Admissions and Recruitment by writing:

Defense Activity for Non-Traditional Education Support
Educational Testing Service
Contract Representative for DANTES
Box 2819
Princeton, NJ 08541

Correspondence should include the student's military service number(s) and social security number.

College policy regarding USAFI/DANTES tests is as follows: The College will grant credit to students who achieve a rating of "S" (Satisfactory) or "D" (With Distinction) in USAFI/DANTES courses where the measure of achievement is an end-of-course test or a subject examination. Where the measure of achievement is a USAFI/ DANTES Subject Standardized Test, the College may grant credit for a percentile rating of 35 or above.

PREVIOUS COLLEGE CREDIT

If you have attended another college, you must submit official transcripts of all such work to the Office of Admissions and Recruitment. Only letter grades of "C" and above are accepted.

PREREQUISITES

If a prerequisite is listed and you have not successfully completed that prerequisite course at Middlesex County College, you may not enroll in the course unless you obtain the written approval of the department chair/dean.

Non-declared students who submit proof of an earned bachelor's degree or higher from a regionally accredited college or university within the United States may be exempted from course prerequisites if they believe they have the appropriate academic background to succeed in the course. Such students assume full responsibility for their academic preparedness. If the student later decides to withdraw, no special consideration for a tuition refund beyond the regular refund schedule will be made.

COURSE TIME LIMITS

If you have been admitted to a degree or certificate program, you are expected to make continuous progress towards satisfying all program requirements. You should consult with the department chair responsible for your major for information on course time limits. Major courses are subject to review after five years and all other courses after 10 years. You may need to repeat some courses if you have exceeded the time limit. The time limit review procedure also applies to the evaluation of transfer credits.

Students seeking transfer credit for courses taken at a foreign institution should refer to the section on International Applicants.

DEGREE AND CERTIFICATE REQUIREMENTS

Degree Requirements

1. Satisfactory completion of all courses in an approved program which requires not fewer than 60 or more than 66 semester credit hours, except when required for licensure, accreditation, or transfer of full junior status.
2. Minimum grades of "C" in English composition courses.
3. Minimum cumulative grade point average of 2.0.
4. Residency Requirements: Individual programs may require a minimum number of courses in the major to be taken at Middlesex County College. The College may accept up to 45 credits for courses successfully completed at another college.

Associate in Arts Degree

1. A minimum of 6 credits in English composition.
2. A minimum of 3 credits in speech communication.
3. A minimum of 3 credits in computer literacy.
4. A minimum of 15 credits in humanities, including 6 in history of western civilization and 6 in a foreign language.*
5. A minimum of 6 credits in the social sciences.
6. A minimum of 7 credits in the natural sciences.**
7. A minimum of 6 credits in a two-semester mathematics sequence.***
8. A minimum of 1 credit in physical education or health education.
9. A minimum of 12 credits in one area of concentration.
10. Additional credits as detailed in the sample plan of study to comply with general college requirements, including a minimum of 3 credits that satisfy the general education cultural diversity requirement.

** Level of language placement is based on proficiency tests*
*** Life sciences are generally recommended. There must be laboratory science courses.*
**** Mathematical competency equivalent to MAT 101-102 is required.*

Associate in Fine Arts Degree

1. A minimum of 6 credits in English composition.
2. A minimum of 3 credits in speech communications.
3. A minimum of 3 credits in computer literacy.
4. A minimum of 15 credits in humanities, including 6 in history of western civilization and 6 in a foreign language.*
5. A minimum of 3 credits in the social sciences.
6. A minimum of 6 credits at the 101 level or higher in the natural sciences and/or mathematics.
7. A minimum of one credit in physical education or health education.
8. Additional credits as detailed in the associate in fine arts to comply with the specific fine arts discipline requirements.

Associate in Science Degree

1. A minimum of 6 credits in English composition.
2. A minimum of 6 credits in the humanities.
3. A minimum of 6 credits in the social sciences.
4. A minimum of 6 credits in a two-semester mathematics sequence or 8 credits in a two-semester laboratory science sequence.
5. One course in computer science.
6. Additional credits in the area of general education* to total with the above to a minimum of 30 credits.
7. A minimum of one credit in physical education or health education.
8. Additional credits as detailed in the sample plan of study to comply with general college requirements.

** Drawn from areas other than the curriculum major; the humanities, social sciences, mathematics, science, physical education, and health education.*

Associate in Applied Science Degree

1. A minimum of 6 credits in English composition.
2. A minimum of 3 credits in the humanities.
3. A minimum of 3 credits in the social sciences.
4. A minimum of 3 credits in mathematics or science.
5. Additional credits in the area of general education to total with the above to a minimum of 20 credits.
6. A minimum of one credit in physical education or health education.
7. Additional credits as detailed in the degree requirements to comply with general college requirements.

Second Associate Degree

A second associate degree may be awarded in only those programs which differ by a minimum of 15 credits in major courses. Such a degree may be awarded only upon completion of degree requirements for the second program.

Certificate of Achievement Requirements

1. Satisfactory completion of all courses in an approved program which requires not fewer than 30 and no more than 36 degree credit hours.
2. Minimum grades of "C" in English composition courses when those courses are required in the approved program.
3. Minimum cumulative grade point average of 2.0.
4. Individual programs may require a minimum number of courses in the major to be taken at Middlesex County College. The College may accept up to 15 credits for courses successfully completed at another college.

Technical Certificate

1. Satisfactory completion of all courses in an approved program which requires not fewer than 16 and no more than 21 degree credit hours.
2. Minimum cumulative grade point average of 2.0.
3. The College may accept up to 9 credits for courses successfully completed at another college.

GRADUATION

Application

Degrees and Certificates are awarded in August, January, and May. You must submit an application for graduation to the Cashier's Office well in advance of the graduation date. The application fee is $40. The deadlines for filing are: July 1 for August graduation, December 1 for January graduation, and March 1 for May graduation. You must complete an academic major program to the satisfaction of the department administering the major. If you do not meet all degree or certificate requirements for the graduation date stated in the application, you must reapply in order to be considered for graduation at a later date. You are not charged an additional application fee.

May Commencement Ceremony

Graduates who have satisfied all degree requirements at the end of a spring semester and all graduates from the previous January and August semesters may participate in the May commencement ceremony. Candidates must submit an application for May graduation by March 1. Additionally, candidates for degrees in Automotive Technology, the Culinary Arts Option in Hotel, Restaurant and Institutional Management, Radiography Education, Respiratory Care and candidates for the certificate in Culinary Arts who are required to enroll in clinical courses in the Summer session may participate in the ceremony. To be eligible, candidates must submit an application for August graduation by March 1.

Honors and Awards

- **The Frank M. Chambers Award for Academic Achievement**
  This award for academic excellence is presented each year at Commencement to those graduates who have achieved a 4.0 cumulative grade point average during their years at Middlesex County College. The award is named in honor of Dr. Chambers, founding president, who served from 1965 to 1975. Certificate or Technical Certificate candidates aren't eligible for the Chambers Award.

Honors at Graduation

Graduates who have earned honors at graduation will be given a gold tassel to wear with their cap and gown. Eligible August candidates who subsequently earn honors after having completed all degree/certificate requirements will be given a gold tassel when they receive their diplomas/certificates in September. Degrees are conferred in absentia when candidates have received permission in advance from their academic dean to be excused from the May commencement ceremony. *(see Honors at Graduation information on page 22.)*

TRANSCRIPTS

As July 1, 2004 Middlesex County College will be using the Electronic Transcript (ET). ET will allow MCC to send/receive transcripts electronically. Using ET, MCC can send a transcript to a participating two-year or four-year institution via the NJ TRANSFER server. Issuance of official transcripts routinely takes two working days from the time the request is received in the Office of the Registrar. It takes five working days from the time grades are posted to the transcript file at the end of a term. For each transcript furnished, the fee is $3.00. Students who choose to pick up their transcript rather than having it mailed must present identification. If the student has another person pick up the transcript, that person must present identification and a letter from the student. Students with outstanding financial or other obligations are not issued official transcripts.

ACADEMIC INTEGRITY POLICY

Academic integrity is essential to all educational endeavors and demands that every individual adhere to its basic ethical principles. All academic work must be wholly the product of the individual or individuals who submit it except as properly noted; joint efforts are legitimate only when assigned or approved by the instructor. Academic dishonesty can take the form of plagiarism or cheating.

Plagiarism

To plagiarize is to copy someone else's writing or ideas and to present them as one's own. Even if the author's exact words are not used, it is plagiarism if his or her ideas are used without giving credit. Types of plagiarism include:

- Copying word-for-word from a source without giving credit to the author is plagiarism. This includes copying all of, or portions of, a paper, book, periodical, CD-ROM, web page, or other material written by another person. Text that is copied must be referenced using a standard citation style. Examples of this type of plagiarism include copying a paper written by another person, and cutting a sentence or paragraph from any source and pasting it into one's paper.
- Paraphrasing without giving credit to the original source for the idea is plagiarism. To paraphrase is to restate a text or passage in another form or in different words. Credit must be given to the author for his or her idea.
- Using language that is almost identical to the language of another author is plagiarism. Either the language must be rewritten in an original style, with a reference given for the idea used, or the author's original language should be used, with the appropriate reference.

Cheating

To cheat is to give or receive assistance with an assignment, or during an exam, which is not authorized by the instructor. Examples of cheating include, but are not limited to: Consulting or possessing unapproved materials during a test

- Copying from another student's exam paper or allowing another student to copy from one's exam paper
- Receiving or providing assistance during an exam through an electronic device such as a cell phone, beeper, or PDA
- Falsifying data collected for a lab report or other assignment
- Collaborating on an assignment without approval
- Sabotaging another student's work
- Submitting for a grade an assignment that was completed by another person, or giving an assignment to another student so that he or she can submit it as his or her own work.
- Using a stand-in to take an exam or acting as a stand-in to take an exam
- Altering a graded assignment to obtain a better grade without instructor permission
- Possessing exam questions or other test materials without approval
- Forging, altering, or misusing a College document
- Aiding and abetting another in committing an act of academic dishonesty

Penalties

Any violation of the principles of academic integrity is a serious offense. Penalties imposed by the instructor can range from an alternate assignment to failure in the course. In addition, the instructor can file code of student conduct charges which can result in suspension from the College.

ATTENDANCE

To obtain the maximum benefit from educational opportunities, students must establish habits of regular class attendance. The College values educational growth that results from such class attendance where ideas and concepts, social development, knowledge, and success derive from the interaction of students and faculty. Therefore:

1. Students are expected to attend all classes, laboratories, and clinical sessions for which they are enrolled.
2. Students are graded solely on the basis of quality and quantity of work, as stated in the course objectives and grading rationales distributed by the instructor at the beginning of each term. Students are responsible for all subject matter presented or assigned and should understand that work or tests missed may jeopardize their grades.
3. Students whose absence is caused by personal illness or serious personal matters should contact their instructors and will be allowed to make up work when possible. It is the prerogative of the instructor to excuse absences provided the student will be able to fulfill course requirements. It is the student's responsibility to arrange promptly with the instructor to make up missed work which has been agreed to by the instructor. Excessive absences may result in not meeting the course objectives and a failing grade as defined in the instructor's grading rationale.

Attendance and Grading Procedures

An instructor is obligated to assign an "N" grade when a student has not attended class a sufficient number of times to permit adequate course evaluation. An "N" grade is initiated only at midterm and will be continued as a student's final grade unless class attendance is resumed and course requirements are met sufficiently to receive an evaluated grade. "N" grades do not affect the grade point average.

Students who receive an "N" grade in all course work at midterm are subject to administrative withdrawal. Students who are administratively withdrawn must reapply and be approved for admission to re-enroll as full-time students. An "N" grade will not be assigned as a final grade when the student's pattern of nonattendance began after midterm. In such cases, the S, D, or F grade received at midterm must be revised by the instructor to an appropriate final evaluated grade of A, A-, B+, B, B-, C+, C, D, F, or I. NO "N" GRADE WILL BE ASSIGNED AS A FINAL GRADE UNLESS THE STUDENT RECEIVED AN "N" GRADE AT MIDTERM.

Although mid-term grades are not recorded for Fall II, wintersession, Spring II, and summer session, instructors may assign a final grade of "N."

Make-up Examination

Students must make arrangements for a make-up final examination with the instructor or the appropriate department chair. The student will not be given a make-up examination unless a written legitimate excuse has been accepted by the division dean's office.

GRADING SYSTEM

Letter Grade	Point System
A	4
A-	3.7
B+	3.5
B	3
B-	2.7
C+	2.5
C	2
D	1
F	0

Other Grades *(Not included in cumulative average)*

Letter Grade	Description
E	Credit by examination
I	Incomplete work to be made up within one week from the end of the semester or by special arrangement of the department. An 'I' grade is temporary and will be changed to an 'F' if make-up is not accomplished in a timely fashion.
N	Not evaluated – insufficient course participation
T	Transfer credit from another institution.
W	Withdrawal from course
X	Audit

A cumulative grade point average of 2.0 will qualify students for the associate degree.

Credit Equivalent

This is a non-credit developmental course. Credit equivalency is used to calculate cost, determine student status, and indicate a comparable level of class time and/or workload. Credit equivalent courses are indicated on the transcript with a "Q" preceding the assigned grade. Credit equivalents count in the term GPA but not the cumulative GPA.

Grade Changes - Time Limit

Grade changes should be made as soon as the error is detected or an appeal is granted. All approved grade changes must be submitted to the Office of the Registrar within one year of the original grade assignment.

Repeated Courses

Students may repeat any course regardless of the grade first received. If the course number or title has changed, students must submit a student appeal to the division dean requesting that an equivalent course be approved. Students may enroll in the same course a maximum of three times. Any grades assigned including "F," "N," or "W" constitute enrollment in a course. All previous courses will remain on record. Only the highest grade will count in the average, regardless of the number of times the course has been taken. The recalculation of the grade point average occurs automatically after grades are posted to the transcript at the close of each semester. Courses completed at another institution will not be applicable for such a grade point average recalculation. Credit by examination may be used in lieu of repeating a course.

Nursing students should refer to page XX for an explanation of the repeat policy pertaining to their program.

Students transferring to another college are advised that every institution has its own policy regarding repeated courses and the calculation of the cumulative grade point average. Other colleges may not apply Middlesex County College's policy when calculating the student's GPA for admissions purposes.

Calculation of Grade Point Average

Grade point averages are calculated using the following formula:
GPT (Grade Point Total)

- GPA = GHR (Graded Hours - Total credits for which grades were given)
- GHR is obtained by adding all of the credits obtained from courses for which grades were given (A, B, C, D, F)
- GPT grade point total (or total honor points) is determined by using the following scale:

Grade	Course Credit		Honor points per credit		Course honor points
A	1	x	4	=	4
B	1	x	3	=	3
C	1	x	2	=	2
D	1	x	1	=	1
F	1	x	0	=	0
	5				10 GPT

Therefore, if a student took 5 courses, each 1 credit and received A, B, C, D, F, the total grade points (GPT) would be 10 and the course credits (GHR) would be 5.

$$\text{Your GPA} = \frac{\text{GPT}}{\text{GHR}} = \frac{10}{5} = 2.00$$

Consider another example. You initially requested 5 courses (14 credits) and received on your grade report the following:

Grade	Course	Credits	Honor points per credit	Course honor points
A	English I	3	4	12
B	Child Psy	3	3	9
C	Gen Chem I	4	2	8
W	Prin of Econ	0	0	0
D	Physical Ed	1	1	1
		11 GHR		30 GPT

Therefore, your GPA in this case would be 2.7.

SCHOLASTIC STANDING

Honors

- Dean's List
  Students who earn 12 or more degree credits and who achieve a grade point average of 3.25 or higher with no grade below a "C" will be eligible for Dean's List. Dean's List is awarded at the end of the Fall, Spring and Summer semesters for those students enrolled in 12 or more credits for that semester, or at the end of the academic year for those students who earn 12 or more credits between September 1 of one year and August 31 of the following year but who did not qualify for Dean's List in either the Fall or Spring semester.

- Dean's Letter of Commendation
  Students who earn 12 or more credit equivalents, or a combination of credit and credit equivalents, and who achieve a grade point average of 3.25 or higher with no grade below a "C" will be eligible for A Dean's Letter of Commendation. A Dean's Letter of Commendation will be awarded at the end of the Fall, Spring and Summer semesters for those students who earn 12 or more credits/credit equivalents for that semester, or at the end of the academic year for those who earn 12 or more credits/credit equivalents between September 1 of one year and August 31 of the following year but did not qualify for a Dean's Letter of Commendation in either the Fall or Spring semester. Grades of "I" (Incomplete), or "N" (Not evaluated) will disqualify students for an evaluation period. When an "I" grade is changed, students will be reevaluated for Dean's honors.

- Honors at Graduation
  Students graduating with cumulative grade point averages of 3.25 or higher in course work completed at Middlesex County College are recognized at Commencement as honor students with the following designations:

3.70-4.00	Highest Honors
3.40-3.69	High Honors
3.25-3.39	Honors

STANDARDS OF PROGRESS

Students are evaluated against the academic standards of progress at the conclusion of each semester or session including fall semester, wintersession, spring semester and summer session. Students will receive a grade report indicating their status at the conclusion of each enrollment period.

Credit Courses

The consequences for students whose cumulative grade point averages (GPAs) fall below 2.00 are as follows:

- ***If a student has attempted no more than 11 credits,***
  Below 2.00 = Academic Warning

- ***If a student has attempted between 12 and 23 credits,***
  Below 2.00 = Academic Warning
  Below 1.60 = Academic Probation
  Below 1.00 = Academic Restriction

- ***If a student has attempted between 24 and 39 credits,***
  Below 2.00 = Academic Warning
  Below 1.80 = Academic Probation
  Below 1.60 = Academic Suspension

- ***If a student has attempted 40 or more credits,***
  Below 2.00 = Academic Warning
  Below 1.80 = Academic Suspension

Developmental Courses

- A student whose schedule includes developmental courses is expected to earn at least a 2.0 TERM average, and a C or better in all developmental courses. Failure to do so will result in Academic Probation. Failure to earn at least a 1.00 TERM average will result in Academic Restriction."

- A student on Academic Restriction or Academic Probation who, in a subsequent semester while still enrolled in developmental courses, fails to earn a 2.00 term average in all courses will be placed on Academic Suspension.

Basis for Academic Dismissal

Academic Dismissal will occur when a student, who has been readmitted following Academic Suspension or previous Academic Dismissal, fails to maintain an overall GPA of 2.00 in the coursework taken subsequent to readmission.

Course Repeat Limitation and Academic Status

Since a course may be attempted no more than three times, failure to complete a course successfully within three attempts may result in Academic Suspension or Dismissal - even if those statuses are not otherwise indicated by the above criteria.

Curriculum Suspension and Dismissal

In addition to the College-wide standards outlined above, individual programs may have stricter standards regarding continued enrollment in those programs *(see your program requirements).*

ACADEMIC STATUSES

Academic Warning

Academic warning is an advisory statement to students that their present level of performance is below College standards.

Academic Probation

Students who have been placed on Academic Probation will be limited to 14 credits and credit equivalents or 4 courses. Additional limitations may include non-admittance to certain courses and/or required enrollment in one of the student enrichment courses. No student on academic probation may register without signed approval by one of the following: the curriculum chair, the dean of the student's division or an advisor in the Advising Center.

Academic Restriction

Students who have been placed on Academic Restriction will be limited to 8 credits and credit equivalents or 2 courses. Additional limitations may include non-admittance to certain courses and/or required enrollment in the student success course. No student on academic restriction may register without signed approval by one of the following: the curriculum chair, the dean of the student's division or an advisor in the Advising Center.

Academic Probation and Restriction

A student on Academic Probation or Restriction who has voluntarily not enrolled for the next semester will be placed on Academic Probation for the next semester in which she/he enrolls, with the permission of the dean of his/her division, or of the Department Chair or the Academic Advising Center.

If the student returns following the suspension period, he/she is subject to scheduling limitations as described under "Academic Probation."

Academic Suspension

Students who have been academically suspended are prohibited from enrolling at the College for a period that includes one fall or spring semester. A suspension at the conclusion of a fall semester includes both winter and spring semesters. A suspension at the conclusion of a spring semester includes both summer and fall.

Academic Dismissal

Academic Dismissal will occur when a student, who has been readmitted following Academic Suspension or previous Academic Dismissal, fails to maintain an overall GPA of 2.0 in the coursework taken subsequent to readmission. Students who have been academically dismissed are prohibited from enrolling at the College for a minimum period of two years. A student wishing to be reinstated following dismissal must submit a reinstatement appeal demonstrating his/her readiness to pursue college studies. The Deans' Council will rule on the appeal.

ACADEMIC AMNESTY APPEAL

A student who had exhibited poor academic performance prior to an extended period of absence from the College, may, following a successful return to the College, appeal to have the previously earned grades disregarded in calculating the GPA.

The following terms and conditions apply:

1. The GPA prior to the period of absence from the College must have been below 2.0.
2. A minimum of three years without Middlesex County College enrollment in credit and credit equivalent courses must have elapsed prior to re-enrollment.
3. A student must complete 18 credits following re-enrollment, with a minimum GPA of 2.0, prior to submitting the appeal.
4. No credits or grades earned prior to the period of absence will be counted in the calculation of the new GPA or credits toward graduation.
5. All courses and grades will continue to appear on the transcript.
6. An Academic Amnesty Appeal may be approved only once for any individual student and is irrevocable.

Note that a student receiving benefits from the Veterans' Administration will not be reimbursed for repeating courses which had already been passed. Note also that a student transferring to another college will be bound by the incoming college's terms and conditions for accepting transfer credits.

ADMINISTRATIVE DISMISSAL

Students may be considered for dismissal from the College for the following causes:

1. Neglect of financial obligations.
2. Failure to comply with College rules and regulations or official notices.
3. Violation of the Student Code of Conduct.

The College reserves the right to be the sole judge in all matters pertaining to dismissal.

ACADEMIC APPEALS

You may file a written appeal for an exception to an academic policy. You must be able to demonstrate that there are circumstances that warrant an exception. You should submit academic appeals to the academic dean of the division that administers your degree or certificate program. Your academic dean may meet with you to discuss your appeal. The decision of the dean is final. Appeal forms are available in your dean's office and in the Office of the Registrar.

You should direct questions about a course grade to the course instructor or to the academic department chair of the course. All approved grade changes must be submitted to the Office of the Registrar within one year of the original grade assignment.

Students' Rights and Responsibilities

STUDENT RESPONSIBILITIES

Acceptable Use Policy for Computer Facilities

The mission of Middlesex County College is to "provide a quality, affordable post-secondary education responsive to the needs of the community and accessible to all who can benefit from it" (p.4). Inherent in our purpose is to provide the college community, including faculty, staff, students and other authorized users, access to the computing resources needed to support academic and instructional activities required for effective learning. Access to these resources assumes they will be used in a professional, ethical, and legal manner.

In order to provide for the maximum comfort, convenience, and well-being of the total college community, certain standards of behavior have been established at Middlesex County College. These standards are referred to as the Code of Student Conduct. The Code of Student Conduct and related policies and procedures are outlined in the Pathfinder, the student handbook for the College. Upon admission to the college, students accept an unqualified commitment to adhere to such standards and to conduct themselves in a manner that reflects pride in themselves and the College. To ensure adherence to these standards and protect the integrity of its computing resources, the College reserves the right to monitor such resources. Any behavior in violation of College standards is cause for disciplinary action.

Implicit in the use of the College's computer resources is the user's obligation to abide by the following rules and regulations:

- Usage is limited to registered students, faculty, staff, administrators, employees or authorized guests.
- Each user is responsible for his or her own account which may not be shared or transferred to another individual.
- Accessing another individual's account is strictly forbidden.
- No one shall attempt to degrade the performance of the computer resources by: sending mass mailings, introducing computer viruses, using the facilities for commercial purposes, participating in interactive game playing or engaging in any other attempt to degrade the system.
- Each user must refrain from sending, printing, requesting, displaying or storing images, audio files, and/or other materials for purposes unrelated to the mission and goals of the College.
- No one shall attempt to circumvent any system security measure.
- No one shall violate copyright and/or software agreements.
- All federal, state, and local laws will be adhered to when using the College's computing equipment.
- The College's computing resources may not be used for commercial purposes including solicitations on behalf of groups or organizations that are not related to the College.

The College will make every effort to ensure the integrity of the computer resources and the information stored thereon. However, Middlesex County College is not responsible for the loss of information from computing misuses, malfunction of computing and networking hardware, malfunction of computing and networking software or external contamination of data or programs. (Reference Code Student Conduct in Pathfinder)

Conduct

Standards of behavior have been established to provide for the maximum comfort, convenience, and well being of the entire Middlesex County College community. These standards are referred to as the Code of Student Conduct. The Code of Student Conduct and related policies and procedures are outlined in the Pathfinder, the student handbook for the College. Your enrollment in the College confirms your acceptance of exemplary standards of behavior and unqualified commitment to academic integrity.

Students who violate the College's behavioral norms will be subject to disciplinary action.

Dress

The College expects you to exercise good judgment with respect to attire worn in the classroom and on the campus. For reasons of safety, footwear is required.

Identification

You will receive a photo identification card from the Office of Student Activities after you register for the first time. You can use the card for library privileges, computer lab facilities, processing transactions in the Office of the Registrar and for admission to all athletic events, social activities, and other College functions. Therefore, you must carry your identification card with you whenever you are on campus. If you lose the card, you will be charged a replacement fee.

Animals on Campus

Animals are not permitted in College buildings. Exceptions will be made to those animals assisting disabled individuals, those related to a classroom requirement, and all campus residences.

Transportation

You are responsible for arranging your own transportation to and from the campus. Public transportation is available. You can get copies of bus schedules in the Office of Student Activities. If you drive your own car, you may want to arrange to travel in car pools with other students.

Parking

The College is designed as a compact walk-on campus with perimeter parking. Information about driving and parking on campus can be found in the Motor Vehicle Regulations booklet, issued when vehicles are registered with College Police.

If you have State handicapped plates or placards, you will be allowed to park in the designated parking areas/spaces for persons with disabilities. The placards must be displayed so they are readily visible.

College Police

The College Police are authorized to enforce all regulations regarding parking and traffic and to issue citations for violations.

Living Accommodations

The College does not maintain dormitories. If you live away from home while enrolled at Middlesex you are responsible for arranging your own living accommodations.

STUDENT RIGHTS

Access to Student Records - Family Educational Rights and Privacy Act of 1974

Annually, Middlesex County College informs students of the Family Educational Rights and Privacy Act of 1974. This Act, with which the College complies fully, was designated to protect the privacy of education records, to establish the right of students to inspect and review their education records, to challenge the contents of their education records, to have a hearing if the outcome of the challenge is unsatisfactory, to submit an explanatory statement for enclosure in the record if the outcome of the hearing is unsatisfactory, to prevent disclosure, with certain exceptions, of personally identifiable information and to secure a copy of the College policy, which includes the location of all education records. Students also have the right to file complaints with the Family Educational Rights and Privacy Act Office (FERPA), Department of Education, Room 4511, Switzer Building, Washington, D.C. 20202, telephone 202.655.4000, concerning alleged failures by the College to comply with the Act.

Institutional policy explains in detail the procedures to be used by the College for compliance with the provisions of the Act. Copies of the policy are available in the following offices: Office of the Registrar, Counseling and Career Services, and Dean of Enrollment Management. The policy is also printed annually in Quo Vadis, the student newspaper. The offices mentioned also maintain a directory of records which lists all education records maintained on students by the College.

Questions concerning the Family Educational Rights and Privacy Act may be referred to the Registrar.

Directory Information

Middlesex County College hereby designates the following categories of student information as public or 'Directory Information.' Such information may be disclosed by the College at its discretion.

- ***Category I*** - Name, program of study, full or part-time enrollment status, dates of enrollment, date of actual or anticipated graduation, degree earned, and any honors received.
- ***Category II*** - Email addresses, Postal address, i.e., city, town, or township and state, but not including street address to be released to Office of Public Relations for the purpose of media distribution in connection with Dean's List and graduation.
- ***Category III*** - Current address, telephone number to be released to College Police, for the purpose of investigation of campus traffic violations, and encumbrance of student transcripts in connection with violation charges and by government agencies when required.
- ***Category IV*** - Permanent home address to be released by the International Student Advisor, in compliance with appropriate and necessary institutional reports.
- ***Category V*** - Name, address, telephone number, program of study, enrollment status (full-time or part-time), dates of enrollment, date of actual or anticipated graduation, degree earned, and 'any honors received to be released to college affiliated corporations for their exclusive use.

Currently enrolled students may withhold disclosure of any category of information under the Family Educational Rights and Privacy Act of 1974, except Middlesex County College shall disclose education records as required by law and as indicated under "Disclosure of Identifiable Information"

To withhold disclosure, written notification must be received in the Office of Registrar. Forms requesting the withholding of directory information are available in that office. Middlesex County College assumes that failure on the part of any student to specifically request the withholding of categories of 'Directory Information' indicates individual approval for disclosure.

STUDENT GRIEVANCE PROCEDURE

Students are encouraged to discuss their concerns with the faculty member involved or with their academic advisor, prior to presenting a formal grievance. Whenever a student brings a grievance against a faculty member to the attention of a College administrator, the following procedure will be followed:

1. Should the student grievant so request, the time sequence outlined below will be extended to the end of the semester.
2. The administrator shall inform the faculty member of the nature of the allegation prior to conducting an investigation.
3. Upon investigation, if the administrator or his/her designee finds probable cause, but the nature of the grievance is not of serious nature to warrant disciplinary action, the administrator will attempt to resolve the matter informally.
4. If the administrator or his/her designee finds probable cause and the nature of the grievance is of a serious nature to potentially warrant disciplinary action, the administrator shall advise the faculty member, the Union and the dean of the nature of the complaint and the name of the grievant.
5. The dean of the Division shall complete the investigation and hold a hearing within fifteen (15) school days. Following the hearing, the dean shall, within ten (10) school days, render a final decision.

Students may appeal the decision of the Division Dean to the Vice President of Academic & Student Affairs of the College.

SEXUAL HARASSMENT POLICY

Middlesex County College reaffirms its desire to create an academic/work environment for all students, faculty and staff that is not only responsible but supportive and conducive to the achievement of educational/career goals on the basis of such relevant factors as ability and performance. All students, faculty and staff at Middlesex County College have the right to expect the administration to maintain an environment which allows them to enjoy the full benefits of their work or learning experiences.

Therefore, it is the policy of the College to prohibit sexual harassment from occurring at the College or at any other location where a College-sponsored event takes place. The purpose of this policy is not to regulate personal morality or to encroach upon one's personal life, but to demonstrate a strong commitment to maintaining a working and learning environment free of harassment.

Sexual harassment is prohibited by the Civil Rights Act of 1964, Title VII, Section 703, and by the Educational Amendment of 1972, Title IX. Middlesex County College intends to abide by the law. Immediate and appropriate corrective action will be taken should any student, faculty member, staff or administrative employee who engages in behavior contrary to this policy or who engages in any form of retaliation against individuals who report unwelcome conduct or who cooperate in the investigation of such reports in accordance with this policy.

The complete sexual harassment policy and complaint procedure is available in the Library, the Pathfinder, and the Office of the Executive Director of Labor Relations and Human Resources.

Academic Programs Index

It is important that you find the right college major to achieve your career and educational goals. To do this, find the area that interests you under Area of Interest. To the right you will find the name of that major at Middlesex County College. To learn more about that major, turn to the page listed in the column on the far right.

CHECK COURSE DESCRIPTIONS FOR A COMPLETE LIST OF PREREQUISITES OR COREQUISITES.
YOU SHOULD MEET WITH AN ACADEMIC ADVISOR TO PLAN THE BEST ORDER IN WHICH TO TAKE YOUR COURSES.

The College in Brief

COLLEGE GOVERNANCE

As a student, you may participate in College governance via the College Assembly, it's various task forces, and the Academic Divisional Councils. Academic policy, student life, and college affairs are all areas in which students have a voice in the decision-making process.

COLLEGE ASSEMBLY

The College Assembly is the college-wide body of students, faculty, staff and administrators charged to make recommendations to the President regarding academic, student and other college affairs. Students, chairs/directors and faculty members of the Assembly are nominated and elected through the Divisional Councils and appointed by the chair of the Assembly.
Students interested in participating in the Assembly should contact the Assembly chair (through the office of the Assembly, Raritan Hall Room 122, 732.906.4239, or X4239 from a campus phone), the chair of his/her Divisional Council or the Division Dean. The Assembly meets on the first Thursday in October, November, December, February, March, April and May.

TASK FORCES

Task Forces are committees of the College Assembly established to deal with specific areas or issues. The standing task forces of the College Assembly include: Academic Standards, Accessibility for Persons with Disabilities, Campus Diversity, Curriculum, Educational Resources, Student Life and Community Concerns, and Bylaws. The Assembly also recommends the appointment of students to the Retail Services Corporation, Alcohol Review Board, Judicial Board and Traffic Appeals Board. Students interested in participating in any of these task forces or other organizations should contact the chair of their Divisional Council or their Division Dean. Student elections for these governance positions are held annually in February by the respective divisions.

COLLEGE HOURS

College Hour

The College Hours are times when meetings of the College Assembly, as well as other meetings and activities, are scheduled. Generally, no formal classes are scheduled at this time, Thursday from 2 to 3:20 p.m. The College Hour is also a time when departments and divisions meet for co-curricular programs, Monday from 11:15 a.m. to 12:10 p.m.

ALUMNI ASSOCIATION

All graduates of degree or certificate programs at the College, as well as students who have completed 60 credits, are automatically members of the Alumni Association, an organization uniting more than 30,000 Middlesex County College alumni throughout the world.
The organization coordinates social functions and association meetings. The Association's newsletter, ***Middlesex Now***, provides members with news about their classmates and developments at the College.
A $500 Alumni Scholarship Fund is currently being developed for dependents of Middlesex County College alumni. Applications are available through the Middlesex County College Office of Alumni Affairs.
Governed by a Board of Trustees comprising members elected by the alumni, the Alumni Association's day-to-day activities are conducted by the Office of Alumni Affairs in the Marketing & Public Information Department.
For further information, e-mail: ***alumni@middlesexcc.edu.***

MCC FOUNDATION

The Middlesex County College Foundation was formed in 1966 to raise private support for the College and its students. The foundation mission is helping students open doors to their futures with financial aid, scholarships and educational resources. The Foundation seeks to inspire the community and invest in the academic and career goals of our students, which in turn empowers them to become community leaders.

Over the years, the Foundation has helped thousands of students. In 1984, the Foundation established an endowment fund to provide a perpetual source of scholarship support. The endowment now stands at over $7 million. More than 600 students receive financial support from Foundation efforts each year.

The Foundation depends on the strong support of a dedicated Board of Directors made up of more than 80 directors and trustees. The Foundation also holds three fund raising events annually: the Scholarship Ball, the Night at the Races, and the Scholarship Golf Classic. The Foundation invites Alumni, individuals, Corporations and Foundation who believe in the value of making an affordable, accessible, quality education available to the community to join in our efforts.

Expenses, Financial Aid and Scholarships

RESIDENCY

Your residency status determines the amount of your tuition and fees. To better understand how the College determines residency, please read the following.

DEFINITIONS

Residency is based on three criteria:

1. Location of permanent domicile
2. Length of time at the permanent domicile
3. Dependent or independent financial status

THE FOLLOWING INFORMATION IS HELPFUL IN INTERPRETING THE RESIDENCY POLICY.

Dependent students are those who are not:

1. 24 years of age by January 1 of the award year
2. A veteran of the U.S. Armed Forces
3. Married
4. Wards of the court or do not have living parent(s)
5. Claiming legal dependents, other than a spouse, as defined by the Internal Revenue Service.

Independent students are those who are:

1. 24 years of age by January 1 of the award year;
2. A veteran of the U.S. Armed Forces
3. Married
4. Wards of the court or whose parents are deceased
5. Claiming legal dependents, other than a spouse, as defined by the Internal Revenue Service.

RESIDENCY POLICY

Students maintaining a permanent domicile in New Jersey for at least 12 months **and** permanent domicile in Middlesex County for at least 30 days immediately prior to the first day of classes are defined as Middlesex County residents.

INTERNATIONAL STUDENTS

(Non-Immigrant Alien Students) Students whose permanent domicile is outside the United States and its possessions are defined as out-of-state residents.

CHARGEBACK

If you live in New Jersey but outside of Middlesex County, you may pay the in-county tuition rate if you qualify for chargeback. You must provide the Middlesex County College Business Office with the properly signed Certification of Inability to Admit from your home county college and Certification of Residency forms.

The Registrar or Admissions Officer of your county college must complete the Certification of Inability to Admit. The county fiscal officer (treasurer) of your home county must complete the Certification of Residency form. These forms are normally good for a one-year period from July 1 to June 30 of the following year. You may pay in-county tuition if you submit these forms with your registration.

If you pay out-of-county tuition and subsequently file properly executed chargeback forms, you will receive a refund that will reduce your tuition charge to the in-county rate. The refund will be made when your home county has made payment to the College.

If you live in Middlesex County and wish to take courses at another New Jersey County College, you may have Middlesex County pay a portion of your tuition if you obtain a Middlesex County Chargeback Application from the College's Office of Admissions and Recruitment.

If all is in order, Middlesex County College will forward the application to the Middlesex County Controller for endorsement. The original approved application will be mailed to the accepting college and a copy will be mailed to you. The completed application, along with two proofs of residency, ***must be presented within 30 calendar days of the start of classes.***

SENIOR CITIZENS TUITION WAIVER

If you are a Middlesex County resident who is 65 years or older, you may take any course on a space-available basis and have the tuition waived. As a senior citizen who has been admitted to a degree or certificate program at Middlesex, you may register at any time. However, if you have not declared a major, you cannot register until the late registration period begins, typically two days prior to the start of classes. The College will waive the late registration fee. You will be responsible for paying all other fees and related expenses, including student activity fees, general fees, technology fees, vehicle decal fee, course and laboratory fees, books and all other College fees.

VOLUNTEER TUITION WAIVER

If you are a volunteer fire fighter, first aid or rescue squad member or their spouse or dependent child, you may qualify for a tuition waiver and you may take any course on a space-available basis. To be eligible, volunteers shall agree to serve as a member volunteer for a minimum of four years. Following each year of volunteer service performed, the person or family member is entitled to receive a maximum of $600 per academic year of tuition credit. The cumulative maximum tuition credit is $2,400. The student must complete a waiver form available in the Cashier's Office each semester. All remaining expenses must be paid by the regular due date. The student must maintain a minimum 2.0 GPA.

PAYMENT POLICY

All tuition and fees must be paid on or before the date shown on your class schedule/invoice. If your employer pays your tuition, you must submit an employer tuition voucher prior to the payment due date. ***You are obligated for the payment of tuition and fees regardless of whether or not you attend class, unless a completed withdrawal form has been submitted to the Office of the Registrar.***

Overdue accounts will be referred to a collection agency and all collection costs and fees will be added to your account. If your account is overdue, you will be prohibited from registering and official transcripts will not be released.

ENCUMBRANCE POLICY

The records of students who owe the College money will be encumbered. Requests for transcripts and graduation applications will be processed only for those students who have satisfied all financial obligations to the College. Students with past due accounts will be referred to a collection agency. The collection agency's fee will be added to those students' existing financial obligation. Final grades will be withheld and registration for future semesters will not be permitted until the debt is satisfied. Students may appeal their situation to the Bursar.

EXPENSES

The tuition and fees and other expense amounts below are provided for informational purposes and are subject change.

Tuition and Fees

The College reserves the right to change these rates for subsequent semesters.

- Tuition

  Middlesex County Residents .....$79.25 per credit or credit equivalent

  Out of County Residents .....$158.50 per credit or credit equivalent

- Fees

General Service

  Middlesex County Residents .....$12.00 per credit or credit equivalent

  Out of County Residents .....$24.00 per credit or credit equivalent

Student Service

  Middlesex County Residents .....$3.50 per credit or credit equivalent

  Out of County Residents .....$7.00 per credit or credit equivalent

Technology

  Middlesex County Residents .....$7.00 per credit or credit equivalent

  Out of County Residents .....$14.00 per credit or credit equivalent

General Expenses

- Course Fees .....$30 to $250

  Per course with clinical, laboratory, computer, or other appropriate non- replaceable materials including energy uses. Refer to the schedule bulletins for specific information.

- Parking .....$25.00 Valid September-August
- Insurance

  Accident/Health and Sickness .....$68.00 per year

  Required of students registering for 12 or more credits. Students who are covered by their own insurance policy can have the fee waived. The form can be obtained from the cashier's office. The waiver must be returned within 30 days from the first day of class or the fee is non-refundable.

  Clinical Liability $36.00

  Mandatory annual fee for students enrolled in Dental Hygiene, Dietetic Technology Medical Laboratory Technology, Nursing, Psychosocial Rehabilitation, Respiratory Care or Radiography Education courses with clinic requirements.

Miscellaneous Fees

These miscellaneous fees are non-refundable.

Application Fee $25.00

Curriculum Change Fee $10.00

Late Registration Fee $40.00

Begins two weeks immediately prior to the first day of classes and continues through the registration period.

Graduation Application Fee $40.00

Students pay this fee only once for each degree or certificate awarded.

Dishonored Check Fee .....$25.00 per dishonored check

Official Transcript .....$3.00 each

Reinstatement Penalty Fee .....$79.25 per credit

Students who attend class without being properly registered may be subject to a $79.25 per credit late registration penalty.

Special Fees

- International Student Fee

  All international students must pay .....$300.00 per semester

  Fall and Spring semester only

- Dental Hygiene Senior Students Licensing Examination Fees

  National Board Examination .....$140.00 (approximately)

  North East Regional Board .....$550.00 (approximately)

  New Jersey License $75.00

- Advanced Placement-Nursing

  Phase I $65.00

  Phases II and III $135.00

Books and Supplies

These charges are approximate and subject to change.

- Automotive Technology

  Tools $1,800.00

- Dental Hygiene

  Instrument Kit .....$1,700.00 (approximately)

  Uniform .....$200.00 (approximately)

- Dietetic Technology

  Knives .....$20.00 (approximately)

  Uniform $100.00

- Engineering Program

  Drawing Kits $50.00

- Hotel, Restaurant, and Institution Management

  Knives .....$20.00 (approximately)

  Uniform $100.00

- Media Arts & Design

  A camera with adjustable shutter speed and aperture settings and a non-automatic metering system is required. A secondhand camera in good working condition meeting these specifications may be used.

  Art and photographic equipment and supplies $125.00

- Medical Laboratory Technology

  Uniform $45.00

- Nursing-Joint Program with UMDNJ

  Uniform $100.00

- Radiography Education

  Uniform .....$200.00 (approximately)

- Respiratory Care

  Uniform $100.00

Middlesex County College Fitness Club Rates

- Middlesex County College Students (full and part time)

Individual

  Fall or Spring Semester $25.00

  Summer Session $15.00

  Winter Session $10.00

Family

  Fall or Spring Semester $70.00

  Summer Session $45.00

  Winter Session $25.00

- Adjuncts, Retirees & Grant

Individual

  Annual $100.00

Family

  Annual $260.00

- Full-Time Faculty, Administrators, Confidentials, Police, Staff, Teamsters, Trustees and HS Academy Instructors

Individual

  Annual .....FREE

Family

  Annual $260.00

- Middlesex County College Alumni

Individual

  Annual $130.00

Family

  Annual $330.00

  Family membership will be limited to the individual and three (3) additional family members living in the household. The above rates will be prorated as appropriate for alumni, full-time faculty, staff and grant personnel with contracts of less than one year. Adjuncts must be here for four (4) consecutive semesters in order to apply.

General Use Fees

- Swimming Pool

The general public is charged $5.00 per person per session. Children 5 years of age and under are free. 16 years old and under need a parent/guardian in a bathing suit on the pool deck to enter the pool. There is a ratio of two (2) children to one (1) adult.

  Rentals-School $70.00/hour

  Community nonprofit and county organizations $80.00/hour

  Other groups $100.00/hour

- Weight Room

  Children under 16 are not permitted in the weight room.

- Racquetball Courts

  Monday-Friday

  7 a.m. - 4 p.m. .....$10.00/hour Middlesex County College community $10.00/hour general public

  4 - 9 p.m. .....$10.00/hour Middlesex County College community $20.00/hour general public

  Saturday .....$10.00/hour Middlesex County College community $20.00/hour general public

  Each participant is entitled to play with one free guest. Additional guest will be charged $2.00 Each. Middlesex County College community members include registered students charged the student service fee, full-time faculty, full-time staff, administrators, grants, teamsters, adjuncts and confidentials.

FINANCIAL APPEALS

You may file a written appeal for an exception to tuition and fee refund policies. The Tuition Appeals Committee will consider appeals in the case of serious illness or death of a family member, and requires that proper supporting documentation be submitted with the appeal. You should submit financial appeals to the Office of the Registrar for review by the committee. Appeal forms are available in the Office of the Registrar. You must submit financial appeals within 30 days of the last day of the semester related to the appeal. The Tuition Appeals Committee decisions are final.

REFUND POLICY

To be eligible for a refund, you must officially drop individual classes, or all of your classes, prior to the dates specified below.

If you withdraw prior to the first day of classes you will receive a full (100 percent) refund of tuition and fees, except the non-refundable late registration fee. The first day of class is the first day classes are in session for a given semester, not the first day a particular course meets.

If you withdraw prior to the first day of the second week of classes you will receive a 75 percent refund of all tuition and fees, except the non-refundable late registration fee.

If you withdraw prior to the first day of the third week of classes you will receive a 50 percent refund of all tuition and fees, except the non-refundable late registration fee.

Check the schedule bulletin for specific withdrawal deadlines for each semester. Summer and Wintersession rules vary.

Appeals regarding the College's refund policy must be filed no later than 30 days after the last day of classes for the semester being appealed. Appeals must be documented and submitted to the Office of the Registrar. The Tuition Appeals Committee will review all appeals.

FINANCIAL AID REFUND POLICY

Federal regulations require that the College must calculate refunds using federal guidelines for all financial aid students who withdraw before completing the enrollment period for which they were charged.

Financial aid students who withdraw between the first day and the end of the ninth week of classes will have their aid recalculated following federal and state requirements. Based on this recalculation, the student may owe a refund to MCC.

Financial aid students who withdraw after the ninth week of the semester will not have their aid reduced.

The College's Business Office will return the undisbursed student loan check to the lender for any borrower who has not met loan requirements, who has less than six credits or who has withdrawn completely from the College. If the loan has been disbursed, the college will use federal regulation to determine the amount to be returned to the lender.

FINANCIAL AID

Middlesex County College makes every effort through its financial aid programs to overcome financial barriers that may prevent students from completing their education. Funds from federal, state and College sources are available to those who demonstrate need and meet eligibility requirements. Loans must be repaid, but grants need not be repaid. Students with a bachelors degree are not eligible for federal and state grants but may apply for student loans.

Apply electronically through the Internet at ***www.fafsa.ed.gov.*** You may also mail your FAFSA to the Processing Center but allow four extra weeks for processing.

All applicants for federal, state, and college aid must complete the Free Application for Federal Student Aid (FAFSA). Apply electronically through the Internet at www.fafsa.ed.gov. (You may also mail your FAFSA to the Processing Center but allow four extra weeks for processing.)

The FAFSA must be filed each academic year. Apply as early as you can; applications become available each January. Financial Aid students must also complete a Financial Aid Authorization form available at the Financial Aid Office. Students should apply by May 1 to ensure priority processing especially for limited campus aid funds.

The federal processing agency takes the information provided on the FAFSA and determines each applicant's family contribution using a federal methodology formula. The NJ Higher Education Student Assistance Authority receives the FAFSA information from the Federal agency and calculates the student's eligibility for State funds using a State formula. Financial need is computed by subtracting the federal family contribution figure from students' cost of attendance. Data verification may also be required.

The Financial Aid Office reviews applications and documents and develops appropriate financial aid packages for eligible students. An aid package may include a combination of grants, loans and part-time employment.

Eligibility is determined by the requirements of each aid program. The Financial Aid Office monitors the academic progress of financial aid recipients, and terminates aid awards if students do not demonstrate satisfactory progress (SAP). Federal aid will not fund more than 30 credits of developmental courses. State aid will not fund more than four semesters of attendance at the community college level.

For further information, call the Financial Aid Office at 732.906.2520. Consumer information is available upon request, or on the College's Website. The address for financial aid consumer information is ***www.middlesexcc.edu.***

FINANCIAL AID PROGRAMS

Student eligibility for the following programs is based on the specific requirements of the program as well as positive evidence that the student is making satisfactory academic progress toward a degree. Students apply for these programs by completing the Free Application for Federal Student Aid (FAFSA).

FEDERAL GRANTS

Pell Grant Program

- Awards range from $200 to $4,050.
- The U.S. Department of Education uses a standard formula to determine student eligibility.
- The student is notified via a Student Aid Report (SAR).

Supplemental Educational Opportunity Grant

- Awards range from $250 to $1,000.
- The College determines eligibility based on federal guidelines.
- The student is notified via an award notice from the College.

NEW JERSEY GRANTS

Tuition Aid Grant (TAG)

- Awards range from $200 to $2,072.
- The Higher Education Student Assistance Authority uses a State formula to determine eligibility.
- The student is notified via a Student Eligibility Notice (SEN) from the State.

Educational Opportunity Fund Program

- Awards range from $212 to $950.
- The College uses State guidelines to determine eligibility.
- The student is notified via a Student Eligibility Notice (SEN) from the State.

Garden State Scholarship Program

- Awards range from $200 to $900.
- The Higher Education Student Assistance Authority uses academic achievement guidelines to determine recipients.
- The student is notified via a Student Eligibility Notice

MIDDLESEX COUNTY COLLEGE GRANTS

Middlesex County College Foundation Grants

- Awards range from $200 to $1000.
- The College uses Middlesex County College Foundation guidelines to determine eligibility.
- The student is notified via an award notice from the College.

Educational Opportunity Fund Program

- Awards range from $212 to $850.
- The College uses State guidelines to determine eligibility.
- The student is notified via a Student Eligibility Notice (SEN) from the State.

Garden State Scholarship Program

- Awards range from $200 to $900.
- The Higher Education Student Assistance Authority uses academic achievement guidelines to determine recipients.
- The student is notified via a Student Eligibility Notice (SEN) from the State.

FEDERAL WORK STUDY PROGRAM

Federal Work Study Program

- Awards range from $500 to $4,000.
- The College uses federal guidelines to determine eligibility and places students in part-time on-campus jobs.
- The student is notified via an award notice from the College.

FEDERAL STAFFORD LOAN PROGRAM

- Loans range from $500 to $4,000.
- The NJ Higher Education Student Assistance Authority approves the loan after the College uses federal guidelines to determine eligibility.
- The student is notified via a letter from the lender.

Stafford loans are made through banks or other lending agencies such as Educaid, and are repaid after the student leaves college. The interest rate is variable for repayment of new loans but not higher than 8.25 percent. The government pays the interest during in-school periods on need based loans called subsidized Stafford loans. The student is responsible for all interest on non-need based loans called unsubsidized Stafford loans. In addition to completing the FAFSA, a Master Promissory Note must be completed. Contact the Financial Aid Office for loan application information. Information about the current terms of the program is available at the time of application.

OTHER SOURCES OF ASSISTANCE

Part-Time Jobs

Many students work part-time in the surrounding area. *The Middlesex County College Career Services Office can assist in locating part-time jobs. Call 732.906.2595.*

Cooperative Education

Students in most majors may have the opportunity to gain work experience in their fields while earning money to help finance their college costs. *Contact the College's Career Services Office for further information 732.906.2595.*

Outside Scholarships

Many organizations award scholarships. If a student's family is affiliated with a community or religious organization, the organization may be contacted to see if it offers scholarships. Many companies will help employees or children of employees finance their education. *Students may contact their employer or their parents' employers and ask if they have tuition assistance programs.*

Middlesex County College Scholarships

Middlesex County College awards several full-time scholarships each year for academic excellence. These awards are based on merit rather than financial need. Students graduating from Middlesex County high schools may apply. *Contact the Office of Admissions and Recruitment for further information.*

Electronic Sources of Financial Aid Information

The following addresses on the World Wide Web provide on-line information about financial aid publications, scholarship information and general financial aid application assistance.

- A Guide to Financial Aid Information & Assistance from the US Government
  http://www.finaid.org
- National Association of Student Financial Aid Administrators
  http://www.NASFAA.org
- HESAA (Higher Education Student Assistance Authority)
  http://www.hesaa.org

If you do not have a computer at home, check with your local high school, public library or the College's student computer labs for information about access to the Internet and World Wide Web.

PROMISSORY NOTE - FINANCIAL AID APPLICANTS

Admitted students applying for financial aid and unable to pay tuition due to financial hardship may apply for a promissory note according to the following procedures:

1. The student must sign the Statement of Responsibility for financial obligations located on the Financial Aid Authorization form. A student's signature on this statement indicates that the student promises to pay all charges if financial aid is not processed, or is rejected or denied.
2. Students must submit the results of their completed Free Application for Federal Student Aid (FAFSA) before determination of promissory note eligibility can be made.
3. Students applying for Federal Stafford loans and parents applying for Federal Parent Loans (PLUS) must submit evidence of loan processing.

The promissory note allows students a grace period of 30 days before payment of the term bill is required. Students who have already received financial aid awards will have their financial aid credited automatically toward their bill.

Students not satisfying their bill with financial aid must make payment at the end of the note period. Special circumstances may warrant the note being extended.

Scholarship Opportunities

MIDDLESEX COUNTY COLLEGE FOUNDATION - HELPING STUDENTS ACHIEVE THEIR DREAMS

The Middlesex County College Foundation has provided more than 60 different scholarships and financial aid to students screened through the Financial Aid Department and/or who meet academic requirements and criteria for specific scholarships. Since 1967, more than $6.5 million in financial aid, scholarships and grants have benefited more than 9,500 students. Not all scholarships listed below are available every year. For additional eligibility requirements and restrictions and further information on how to apply, please refer to the scholarship brochure and application, which are available in the Middlesex County College Foundation office in Center IV. *Call 732.906.2564 or visit the Foundation's website, www.mcc-foundation.org.*

MIDDLESEX COUNTY COLLEGE FOUNDATION SCHOLARSHIP OPPORTUNITIES AND ELIGIBILITY HIGHLIGHTS

Academic Excellence Scholarship
Entering student from High School with outstanding academic achievement. Scholarship is renewable second year if student maintains a 3.0 GPA.

Maris and Mary Alexander Memorial Endowed Scholarship
Student with financial need who is a resident of Middlesex County and is majoring in Nursing.

Dr. John A. Bakum Endowed Scholarship
Older MCC students who are overcoming major life challenges such as divorce, drug or alcohol rehabilitation, history of incarceration, death of a spouse, etc.

Bernard Family Scholarship
Participant in Franklin Township Pop Warner, Inc., and has demonstrated civic involvement.

Bristol Myers Squibb Scholarships
Preference given to Psychosocial Rehabilitation students, nursing students with interests in oncology care and other nursing students.

Chimney Rock Inn Annual Scholarship
Preference given to a student with a 3.0 GPA or better, enrolled in Hotel, Restaurant and Institutional Management program and who is currently employed in the restaurant industry working a minimum of 25 hours per week.

Robert J. and Elaine L. Ciatto Endowed Scholarship
Full or part-time student who was raised by a single parent, with financial need who has completed 12 or more credits and has a 2.5 GPA or better.

Larry L. Cohen Endowed Scholarship
Minority student with financial need and a 3.0 GPA or better in Humanities or Social Science curriculum.

Gale Cooperstein Annual Scholarship
Full-time Dental Hygiene student who has returned to school after a lapse in education and has demonstrated financial need.

The Csizmarik Family Endowed Scholarship
Accounting or Business majors with financial need.

Rose Channing Danzis Endowed Scholarship
Health Technologies students with financial need.

Delta Dental Annual Award
Student in the MCC Dental program, with financial need. A letter of recommendation and essay required.

Margarete K. M. Driver Modern Languages Scholarship
Student majoring in Modern Languages. Essay required.

Edison Chamber of Commerce Endowed Scholarship
Student who has completed 12 credits with a 3.0 GPA; lives or works in Edison for 4 years; studying Business, Computer Science or Engineering Technologies.

Financial Aid Scholarship
Meets federal guidelines for financial aid and has completed 12 credits with 2.0 GPA or better.

Murray Geltzer Endowed Scholarship
Entering full-time student who has worked while in high school and maintained a B average.

Dorothy I. Good Endowed Scholarship
Medical Technology student with financial need with a 3.0 GPA or better.

Susan Green Endowed Scholarship
Second-year student majoring in Media, Arts & Design with 3.0 GPA or better and is active in the Art and Photography Club.

Habib American Bank Annual Scholarship
Students with a 3.0 GPA or better who have completed at least one semester at MCC with 12 credits, majoring in Business.

Hispanic-American Club Award
Full-time student residing in Middlesex County who is active in the Hispanic-American Club. Student is ineligible for Financial Aid, but has demonstrated financial need.

Rush Holt/Margaret Lancefield Annual Scholarship
Part-time student who is working and has family obligations, and who resides in New Jersey's 12th Congressional District.

J&J Health Technologies Scholarship
Preference given to students in health-related careers.

JFK Medical Center Auxiliary Scholarship
Full-time Health Technologies students from Metuchen, Edison or Woodbridge.

Ernest A. Johnson Memorial Endowed Scholarship
Student pursuing an Associates Degree in Business Administration and Management, who has demonstrated academic merit and financial need and who is involved in community service.

Jerome F. Katcher, CPA and Estelle Katcher Business Achievement Award
Second year Business major with academic achievement.

Joseph E. Klegman Memorial Scholarship
A second year student majoring in Business Administration or Management.

The L'Hommedieu Family Scholars Program
Students pursuing careers in Health Technologies.

Sam Landis Endowed Scholarship
Full-time second year student in each college division with 3.0 GPA or better.

Menlo Engineering Scholarship
Student with demonstrated financial need and academic merit who is pursuing a degree within the Engineering Technologies program.

Thomas J. McCoy Endowed Scholarship
Outstanding students in Legal Studies and Accounting.

Middlesex County College Alumni Scholarship
Full or part-time second-year student who is a dependent of an MCC alumnus.

Middlesex County Association of Realtors Endowed Scholarship
Student with a documented disability and demonstrated financial need.

Middlesex County Fraternal Order of Police Endowed Scholarship
Student enrolled in the second-year Criminal Justice Program with Police Option. Student must have completed 25 credits with a GPA of 3.0 or better and be involved in community service.

Anna Morgan Memorial Endowed Scholarship
Nursing Major from South Amboy.

New Brunswick Housing Authority Endowed Scholarship
New Brunswick Housing resident taking two or more courses.

New Jersey Association of Women Business Owners Endowed Scholarship
Second year female student who has returned to school after a lapse in formal education with 3.0 GPA or better. Middlesex County resident enrolled in one of the following divisions: Business, Engineering, Health Technologies or Social Science and Humanities.

Alfred Miller - New Jersey Transportation (NTR) Endowed Scholarship
Preference given to a second-year student in Transportation, Materials Handling, Warehouse or Distribution. If there are no students who meet this academic criteria, this scholarship may be awarded to a second-year student with a 3.0 GPA or better.

Old Bridge/Sayreville Rotary Endowed Scholarship
Old Bridge or Sayreville residents who are high school graduates. Preference given to Rotary Interact and Rotary members, students with financial need, and those who participate in community service.

PSE&G Annual Scholarship
Students with financial need who are enrolled in Engineering Technology majors.

Daitaun Paradise Memorial Scholarship
Graduating senior who has participated in MCC basketball and is planning to attend a four-year institution.

Harry Payne Endowed Scholarship
Hispanic or African-American students who have overcome obstacles.

Irene Figarotta Pearse Academic Encouragement Award
Female parent returning to school after a lapse in formal education.

Nancy Yusko Peters Endowed Scholarship
A full or part-time student who has overcome obstacles to attend MCC.

Pinnacle Federal Credit Union Annual Scholarship
Full-time second year student with financial need, majoring in Business, Accounting or Computer Science with a 3.0 GPA or better.

Provident Bank Foundation Endowed Scholarship
Business or Accounting student with 3.0 GPA or better. Preference given to Middlesex County College Educational Opportunity Fund students.

Prudential Endowed Scholarship
Full-time minority students in Accounting, Computer Science, or Office Systems Technology.

Retail Services Corporation Scholarship
Students with 12 credits completed with a 2.5 GPA, carrying 12 credits, with financial need.

Ron Romano Memorial Endowed Scholarship
High achieving student in Science, Math or Health Technologies. Awarded in spring for following fall semester.

Steven B. Rosengarten Memorial Endowed Scholarship for Current MCC Students
Second year student who volunteers, and has completed one Psychology class with a grade of B.

Steven B. Rosengarten Memorial Scholarship for Graduating MCC Senior
Graduating senior planning to major in Psychology or Education at a four-year institution. Essay required.

Rubino & Nolan Scholarship
Full or part-time second-year student in Mechanical-Civil/Construction Engineering Technology program.

Fernando Santiago Endowed Scholarship
Student with proven financial need, registered for at least 2 classes at the Perth Amboy Center. Essay required.

Goldelie and Stanley Schneider Endowed Scholarship
Female student who is a custodial parent, 25 years or older, returning after a lapse in formal education.

Frank E. Schultz Endowed Scholarship
Student with 3.0 GPA or better with plans to continue education in Graphic Design or Visual Arts after MCC.

The Shailesh and Dr. Bharti Shah Endowed Scholarship
High achieving student of Indian origin (student and/or parent born in India) who is a full-time second year student with at least 12 credits. Student selection based on financial need, academic merit, and involvement in the community.

Carol A. Siperstein Memorial Endowed Scholarship
Student with 3.0 GPA or better. Applicant should reflect some or all of the following: an interest in teaching, appreciation for fine and performing arts and sensitivity to gender diversity.

Morris and Mildred Siperstein Memorial Endowed Scholarship
Student in Health Technologies courses with a 3.0 GPA or better.

Florence M. Skomba Annual Scholarship
High achieving female student from Old Bridge or Perth Amboy Adult Schools who plans to further her education. Awarded by The Kiwanis Club of Perth Amboy.

Ian Smith Endowed Scholarship
Graduating senior with a 3.8 GPA, transferring to a four-year institution. One faculty recommendation and an essay are required.

Frank R. Steele/H.O.N.O.R. Endowed Scholarship
African American students with financial need, enrolled in Science, Engineering or Business courses.

Joan D. Sulva Endowed Scholarship
Student with documented disability, taking 12 non-remedial credits with a 2.5 GPA. Essay required.

Telcordia Pioneers, Chapter 99 Endowed Scholarship
Full-time student with economic need, majoring in Telecommunications Network Technology or related Computer majors, with significant community service participation.

Mary E. Trickel Endowed Scholarship
Full or part-time custodial parent returning after a 5 year lapse in formal education and who is not covered by tuition reimbursement. 12 credits, remedial or college level with a 2.0 GPA or better. Essay required.

Verizon Annual Scholarship
Students with financial need who are interested in pursuing careers in telecommunications.

Frank D. Visceglia Endowed Scholarship
Student with financial need pursuing a career in health care.

Wachovia Annual Scholarship
Full-time, second-year minority student majoring in Business with financial need and a 3.0 GPA or better.

Barbara A. and Samuel E. Wike Endowed Scholarship
Custodial parent returning to school after a 5 year lapse in education. Essay required.

"Despite Obstacles I have encountered, I am determined to succeed in achieving the goals I have set for myself . . . The recognition you have bestowed on me with this scholarship award reinforces my belief that hard work does indeed pay off. Thank you very much for your generosity, encouragement and support."
Corrina E. Crafton, Middlesex County College Scholarship Recipient.

Enrollment Services, College Programs and Activities

ACADEMIC ADVISING

You should meet with an academic advisor each term to review curriculum requirements, to discuss career and educational goals (including transfer) and to discuss problems that may interfere with your academic success. It is your responsibility to meet all curriculum and College requirements.

As a full-time student, you are assigned a faculty advisor, usually from your academic program. Full-time faculty members maintain a regular schedule of office hours, which is posted on their office doors. It is your responsibility to make appointments with your advisor. Names of advisors for full-time students are on file in the academic departments, Academic Advising Center and the Office of the Registrar in Chambers Hall. Advisors may refer you to a counselor in the Department of Counseling and Career Services when appropriate.

As a part-time student, you may meet with an advisor in the Academic Advising Center on a drop-in basis. *For more information, please call 732.906.2596 or contact* ***advising@middlesexcc.edu.***

OPEN COLLEGE PROGRAM

The Open College Program gives students the opportunity to enroll full time without selecting a major. Open College is for students who are unsure of educational goals, or wish to explore before choosing a major, or need a better background or preparation in math, sciences, writing and/or reading before pursuing college-level studies.

Each student enrolling in Open College will develop, in conjunction with an advisor, a plan of study tailored to the individual's educational needs. All students must enroll in writing each term until English Composition II is successfully completed. *For more information, please call 732.906.2596.*

ADMISSIONS COUNSELING

To learn more about the College, to obtain help in selecting a major, to learn more about specific courses of study, or to simply schedule a campus tour, you are invited to make an appointment with an Admissions Counselor in the Office of Admissions and Recruitment, Chambers Hall, 732.906.4243. For more detailed admissions information and deadlines please refer to our Applicant's Guide.

CHANGE OF MAJOR

You may change your major if you meet the admissions requirements for the new major and space is available. If you are currently seeking a degree or certificate or you are an Open College student, you must submit an ADD/DROP Change Form to the Office of the Registrar signed by the Dean or Department Chairperson of the academic department/division which administers the new major.

If you want to change your major to Dental Hygiene, Medical Laboratory Technology, Nursing, Psychosocial Rehabilitation and Treatment, Radiography Education, Respiratory Care, or Automotive Technology, you must file an Application for Admission with the Office of Admissions and Recruitment.

Non-Matriculated part-time and English as a Second Language (ESL) students who wish to declare a degree or certificate program must also file an application with the Office of Admissions and Recruitment.

READMISSION

If you have not been enrolled at the College for a period of 12 months, and you are a degree, certificate, or Open College student, you must apply for readmission before re-enrolling. You will be subject to the degree or certificate requirements in effect at the time of readmission. If you anticipate being away from the College for up to one year, you may apply for a Leave of Absence. If the leave is approved, you do not need to apply for readmission.

LEAVE OF ABSENCE

You may apply for up to one year of Leave of Absence from the College by completing a form that is available in the Department of Counseling and Career Services. The leave allows you to return to the College within a year without applying for readmission and without a change in requirements for a degree or certificate program. Failure to obtain a Leave of Absence means that you must apply for readmission to return. If you are majoring in any of the Health Technologies, check with the Department Chairperson or Dean of the Division for special conditions.

CAMPUS CRUISER/WEB ADVISOR

CampusCruiser/WebAdvisor is the online portal available to all students, faculty and staff at Middlesex County College. Using the power of CampusCruiser/WebAdvisor students now have the ability to access both general and personalized college-related services from the Internet. Services are available seven days a week, 24 hours a day except during scheduled maintenance. Some of the features of CampusCruiser/WebAdvisor include: schedules, grades, transcripts and financial aid information. Students may also register for classes and pay tuition bills online. Other features are: e-mail, calendars, national and school news, sports, web pages, chat and message boards, course listings & descriptions and specific class information including syllabi, assignments, resources and links.

All official communication with students containing personal information will be conducted using the FERPA guidelines. Students will be responsible for checking their official college provided CampusCruiser/WebAdvisor email regularly and maintaining the security of that address. *If you need more information about CampusCruiser/WebAdvisor please e-mail* ***Cruisers_Help@portal.middlesexcc.edu*** *or call 732.906.2616 during business hours.*

COUNSELING

The Department of Counseling and Career Services offers a full complement of professional counseling services designed to help students cope with academic demands, choose a career or major and cope with personal problems. Because counselors believe that each individual problem merits privacy and confidentiality, professional counseling ethics are practiced throughout the department. The office is located in Edison Hall, Room 100. *732.906.2546.*

CAREER SERVICES

Assistance with full-time, part-time, or seasonal employment is available to students and alumni. Services include workshops for employment preparation, on-line job listings, career and interest assessment, resume referral and career counseling. The Career Resource Center in Edison Hall, Room 100 provides electronic and print information on career choices, employment trends, job-search materials, and specific vocational fields. *For additional information, call 732.906.2595 or visit* ***www.middlesexcc.edu/career.***

CHILD CARE SERVICES

Child care is available on-campus in a modern child care center for the children of students, staff, and residents of the community. Professionals offer child care and preschool education during the day for children between 2-5 years of age. Evening care is available from 5:15-9 p.m. for the children, ages 3-9, of college students only. Students enrolled in Middlesex County College education programs provide individualized attention to the children in the Center.
For information on Child Care Center services, call 732.906.2542.

COLLEGE CENTER

When you want to relax in informal surroundings, head over to the College Center. Here students can enjoy campus activities, buy lunch in the cafeteria, grab a cup of coffee in the snack bar, or just find a comfortable place to talk with friends, faculty, and staff. The following facilities are available within the College Center: an information desk, an Automated Teller Machine (ATM), photocopying services, a game room, the Corral Restaurant, lounges, meeting rooms, and student organization offices.

COLLEGE PROGRAMMING BOARD

The College Programming Board may catch your interest if you enjoy planning and presenting a variety of cultural, recreational, and social events. You can become a member of one of the five committees that make up this board. Throughout the year, members of these committees plan and present popular and classical concerts, film programs, art exhibits, forums for speakers, theater and museum trips, and social functions.

Interested in becoming part of a student organization? We have approximately 100 chartered organizations to choose from. Develop current interests, explore new areas, and meet new people. These are three compelling reasons to join a student organization.

COMMUNITY SCHOLARS CORPS/ BONNER LEADER PROGRAM

Baseball and basketball players receive college scholarships at many colleges—and at Middlesex—so do students who join the Democracy House team. Democracy House is Middlesex's Center for Civic Engagement and it runs a number of programs, including the Community Scholars Corps and the Bonner Leaders Program. Diverse groups of students are united and work together to address the unmet needs of the local community—by tutoring homeless children, feeding the hungry, restoring local rivers, completing community based research projects for local non-profits, organizing local youth to identify and complete their own neighborhood improvement projects—and much more. It receives support from the Corporation for National and Community Service's AmeriCorps and Learn and Serve America Programs—and is part of the Bonner Foundation network which provides potential transfer opportunities to dozens of colleges around the country. Most students receive an hourly stipend and a college scholarship for their commitment and desire to learn and serve their community. For more information contact Professor Patrick Donohue, Department of History and Social Behavior at extension 3262 or visit Democracy House in Raritan Hall (003).

COOPERATIVE EDUCATION AND INTERNSHIPS

Cooperative Education integrates academic study and practical work experience. Students gain college credit along with career-related work experience. *For more information, stop by Career Services in Edison Hall, Room 100, or visit* **www.middlesexcc.edu/career**. *732.906.2595.*

DENTAL HYGIENE CLINIC

The Dr. Sidney Danzis Dental Hygiene Clinic, located on the main floor of L'Hommedieu Hall (the Health Technologies Building) offers the following dental services to the College community and the surrounding community: oral cancer screening, dental scaling and polishing, dental exam, x-rays, fluoride treatments, sealants, nutritional counseling and instruction in maintaining good oral health. A nominal fee is charged. *For an appointment, call 732.906.2536.*

EDUCATIONAL OPPORTUNITY FUND

The Educational Opportunity Fund (EOF) program is an academic program that provides individual and group counseling services, academic support, and financial aid to educationally and economically disadvantaged students who might not otherwise attend college. Students must complete a Free Application for Federal Student Aid form (FAFSA) and an Educational Opportunity Fund program application. *For information about admission to the program, contact the EOF Office in South I. 732.906.2544.*

ENGLISH AS A SECOND LANGUAGE

If your native language is not English, you can study and prepare for college courses or gain needed language skills for the current job market in our ESL program. The College will test your language skills and place you in a program of study to meet your specific needs. *TOEFL is not needed. 732.906.2508.*

HIGH SCHOOL SCHOLARS PROGRAM

High school students may take college courses for credit if they have completed the prerequisites that the courses require. To register for a course, all students must complete the "High School Scholars" application (available online), have the recommendation of their school guidance counselor, and parental permission.

Students may attend classes on the Middlesex County College campus, at the New Brunswick or Perth Amboy Centers, or at any of the off-campus locations. Where there is sufficient interest, by arrangement with the school district, courses may be offered on the school premises during the regular school day.

During the fall and spring semesters, students pay only $100.00 (plus fees where applicable) and are limited to one course per semester. Students choosing to take summer courses pay the regular tuition and fees. *For more information, call 732.906.2554.*

HONOR SOCIETIES

Middlesex has three honor societies for students who excel in the classroom. Phi Theta Kappa, the national honor society that recognizes the academic achievements of community college students, provides leadership training and a free exchange of ideas in an intellectually stimulating atmosphere. You will be invited to join if you earn a 3.5 semester and overall GPA based on a minimum of 12 credits, pledge an interest in developing leadership skills, and are willing to perform community service. Alpha Mu Gamma is the national collegiate foreign language honor society. Our Iota Tau Chapter will tap you if you maintain a 4.0 GPA in upper level language courses along with an overall 3.0 GPA. Psi Beta, the national psychology honor society for community colleges, recognizes and encourages scholarship and stimulates your interest in psychology. You are eligible for membership if you have completed at least one psychology course with a grade "B" or better and have an overall GPA of at least 3.25.

The Chi Alpha Epsilon National Honor Society, Inc. recognizes students who have completed three or more credits of developmental courses in an academic area and exhibited high academic achievement. In order to be inducted into the Gamma Gamma Chapter, full-time students must have a 3.00 grade point average for two consecutive semesters; part-time students taking 9-11credits must have a 3.00 for three consecutive semesters and those taking 6-8 credits, a 3.00 for four consecutive semesters.

IMMUNIZATION:

Middlesex requires all students taking 12 credits or more to provide immunization records proving immunization to Measles, Mumps and Rubella.

Additional immunization records are required of students in the Health Technology programs and the Diet Technology program. Those additional requirements are Tetanus Diphtheria, Hepatitis B and yearly ppd testing.

INDEPENDENT STUDY PROGRAM

Are you a highly motivated self-directed learner who wants to determine your own pace of instruction? If so, the College's independent study courses in English composition and American literature may be of interest to you. The Independent Study Program provides a flexible approach toward college instruction. Course components include a textbook, study guide and other support material. An instructor is available during regularly scheduled consultation hours for in-person or telephone communication. You may mail your assignments to the instructor. You must take all exams on campus.

INTERCOLLEGIATE SPORTS

Middlesex is a member of Region XIX of the National Junior College Athletic Association. Competing teams come from New Jersey, Pennsylvania, and Delaware. We are also a charter member of the Garden State Athletic Conference, which oversees athletic competition among New Jersey's community colleges. *If you want more information or wish to participate, contact the Director of Athletics, 732.906.2558, after you enroll at Middlesex.* Women's intercollegiate sports include basketball, cross-country, golf, indoor and outdoor track and field, soccer, and softball. Men's intercollegiate sports include baseball, basketball, cross-country, golf, indoor and outdoor track and field, soccer, and wrestling.

INTERNATIONAL STUDENT ADVISOR

Advisors assist international students with individual counseling regarding immigration status, government regulations, cross-cultural adaptation, and adjustment to U.S. education. International students must register with the Department of Counseling and Career Services, Edison Hall, 100 at the time of enrollment. *732.906.2546.*

LIBRARY & MEDIA RESOURCE CENTER

Overwhelmed by information on the Internet? Not sure how to start a research project? Need college level materials for class assignments? The Middlesex County College Library is here to help you with these and other informational needs. The Reference Librarians offer individual instruction in locating and evaluating appropriate materials for your research projects. Among the basic reference sources and other traditional information tools, the College Library subscribes to a variety of on-line databases, including EBSCO Academic Search and Lexis-Nexis which provide complete articles from newspapers, magazines and journals.

In addition to materials and resources available at the College Library, resources can be obtained through an international interlibrary loan network (OCLC). The College Library is also linked with other libraries through an on-line catalog (MIDAS).

Expand your research and learning activities by a visit to the Media Resource Center in the Instructional Resources Center, where you will find the Open Computer Lab, the Multimedia Lab, and videotapes.

MINORITY STUDENT AFFAIRS

A number of special programs and services are designed especially to improve the success of minority students on campus. You are provided with a support system to help you reach your goals, whether you intend to enter the workplace or transfer to a four-year college or university.

Our Minority Access to the Professions Scholars (MAPS) program assigns, Corporate Mentors to help you grow personally and professionally while earning a degree. The Peer Mentor Program matches a first-year student with an outstanding second-year minority student. Project Success provides intensive academic and personal assistance to African-American and Hispanic students who are majoring in the technologies or other programs in applied arts or science.
Contact the Middlesex Minority Student Affairs Office. 732.906.2532.

NJ STARS

The NJ STARS* program ensures all tuition and fees will be covered for two years at your local community college if you graduate in the top 20 percent of your class.

You can complete the freshman and sophomore years of college with no tuition costs — and then transfer to a bachelor's degree program for the final two years.

To qualify, you must:

- Graduate in the top 20% of your high school class in 2005 or beyond
- Maintain full-time enrollment status in an associate's degree program at Middlesex County College. (12 or more college credits)
- Apply for all need-based and merit-based financial aid each year.
- Maintain a minimum grade point average of 3.0.
- Be a United States citizen or have permanent residence status in Middlesex County.

OFFICE OF SCHOOL RELATIONS

The Office of School Relations is the College liaison to the K-12 school districts. Working with the K-12 sector, Middlesex County College provides professional development workshops for teachers and academic and career development programs for students. The professional development includes customized in-district workshops to meet the specific needs of local school districts, on-campus workshops integrating the NJ Core Curriculum Content Standards, and summer institutes focused on math, science, and technology. Middlesex is registered with the NJ Department of Education as a professional development provider (#42). Through School Relations, both a 'Substitute Teacher Training Seminar' and a 'Substitute School Nurse Seminar' are offered to meet the districts' staffing needs. New Pathways to Teaching in New Jersey, an alternate route to teaching in the K-12 sector, is available through the Office of School Relations. A Praxis Review course is available for the elementary school praxis exam.

For middle and high school students, School Relations offers career exploration and academic enrichment programs such as the Middlesex County Teen Arts Festival, the High School Scholars program, and GATEway, a summer program for academically gifted students who have completed seventh, eighth, or ninth grade. *For information on any of the School Relations programs, call 732.906.2554 or check the College website.*

PEER GUIDANCE ORGANIZATION

Peer guides are there when you have a problem and don't know where to turn. Trained students will listen to you and make appropriate referrals to others on campus. *732.906.2546.*

PHYSICAL EDUCATION CENTER

At the Physical Education Center, you can get in shape and stay in shape on any of our collegiate-size basketball courts, on the racquetball courts, in the weight room, at the swimming and diving complex, or in the dance studio. The air-conditioned weight room is complete with closed-circuit television, as state-of-the-art treadmills, computerized exercise bikes, and steppers. In addition, students using free weights have available to them dumbbells, barbells, and a Smith machine.

If you are a registered student and pay the student service fee, you may use the swimming pool, gymnasium, and outdoor track, as scheduling permits, and join the Fitness Club. Fitness Club memberships are also available to staff and graduates of Middlesex. Your membership entitles you to free use of all the facilities except the racquetball courts, which require an hourly usage fee.
To receive a complete schedule, contact the Physical Education Center at 732.906.2558.

PROJECT CONNECTIONS

Project Connections, our award-winning program for highly motivated, college-able students with specific learning disabilities, provides support services to students through a comprehensive psycho-educational support.

Both academic and counseling services are available to assist students in meeting with success in completing their college program. Admission is selective and a supplemental application is required.
To request an application, please call 732.906.2507.

REGISTRATION

Current Students Who Have Been Admitted to a Degree or Certificate Program

If you are a current student who is eligible to do so, you may register online through CampusCruiser/WebAdvisor during the designated registration period for the upcoming term. You are encouraged to meet with a faculty advisor prior to registering. The advisor assists you with course selection and approves your schedule.

New Students Who Have Been Admitted to a Degree or Certificate Program

As a new student you must schedule an enrollment appointment once you are admitted to the College and have taken the College Placement Test. Faculty advisors assist you at the time of enrollment by answering questions about the College and helping you choose appropriate classes.

New and Current Non-Matriculated Part-Time Students

Current part-time students and those currently enrolled who have not been admitted to a degree or certificate program (non-matriculated) are encouraged to register online through CampusCruiser/WebAdvisor. New part-time and non-matriculated students may register by mail or in person during the designated registration period for the upcoming term. All new students are subsequently sent a CampusCruiser/WebAdvisor Log-In ID and Password after then have enrolled for the first time.

The Master Class Schedules are available on the College web site: **www.middlesexcc.edu.**

AUDIT

Most courses may be audited. You may elect to change a course from credit to audit through the refund period, or the 10th day of the semester, **by submitting the change to the Office of the Registrar.** As an auditor, you are not obligated to complete examinations or other requirements, nor do you receive any grade or credit for the course. However, you must pay the same tuition or credit for the course whether you audit a course or take it for credit. The course will appear on the official academic transcript with a grade of "X."

CERTIFICATION OF ENROLLMENT

The National Student Clearinghouse is the authorized agent for providing Certification of Enrollment to outside agencies such as the Social Security Administration. If you need to have your enrollment certified, log into CampusCruiser to reach the National Student Clearinghouse Self-Service site, where you can make your request. If you are not currently enrolled and cannot access the site through CampusCruiser, you may contact the National Student Clearinghouse directly at: **www.studentclearinghouse.org**

COURSE LOAD

Enrollment for fewer than 12 credits or credit equivalents is considered part-time and enrollment for 12 or more credits or credit equivalents is full-time.

If you want to enroll in more than 20 degree credits (or their equivalent) in any semester, you must have the written permission of your academic dean.

GRADE REPORTS

You may access your grades online through CampusCruiser/WebAdvisor. A grade report will be mailed to your home at both midterm and the end of the semester. Official transcripts may be ordered at the Office of the Registrar or you may download the Transcript Request Form to mail to the office for processing.

WITHDRAWAL FROM A COURSE

If you decide to withdraw from a fall or spring course, you must do so officially. Depending on when you decide to withdraw, you must adhere to one of the following procedures:

- **Prior to the first day of class:**

You may drop a course online through CampusCruiser/WebAdvisor or by completing an ADD/DROP Change Form and submitting it to the Office of the Registrar. Dropping a course at this time has no effect on the Grade Point Average, and the course is not recorded on the permanent academic record.

- **First ten days from the first day of a Fall or Spring semester:**

You may drop a course in person by using an ADD/DROP Change Form. Withdrawing from a course at this time has no effect on the Grade Point Average, and the course is not recorded on the permanent academic record. For developmental course withdrawal a signature is required from either the curriculum chair, the dean of the student's division, an academic advisor in the advising center or a faculty advisor. All forms must be submitted to the Office of the Registrar.

After a class has met once, a student may not be able to register for another class.

- **Eleventh day through the end of the withdrawal period:**

You may drop a course in person by using an ADD/DROP Change Form. A grade of "W" will appear on your permanent academic record. For developmental course withdrawal a signature is required from either the curriculum chair, the dean of the student's division, an academic advisor in the advising center or a faculty advisor. All forms must be submitted to the Office of the Registrar. The dropped course will be designated as having been taken one time according to the Repeated Course requirement in the college catalog.

- **After the withdrawal period ends:**

You may appeal to the dean of your academic division should withdrawal be necessitated for reasons of health or circumstances beyond your control.

- **For all withdrawals:**

  - Students should retain the copy of the withdrawal form given them by the registrar until final grades are assigned.
  - Withdrawal from a developmental course may limit the courses for which you may register next semester.
  - Students withdrawing from Fall II or Spring II, Wintersession or Summer Session, should refer to the current schedule bulletin for deadline dates.
  - The withdrawal period ends 10 business days after midterm grades are available. The exact date will be posted each semester throughout the campus.
  - International Students who are on F-1 visa/status must meet with an International Student Counselor before they can withdraw from a class or from the College.

WITHDRAWAL FROM THE COLLEGE

If you are a full-time student and need to withdraw from all our courses, you must go to the Department of Counseling and Career Services in Edison Hall, Room 100, to complete the proper withdrawal form and confer with one of the counselors. All Degree and Certificate students who withdraw completely, and who intend to return to the College, are advised to apply for a leave of absence. For more information about the Leave of Absence Policy and Readmission, refer to page XX.

Students who officially withdraw from the College after the tenth day of the semester but before 10 business days after midterm grades are available will receive the grade "W" in all courses. Should withdrawal be necessitated for reasons of health, or circumstances beyond the student's control, the student may appeal to the Tuition Appeals Committee.

International Students who are on F-1 visa/status must meet with an International Student Counselor before they can withdraw from a class or from the College.

Financial Aid students who withdraw from all of their courses prior to the end of the enrollment period will have their aid awards adjusted according to the Refund/Repayment Policy. See page XX.

SEMESTERS AND SESSIONS

Fall and Spring

Courses offered during the fall and spring semesters are taught over a 14-week period. These courses are offered on the main campus in Edison, at the New Brunswick Center, the Perth Amboy Center and numerous high schools within Middlesex County.

Fall II and Spring II

Within each of the regular 14-week semesters is a concentrated eight or nine week session with a limited schedule of course offerings. These courses are offered at off-campus locations, as well as the main campus in Edison. These concentrated sessions allow you to begin class four weeks after the regular semesters begin.

Summer

During the summer months students from more than 100 different colleges and universities enroll in summer classes at Middlesex taking day and evening sessions.

Wintersession

In December, the College offers a concentrated three-week session. A limited schedule of classes runs five mornings a week. This mini-semester allows you to earn credits without increasing your regular semester course load, to fulfill a prerequisite for a course you wish to take in the spring or to repeat a fall course to improve your grade.

SPANISH / ENGLISH COUNSELING CONSEJERIA BILINGUE

Se ofrece ayuda especial a los miembros de la comunidad hispana y estudiantes con dificultades con el idioma inglés. Se ofrece consejería bilingüe en inglés y español, en areas de problemas personales, vocacionales, adaptación en esta sociedad y desarrollo personal. *Para hacer una cita llame al teléfono: 732.906-2546. También usted Puede pasar por nuestra oficina en Edison Hall, Room 100.*

STUDENTS WITH DISABILITIES

Students requiring assistance are strongly encouraged to contact the Counselor for Students with Disabilities *(Edison Hall, Room 100, 732.906.2546 or TTY 732.906-2547)* early in the application process so that the College may respond to your needs in a timely and effective way. You are invited to request a copy of our "Special Services" brochure and policies and procedures for additional information.

STUDY - ABROAD PROGRAM

During the summer, the Center for International Education offers five Study-Abroad Programs in England, Chile and Quebec.

Experience the summer of your life! Travel, learn, expand your cultural horizons, meet different people, learn more about yourself, earn college credits, immerse yourself in cultural traditions of the old continent! The College's Study and Travel Programs offer an invaluable opportunity for college students, above-average high school students, educators, alumni and retirees to learn more about the social, cultural, historical and educational life of people in other countries.

Most programs cost include: R/T airfare from NY/Newark to any of the program sites, room and board, tuition for up to six college credits, activities consisting of sightseeing, performances, lectures, tours to nearby cities, etc. *For information regarding costs and detailed itineraries, please contact the Center for International Education at 732.906.2529.*

TRANSFER SERVICES

Students interested in transfer after Middlesex County College can receive assistance with educational planning and choosing transferable courses appropriate to the four-year college and degree of his/her choice. The latest catalogs, reference books, scholarship guides, on-line sites, and other specialized information are available at the Transfer Services Center in Edison Hall, Room 100. *732.906.2546.*

TUTORING CENTERS

The Peer Tutoring Program matches friendly, academically-qualified Middlesex students with those seeking assistance. Tutoring is offered in almost all curriculum areas on a drop-in basis or by appointment. This free service is offered on a daily basis including some evening and weekend hours. *732.906.2631*. Assistance in reading and writing is available in East Hall. *732.548.6000 ext. 3086.*

VETERANS AND MILITARY APPLICANTS

The New Jersey Department of Military and Veterans' Affairs, State Approving Agency under Title 38, U.S. Code, Section 1775, for veteran training approves all degree and certificate programs. Those applicants wishing to obtain governmental educational benefits or any additional information should contact the Office of the Registrar.

Individuals have 10 years from their date of separation from active duty to use their entitlement. Veterans who began active duty between January 1977 and June 30, 1985, may be eligible for veterans benefits if they contributed to the Veterans Education Assistance Program (Chapter 32).

Veterans who began active duty after June 30, 1985 may be eligible for veterans benefits if they participated in the Montgomery G.I. Bill (Chapter 30) or the Active Duty Educational Assistance Program of the Selected Reserve and National Guard (Chapter 106).

Veteran benefit recipients must apply for admission to a degree or certificate program. Open College-Developmental Plans of Study have been approved by the New Jersey Department of Higher Education, State Approving Agency.

To maintain benefits, veterans must comply with the Standards of Progress established by the College in cooperation with the State Approving Agency. These Standards include degree requirements, standards and regulations and the College's Code of Student Conduct. Failure to observe these regulations will jeopardize receipt of benefits. Additional information may be found in the Pathfinder and the schedule bulletins.

The Office of the Registrar certifies the enrollment status of all students who apply for veteran's benefits. Applicants who are still in military service may apply for an "early out" from their military obligation. Middlesex County College is included in the Education Directory, Part 3: Higher Education.

RESERVE OFFICERS TRAINING CORPS (ROTC)

Middlesex County College and Rutgers University have an agreement permitting students at Middlesex to cross-enroll in the Army Reserve Officers Training Program at Rutgers without a military commitment. Scholarships of various award levels and lengths are available. Additionally, NJ Army National Guard members can attend college under the NJARNG tuition-free waiver program. The Army ROTC program provides students the opportunity to study and train for careers in the U.S. Army, Army National Guard, and the Army Reserve. Students who successfully complete the program are commissioned as second lieutenants, and, depending on their career choices, can serve full-time on active duty, or part-time, one weekend a month. *For more information, call 732.932.7313, ext. 11 or e-mail us at* **apgarb@rci.rutgers.edu**. *For more information, visit us on the web at* **www.armyrotc.rutgers.edu/home.html**

WORKFORCE DEVELOPMENT PROGRAM

Assistance for students sponsored by NJ Employment Services programs is available through the Career Services office located in Edison Hall, Room 100. *732.906.2595*

Community Outreach

Career Training Center

The Career Training Center provides adults with the opportunities to enhance their present career or prepare for a new career through computer-based training programs. These programs, which meet the needs of businesses, include training in health care, accounting, software technology and web design. Programs vary in duration from one day to 22 weeks and are available in day, evening and weekend sessions.

The Center's programs provide career development and job placement services. A series of career development seminars are presented to all students. Topics include resume preparation, interviewing skills and job search. These interactive sessions enhance employability skills and prepare students for the demands of the corporate workplace. *For information regarding Career Training Center programs, call 732.906.4231.*

New Brunswick Center

The New Brunswick Center is a state of the art facility serving the greater New Brunswick community. Guided by the motto "Educate to Elevate" the Center opened in April of 1980 and provides educational opportunities to meet the needs of the community in which it serves. The Center was established through the efforts of New Brunswick Tomorrow, the city's redevelopment organization, aided by an advisory committee composed of representatives from government, business, industry, and community groups. The New Brunswick Center provides comprehensive enrollment services which include admissions, registration, financial aid assistance, tutoring services, English as a Second Language placement and college placement testing.

The Center is the site for a wide range of academic offerings both credit and non- credit as well as library services. Courses are scheduled at convenient times, days, evenings and Saturdays. The staff is bilingual in English /Spanish .Community and business input is always welcome and is used to develop future course offerings.

The New Brunswick Center at 140 New Street is conveniently located at the corner of New Street and Joyce Kilmer Avenue and walking distance from the New Brunswick train station. *For more information call 732.745.8866.*

Perth Amboy Center

In 1974 the Perth Amboy Center was established to meet educational and career needs for people in the Perth Amboy area. Today, the Center offers college credit and non-credit courses as well as a variety of student activities. The staff is bilingual and includes program specialists, career counselors and teachers. The Center would like the community to envision higher education as an opportunity to a better future. This idea is the basis for its motto, "Juntos podemos-together we can."

The Perth Amboy Center provides academic offerings which include a full range of English as a Second Language courses; developmental courses in reading, writing and math; and college credit courses in liberal arts and business.

The Center also offers comprehensive enrollment services, which include admissions, ESL and college placement tests, academic and financial aid advisement, registration and payment plans. In addition, students can purchase their books and obtain their student ID cards at Perth Amboy at the beginning of each semester. Also, a variety of counseling services including vocational assessment, training and job referral services are available on an individual basis by appointment or through group sessions. All counseling services are offered in English and/or Spanish. Tutoring and a variety of cultural and social activities are offered for students at the Center.

The Perth Amboy Center is located at 60 Washington Street, Perth Amboy, NJ 08861. The newly built Center is on the corner of Washington and High Streets. There is free parking for students on Mechanic Street. *For more information call 732.324.0700.*

Off-Campus Offerings

In addition to Centers in New Brunswick and Perth Amboy, the College offers credit courses at public high schools in the evening. During the past academic year, student registrations were accepted for courses offered in various locations including East Brunswick, North Brunswick, South Brunswick and Old Bridge.

The Center for International Education

The Center offers a unique certificate program in International Trade for individuals who have not had any previous training in international trade and who wish to start a career in international trade or start their own international business.

This program is designed to give participants the appropriate background in the field of International Trade. Specialization in this field prepares participants for entry level management positions in international trade or export-import positions.

The non-credit certificate program requires the completion of five core courses. After successful completion of the specified course of study outlined by the department, a certificate will be awarded to the participant.

Additional courses may be taken to learn the language and culture and commercial traditions of various countries. Arabic, Chinese, French, German, Italian, Japanese, Russian, and Spanish courses are offered.

The Center sponsors The International Business Round Table which has been a gathering place for business, government and education leaders since 1975. It is a central venue to give and receive information regarding foreign markets, new shipping regulations, new export credit and insurance requirements and all critical data for the expansion of foreign trade. A panel of experts in the various fields of international trade exchange accurate, up-to-the-minute information on a bimonthly basis. *For further information call 732.906.2529.* The Center coordinates the College's Study Abroad Program and the International Festival each April.

The Center for the Study of Prejudice, Genocide, and the Holocaust

Recognizing the negative and deleterious impact prejudice and discrimination have on people and society, the Board of Trustees authorized the establishment of the Center for the Study of Prejudice, Genocide, and the Holocaust. Through a variety of academic programs and courses, the Center seeks to promote understanding and respect for people of diverse backgrounds and cultures.

PROGRAMS AND SERVICES

Professional and Community Programs

Professional

A variety of professional, non-credit programs are available to men and women who wish to make a change – to develop new skills in their field, to earn more money, to get a better job, or to try an entirely new career. Taught by business professionals in high demand fields, these causes are developed with commercial applications in mind. Comprehensive training is available in a wide range of areas that include: Small Business Development, Construction Management, Training and Development, Health Information Training, NJ Uniform Construction pre-licensing courses and Pharmacy Technology. Most courses are offered evening and week-ends to accommodate the schedules of working people. In addition to courses on the main college campus, a selection of courses is also available in the New Brunswick and Perth Amboy Centers. *For additional information call 732.906.7740 or visit www.middlesexcc.edu*

Community

To enrich your life with leisure time pursuits, improved health, stress reduction and new friends, a wealth of personal enrichment courses are offered. There are no prerequisites, no tests and adults of all ages are welcome! Courses include Dance – African, Belly, Salsa and Argentine Tango; Health and Fitness – Stop Smoking, Weight Reduction, Yoga and Pilates; Music – Afro Cuban and Puerto Rican Drumming and Chanting, African Drumming and Hand Drumming; General Interest – Bridge, Knitting and Crochet and Finance and Law – Debt Reduction, Investments and Financial Planning. *For additional information call 732.906.7740 or visit www.middlesexcc.edu*

Summer Camp

To delight your child in a safe and healthy environment as he or she develops new skills, Camp Middlesex offers an overabundance of child-centered activities. Specialty camps include theater, basketball, magic, golf, clowning, chess, baseball, cartooning, sewing, specialized computer techniques, mosaics, science and so much more! Camps are offered as individual modules with an extended program option for working parents. Children, Ages 6 – 18 are welcome! *For additional information call 732.906.7740 or visit www.middlesexcc.edu*

Work Readiness Program

Through Grants provided by the Middlesex County Work Force Investment Board, Middlesex County College assists recipient of public assistance with life and academic skills necessary to support them in becoming financially independent. These grants include training in the areas of life skills, English as a Second Language and adult basic education. In addition, career development and exploration, resume writing and job interviewing techniques are included as part of the program. The Work Readiness Program is offered at the Perth Amboy Center.

Project SPAN

The Supportive Parent Aid Network (SPAN) is a unique community volunteer program that provides a wide range of supportive services to families where there are varying degrees of existing or potential cases of child abuse and/or neglect.

By placing trained adult volunteers in contact with these families, SPAN offers, on a one-to-one basis, practical guidance, information and emotional support.

SPAN volunteers are first carefully trained in the dynamics of abusive families, parenting skills, early childhood development, crisis intervention, and community resources. They are then assigned to a family who has consented to accept a SPAN volunteer. Great care is taken to match the right volunteer with the family. Under this professional supervision, the SPAN volunteer becomes an integral part of the community effort to prevent child abuse. *To participate or receive more information, call 732.906.2553.*

The Institute for Management and Technical Development

The Institute provides customized training services for business, industry, nonprofit organizations, municipalities, and professional groups. Since its inception, over 270 companies have been served, from multinational organizations to small businesses. Institute programs provide training in manufacturing skills, management, English as a Second Language (ESL), customer service, and information technology. Computer-based training is provided in college labs or at a company's site with a portable laptop lab. Additionally, the Institute offers a comprehensive medical coding program which leads to the CCA Exam.

A partner with the New Jersey Department of Labor, The Institute provides its clients training assessments, program delivery and assistance with application as well as billing. *For further information on The Institute's services, call 732.906.4681.*

Accounting

DIVISION OF BUSINESS, COMPUTER SCIENCE & ENGINEERING TECHNOLOGIES (BCSET)

ACCOUNTING AND LEGAL STUDIES DEPARTMENT

Associate in Applied Science (A.A.S.) Degree

Why major in Accounting?

Accounting is one of the most rapidly expanding fields in today's economy. Since it is service oriented, it involves working with people almost as much as with financial records. As an accountant, you will not only collect and report financial data, but also serve as the link between the data and the people who use it.

If I major in Accounting, what degree can I earn?

The Associate in Applied Science Degree which prepares you to begin a career in business, industry, and government as a junior accountant.

If I major in Accounting, can I transfer to a four-year college or university?

Many colleges and universities will apply the courses you have taken towards a bachelor's degree.

What will I learn if I study Accounting?

You acquire an extensive background in accounting and a strong fundamental knowledge of the major functions of business and industry. You study business law, business organization and management, mathematics and economics.

Are there any requirements I must satisfy before I start taking courses in my major?

Algebra I is a prerequisite for all majors. Algebra I competency must be verified with a passing score on the College's placement test.

How long will it take for me to complete this degree?

If you do not need to take developmental coursework, and you register for an average of 17 credits each semester, you can complete the degree in two years. You can shorten the amount of time by taking courses in the summer and winter sessions.

Where should I direct specific questions about this program?

Contact Professor Ellison, Department Chair, at 732.906.2576.

DEGREE PROGRAM

Below are required courses and recommended course groupings and sequences for program completion. Courses may have prerequisites and corequisite requirements. Check course descriptions for details.

Courses		Credits	Requisites / Comments
Semester I			
ACC 101	FINANCIAL ACCOUNTING	4	
BUS 101	BUSINESS ORGANIZATION AND MANAGEMENT	3	
BUS 107	COMPUTER APPLICATIONS FOR BUSINESS	3	
ENG 121	ENGLISH COMPOSITION I	3	A passing score on the writing portion of the College's Placement Test or a grade of "C" or better in ENG 010; completion of RDG 009 with a "C" or better or a score on the reading portion of the College Placement Test that exempts the students from RDG 009.
____ ____	MATHEMATICS ELECTIVE	3-4	BUS 115, Mathematics of Finance, will satisfy the math requirement. Students considering transfer to a baccalaureate program should consult an Academic Advisor as to the other math choices.
Semester II			
ACC 102	MANAGERIAL ACCOUNTING	4	ACC 101
BUS 201	BUSINESS LAW I	3	
ENG 122 OR ENG 125	ENGLISH COMPOSITION II ENGLISH COMPOSITION II: WRITING ABOUT LITERATURE	3	A grade of "C" or better in ENG 121 and a passing score on the reading portion of the College Placement Test or a grade of "C" or better in ENG 121 and a grade of "C" or better in RDG 011.
____ ____	GENERAL EDUCATION HUMANITIES ELECTIVE (GE HUM)	3	
____ ____	GENERAL EDUCATION SOCIAL SCIENCE ELECTIVE (GE SS)	3	
Semester III			
ACC 202	COST ACCOUNTING	4	ACC 102
ACC 211	INTERMEDIATE ACCOUNTING I	4	ACC 102
BUS 202	BUSINESS LAW II	3	BUS 201
ECO 201	ECONOMICS I	3	A passing score on the algebra portion on the College Placement Test or MAT 013.
PED/HED	PHYSICAL/HEALTH ED ELECTIVE	1-3	
____ ____	GENERAL EDUCATION SCIENCE ELECTIVE (GE SCI)	3-4	You may choose a science course for which you have the appropriate academic background from Biology, Chemistry, Environmental Science, Physics and Science.
Semester IV			
____ ____	CHOOSE ONE OF THE THREE FOLLOWING COURSES (3 CREDITS EACH):	3	
	ACC 203 - ACCOUNTING SYSTEMS AND PROCEDURES		ACC 102
	ACC 206 - TAX ACCOUNTING		ACC 102
	ACC 208 - ACCOUNTING FIELD EXPERIENCE		ACC 211 and written permission from the Department Chairperson and the Director of Cooperative Education and Internships.
ACC 280	ACCOUNTING SENIOR SEMINAR	3	ACC 202, ACC 211, BUS 107 and BUS 202 Corequisite: ACC 212
ACC 212	INTERMEDIATE ACCOUNTING II	4	ACC 211
ECO 202	ECONOMICS II	3	ECO 201
____ ____	GENERAL EDUCATION HUMANITIES OR SOCIAL SCIENCE (GE HUM) OR (GE SS)	3	

Total Credits: 66-70

TECHNICAL CERTIFICATE

The Accounting Technical Certificate is designed for individuals with a college degree who have satisfied basic skills, general education and mathematics requirements. Permission of the Department Chairperson may also be required.

Courses		Credits	Requisites/Comments
ACC 101	FINANCIAL ACCOUNTING	4	
ACC 102	MANAGERIAL ACCOUNTING	4	ACC 101
ACC 202	COST ACCOUNTING	4	ACC 102
ACC 211	INTERMEDIATE ACCOUNTING	4	ACC 102
____ ____	RECOMMENDED ELECTIVE:		
ACC 212	INTERMEDIATE ACCOUNTING II	4	ACC 211

Total Credits: 20

Automotive Technology

DIVISION OF BUSINESS, COMPUTER SCIENCE & ENGINEERING TECHNOLOGIES (BCSET)

ELECTRICAL ENGINEERING TECHNOLOGY DEPARTMENT

Associate in Applied Science (A.A.S.) Degree

Why major in Automotive Technology?

You acquire the technical skills that provide you with career opportunities as an automotive service technician in dealerships and independent businesses. This program is offered in cooperation with Middlesex County Vocational and Technical Schools. It combines classroom and laboratory experience with paid on-the-job training. This program is certified by the National Automotive Technician Education Foundation (NATEF).

If I major in Automotive Technology, what degree can I earn?

The Associate in Applied Science Degree which prepares you to begin a job as an automotive technician. Students are eligible for the Maintenance and Light Repair (MLR) Certificate from the Ford Motor Company, after successful completion of the first year of automotive courses.

Are there any requirements I must satisfy before I start taking courses in my major?

Algebra I is a prerequisite for all majors. Algebra I competency must be verified with a passing score on the College's placement test. As a result of your performance on the College's placement test, you may need developmental coursework. All developmental coursework must be completed before you will be considered for admission to the program.

How long will it take for me to complete this degree?

Automotive Technology is an intensive full-time program. It includes 60 weeks spent in college classes and 30 weeks spent acquiring work place experience. This cooperative education program takes approximately 2 years to complete. This program begins every other fall semester in the even numbered years.

Where should I direct specific questions about this program?

Contact Professor Waintraub, Department Chair, at 732.906.2584.

DEGREE PROGRAM

Below are required courses and recommended course groupings and sequences for program completion. Courses may have prerequisites and corequisite requirements. Check course descriptions for details.

Courses		Credits	Requisites/Comments
Fall			
AUT 111	MINOR AUTOMOTIVE SERVICES	3	
AUT 115	AUTOMOTIVE BRAKE SYSTEMS	2	
AUT 117	AUTOMOTIVE ELECTRICAL SYSTEMS	3	
ENG 121	ENGLISH COMPOSITION I	3	A passing score on the writing portion of the College's Placement Test or a grade of "C" or better in ENG 010; completion of RDG 009 with a "C" or better or a score on the reading portion of the College's Placement Test that exempts the students from RDG 009.
MAT 107	MATHEMATICS I	3	Appropriate score on the College Placement Test, MAT 013, MAT 013A/MAT 013B, or departmental approval.
			Higher level mathematics course can be substituted with departmental approval.
PED/HED	PHYSICAL/HEALTH ED ELECTIVE	1-3	
Spring			
AUT 122	ANALYSIS AND TUNE UP	3	AUT 111 Corequisites: AUT 124, 126
AUT 124	AUTOMOTIVE HVAC SYSTEMS	3	AUT 111
AUT 126	ALIGNMENT, SUSPENSION AND STEERING SYSTEMS	2	AUT 111
CSC 105	COMPUTER APPLICATIONS AND SYSTEMS	3	
ENG 122 OR ENG 125	ENGLISH COMPOSITION II ENGLISH COMPOSITION II: WRITING ABOUT LITERATURE	3	A grade of "C" or better in ENG 121 and a passing score on the reading portion of the College's Placement Test or a grade of "C" or better in ENG 121 and a grade of "C" or better in RDG 011.
Summer			
AUT 108	AUTOMOTIVE TECHNOLOGY WORK EXPERIENCE I (A 15 week cooperative education course)	3	AUT 122, 124, 126
Fall			
AUT 211	STANDARD TRANSMISSION AND DRIVE TRAIN	3	AUT 108
AUT 213	AUTOMATIC TRANSMISSION I	3	AUT 108 Corequisite: AUT 211
AUT 216	FUEL AND EMISSION SYSTEMS	3	AUT 108 Corequisite: AUT 217
AUT 217	ENGINE DIAGNOSTICS & REPAIR I	3	AUT 108 Corequisite: AUT 216
____ ____	GENERAL EDUCATION HUMANITIES ELECTIVE (GE HUM)	3	
Spring			
AUT 208	AUTOMOTIVE TECHNOLOGY WORK EXPERIENCE II (A 15 week cooperative Education course)	3	AUT 211, 213, 216, 217
Summer			
AUT 226	AUTOMATIC TRANSMISSION II	2	AUT 213, 208
AUT 228	ENGINE DIAGNOSTIC AND REPAIR II	3	AUT 217, 208
AUT 229	AUTOMOTIVE ELECTRICITY AND ELECTRONICS	3	AUT 208 Corequisites: AUT 226, 228
PHY 101	PRINCIPLES OF PHYSICS	4	MAT 107 or equivalent
			Higher level Physics course can be substituted with departmental approval.
____ ____	GENERAL EDUCATION SOCIAL SCIENCE ELECTIVE (GE SS)	3	
	Total Credits:	***65-67***	

Biology

DIVISION OF SCIENCE, MATHEMATICS & HEALTH TECHNOLOGIES (SCMHT)

BIOLOGY DEPARTMENT

Associate in Science (A.S.) Degree

Why major in Biology Transfer or Biology Pre-Professional Degree Options?

You may choose from a traditional biology major curriculum or an option designed to prepare you for Pre-Physical Therapy, Pre-Occupational Therapy or Pre-Physician's Assistant programs. These curricula parallel the first two years of a baccalaureate degree in biology. The traditional biology major prepares you, upon graduation, to transfer to a four-year college or university to pursue a career in biology related fields such as molecular biology, cell biology, physiology, microbiology, biochemistry, ecology or any biological field. If you are interested in Pre-Medicine, Pre-Dentistry, Pre-Chiropractic or Pre-Veterinary, you may major in either the traditional Biology major or Chemistry major. Contact the department chair for assistance in choosing an appropriate major.

The Pre-Professional option prepares you to transfer to colleges offering programs in Pre-Physical Therapy, Pre-Occupational Therapy or Pre-Physician's Assistant.

If I major in Biology Transfer or Biology Pre-Professional Degree Options, what degree can I earn?

You will earn an Associate in Science Degree that prepares you to transfer to upper division colleges and universities.

What will I learn if I study Biology Transfer or Biology Pre-Professional Degree Options?

You concentrate on the theoretical and applied sciences, and mathematics. Your studies prepare you to meet the challenges of advanced study in professional careers.

What will I learn if I study Biology Transfer or Biology Pre-Professional Degree Options?

A passing score on the College's placement mathematics test for both Algebra I and Algebra II or MAT 013 and MAT 014 is required for all Biology majors. In addition, a high school laboratory biology course with a minimum grade of "C" or BIO 010 and a high school laboratory chemistry or CHM 010 with a minimum grade of "C" are also required.

How long will it take for me to complete this degree?

If you do not need developmental coursework, and you register for an average of 16 credits each semester, you can complete the degree in two years. You can shorten the amount of time by taking courses in the summer and winter sessions.

Where should I direct specific questions about this program?

Where should I direct specific questions about this program? Contact Professor Przygoda, Department Chair, at 732.906.2592.

BIOLOGY OPTION - SCIENCE TRANSFER DEGREE

Below are required courses and recommended course groupings and sequences for program completion. Courses may have prerequisites and corequisite requirements. Check course descriptions for details.

Courses		Credits	Requisites / Comments
Semester I			
BIO 123	GENERAL BIOLOGY I	4	One year of high school laboratory biology or BIO 010 and one year of high school laboratory chemistry or CHM 010. Also appropriate score on the College's Placement Test or MAT 013 or MAT 013A/ MAT 013B.
CHM 123	GENERAL CHEMISTRY I	4	MAT 014 or MAT014A/MAT014B or appropriate score on the College's Placement Test and one year of high school laboratory chemistry.
ENG 121	ENGLISH COMPOSITION I	3	A passing score on the writing portion of the College's Placement Test or a grade of "C" or better in ENG 010; completion of RDG 009 with a "C" or better or a score on the reading portion of the College's Placement Test that exempts the students from RDG 009.
MAT 129	PRECALCULUS	4	Appropriate score on the College's Placement Test and/or satisfactory score on the Diagnostic Examination, "B" or better in MAT 014, or departmental approval. You may substitute MAT 014A plus MAT 014B. MAT 131-132 recommended
PED/HED	PHYSICAL/HEALTH ED ELECTIVE	1-3	
Semester III			
BIO 221	MICROBIOLOGY	4	BIO 118, 120, or 124; and CHM 118 or 124 BIO 221 is offered in the fall semester only
PHY 121	GENERAL PHYSICS	4	MAT 129 or MAT 129A/MAT 129B
____ ____	GENERAL EDUCATION SOCIAL SCIENCE ELECTIVE (GE SS)	3	
____ ____	GENERAL EDUCATION HUMANITIES ELECTIVE (GE HUM)	3	
CSC 105	COMPUTER APPLICATIONS AND SYSTEM	3	
Semester IV			
____ ____	BIOLOGY ELECTIVE	4	You may choose BIO 228 (offered fall only) or BIO 224 (offered spring only).
	Recommended Elective BIO 240 Research in Biology	4	BIO 124, CHM 124, ENG 121 and Department approval
PHY 122	GENERAL PHYSICS	4	PHY 121
____ ____	GENERAL EDUCATION SOCIAL SCIENCE ELECTIVE (GE SS)	3	
____ ____	GENERAL EDUCATION HUMANITIES ELECTIVE (GE HUM)	3	
____ ____	SCIENCE/MATH ELECTIVE	3-4	You may select from BIO 224 (offered spring only) , BIO 228 (offered fall only), CHM 223 or MAT 132 or a course with permission of the Department Chairperson. Please see catalogue for appropriate prerequisites.

Total Credits: 65-68

BIOLOGY PRE-PROFESSIONAL OPTION - SCIENCE TRANSFER DEGREE

(Recommended for students interested in Pre-Physician's Assistant, Pre-Occupational Therapy or Pre-Physical Therapy programs)

Courses		Credits	Requisites / Comments
Semester I			
BIO 123	GENERAL BIOLOGY I	4	One year of high school laboratory biology or BIO 010 and one year of high school laboratory chemistry or CHM 010. Also appropriate score on the College's Placement Test or MAT 013.
CHM 123	CHEMISTRY I	4	MAT 014 or MAT 014A/MAT 014B or appropriate score on the College's Placement Test and one year of high school chemistry.
ENG 121	ENGLISH COMPOSITION I	3	A passing score on the writing portion of the College's Placement Test or a grade of "C" or better in ENG 010; completion of RDG 009 with a "C" or better or a score on the reading portion of the College's Placement Test that exempts the students from RDG 009.
MAT 129	PRECALCULUS	4	Appropriate score on the College's Placement Test and/or satisfactory score on the Diagnostic Examination, "B" or better in MAT 014, or departmental approval. You may substitute MAT 014A plus MAT 014B. MAT 131-132 recommended
PED/HED	PHYSICAL/HEALTH ED ELECTIVE	1-3	
Semester II			
BIO 124	GENERAL BIOLOGY II	4	BIO 123
CHM 124	CHEMISTRY II	4	CHM 123
ENG 122 OR ENG 125	ENGLISH COMPOSITION II OR ENGLISH COMPOSITION II: WRITING ABOUT LITERATURE	3	A grade of "C" or better in ENG 121 and a passing score on the reading portion of the College's Placement Test or a grade of "C" or better in ENG 121 and a grade of "C" or better in RDG 011.
MAT 131	ANALYTIC GEOMETRY AND CALCULUS I	4	MAT 129, or MAT 129A/129B, or appropriate score on the College's Placement Test and/or satisfactory score on the Diagnostic Examination, or departmental approval.
Semester III			
BIO 111	HUMAN ANATOMY AND PHYSIOLOGY I	4	One year of high school laboratory biology or BIO 010 and one year of high school laboratory chemistry or CHM 010 and appropriate score on the College's Placement Test or MAT 013 or MAT 013A/MAT 013B
PHY 121	GENERAL PHYSICS	4	MAT 129 or MAT 129A/MAT 129B.
____ ____	GENERAL EDUCATION SOCIAL SCIENCE ELECTIVE (GE SS)	3	
____ ____	GENERAL EDUCATION HUMANITIES ELECTIVE (GE HUM)	3	
CSC 105	COMPUTER APPLICATIONS AND SYSTEM	3	
Semester IV			
BIO 112	HUMAN ANATOMY AND PHYSIOLOGY II	4	BIO 111
PHY 122	GENERAL PHYSICS	4	PHY 121
____ ____	GENERAL EDUCATION SOCIAL SCIENCE ELECTIVE (GE SS)	3	
____ ____	GENERAL EDUCATION HUMANITIES ELECTIVE (GE HUM)	3	
____ ____	SCIENCE/MATH ELECTIVE	3-4	You may select from BIO 224 (offered spring only) , BIO 228 (offered fall only), BIO 240, CHM 223 or MAT 132 or a course with permission of the Department Chairperson. Please see catalogue for appropriate prerequisites.
		Total Credits: 65-68	

Biotechnology

DIVISION OF SCIENCE, MATHEMATICS & HEALTH TECHNOLOGIES (SCMHT)

BIOLOGY DEPARTMENT

Associate in Applied Science (A.A.S.) Degree

If I major in Biotechnology, what degree can I earn?

You will earn the Associate in Applied Science Degree which prepares you for career opportunities in pharmaceutical firms and biotechnology companies.

What will I learn if I study Biotechnology?

You will earn an Associate in Science Degree that prepares you to transfer to upper division colleges and universities. You acquire knowledge and develop practical skills in biology, chemistry, microbiology, modern biological techniques, and laboratory instrumentation.

Are there any requirements I must satisfy before I start taking courses in my major?

Algebra I is a prerequisite for all majors. Algebra I competency must be verified with a passing score on the College's placement test. You must have earned a grade of "C" or better in one year of high school laboratory science.

How long will it take for me to complete this degree?

If you do not need developmental coursework, and you register for an average of 16 credits each semester, you can complete the degree in two years. You can shorten the amount of time by taking courses in the summer and winter sessions.

Where should I direct specific questions about this program?

Contact Professor Przygoda, Department Chair, at 732.906.2592.

DEGREE PROGRAM

Below are required courses and recommended course groupings and sequences for program completion.

Courses		Credits	Requisites/Comments
Semester I			
BIO 119	BIOLOGY FOR TECHNOLOGY I	4	Appropriate score on the College Placement Test or MAT 013, MAT 013A/MAT013B and one year high school laboratory science or BIO 010 or CHM 010. BIO 119 is offered fall only
CHM 117	CHEMISTRY I	4	Appropriate score on the College Placement Test or MAT 013, MAT 013A/MAT 013B and one year high school laboratory science or BIO 010 or CHM 010 or departmental approval. CHM 117 is offered fall only
ENG 121	ENGLISH COMPOSITION I	3	A passing score on the writing portion of the College Placement Test or a grade of "C" or better in ENG 010; completion of RDG 009 with a "C" or better or a score on the reading portion of the College Placement Test that exempts the students from RDG 009.
MAT 107	MATHEMATICS I	3	Appropriate score on the College Placement Test or MAT 013, MAT 013A/MAT 013 B or departmental approval.
SCI 103	SAFETY AND FDA REGULATIONS FOR LAB TECHNICIANS	1	SCI 103 is offered fall only
PED/HED	PHYSICAL/HEALTH ED ELECTIVE	1-3	
Semester II			
BIO 120	BIOLOGY FOR TECHNOLOGY II	4	BIO 119 BIO 120 is offered spring only
CHM 118	CHEMISTRY II	4	CHM 117 CHM 118 is offered spring only
ENG 122 OR ENG 125	ENGLISH COMPOSITION II ENGLISH COMPOSITION II: WRITING ABOUT LITERATURE	3	A grade of "C" or better in ENG 121 and a passing score on the reading portion of the College's Placement Test or a grade of "C" or better in ENG 121 and a grade of "C" or better in RDG 011. You may substitute ENG 125
MAT 108	MATHEMATICS II	3	MAT 107
SCI 104	TECHNICAL COMMUNICATIONS	1	Corequisite: ENG 121 SCI 104 is offered spring only
CSC 105	COMPUTER APPLICATIONS AND SYSTEMS	3	
Semester III			
BIO 221	MICROBIOLOGY	4	BIO 118, 120 or 123; CHM 118 or 124 BIO 221 is offered fall only
CHM 203	PRINCIPLES OF ORGANIC CHEMISTRY	3	CHM 118 or equivalent CHM 203 is offered fall only
BIO 205	METHODS IN DNA TECHNOLOGY	3	BIO 120; CHM 118 or 124; MAT 108 BIO 205 is offered fall only
SCI 215	CURRENT GOOD MANUFACTURING PRACTICES AND QUALITY CONTROL FOR BIOTECHNOLOGY[1]	1	SCI 215 is offered fall only
SPE 121	FUNDAMENTALS OF PUBLIC SPEAKING	3	
___ ___	GENERAL EDUCATION SOCIAL SCIENCE ELECTIVE (GE SS)	3	
Semester IV			
BIO 226	BIOLOGICAL TECHNOLOGY COOPERATIVE EDUCATION	3	Permission of the Department Chairperson
BIO 224	APPLIED MICROBIOLOGY	4	BIO 221 BIO 224 is offered spring only
CHM 220	METHODS OF CHROMATOGRAPHIC SEPARATION	4	CHM 201, 219 or equivalent CHM 220 is offered spring only
BIO 206	PROTEIN PURIFICATION AND TISSUE CULTURE TECHNIQUES	3	BIO 205; Must co-enroll CHM 220 BIO 206 is offered spring only
SCI 216	CURRENT ISSUES AND OPPORTUNITIES IN LAB TECHNOLOGY	1	SCI 216 is offered spring only

Total Credits: 66-68

Business Administration Degree (Designed for Transfer)

DIVISION OF BUSINESS, COMPUTER SCIENCE & ENGINEERING TECHNOLOGIES (BCSET)

BUSINESS ADMINISTRATION AND MANAGEMENT DEPARTMENT

Associate in Science (A.S.) Degree

Why major in Business Administration?

You prepare to transfer to an upper division college or university in any field of business after earning your associate degree.

If I major in Business Administration, what degree can I earn?

The Associate in Science Degree which prepares you to transfer to upper division colleges and universities.

What will I learn if i study Business Administration?

Your program is an intensive one that includes challenging mathematics and business courses, as well as sciences and general education.

Are there any requirements I must satisfy before I start taking courses in my major?

Algebra I is a prerequisite for all majors. Algebra I competency must be verified with a passing score on the College's placement test. You also need a grade of "C" or higher in high school algebra II, geometry and in one year of laboratory science.

How long will it take for me to complete this degree?

If you do not need developmental coursework, and you register for an average of 16 credits each semester, you can complete the degree in two years. You can shorten the amount of time by taking courses in the summer and winter sessions.

Where should I direct specific questions about this program?

Contact Professor Bailey, Department Chair, at 732.906.2594 or **bam@middlesexcc.edu.**

DEGREE PROGRAM

Below are required courses and recommended course groupings and sequences for program completion. Courses may have prerequisites and corequisite requirements. Check course descriptions for details.

Courses		Credits	Requisites/Comments
Semester I			
ENG 121	ENGLISH COMPOSITION I	3	A passing score on the writing portion of the College's Placement Test or a grade of "C" or better in ENG 010; completion of RDG 009 with a "C" or better or a score on the reading portion of the College's Placement Test that exempts the students from RDG 009.
____ ____	Mathematics Elective Choices (select one sequence):	6-8	
MAT 123	STATISTICS I	3	MAT 014, MAT 014A/014B, or satisfactory score on the College Placement Test
MAT 124	STATISTICS II	3	MAT 123
or			
MAT 129A	PRECALCULUS (Part A)	2	Appropriate score on the College Placement Test and/or satisfactory score on the Diagnostic Examination, "C" or better in MAT 014 or MAT 014A and MAT 014B, or departmental approval.
MAT 129B	PRECALCULUS (Part B)	2	MAT129A or equivalent courses
and			
MAT 131A	ANALYTIC GEOMETRY AND CALCULUS I (Part A)	2	MAT 129 or MAT 129A/129B or appropriate score on the College Placement Test and/or satisfactory score on the Diagnostic Examination, or departmental approval.
MAT 131B	ANALYTIC GEOMETRY AND CALCULUS I (Part B)	2	MAT 131A
MAT 129	PRECALCULUS	4	Appropriate score on the College Placement Test and/or satisfactory score on the Diagnostic Examination, "B" or better in MAT 014, or departmental approval.
MAT 131A	ANALYTIC GEOMETRY AND CALCULUS I (Part A)	2	MAT 129 or MAT 129A/129B or appropriate score on the College Placement Test and/or satisfactory score on the Diagnostic Examination, or departmental approval.
MAT 131B	ANALYTIC GEOMETRY AND CALCULUS I (Part B)	2	MAT 131A
MAT 129	PRECALCULUS	4	Appropriate score on the College Placement Test and/or satisfactory score on the Diagnostic Examination, "B" or better in MAT 014, or departmental approval.
MAT 131	ANALYTIC GEOMETRY AND CALCULUS I	4	MAT 129, or MAT 129A/129B, or appropriate score on the College Placement Test and/or satisfactory score on the Diagnostic Examination, or departmental approval.
MAT 131A	ANALYTIC GEOMETRY AND CALCULUS I (Part A)	2	MAT 129 or MAT 129A/129B or appropriate score on the College Placement Test and/or satisfactory score on the Diagnostic Examination, or departmental approval.
ACC 101	FINANCIAL ACCOUNTING	4	
BUS 101	BUSINESS ORGANIZATION AND MANAGEMENT	3	
___ ___	GENERAL EDUCATION SOCIAL SCIENCE ELECTIVE (GE SS)	3	
Semester II			
ENG 122	ENGLISH COMPOSITION II	3	A grade of "C" or better in ENG 121 and a passing score the reading portion of the College's Placement Test or a grade of "C" or better in ENG 121 and a grade of "C" or better in RDG 011.
OR			
ENG 125	ENGLISH COMPOSITION II: WRITING ABOUT LITERATURE		
___ ___	MATHEMATICS REQUIREMENT	3-4	Follow Semester I math requirement.
ACC 102	MANAGERIAL ACCOUNTING	4	ACC 101
ECO 201	PRINCIPLES OF ECONOMICS I	3	A passing score on the algebra portion on the College's Placement Test or MAT 013.
___ ___	GENERAL EDUCATION HUMANITIES ELECTIVE (GE HUM)	3	
Semester III			
ECO 202	PRINCIPLES OF ECONOMICS II	3	ECO 201 or permission of Department Chairperson
BUS 201	BUSINESS LAW I	3	
___ ___	GENERAL EDUCATION SOCIAL SCIENCE ELECTIVE (GE SS)	3	
BUS 107	COMPUTER APPLICATIONS FOR BUSINESS	3	
___ ___	BUSINESS ELECTIVE		
	Recommended business electives are as follows:	3	
	BUS 202 - BUSINESS LAW II		BUS 201
	MGT 210 - CONCEPTS OF BUSINESS MANAGEMENT		BUS 101
	MKT 201 - MARKETING I		BUS 101
PED/HED	PHYSICAL/HEALTH ED ELECTIVE	1-3	
Semester IV			
___ ___	GENERAL EDUCATION HUMANITIES ELECTIVE (GE HUM)	3	
___ ___	GENERAL EDUCATION SCIENCE ELECTIVE (GE SCI)	4	Students may elect a 4 credit course with a code of BIO, CHM, ENV, PHY or SCI for which they have the appropriate academic preparation.
___ ___	FREE ELECTIVE	3	
___ ___	BUSINESS ELECTIVE		
	Recommended business electives are as follows:	3	
	BUS 202 - BUSINESS LAW II		BUS 201
	MGT 210 - CONCEPTS OF BUSINESS MANAGEMENT		BUS 101
	MKT 201 - MARKETING I		BUS 101
___ ___	BUSINESS ELECTIVE		
	Recommended business electives are as follows:	3	
	BUS 202 - BUSINESS LAW II		BUS 201
	MGT 210 - CONCEPTS OF BUSINESS MANAGEMENT		BUS 101
	MKT 201 - MARKETING I		BUS 101

Total Credits: 64-66

Business Software Applications

DIVISION OF BUSINESS, COMPUTER SCIENCE & ENGINEERING TECHNOLOGIES (BCSET)

OFFICE ADMINISTRATION DEPARTMENT

Why major in Business Software Applications?

You develop the technical skills many employers are looking for when they hire entry-level office assistants. If you are currently employed, you can upgrade your technical skills to meet the constantly changing needs of the workplace.

If I major in Business Software Applications, what do I earn?

The Technical Certificate prepares you for an entry-level office position.

What will I learn if I study Business Software Applications?

You acquire computer skills by learning Microsoft Word, Excel, Access, PowerPoint and how to integrate them.

Are there any requirements I must satisfy before I start taking courses in my major?

Algebra I is a prerequisite for all majors. Algebra I competency must be verified with a passing score on the College's placement test. In addition, keyboarding experience is required.

How long will it take for me to complete this certificate?

If you do not need developmental coursework, you can complete the certificate in one year.

NOTE: NOT all courses are offered every semester both day and evening. Please call the Department Chair to discuss course offerings for future semesters.

TECHNICAL CERTIFICATE

Below are required courses and recommended course groupings and sequences for program completion.

Courses		Credits	Requisites/Comments
OAD 101	DOCUMENT PROCESSING I	3	Keyboarding experience. **Recommended** that this course be taken before the Principles & Applications courses. Credit-By-Exam is available for this course. For additional information contact the Department Chairperson at 732.906.2578.
OAD 102	DOCUMENT PROCESSING II	3	OAD 101. Credit-By-Exam is available for this course. For additional information, contact the Department Chairperson.
OAD 110	PRINCIPLES AND APPLICATIONS OF MICROSOFT ACCESS	2	
OAD 113	PRINCIPLES AND APPLICATIONS OF MICROSOFT EXCEL	2	
OAD 114	PRINCIPLES AND APPLICATIONS OF MICROSOFT WORD	2	
OAD 116	PRINCIPLES AND APPLICATIONS OF MICROSOFT POWERPOINT	2	
OAD 223	INTEGRATED SOFTWARE APPLICATIONS	3	OAD 102 & OAD 110 & OAD 113 & OAD 114 & OAD 116 or OAD 102 & OAD 123
___ ___	ELECTIVE	3	OAD 210 Records Management recommended
	Total Credits:	***20***	

Chemical Technology

DIVISION OF SCIENCE, MATHEMATICS & HEALTH TECHNOLOGIES (SCMHT)

CHEMISTRY/PHYSICS DEPARTMENT

Associate in Applied Science (A.A.S.) Degree

If I major in Chemical Technology, what degree can I earn?

You can earn the Associate in Applied Science Degree. This major is a job-oriented program prepares you for career opportunities in the chemical/pharmaceutical industries as research assistants, laboratory technicians, control analysts, production supervisors and quality control analysis. With experience, you may find positions in sales, production, and consumer service. Alternatively, you may choose to earn the Certificate of Achievement. Courses for the certificate are offered in the evenings.

What will I learn if I study Chemical Technology?

You learn the basic principles of inorganic and organic chemistry and develop practical skills in chemical procedures, chemical analysis and laboratory instrumentation.

Are there any requirements I must satisfy before I start taking courses in my major?

Algebra I is a prerequisite for all majors. Algebra I competency must be verified with a passing score on the College's placement test. You must also have a grade of "C" or better in one year of high school laboratory science.

How long will it take for me to complete this degree?

If you do not need developmental coursework, and you register for an average 16 credits each semester, you can complete the degree in two years.

Where should I direct specific questions about this program?

Contact Dr. Trainor, Department Chair, at 731.906.2587.

DEGREE PROGRAM

Below are required courses and recommended course groupings and sequences for program completion. Courses may have prerequisites and corequisite requirements. Check course descriptions for details.

Courses		Credits	Requisites/Comments
Semester I			
BIO 119	BIOLOGY I	4	Appropriate score on the College Placement Test or MAT 013 and one year of high school laboratory science or BIO 010 or CHM 010. You may substitute BIO 123-BIO 124 for BIO 119-BIO 120 if you have completed a high school biology lab course and high school lab chemistry.
CHM 117	CHEMISTRY I	4	Appropriate score on the College Placement Test of MAT 013 and one year of high school laboratory science, CHM 010 or departmental approval. You may substitute CHM 123-CHM 124 for CHM 117-CHM 118 if you have completed a high school chemistry lab course.
ENG 121	ENGLISH COMPOSITION I	3	A passing score on the writing portion of the College's Placement Test or a grade of "C" or better in ENG 010; completion of RDG 009 with a "C" or better or a score on the reading portion of the College Placement Test that exempts the students from RDG 009.
MAT 107	MATHEMATICS I	3	Appropriate score on the College Placement Test, MAT 013, MAT 013A/MAT 013B, or departmental approval. You may substitute MAT123-MAT124 or MAT129-MAT131 for MAT-107-MAT108.
PED/HED	PHYSICAL/HEALTH ED ELECTIVE	1-3	
Semester II			
BIO 120	BIOLOGY II	4	BIO 119
CHM 118	CHEMISTRY II	4	CHM 117
ENG 122	ENGLISH COMPOSITION II	3	A grade of "C" or better in ENG 121 and a passing score on the reading portion of the College's Placement Test or a grade of "C" or better in ENG 121 and a grade of "C" or better in RDG 011.
OR			
ENG 125	ENGLISH COMPOSITION II: WRITING ABOUT LITERATURE	3	
MAT 108	MATHEMATICS II	3	MAT 107
CSC 105	COMPUTER APPLICATIONS AND SYSTEMS	3	
Semester III			
PHY 101	PRINCIPLES OF PHYSICS	4	MAT 107 or equivalent
CHM 201	PRINCIPLES OF ORGANIC CHEMISTRY (LECTURE ONLY)	3	CHM 118 or equivalent You may substitute CHM 223 for CHM 201 and CHM 203 if you have completed CHM 124 or equivalent.
OR			
CHM 203	PRINCIPLES OF ORGANIC CHEMISTRY	4	
SCI 103	SAFETY AND FDA REGULATIONS FOR LAB TECHNICIANS	1	
___ ___	GENERAL EDUCATION SOCIAL SCIENCE S ELECTIVE (GE SS)	3	
CHM 219	CLASSICAL VOLUMETRIC AND SPECTROPHOTOMETRIC ANALYSIS	5	CHM 118, MAT 014 or equivalent
Semester IV			
CHM 220	METHODS OF CHROMATOGRAPHIC SEPARATION	4	CHM 201 or CHM 203, CHM 219 or equivalent
ENV 221	HAZARDOUS WASTE MANAGEMENT	3	
SCI 104	TECHNICAL COMMUNICATION	1	Corequisite: ENG 121
___ ___	GENERAL EDUCATION HUMANITIES ELECTIVE (GE HUM)	3	
___ ___	TECHNICAL ELECTIVE	3-4	
	TECHNICAL ELECTIVE CHOICES (SELECT ONE):		
	CHM 202 - BIOCHEMISTRY	4	CHM 201
	CHM 226 - CHEMICAL TECHNOLOGY COOPERATIVE EDUCATION	3	CHM 201 or CHM 223, CHM 219 and department approval
	ENV 222 - WATER AND WASTEWATER ANALYSIS	3	BIO 118, CHM 118, MAT 013
		Total Credits:	***65***

CERTIFICATE OF ACHIEVEMENT

Courses		Credits	Requisites/Comments
CHM 117	CHEMISTRY I	4	Appropriate score on the College Placement Test of MAT 013 and one year of high school laboratory science, CHM 010 or departmental approval. You may substitute CHM 123-CHM 124 for CHM 117-CHM 118 if you have completed a high school chemistry lab course.
CHM 118	CHEMISTRY II	4	CHM 117
CHM 203	PRINCIPLES OF ORGANIC CHEMISTRY	4	CHM 118 or equivalent You may substitute CHM 223 for CHM 201 and CHM 203 if you have completed CHM 124 or equivalent
CHM 219	CLASSICAL VOLUMETRIC AND SPECTROPHOTOMETRIC ANALYSIS	5	CHM 118, MAT 014 or equivalent.
ENG 121	ENGLISH COMPOSITION I	3	A passing score on the writing portion of the College's Placement Test or a grade of "C" or better in ENG 010; completion of RDG 009 with a "C" or better or a score on the reading portion of the College Placement Test that exempts the students from RDG 009.
ENG 122 OR ENG 125	ENGLISH COMPOSITION II ENGLISH COMPOSITION II: WRITING ABOUT LITERATURE	3	A grade of "C" or better in ENG 121 and a passing score on the reading portion of the College's Placement Test or a grade of "C" or better in ENG 121 and a grade of "C" or better in RDG 011.
MAT 107	MATHEMATICS I	3	Appropriate score on the College Placement Test, MAT 013, MAT 013A/MAT 013B, or departmental approval. You may substitute MAT123-MAT124 or MAT129-MAT131 for MAT-107-MAT108.
MAT 108	MATHEMATICS II	3	MAT 108
CSC 105	COMPUTER APPLICATIONS AND SYSTEMS	3	
		Total Credits:	***32***

Chemistry

DIVISION OF SCIENCE, MATHEMATICS & HEALTH TECHNOLOGIES (SCMHT)

CHEMISTRY/PHYSICS DEPARTMENT

Associate in Science (A.S.) Degree

Why major in Chemistry Transfer?

The Chemistry Transfer program parallels the first two years of a baccalaureate degree program (B.A., B.S.) at four-year colleges and universities. The Chemistry Transfer degree prepares you to transfer to a four-year college or university to pursue professional careers in biology, biochemistry, chemistry, and molecular biology. This degree will prepare you for Pre-Professional programs including Pre-Pharmacy. If you are interested in Pre-Chiropractic, Pre-Dental, Pre-Medicine or Pre-Veterinarian, you may major in either the traditional chemistry major or the biology major.

If I major in Chemistry Transfer, what degree can I earn?

You will earn an Associate in Science Degree that prepares you to transfer to upper division colleges and universities.

What will I learn if I study Chemistry Transfer?

You will learn the basics of General Chemistry and Organic Chemistry that will prepare you to meet the challenges of advanced chemistry courses at the upper division colleges and universities.

Are there any requirements I must satisfy before I start taking courses in my major?

A passing score on the College's placement mathematics test for both Algebra I and Algebra II or MAT 013 and MAT 014 is required for all Chemistry majors. In addition, a high school laboratory chemistry course with a minimum grade of "C" or CHM 010 and a high school laboratory biology course or BIO 010 with a minimum grade of "C" are also required.

How long will it take for me to complete this degree?

If you do not need developmental coursework, and you register for an average of 16 credits each semester, you can complete the degree in two years. You can shorten the amount of time by taking courses in the summer and winter sessions.

Where should I direct specific questions about this program?

Contact Dr. Trainor, Department Chair, at 732.906.2587.

CHEMISTRY OPTION - SCIENCE TRANSFER DEGREE

Below are required courses and recommended course groupings and sequences for program completion.

Courses		Credits	Requisites/Comments
Semester I			
BIO 123	GENERAL BIOLOGY I	4	One year of high school laboratory biology or BIO 010 and one year of high school laboratory chemistry or CHM 010. Also appropriate score on the College Placement Test or MAT 013.
CHM 123	GENERAL CHEMISTRY I	4	MAT 014 or appropriate score on the College Placement Test and one year of high school chemistry or CHM 010.
ENG 121	ENGLISH COMPOSITION I	3	A passing score on the writing portion of the College's Placement Test or a grade of "C" or better in ENG 010; completion of RDG 009 with a "C" or better or a score on the reading portion of the College Placement Test that exempts the students from RDG 009 .
MAT 129	PRECALCULUS	4	Appropriate score on the College Placement Test and/or satisfactory score on the Diagnostic Examination, "B" or better in MAT 014 or departmental approval. Can be taken in 2 semesters MAT 129A/ MAT 129B.
PED/HED	PHYSICAL/HEALTH-ED ELECTIVE	1-3	
Semester II			
BIO 124	GENERAL BIOLOGY II	4	BIO 123
CHM 124	GENERAL CHEMISTRY II	4	CHM 123
ENG 122	ENGLISH COMPOSITION II	3	A grade of "C" or better in ENG 121 and a passing score on the reading portion of the College's Placement Test or a grade of "C" or better in ENG 121 and a grade of "C" or better in RDG 011 or equivalent.
OR			
ENG 125	ENGLISH COMPOSITION II: WRITING ABOUT LITERATURE		
MAT 131	ANALYTICAL GEOMETRY AND CALCULUS I	4	MAT 129, or MAT 129A/129B, or appropriate score on the College Placement Test and/or satisfactory score on the Diagnostic Examination, or departmental approval.
Semester III			
CHM 223	ORGANIC CHEMISTRY I	4	CHM 124 or equivalent
PHY 121	GENERAL PHYSICS I	4	MAT 129 or MAT 129B
CSC	COMPUTER SCIENCE ELECTIVE	3	You may choose CSC 105 or higher
___ ___	GENERAL EDUCATION HUMANITIES ELECTIVE (GE HUM)	3	
___ ___	GENERAL EDUCATION SOCIAL SCIENCE ELECTIVE (GE SS)	3	
Semester IV			
CHM 224	ORGANIC CHEMISTRY II	4	CHM 223
PHY 122	GENERAL PHYSICS II	4	PHY 121
___ ___	FREE ELECTIVE:	3-4	
	Recommended Elective CHM 240 Research in Chemistry	4	BIO 124, CHM 124, ENG 121 and Department approval
___ ___	GENERAL EDUCATION HUMANITIES ELECTIVE (GE HUM)	3	
___ ___	GENERAL EDUCATION SOCIAL SCIENCE ELECTIVE (GE SS)	3	
		Total Credits:	***65-68***

Civil/Construction Engineering Technology

DIVISION OF BUSINESS, COMPUTER SCIENCE & ENGINEERING TECHNOLOGIES (BCSET)

MECHANICAL-CIVIL/CONSTRUCTION ENGINEERING TECHNOLOGY DEPARTMENT

Associate in Applied Science (A.A.S.) Degree

■ Why major in Civil/Construction Engineering Technology?

You can find employment opportunities in occupations such as construction inspector, construction supervisor, materials tester, architectural or structural drafter, surveyor, estimator, shop-drawing detailer, site plan designer, CAD operator, specification writer, and technical sales representative.

The Technology Accreditation Commission of the Accreditation Board accredits this program for Engineering and Technology.

■ If I major in Civil/Construction Engineering Technology, what degree can I earn?

You have several choices with this major. You can earn the Associate in Applied Science Degree or the Certificate of Achievement in Civil/Construction Engineering Technology, or you may earn the A.A.S. Degree in Land Surveying Option. The emphasis on the practical provides you with skills that you can use on the job as a civil engineering technician.

■ If I major in Civil/Construction Engineering Technology, can I transfer to an upper division college or university?

You may choose to participate in the Joint Admissions Program with the New Jersey Institute of Technology. Many other upper division colleges and universities will apply some or all of the courses you have taken towards a bachelor's degree.

■ What will I learn if I study Civil/Construction Engineering Technology?

You acquire a foundation in communications, calculations, and engineering principles along with the specifics of civil/construction engineering. All technical courses provide a balance between theory and practice.

■ Are there any requirements I must satisfy before I start taking courses in my major?

Algebra I is a prerequisite for all majors. Algebra I competency must be verified with a passing score on the College's placement test. You must also have a grade of "C" or better in high school algebra II and geometry.

■ How long will it take for me to complete this degree?

If you do not need developmental coursework, and you register for an average of 17 credits each semester, you can complete the degree in two years. You can earn the certificate in three semesters. You can shorten the amount of time by taking courses in the summer and winter sessions.

■ Where should I direct specific questions about this program?

Contact Professor Rubino, Department Chair, at 732.906.2586.

DEGREE PROGRAM

Below are required courses and recommended course groupings and sequences for program completion. Courses may have prerequisites and corequisite requirements. Check course descriptions for details.

Courses		Credits	Requisites/Comments
Semester I			
MCT 101	INTRODUCTION TO TECHNOLOGY	2	MAT 013 or passing score on the College´s Placement Test. Corequisites: MAT 014
MAT 129A	PRECALCULUS A[1]	2	Appropriate score on the College Placement Test and/or satisfactory score on the Diagnostic Examination, "C" or better in MAT 014 or MAT 014A and MAT 014B, or departmental approval.
ENG 121	ENGLISH COMPOSITION I	3	A passing score on the writing portion of the College's Placement Test or a grade of "C" or better in ENG 010; completion of RDG 009 with a "C" or better or a score on the reading portion of the College Placement Test that exempts the students from RDG 009.
CIT 125	CONSTRUCTION ESTIMATING	3	MAT 013
MEC 123	TECHNICAL GRAPHICS/CAD I	3	
PED/HED	PHYSICAL/HEALTH ED ELECTIVE	1-3	
Semester II			
MAT 129B	PRECALCULUS B[1]	2	Appropriate score on the College Placement Test and/or satisfactory score on the Diagnostic Examination, "C" or better in MAT 014 or MAT 014A and MAT 014B, or departmental approval.
ENG 122	ENGLISH COMPOSITION II	3	A grade of "C" or better in ENG 121 and a passing score on the reading portion of the College Placement Test or a grade of "C" or better in ENG 121 and a grade of "C" or better in RDG 011.
CIT 105	STATICS FOR TECHNICIANS	3	MCT 101, MAT 129A or MAT 129
CMT 124	APPLIED TECHNICAL GRAPHICS/CAD II	3	MEC 123
CIT 104	CONSTRUCTION SURVEYING I	3	MAT 129A or MAT 129
CIT 114	CONSTRUCTION MATERIALS TESTING	1	
___ ___	GENERAL EDUCATION HUMANITIES ELECTIVE (GE HUM)	3	
Semester III			
MAT 131A	ANALYTIC GEOMETRY & CALCULUS I (PART A)[2]	2	MAT 129 or MAT 129B or appropriate score on the College Placement Test and/or satisfactory score on the Diagnostic Examination, or departmental approval.
PHY 121	GENERAL PHYSICS I	4	MAT 129B or MAT 129
CIT 203	STRENGTH OF MATERIALS	4	CIT 105
ELT 105	FOUNDATIONS OF ELECTRICAL & ELECTRONICS TECHNOLOGY	4	MAT 013 or appropriate score on College Placement Test. Corequisite: MAT 014 or higher level
CIT 210	SOILS IN CONSTRUCTION	2	CIT 105
CIT 205	CONSTRUCTION SURVEYING II	3	CIT 104
Semester IV			
MAT 131B	ANALYTIC GEOMETRY & CALCULUS (part B)[2]	2	MAT 131A
PHY 122	GENERAL PHYSICS II	4	PHY 121
CIT 217	STRUCTURAL DESIGN	3	CIT 203
CIT 212	WATER RESOURCES TECHNOLOGY	3	MAT 129B or MAT 129 and CIT 105
CIT 260	CIVIL/CONSTRUCTION DESIGN PROJECT	1	CIT 203, CIT 205, CIT 125 Corequisite(s): CIT 212, CIT 217
____ ____	GENERAL EDUCATION SOCIAL SCIENCE ELECTIVE (GE SS)	3	

Total Credits: 67-69

CIVIL/CONSTRUCTION ENGINEERING TECHNOLOGY CERTIFICATE

Courses		Credits	Requisites/Comments
Semester I			
MCT 101	INTRODUCTION TO TECHNOLOGY	2	MAT 013 or passing score on the College´s Placement Test. Corequisites: MAT 014
MEC 123	TECHNICAL GRAPHICS/CAD I	3	
CMT 124	APPLIED TECHNICAL GRAPHICS/CAD II	3	MEC 123
CIT 125	CONSTRUCTION ESTIMATING	3	MAT 013
CIT 104	CONSTRUCTION SURVEYING I	3	MAT 129A or MAT 129
CIT 205	CONSTRUCTION SURVEYING II	3	CIT 104
CIT 105	STATICS FOR TECHNICIANS	3	MCT 101, MAT 129A or MAT 129
CIT 203	STRENGTH OF MATERIALS	4	CIT 105
MAT 129A	PRECALCULUS A[1]	2	Appropriate score on the College Placement Test and/or satisfactory score on the Diagnostic Examination, "C" or better in MAT 014 or MAT 014A and MAT 014B, or departmental approval.
MAT 129B	PRECALCULUS B[1]	2	MAT 129A or equivalent courses.
ENG 121	ENGLISH COMPOSITION I	3	A passing score on the writing portion of the College's Placement Test or a grade of "C" or better in ENG 010; completion of RDG 009 with a "C" or better or a score on the reading portion of the College Placement Test that exempts the students from RDG 009.
		Total Credits: 31	

LAND SURVEYING DEGREE - OPTION

Courses		Credits	Requisites/Comments
Semester I			
MCT 101	INTRODUCTION TO TECHNOLOGY	2	MAT 013 or passing score on the College´s Placement Test. Corequisite: MAT 014
MAT 129A	PRECALCULUS A[1]	2	Appropriate score on the College Placement Test and/or satisfactory score on the Diagnostic Examination, "C" or better in MAT 014 or MAT 014A and MAT 014B, or departmental approval.
ENG 121	ENGLISH I	3	A passing score on the writing portion of the College's Placement Test or a grade of "C" or better in ENG 010; completion of RDG 009 with a "C" or better or a score on the reading portion of the College Placement Test that exempts the students from RDG 009.
MEC 123	TECHNICAL GRAPHICS/CAD I	3	
___ ___	GENERAL EDUCATION HUMANITIES ELECTIVE (GE HUM)	3	
PED/HED	PHYSICAL/HEALTH ED ELECTIVE	1-3	
Semester II			
MAT 129B	PRECALCULUS B[1]	2	MAT 129A or equivalent courses
ENG 122	ENGLISH II	3	A grade of "C" or better in ENG 121 and a passing score on the reading portion of the College Placement Test or a grade of "C" or better in ENG 121 and a grade of "C" or better in RDG 011.
CSC 105	COMPUTER APPLICATIONS & SYSTEMS	3	
CMT 124	APPLIED TECHNICAL GRAPHICS/CAD II	3	MEC 123
CIT 104	CONSTRUCTION SURVEYING I	3	MAT 129A or MAT 129
BUS 201	BUSINESS LAW I	3	
Semester III			
MAT 131A	ANALYTIC GEOMETRY & CALCULUS I (PART A)[2]	2	MAT 129 or MAT 129B or appropriate score on the College Placement Test and/or satisfactory score on the Diagnostic Examination, or departmental approval.
PHY 121	GENERAL PHYSICS I	4	MAT 129B or MAT 129
CIT 205	CONSTRUCTION SURVEYING II	3	CIT 104
BUS 202	BUSINESS LAW II	3	BUS 201
CIT 151	URBAN AND SUBURBAN DEVELOPMENT	3	CIT 205
Semester IV			
MAT 131B	ANALYTIC GEOMETRY & CALCULUS I (PART B)[2]	2	MAT 131A
PHY 122	GENERAL PHYSICS II	4	PHY 121
CIT 252	BOUNDARY LAW	3	
CIT 212	WATER RESOURCES TECHNOLOGY	3	MAT 129B or MAT 129 and CIT 105
___ ___	GENERAL EDUCATION SOCIAL SCIENCE ELECTIVE (GE SS)	3	
___ ___	ELECTIVE*	3-4	
		Total Credits: 64-67	

[1]Students may substitute MAT 129 for MAT129A & MAT 129B or higher level of mathematics with program Chair's approval.
[2]Students may substitute MAT 131 for MAT131A & MAT 131B or higher level of mathematics with program Chair's approval.

Computer Aided Drafting

DIVISION OF BUSINESS, COMPUTER SCIENCE & ENGINEERING TECHNOLOGIES (BCSET)

MECHANICAL AND CIVIL/CONSTRUCTION ENGINEERING TECHNOLOGY DEPARTMENT

COMPUTER AIDED DRAFTING CERTIFICATE

Below are required courses and recommended course groupings and sequences for program completion.

Courses		Credits	Requisites/Comments
MCT 101	INTRODUCTION TO TECHNOLOGY	2	MAT 013 or passing score on the College´s Placement Test. Corequisite: MAT 014
MEC 130	MANUFACTURING PROCESSES AND MATERIALS	4	
MEC 123	TECHNICAL GRAPHICS/CAD I	3	
ENG 121	ENGLISH COMPOSITION I	3	A passing score on the writing portion of the College's Placement Test or a grade of "C" or better in ENG 010; completion of RDG 009 with a "C" or better or a score on the reading portion of the College Placement Test that exempts the students from RDG 009.
MAT 129A	PRECALCULUS A	2	Appropriate score on the College Placement Test and/or satisfactory score on the Diagnostic Examination, "C" or better in MAT 014 or MAT 014A and MAT 014B, or departmental approval.
MAT 129B	PRECALCULUS B	2	MAT 129A or equivalent courses
ELT 105	FOUNDATIONS OF ELECTRICAL & ELECTRONICS TECHNOLOGY	4	MAT 013 or appropriate score on College Placement Test. Corequisite: MAT 014 or higher level
CMT 124	APPLIED TECHNICAL GRAPHICS/CAD II	3	MEC 123
CIT 125	CONSTRUCTION ESTIMATING	3	MAT 013
MEC 250	SOLID MODELING	3	MEC 123
		Total Credits:	***29***

Computer Science

DIVISION OF BUSINESS, COMPUTER SCIENCE & ENGINEERING TECHNOLOGIES (BCSET)

COMPUTER SCIENCE DEPARTMENT

Associate in Applied Science (A.A.S.) Degree

Why major in Computer Science?

The Computer & Information System option leads to the Associate in Applied Science Degree in Computer Science. Students learn object oriented programming in C++ and event driven programming in Visual Basic, client/server architecture, analysis & design of database systems, networking technologies, Windows 95 and UNIX System Administration. Through a cooperative program students can gain work experience and earn college credits during their studies at Middlesex County College.

If I major in Computer Science, what degree can I earn?

You have several choices with this major. You can earn the Associate in Applied Science Degree in either the Information Systems General Option or Information Systems Network Administration and Support Option. You may also choose between four Certificate of Achievement programs: the certificate in Computer Programming, Network Administration, Windows/Novell NetWare Administration and Information Systems Security.

What will I learn if I study Computer Science?

You learn on both mini and microcomputers running the DOS, Windows, Novell NetWare, and UNIX operating systems. You learn several programming languages and administration of both UNIX and Novell-based system courses. You develop problem-solving and communication skills using modern information processing techniques.

Are there any requirements I must satisfy before I start taking courses in my major?

Algebra II is a prerequisite for all majors. Algebra II competency must be verified with a passing score on the College's placement test. You must also have a grade of "C" or better in algebra II and geometry.

Why major in Computer & Information Systems - Network Administration & Support Option?

Network Administration and Support Option of the CIS program leads to the Associate in Applied Science Degree in Computer Science. Students learn Network Administration of Windows NT, Novell Netware and UNIX Operating Systems. Problem solving skills are taught through the use of the object oriented programming language C++, and the event driven programming Visual Basic. This program prepares students to take the certification tests for Novell CNA (Certified Netware Administrator) and Microsoft Windows MCPA (Microsoft Certified Product Specialist). Through a cooperative program students can gain work experience and earn college credits during their studies at Middlesex County College.

How long will it take for me to complete this degree?

If you do not need developmental coursework, and you register for an average of 17 credits each semester, you can complete the degree in two years. You can complete the certificates in one year. You can shorten the amount of time by taking courses in the summer and winter sessions.

Where should I direct specific questions about this program?

Contact Professor Frank Burke, Department Chair, at 732.906.2526.

COMPUTER AND INFORMATION SYSTEMS
GENERAL DEGREE OPTION

Below are required courses and recommended course groupings and sequences for program completion.
Courses may have prerequisites and corequisite requirements. Check course descriptions for details.

Courses		Credits	Requisites / Comments
Semester I			
CSC 105	COMPUTER APPLICATIONS AND SYSTEMS	3	BUS 107 or CSC 105 or CSC 107 or MCT 101 or one year of high school computer applications or a programming course AND MAT 014 or appropriate score on the College Placement Test.
OR			
CSC 106	INTERMEDIATE PC APPLICATIONS WITH PROGRAMMING	4	
CSC 133	INTRODUCTION TO COMPUTER SCIENCE USING C++	4	MAT 014 or appropriate score on College's Placement Test. Corequisites: MAT 129 or MAT 129A
ENG 121	ENGLISH COMPOSITION I	3	A passing score on the writing portion of the College's Placement Test or a grade of "C" or better in ENG 010; completion of RDG 009 with a "C" or better or a score on the reading portion of the College's Placement Test that exempts the students from RDG 009.
OR			
MAT 125	MATHEMATICS FOR DECISION SCIENCES I	3	MAT 014 or at least two years of high school algebra and satisfactory score on placement examination or departmental approval.
MAT 129	PRECALCULUS	4	Appropriate score on the College Placement Test and/or satisfactory score on the Diagnostic Examination, "B" or better in MAT 014, or departmental approval.
OR			
MAT 129A	PRECALCULUS (PART A)	2	Appropriate score on the College Placement Test and/or satisfactory score on the Diagnostic Examination, "C" or better in MAT 014 or MAT 014A and MAT 014B, or departmental approval.
AND			
MAT 129B	PRECALCULUS (PART B)	2	MAT 129A or equivalent courses
____ ____	GENERAL EDUCATION SOCIAL SCIENCE ELECTIVE (GE SS)	3	
PED/HED	PHYSICAL/HEALTH ED ELECTIVE	1-3	
Semester II			
CSC 110	MICROCOMPUTER OPERATING SYSTEMS AND ARCHITECTURE	3	CSC 105 or BUS 107
CSC 134	OBJECT ORIENTED PROGRAMMING USING C++	4	CSC 133, MAT 125 or MAT 127 or MAT 129
CSC 208	VISUAL BASIC PROGRAMMING	4	CSC 133
ENG 122	ENGLISH COMPOSITION II	3	A grade of "C" or better in ENG 121 and a passing score on the reading portion of the College's Placement Test or a grade of "C" or better in ENG 121 and a grade of "C" or better in RDG 011.
OR			
ENG 125	ENGLISH COMPOSITION II: WRITING ABOUT LITERATURE	3	A grade of "C" or better in ENG 121 and a passing score on the reading portion of the College Placement Test or a grade of "C" or better in ENG 121 and a grade of "C" or better in RDG 011.
MAT 126	MATHEMATICS FOR DECISION SCIENCES II OR	3	MAT 125
MAT 131	ANALYTIC GEOMETRY AND CALCULUS I	4	MAT 129 or MAT 129A/129B or appropriate score on the College Placement Test and/or satisfactory score on the Diagnostic Examination, or departmental approval.
OR			
MAT 131A	ANALYTIC GEOMETRY AND CALCULUS I (PART A)	2	MAT 129 or MAT 129A/129B or appropriate score on the College Placement Test and/or satisfactory score on the Diagnostic Examination, or departmental approval.
AND			
MAT 131B	ANALYTIC GEOMETRY AND CALCULUS I (PART B)	2	MAT 131A
Semester III			
CSC 225	SYSTEMS ANALYSIS	3	CSC 134
CSC 235	DATA STRUCTURES	4	CSC 134, MAT 126 or MAT 131
CSC 241	INTERNET APPLICATIONS - HTML/CGI	4	CSC 134
CSC 245	UNIX AND SHELL PROGRAMMING	4	CSC 133
_____ ____	CHOOSE ONE ACCEPTABLE TECHNICAL ELECTIVE LISTED BELOW:	3-4	All students should consult a Computer Science Advisor
	CSC 205	3	Completion of all courses in first year of CIS or Network Administration Option
	CSC 206	3	CSC 205
	CSC 211	4	CSC 134
	CSC 230	4	CSC 110 (Recommended - MAD 121) or relevant experience
	CSC 247	3	Prerequisite: CSC 105; Corequisite: CSC 110
	CSC 248	3	CSC 200, CSC 247
	CSC 251	3	Prerequisite(s): CSC 110 or TCT 103 Corequisites: CSC 200 or TCT 201
	CSC 252	3	CSC 251
	MAT 132	4	MAT 131, MAT 131A/131B, or equivalent
____ ____	ANY GE SCIENCE ELECTIVE	3-4	
Semester IV			
CSC 200	NETWORKING TECHNOLOGIES	3	CSC 110
CSC 239	DATABASE SYSTEMS CONCEPTS	3	CSC 134
CSC 246	UNIX AND WEB SERVER ADMINISTRATION	3	CSC 245
____ ____	GENERAL EDUCATION HUMANITIES ELECTIVE (GE HUM)	3	
____ ____	CHOOSE ONE ACCEPTABLE TECHNICAL ELECTIVE	3-4	

Total Credits: 67-74

NETWORK ADMINISTRATION AND SUPPORT DEGREE - OPTION

Courses		Credits	Requisites / Comments
Semester I			
CSC 105	COMPUTER APPLICATIONS AND SYSTEMS	3	BUS 107 or CSC 105 or CSC 107 or MCT 101 or one year of high school computer applications or a programming course AND MAT 014 or appropriate score on the College Placement Test.
OR			
CSC 106	INTERMEDIATE PC APPLICATIONS WITH PROGRAMMING	4	
CSC 133	INTRODUCTION TO COMPUTER SCIENCE USING C++	4	MAT 014 or appropriate score on College's Placement test.
ENG 121	ENGLISH COMPOSITION I	3	A passing score on the writing portion of the College's Placement Test or a grade of "C" or better in ENG 010; completion of RDG 009 with a "C' or better or a passing score on the reading portion of the College's Placement Test that exempts the students from RDG 009.
MAT 125	MATHEMATICS FOR DECISION SCIENCES I	3	MAT 014 or at least two years of high school algebra and satisfactory score on placement examination or departmental approval.
OR			
MAT 129	PRECALCULUS	4	Appropriate score on the College Placement Test and/or satisfactory score on the Diagnostic Examination, "B" or better in MAT 014, or departmental approval.
OR			
MAT 129A	PRECALCULUS (PART A)	2	Appropriate score on the College Placement Test and/or satisfactory score on the Diagnostic Examination, "C" or better in MAT 014 or MAT 014A and MAT 014B, or departmental approval.
AND			
MAT 129B	PRECALCULUS (PART B)	2	MAT 129A or equivalent courses
____ ____	GENERAL EDUCATION SOCIAL SCIENCE ELECTIVE (GE SS)	3	
PED/HED	PHYSICAL/HEALTH ED ELECTIVE	1-3	
Semester II			
CSC 110	MICROCOMPUTER OPERATING SYSTEMS & ARCHITECTURE	3	CSC 105 or BUS 107
CSC 208	VISUAL BASIC PROGRAMMING	4	CSC 133
CSC 247	NETWARE SYSTEM ADMINISTRATION	3	CSC 105
ENG 122	ENGLISH COMPOSITION II	3	A grade of "C" or better in ENG 121 and a passing score on the reading portion of the College's Placement Test or a grade of "C" or better in ENG 121 and a grade of "C" or better in RDG 011.
OR			
ENG 125	ENGLISH COMPOSITION II: WRITING ABOUT LITERATURE	3	A grade of "C" or better in ENG 121 and a passing score on the reading portion of the College Placement Test or a grade of "C" or better in ENG 121 and a grade of "C" or better in RDG 011.
MAT 126	MATHEMATICS FOR DECISION SCIENCES II OR	3	MAT 125
MAT 131	ANALYTIC GEOMETRY AND CALCULUS I	4	MAT 129 or MAT 129A/129B or appropriate score on the College Placement Test and/or satisfactory score on the Diagnostic Examination, or departmental approval.
OR			
MAT 131A	ANALYTIC GEOMETRY AND CALCULUS I (PART A)	2	MAT 129 or MAT 129A/129B or appropriate score on the College Placement Test and/or satisfactory score on the Diagnostic Examination, or departmental approval.
AND			
MAT 131B	ANALYTIC GEOMETRY AND CALCULUS I (PART B)	2	MAT 131A
Semester III			
CSC 200	NETWORKING TECHNOLOGIES	3	CSC 110
CSC 245	UNIX AND SHELL PROGRAMMING	4	CSC 133
CSC 251	WINDOWS WORKSTATION ADMINISTRATION	3	CSC 110 or TCT 103
____ ____	CHOOSE TWO ACCEPTABLE TECHNICAL ELECTIVE LISTED BELOW:	6-8	
	CSC 134	4	All students should consult a Computer Science Advisor. Prerequisite(s): CSC 133, MAT 125 or MAT 127 or MAT 129; Corequisite(s): MAT 126 or MAT 128 or MAT 131 or MAT 131A
	CSC 205	3	Completion of all courses in first year of CIS or Network Administration Option
	AND		
	CSC 206	3	CSC 205
	CSC 211	4	CSC 134
	CSC 225	3	CSC 134
	CSC 230	4	CSC 110 (Recommended - MAD 121) or relevant experience
	CSC 235	4	CSC 134, MAT 126, MAT 131 or MAT131A and MAT 131B
	CSC 239	3	CSC 134
	CSC 241	4	CSC 134
	ELT 111	3	MAT 013 or appropriate score on the College Placement Test.
	ELT 226	3	ELT 111
	ELT 239	3	ELT 111
	MAT 132	4	MAT 131, MAT 131A/131B, or equivalent
____ ____	ANY GE SCIENCE ELECTIVE	3-4	
Semester IV			
CSC 246	UNIX AND WEB SERVER ADMINISTRATION	3	CSC 245
CSC 248	NETWARE SERVICE AND SUPPORT	3	CSC 200, CSC 247
CSC 252	WINDOWS SERVER ADMINISTRATION	3	CSC 251
____ _____	GENERAL EDUCATION HUMANITIES ELECTIVE (GE HUM)	3	
_____ ____	TECHNICAL ELECTIVE[1]	3-4	

Total Credits: 64-72

COMPUTER PROGRAMMING CERTIFICATE PROGRAM

Courses		Credits	Requisites/Comments
CSC 105	COMPUTER APPLICATIONS AND SYSTEMS	3	
CSC 110	MICROCOMPUTER OPERATING SYSTEMS AND ARCHITECTURE	3	CSC 105 or BUS 107
CSC 133	INTRODUCTION TO COMPUTER SCIENCE USING C++	4	MAT 014 or appropriate score on College's Placement Test.
CSC 134	OBJECT ORIENTED PROGRAMMING USING C++	4	CSC 133, MAT 125 or MAT 127 or MAT 129
CSC 208	VISUAL BASIC PROGRAMMING	4	CSC 133
	RECOMMENDED COMPUTER SCIENCE ELECTIVE:	3-4	All students should consult a Computer Science Advisor.
	CSC 160	3	MAT 014 or higher and CSC 133 or permission of chairperson.
	CSC 211	4	CSC 134
	CSC 230	4	CSC 110 (Recommended - MAD 121) or relevant experience.
	CSC 235	4	CSC 134, MAT 126 ,MAT 131 or MAT 131A and MAT 131B
	CSC 241	4	CSC 134
	CSC 247	3	Prerequisite: CSC 105; Corequisites: CSC 110
_____ ____	THE FOLLOWING COURSES CANNOT BE TAKEN AS ELECTIVES: CSC 107, CSC 108, CSC 109, CSC 125, CSC 165, BUS 107		
ENG 121	ENGLISH COMPOSITION I	3	A passing score on the writing portion of the College's Placement Test or a grade of "C" or better in ENG 010; completion of RDG 009 with a "C" or better or a passing score on the reading portion of the College's Placement Test that exempts the students from RDG 009.
ENG 122	ENGLISH COMPOSITION II	3	A grade of "C" or better in ENG 121 and a passing score on the reading portion of the College's Placement Test or a grade of "C" or better in ENG 121 and a grade of "C" or better in RDG 011.
OR			
ENG 125	ENGLISH COMPOSITION II: WRITING ABOUT LITERATURE	3	A grade of "C" or better in ENG 121 and a passing score on the reading portion of the College's Placement Test or a grade of "C" or better in ENG 121 and a grade of "C" or better in RDG 011.
MAT 125	MATHEMATICS FOR DECISION SCIENCES I	3	MAT 014 or at least two years of high school algebra and satisfactory score on placement examination or departmental approval.
OR			
MAT 129	PRECALCULUS	4	Appropriate score on the College Placement Test and/or satisfactory score on the Diagnostic Examination, "B" or better in MAT 014, or departmental approval.
OR			
MAT 129A	PRECALCULUS (PART A)	2	Appropriate score on the College Placement Test and/or satisfactory score on the Diagnostic Examination, "C" or better in MAT 014 or MAT 014A and MAT 014B, or departmental approval.
AND			
MAT 129B	PRECALCULUS (PART B)	2	MAT 129A or equivalent courses
MAT 126	MATHEMATICS FOR DECISION SCIENCES II OR	3	MAT 125
MAT 131	ANALYTIC GEOMETRY AND CALCULUS I	4	MAT 129 or MAT 129A/129B or appropriate score on the College Placement Test and/or satisfactory score on the Diagnostic Examination, or departmental approval.
OR			
MAT 131A	ANALYTIC GEOMETRY AND CALCULUS I (PART A)	2	MAT 129 or MAT 129A/129B or appropriate score on the College Placement Test and/or satisfactory score on the Diagnostic Examination, or departmental approval.
AND			
MAT 131B	ANALYTIC GEOMETRY AND CALCULUS I (Part B)	2	MAT 131A

Total Credits: 33-36

NETWORK ADMINISTRATION CERTIFICATE PROGRAM

Courses		Credits	Requisites
CSC 105	COMPUTER APPLICATIONS AND SYSTEMS	3	
CSC 110	MICROCOMPUTER OPERATING SYSTEMS AND ARCHITECTURE	3	CSC 105 or BUS 107
CSC 160	INTRODUCTION TO UNIX FOR WEB DEVELOPMENT	3	Two years of high school Algebra and Geometry or MAT 014
CSC 200	NETWORKING TECHNOLOGIES	3	CSC 110
CSC 247	NETWARE SYSTEM ADMINISTRATION	3	CSC 105
CSC 251	WINDOWS WORKSTATION ADMINISTRATION	3	CSC 110 or TCT 103
CSC 252	WINDOWS SERVER ADMINISTRATION	3	CSC 251
CSC 248	NETWARE SERVICE AND SUPPORT	3	CSC 200, CSC 247
_____ ____	RECOMMENDED COMPUTER SCIENCE ELECTIVE:	3-4	All students should consult a Computer Science Advisor.
	CSC 133	4	Prerequisite(s): MAT 014 or appropriate score on College's Placement Test. Corequisite(s): MAT 125 or MAT 127 or MAT 129 or MAT 110
	CSC 208	4	CSC 133
	ELT 111	3	MAT 013 or appropriate score on the College Placement Test.
	ELT 226	3	ELT 111
	ELT 239	3	ELT 111
_____ ____	THE FOLLOWING COURSES CANNOT BE TAKEN AS ELECTIVES: CSC 107, CSC 108, CSC 109, CSC 125, BUS 107		
ENG 121	ENGLISH COMPOSITION I	3	A passing score on the writing portion of the College's Placement Test or a grade of "C" or better in ENG 010; completion of RDG 009 with a "C" or better or a passing score on the reading portion of the College's Placement Test that exempts the students from RDG 009.
ENG 122	ENGLISH COMPOSITION II ABOUT LITERATURE	3	A grade of "C" or better in ENG 121 and a passing score on the reading portion of the College's Placement Test or a grade of "C" or better in ENG 121 and a grade of "C" or better in RDG 011.
OR			
ENG 125	ENGLISH COMPOSITION II: WRITING	3	A grade of "C" or better in ENG 121 and a passing score on the reading portion of the College's Placement Test or a grade of "C" or better in ENG 121 and a grade of "C" or better in RDG 011.
MAT 125	MATHEMATICS FOR DECISION SCIENCES I	3	MAT 014 or at least two years of high school algebra and satisfactory score on placement examination or departmental approval.
OR			
MAT 129	PRECALCULUS	4	Appropriate score on the College Placement Test and/or satisfactory score on the Diagnostic Examination, "B" or better in MAT 014, or departmental approval.
OR			
MAT 129A	PRECALCULUS (PART A)	2	Appropriate score on the College Placement Test and/or satisfactory score on the Diagnostic Examination, "C" or better in MAT 014 or MAT 014A and MAT 014B, or departmental approval.
AND			
MAT 129B	PRECALCULUS (PART B)	2	MAT 129A or equivalent courses

Total Credits: 35-38

TECHNICAL CERTIFICATE IN INFORMATION SYSTEMS SECURITY

This technical certificate is designed for those students with at least two years of college level education and have completed courses equivalent to ENG 121 and MAT 125. Students must complete CSC 105, CSC 134, and CSC 200 or demonstrate the equivalent proficiency prior to beginning this certificate.

Successful completion of this certificate helps prepare students to take the certification test for Security.

Courses		Credits	Requisites/Comments
CSC 116	INTRODUCTION TO INFORMATION SYSTEMS SECURITY	3	CSC 105 or CSC 106 or BUS 107
CSC 239	DATABASE CONCEPTS	4	CSC 134
CSC 241	WEB PROGRAMMING	4	CSC 134
CSC 245	UNIX AND SHELL PROGRAMMING	4	CSC 133
____ ____	SYSTEM ADMINISTRATION TECHNICAL ELECTIVE:	3	All students should consult a Computer Science Advisor
	CSC 246	3	CSC 245
	CSC 247	3	Prerequisite(s): CSC 105 Corequisite: CSC 110
	CSC 251	3	Prerequisite(s): CSC 110 or TCT 103 Corequisites: CSC 200 or TCT 201
CSC 261	INFORMATION TECHNOLOGY MANAGEMENT	3	CSC 200, CSC 134, CSC 251, ENG 121

Total Credits: 21

TECHNICAL CERTIFICATE IN WINDOWS/NOVELL NETWARE ADMINISTRATION

This technical certificate is designed for those students with at least two years of college level education and have completed courses equivalent to ENG121 and MAT 125. Students must complete CSC105 or demonstrate the equivalent proficiency prior to beginning this certificate program. The dotted lines between groups of classes indicate the recommended three semester sequence. Successful completion of this Certificate helps prepare students to take the certification tests for: NOVELL CNA (Certified Novell Administrator) and MICROSOFT WINDOWS 2000.

Courses		Credits	Requisites/Comments
CSC 110	MICROCOMPUTER OPERATING SYSTEMS AND ARCHITECTURE	3	CSC 105 or BUS 107
CSC 247	NETWARE SYSTEMS ADMINISTRATION	3	Prerequisite(s): CSC 105 Corequisite: CSC 110
CSC 200	NETWORKING TECHNOLOGIES	3	CSC 110
CSC 251	WINDOWS 2000 WORKSTATION ADMINISTRATION	3	Prerequisite(s): CSC 110 or TCT 103 Corequisites: CSC 200 or TCT 201
CSC 252	WINDOWS 2000 SERVER ADMINISTRATION	3	CSC 251
CSC 248	NETWARE SERVICE AND SUPPORT	3	CSC 200, CSC 247
_____ ____	ELECTIVE REQUIRED	3	
	RECOMMENDED ELECTIVE: CSC 160	3	MAT 014 or higher and CSC 133 or permission of chairperson.

Total Credits: 21

Internet/Web Page Development

DIVISION OF BUSINESS, COMPUTER SCIENCE & ENGINEERING TECHNOLOGIES (BCSET)

COMPUTER SCIENCE DEPARTMENT

Why take the Technical Certificate in Internet/Web Page Development?

This technical certificate provides students an awareness of the Internet and the World Wide Web. Publishing text pictures, sound, and even video over the Internet is becoming easier everyday. Individuals who run small businesses with services to sell, and persons with stories to share will acquire the necessary skills to publish useful, attractive, and quality web pages. Upon completion of this certificate program, students will be able to create web sites and useful web pages.

If I major in Internet/Web Page Development, what type of certificate do I earn?

The Technical Certificate.

Are there any requirements I must satisfy before I can start taking courses in my major?

The technical certificate is designed for those students with at least two years of college level education, including ENG 121 English Composition I. Algebra I is a prerequisite for all majors. Algebra I competency must be verified with a passing score on the College's Placement test. You must have completed BUS 107 or CSC 105 or CSC 107 or MCT 101 or demonstrated equivalent proficiency before beginning this certificate.

How long will it take for me to complete this certificate?

It will take at least two semesters for a person to complete this certificate.

Where should I direct specific questions about this program?

Contact Professor Burke, Department Chair, at 732.906.2526.

Why take the technical certificate in Information Systems Security?

This technical certificate develops technical competence in Information Systems Security, an area that is critical to homeland security with rapidly expanding employment opportunities.

Are there any requirements that I must satisfy before I start taking courses in my major?

The technical certificate is designed for those students with at least two years of college education, including ENG 121, English Composition I. Algebra I is a prerequisite for all majors. Algebra I competency must be verified with a passing score on the College's Placement test. You must have completed CSC 105, CSC 134, and CSC 200 or demonstrated equivalent proficiency prior to beginning this certificate.

How long will it take me to complete this certificate?

It will take at least two semesters to complete this certificate.

Where should I direct questions about this major?

Contact Professor Burke, Department Chair, at 732.906.2526.

TECHNICAL CERTIFICATE IN INTERNET / WEB PAGE DEVELOPMENT

This technical certificate is designed for those students with at least two years of college education and have completed courses equivalent to ENG 121 and MAT 125. Students must complete CSC 134 prior to starting this certificate.

Courses		Credits	Requisites / Comments
CSC 125	WEB MARKUP LANGUAGES	3	MAT 014 or above and CSC 133 or permission of chairperson
CSC 160	INTRODUCTION TO UNIX FOR WEB DEVELOPMENT	3	MAT 014 or higher and CSC 133 or permission of chairperson
CSC 211	PROGRAMMING IN JAVA	4	CSC 134
CSC 239	DATABASE SYSTEM CONCEPTS	3	CSC 134
CSC 241	INTERNET APPLICATIONS - HTML/CGI	4	CSC 134
____ ____	CHOOSE ONE TECHNICAL ELECTIVE LISTED BELOW:	3-4	All students should consult a Computer Science Advisor
	CSC 208	4	CSC 133
	CSC 230	4	CSC 110 (Recommended - MAD 121) or relevant experience.
	CSC 235	4	CSC 134, MAT 126, MAT 131 or MAT 131A AND MAT 131B
	CSC 246	3	CSC 245
	MAD 121	3	BUS 107 or CSC 105 or MCT 101 or equivalent

Total Credits: 20-21

Computer Science Transfer Degree

DIVISION OF BUSINESS, COMPUTER SCIENCE & ENGINEERING TECHNOLOGIES (BCSET)

COMPUTER SCIENCE DEPARTMENT

Associate in Science (A.S.) Degree

Why major in Computer Science Transfer Program?

The Computer Science Transfer program leads to the Associate of Science degree and prepares students to transfer to public and private upper-division colleges and universities. Students study topics in computer science such as problem solving object oriented programming using C++, and computer architecture. Calculus, natural science, social science, and humanities are also studied. In the past many of our students have successfully transferred to New Jersey Institute of Technology, Rutgers University and other public and private colleges and universities.

If I major in Science Transfer, what degree can I earn?

The Associate in Science Degree which prepares you to transfer to upper division colleges. If you are interested in a pre-professional program, you should choose either the Biology or Chemistry options. Contact the pre-professional faculty advisor for specific course selection.

What will I learn if I study Science Transfer?

You concentrate on the theoretical and applied sciences, and mathematics. Your studies prepare you to meet the challenges of advanced study in professional careers.

Are there any requirements I must satisfy before I start taking courses in my major?

Algebra II is a prerequisite for all majors. Algebra II competency must be verified with a passing score on the College's placement test. You must also have a grade of "C" or better in algebra II, geometry, laboratory chemistry and one additional year of laboratory science.

How long will it take for me to complete this degree?

If you do not need developmental coursework, and you register for an average of 16 credits each semester, you can complete the degree in two years. You can shorten the amount of time by taking courses in the summer and winter sessions.

Where should I direct specific questions about this program?

Contact Professor Frank Burke, Department Chair, at 732.906.2526.

COMPUTER SCIENCE OPTION - SCIENCE TRANSFER DEGREE

Below are required courses and recommended course groupings and sequences for program completion. Courses may have prerequisites and corequisite requirements. Check course descriptions for details.

Courses		Credits	Requisites/Comments
Semester I			
CSC 133	INTRODUCTION TO COMPUTER SCIENCE USING C++	4	MAT 014 or appropriate score on College's Placement Test.
ENG 121	ENGLISH COMPOSITION I	3	A passing score on the writing portion of the College's Placement Test or a grade of "C" or better in ENG 010; completion of RDG 009 with a "C" or better or a score on the reading portion of the College's Placement Test that exempts the students from RDG 009.
MAT 129	PRECALCULUS	4	Appropriate score on the College Placement Test and/or satisfactory score on the Diagnostic Examination, "B" or better in MAT 014, or departmental approval.
OR			
MAT 129A	PRECALCULUS (PART A)	2	Appropriate score on the College Placement Test and/or satisfactory score on the Diagnostic Examination, "C" or better in MAT 014 or MAT 014A and MAT 014B, or departmental approval.
AND			
MAT 129B	PRECALCULUS (PART B)	2	MAT 129A or equivalent courses
MAT 131	ANALYTIC GEOMETRY AND CALCULUS I	4	MAT 129, or MAT 129A/129B, or appropriate score on the College's Placement Test and/or satisfactory score on the Diagnostic Examination, or departmental approval.
OR			
MAT 131A	ANALYTIC GEOMETRY AND CALCULUS I (PART A)	2	MAT 129, or MAT 129A/129B, or appropriate score on the College Placement Test and/or satisfactory score on the Diagnostic Examination, or departmental approval.
AND			
MAT 131B	ANALYTIC GEOMETRY AND CALCULUS I (PART B)	2	MAT 131A
____ ____	GENERAL EDUCATION SCIENCE ELECTIVE (GE SCI)	4	Students should take General Education Science elective courses that end with the number 117 or higher and should take a two course sequence in the same science.
PED/HED	PHYSICAL/HEALTH ED ELECTIVE	1-3	
Semester II			
CSC 134	OBJECT ORIENTED PROGRAMMING USING C++	4	CSC 133, MAT 125 or MAT 127 or MAT 129
ENG 122	ENGLISH COMPOSITION II	3	A grade of "C" or better in ENG 121 and a passing score on the reading portion of the College's Placement Test or a grade of "C" or better in ENG 121 and a grade of "C" or better in RDG 011.
OR			
ENG 125	ENGLISH COMPOSITION II: WRITING ABOUT LITERATURE	3	A grade of "C" or better in ENG 121 and a passing score on the reading portion of the College's Placement Test or a grade of "C" or better in ENG 121 and a grade of "C" or better in RDG 011.
MAT 131	ANALYTIC GEOMETRY AND CALCULUS I	4	MAT 129, or MAT 129A/129B, or appropriate score on the College's Placement Test and/or satisfactory score on the Diagnostic Examination, or departmental approval.
OR			
MAT 132	ANALYTIC GEOMETRY AND CALCULUS II	4	MAT 131, MAT 131A/131B, or equivalent
____ ____	GENERAL EDUCATION SCIENCE ELECTIVE (GE SCI)	4	Students should take General Education Science elective courses that end with the number 117 or higher and should take a two course sequence in the same science.
____ ____	GENERAL EDUCATION HUMANITIES ELECTIVE (GE HUM)	3	
Semester III			
CSC 233	COMPUTER ARCHITECTURE AND ASSEMBLY LANGUAGE I	4	CSC 133 or permission of Chairperson
CSC 235	DATA STRUCTURES	4	CSC 134, MAT 126 or MAT 131
MAT 132	ANALYTIC GEOMETRY AND CALCULUS II OR	4	MAT 131, MAT 131A/131B, or equivalent
MAT 2__	200 LEVEL MATHEMATICS ELECTIVE	4	Students should take Mathematics elective courses that end with the number 210 or higher.
____ ____	COMPUTER SCIENCE/MATH/SCIENCE ELECTIVE[3]	3-4	Students should preferably take a 200-level Computer Science elective but may take an advanced mathematics or science electives. Mathematics Requirement: Students who have taken Precalculus in high school and have placed at the required level of the college Calculus placement exam, can take MAT 131 as their first mathematics course.
Semester IV			
MAT 206	DISCRETE MATHEMATICS	4	MAT 132 or approval of Department Chairperson
____ ____	COMPUTER SCIENCE/MATH/SCIENCE ELECTIVE[3]	3-4	Students should preferably take a 200-level Computer Science elective but may take an advanced mathematics or science electives. Mathematics Requirement: Students who have taken Precalculus in high school and have placed at the required level of the college Calculus placement exam, can take MAT 131 as their first mathematics course.
____ ____	GENERAL EDUCATION SOCIAL SCIENCE ELECTIVE (GE SS)	3	
____ ____	GENERAL EDUCATION SOCIAL SCIENCE ELECTIVE (GE SS)	3	
____ ____	GENERAL EDUCATION HUMANITIES ELECTIVE (GE HUM)	3	

Total Credits: 65-69

Criminal Justice

DIVISION OF SOCIAL SCIENCES AND HUMANITIES (SSHUM)

HISTORY & SOCIAL SCIENCE BEHAVIOR DEPARTMENT

Associate in Science (A.S.) Degree

Why major in Criminal Justice?

Your program includes general and specialized education courses designed to prepare you for a bachelor's degree program or a job in criminal justice. The certificate prepares you to secure employment in the fields of probation, parole and corrections.

If I major in Criminal Justice, what degree can I earn?

You have several choices with this major. You may earn the Associate in Science Degree that prepares you to transfer to upper division colleges and universities. You may choose to concentrate in either the Correction Administration option or the Police Science option. The department also offers a Certificate of Achievement in Correction Administration.

What will I learn if I study Criminal Justice?

You examine both the substantive and procedural aspects of criminal law. Particular attention will be given to the functions of the courts and special emphasis will be placed on major US Supreme Court decisions. If you choose the Correction Administration degree option or certificate, you learn about relevant trends with regard to correctional institutions, as well as sentencing, judicial treatment and correctional management philosophies. With the Police Science degree option, students will learn police procedures, constitutional law and community policing.

Are there any requirements I must satisfy before I start taking courses in my major?

Algebra I is a prerequisite for all majors. Algebra I competency must be verified with a passing score on the College's placement test. You also need a grade of "C" or better in one year of high school laboratory science.

How long will it take for me to complete this degree?

If you do not need developmental coursework, and you register for an average of 16 credits each semester, you can complete the degree in two years. You can shorten the amount of time by taking courses in the summer and winter sessions. Certain major courses in your program are offered only in the evening.

Where should I direct specific questions about this program?

Contact Professor Shindelman, Department Chair, at 732.906.2503.

CORRECTION ADMINISTRATION DEGREE - OPTION

Below are required courses and recommended course groupings and sequences for program completion. Courses may have prerequisites and corequisite requirements. Check course descriptions for details.

Courses		Credits	Requisites/Comments
Semester I			
ENG 121	ENGLISH COMPOSITION I	3	A passing score on the writing portion of the College's Placement Test or a grade of "C" or better in ENG 010; completion of RDG 009 with a "C" or better or a score on the reading portion of the College's Placement Test that exempts the students from RDG 009.
CJU 123	CRIMINAL JUSTICE I	3	
SOC 121	INTRODUCTION TO SOCIOLOGY I	3	
POS 201	UNITED STATES STATE AND LOCAL GOVERNMENT	3	
____ ____	GENERAL EDUCATION SOCIAL SCIENCE ELECTIVE (GE SS)	3	
Semester II			
ENG 122	ENGLISH COMPOSITION II	3	A grade of "C" or better in ENG 121 and a passing score on the reading portion of the College's Placement Test or a grade of "C" or better in ENG 121 and a grade of "C" or better in RDG 011.
CJU 124	CRIMINAL JUSTICE II	3	CJU 123
SOC 140	INTRODUCTION TO CRIMINOLOGY	3	
POS 220	UNITED STATES NATIONAL GOVERNMENT	3	
PSY 123	INTRODUCTORY TO PSYCHOLOGY	3	
____ ____	GENERAL EDUCATION HUMANITIES ELECTIVE (GE HUM)	3	
Semester III			
____ ____	GENERAL EDUCATION MATHEMATICS ELECTIVE (GE MAT)[1]	3-4	
	OR		
____ ____	GENERAL EDUCATION SCIENCE ELECTIVE (GE SCI)	3-4	
____ ____	GENERAL EDUCATION SOCIAL SCIENCE ELECTIVE (GE SS)	3	
PED/HED	PHYSICAL/HEALTH ED ELECTIVE	1-3	
CSC 105	COMPUTER APPLICATIONS AND SYSTEMS	3	
COR 201	INTRODUCTION TO CORRECTION ADMINISTRATION	3	Prerequisite or Corequisite: CJU 123
PSY 222	SOCIAL PSYCHOLOGY	3	SOC 121 or PSY 123
Semester IV			
____ ____	GENERAL EDUCATION MATHEMATICS ELECTIVE (GE MAT)	3-4	
	OR		
____ ____	GENERAL EDUCATION SCIENCE ELECTIVE (GE SCI)	4	
____ ____	GENERAL EDUCATION HUMANITIES ELECTIVE (GE HUM)	3	
COR 207	CORRECTIONAL INSTITUTIONS	3	Prerequisite or Corequisite: CJU 123
SOC 225	JUVENILE DELINQUENCY	3	
	OR		
POS 231	CONSTITUTIONAL LAW	3	Prerequisite: POS 121 or POS 201 or POS 220
COR 280	CORRECTIONS EXTERNSHIP	3	Prerequisite or Corequisite: COR 201 or COR 207
	OR		
POL 204	LAW ENFORCEMENT AND COMMUNITY	3	
		Total Credits:	***64-68***

CORRECTION ADMINISTRATION CERTIFICATE PROGRAM

Courses		Credits	Requisites/Comments
CJU 123	CRIMINAL JUSTICE I	3	
CJU 124	CRIMINAL JUSTICE II	3	CJU 123
COR 201	INTRODUCTION TO CORRECTION ADMINISTRATION	3	Prerequisite or Corequisite: CJU 123
COR 207	CORRECTIONAL INSTITUTIONS	3	Prerequisite or Corequisite: CJU 123
COR 280	CORRECTIONS EXTERNSHIP	3	Prerequisite or Corequisite: COR 201 or COR 207
OR			
POL 204	LAW ENFORCEMENT AND COMMUNITY	3	
ENG 121	ENGLISH COMPOSITION I	3	A passing score on the writing portion of the College's Placement Test or a grade of "C" or better in ENG 010; completion of RDG 009 with a "C" or better or a score on the reading portion of the College's Placement Test that exempts the students from RDG 009.
ENG 121	ENGLISH COMPOSITION II	3	A grade of "C" or better in ENG 121 and a passing score on the reading portion of the College's Placement Test or a grade of "C" or better in ENG 121 and a grade of "C" or better in RDG 011.
POS 201	UNITED STATES STATE AND LOCAL GOVERNMENT	3	
POS 220	UNITED STATES NATIONAL GOVERNMENT	3	
PSY 123	INTRODUCTORY TO PSYCHOLOGY	3	
SOC 121	INTRODUCTION TO SOCIOLOGY	3	
SOC 140	INTRODUCTION TO CRIMINOLOGY	3	
	Total Credits:	***36***	

POLICE SCIENCE DEGREE - OPTION

Courses		Credits	Requisites/Comments
Semester I			
ENG 121	ENGLISH COMPOSITION I	3	A passing score on the writing portion of the College's Placement Test or a grade of "C" or better in ENG 010; completion of RDG 009 with a "C" or better or a score on the reading portion of the College's Placement Test that exempts the students from RDG 009.
CJU 123	CRIMINAL JUSTICE I	3	
SOC 121	INTRODUCTION TO SOCIOLOGY	3	
POS 201	UNITED STATES STATE AND LOCAL GOVERNMENT	3	
____ ____	GENERAL EDUCATION SOCIAL SCIENCE ELECTIVE (GE SS)	3	
Semester II			
ENG 122	ENGLISH COMPOSITION II	3	A grade of "C" or better in ENG 121 and a passing score on the reading portion of the College's Placement Test or a grade of "C" or better in ENG 121 and a grade of "C" or better in RDG 011.
CJU 124	CRIMINAL JUSTICE II	3	CJU 123
SOC 140	INTRODUCTION TO CRIMINOLOGY	3	
POS 220	UNITED STATES NATIONAL GOVERNMENT	3	
PSY 123	INTRODUCTORY TO PSYCHOLOGY	3	
____ ____	GENERAL EDUCATION HUMANITIES ELECTIVE (GE HUM)	3	
Semester III			
____ ____	GENERAL EDUCATION MATHEMATICS ELECTIVE (GE MAT)[1]	3-4	
OR			
____ ____	GENERAL EDUCATION MATHEMATICS ELECTIVE (GE LAB SCIENCE)[1]	4	
____ ____	GENERAL EDUCATION SOCIAL SCIENCE ELECTIVE (GE SS)	3	
PED/HED	PHYSICAL/HEALTH ED ELECTIVE	1-3	
CSC 105	COMPUTER APPLICATIONS	3	
POL202	POLICE OPERATIONS	3	
POL 204	LAW ENFORCEMENT AND COMMUNITY	3	
Semester IV			
____ ____	GENERAL EDUCATION MATHEMATICS ELECTIVE (GE MAT)[1]	3-4	
OR			
____ ____	GENERAL EDUCATION SCIENCE ELECTIVE (GE SCI)	4	
____ ____	GENERAL EDUCATION HUMANITIES ELECTIVE (GE HUM)	3	
POL 201	POLICE ADMINISTRATION	3	
PSY 222	SOCIAL PSYCHOLOGY	3	SOC 121 or PSY 123
SOC 225	JUVENILE DELINQUENCY	3	
OR			
POS 231	CONSTITUTIONAL LAW	3	POS 121 or POS 201 or POS 220

[1]You may fulfill the mathematics or laboratory science requirement by completing either two semesters of mathematics or two semesters of four credit laboratory science courses. If you choose to take mathematics, MAT 123 - MAT 124 are recommended. All mathematics and science courses require knowledge of Algebra I and some may require Algebra II. You should discuss your choice with your academic advisor.

Dental Hygiene

DIVISION OF SCIENCE, MATHEMATICS & HEALTH TECHNOLOGIES (SCMHT)

DENTAL AUXILIARIES EDUCATION DEPARTMENT

Associate in Applied Science (A.A.S.) Degree

The program in Dental Hygiene is accredited by the Commission on Dental Accreditation and has been granted the accreditation status of approval.

Why major in Dental Hygiene?

You can become a licensed professional who works under the supervision of a dentist and performs services that detect, prevent and treat diseases of the mouth. Services include performing oral examinations, oral cancer screenings, scaling, root planning, polishing, applying decay preventing agents, taking and processing dental X-rays, giving nutritional counseling, and providing patient education in preventive dentistry.

If I major in Dental Hygiene, what degree can I earn?

The Associate in Applied Science Degree which prepares you for a career as a registered dental hygienist. Graduates of this program qualify to take the North East Regional and the National Board Examinations for licensure to practice.

If I major in Dental Hygiene, can I transfer to a four-year college or university?

Some colleges and universities, Thomas Edison, Montclair State University, UMDNJ, and New Jersey City University, will apply the courses you have taken for your degree towards a bachelor's degree.

What will I learn if I study Dental Hygiene?

You will study comprehensive didactic, laboratory and clinic courses in dental hygiene and the dental sciences presented by highly qualified dental hygienists and dentists. State-of-the-art equipment is used in our on-site dental hygiene clinic and laboratories. You will have additional clinical experiences in local hospitals and public schools. Basic science and general education requirements complete the course of study.

Are there any special requirements I must satisfy before I start taking courses in my major?

Algebra I is a prerequisite for all majors. Competency in algebra I must be verified with a passing score on the College's placement test. You must also have a "C" or better in high school laboratory biology and laboratory chemistry. As a result of your performance on the College's placement test, you may need developmental coursework.
All developmental coursework must be completed before you will be considered for admission to the program. When you apply, you must take a pre-health aptitude test and score above the cutoff scores established by the College. The Dental Hygiene Program is open to New Jersey residents only. Proof of residency required.

How long will it take for me to complete this degree?

If you register for an average of 18 credits each semester, you can complete the degree in two years.

Are there any special requirements once I am admitted to this major?

You must meet the academic standards of progress to stay in the program. All DHY courses must be taken at Middlesex County College.

Where should I direct specific questions about this program?

Contact Professor Holbeck, Department Chair, at 732.906.2536.

DEGREE PROGRAM

Below are required courses and recommended course groupings and sequences for program completion. Courses may have prerequisites and corequisite requirements. Check course descriptions for details.

Courses		Credits	Requisites/Comments
Semester I			
BIO 211	PRINCIPLES OF MICROBIOLOGY	4	One year of high school laboratory biology or BIO 010 and one year of high school laboratory chemistry or CHM 010. Also appropriate score on the College Placement Test or MAT 013.
DHY 102	DENTAL RADIOLOGY	2	Credit-by-examination available if you are licensed to take radiographs in New Jersey.
DHY 105	ORAL ANATOMY AND HISTOLOGY	4	
DHY 107	PREVENTIVE ORAL HEALTH SERVICES I	4	
ENG 121	ENGLISH COMPOSITION I	3	A passing score on the writing portion of the College's Placement Test or a grade of "C" or better in ENG 010; completion of RDG 009 with a "C" or better or a score on the reading portion of the College Placement Test that exempts the students from RDG 009.
Semester II			
BIO 111	HUMAN ANATOMY AND PHYSIOLOGY I	4	One year of high school laboratory biology or BIO 010 and one year of high school laboratory chemistry or CHM 010 and appropriate score on the College Placement Test or MAT 013.
DHY 108	PREVENTIVE ORAL HEALTH SERVICES II[3]	5	DHY 102, DHY 105, DHY 107 and current CPR certification.
DHY 111	NUTRITION AND ORAL HEALTH	2	DHY 102, DHY 105, DHY 107
DHY 204	DENTAL MATERIALS	2	DHY 102, DHY 105, DHY 107
DHY 205	PERIODONTOLOGY	2	BIO 211, DHY 102, DHY 105, DHY 107
ENG 122	ENGLISH COMPOSITION II	3	A grade of "C" or better in ENG 121 and a passing score on the reading portion of the College Placement Test or a grade of "C" or better in ENG 121 and a grade of "C" or better in RDG 011.
Semester III			
BIO 112	HUMAN ANATOMY AND PHYSIOLOGY II	4	BIO 111
CHM 107	PRINCIPLES OF CHEMISTRY	4	One year of high school laboratory chemistry or CHM 010
DHY 203	GENERAL AND ORAL PATHOLOGY	2	DHY 108, DHY 110, DHY 204, DHY 205
DHY 207	DENTAL HEALTH EDUCATION	2	DHY 108, DHY 110, DHY 204, DHY 205
DHY 211	PREVENTIVE ORAL HEALTH SERVICES III[3]	5	DHY 108, DHY 110, DHY 204, DHY 205 and current CPR certification.
DHY 215	ADVANCED PERIODONTOLOGY	1	DHY 108, DHY 110, DHY 204, DHY 205
PSY 123	INTRODUCTORY PSYCHOLOGY	3	
Semester IV			
DHY 208	PHARMACOLOGY	2	BIO 112, CHM 107, DHY 203, DHY 207, DHY 211, DHY 215
DHY 210	PUBLIC HEALTH	2	DHY 203, DHY 207, DHY 211, DHY 215
DHY 212	PREVENTIVE ORAL HEALTH SERVICES IV	5	DHY 203, DHY 207, DHY 211, DHY 215 and current CPR certification.
SOC 121	INTRODUCTION TO SOCIOLOGY I	3	
PED/HED	PHYSICAL/HEALTH ED ELECTIVE	1-3	
____ ____	GENERAL EDUCATION HUMANITIES ELECTIVE (GE HUM)	3	
	Total Credits: 72-74		

Standards of Progress

1. Must achieve a "C" grade or better in all Dental Hygiene courses.
2 Any student achieving a grade less than a "C" in Dental Hygiene courses will be dropped from the program.
3 For readmission to the first semester the student must be in good academic standing to reapply and be re-ranked.
4. May retake a Dental Hygiene course only once.
5. Must achieve a "C" grade or better in all science courses to satisfy degree requirements.
6. If a student earns a grade of less than "C" in any science course, the student must retake the course and achieve a grade of "C" or better.

Dietetic Technology

DIVISION OF BUSINESS, COMPUTER SCIENCE & ENGINEERING TECHNOLOGIES (BCSET)

HOTEL, RESTAURANT AND INSTITUTION MANAGEMENT DEPARTMENT

Associate in Applied Science (A.A.S.) Degree

Why major in Dietetic Technology?

The Dietetic Technology Program is currently granted Accreditation by the Commission on Accreditation for Dietetics Education of the American Dietetic Association, 120 South Riverside Plaza, Chicago, IL 60606-6995, 312.899.5400. When you graduate you are eligible for active membership in the American Dietetic Association and to write the registration examination for dietetic technicians administered by the Commission on Dietetic Registration to become a Dietetic Technician Registered (DTR). You are also eligible for membership in the Dietary Managers Association and to sit for the credentialing examination to become a Certified Dietary Manager (CDM).

If I major in Dietetic Technology, what degree can I earn?

The Associate in Applied Science Degree, which prepares you for a career as a dietetic technician in a health care facility, school, day care center, correction facility, corporation or community health setting.

What will I learn if I study Dietetic Technology?

You study the management of food service systems and how to function at the mid-management level in assessment, planning, implementation, and evaluation of the food service operations and nutrition care plans. You learn in the classroom and in clinical settings.

If I major in Dietetic Technology, can I transfer to an upper division college or university?

Many upper division colleges and universities will apply the courses you have taken towards a Bachelor's degree in dietetics, foods and nutrition and hotel, restaurant management. The College has official articulation agreements with NYU, the College of St. Elizabeth, and Montclair State University.

Are there any requirements I must satisfy before I start taking courses in my major?

Algebra I is a prerequisite for all majors. Algebra I competency must be verified with a passing score on the College's placement test. You also need a grade of "C" or higher in one year of high school laboratory science.

How long will it take for me to complete this degree?

If you do not need developmental coursework, and you register for 17 credits each semester, you can complete the degree in two years.

Where should I direct specific questions about this program?

Contact Professor Maciolek, Director, Dietetic Technology, at 732.906.2523, extension 3420.

DEGREE PROGRAM

Below are required courses and recommended course groupings and sequences for program completion. Courses may have prerequisites and corequisite requirements. Check course descriptions for details.

Courses		Credits	Requisites/Comments
Semester I			
BIO 108	ESSENTIALS OF HUMAN ANATOMY AND PHYSIOLOGY	4	Appropriate score on the college Placement Test or MAT 013 and one year high school laboratory biology or chemistry or BIO 010 or CHM 010. **Note: This** course is offered in the day in the fall semester and in the evening in the spring semester.
DTC 101	INTRODUCTION TO DIETETIC TECHNOLOGY	1	**Note:** This course is only offered in the fall semester.
ENG 121	ENGLISH COMPOSITION I	3	A passing score on the writing portion of the College's Placement Test or a grade of "C" or better in ENG 010; completion of RDG 009 with a "C" or better or a score on the reading portion of the College Placement Test that exempts the students from RDG 009.
HRI 103	PRINCIPLES OF FOOD SELECTION AND PREPARATION	3	
HRI 105	BASIC NUTRITION	3	Corequisite: BIO 108. **Note:** This course is only offered in the fall semester.
HRI 208	FOODSERVICE SANITATION	3	
Semester II			
BUS 107	COMPUTER APPLICATIONS FOR BUSINESS	3	
DTC 102	TOOLS AND TECHNIQUES OF THE NUTRITION CARE PROCESS	1	DTC 101, HRI 103 and HRI 105. Students must have earned a grade of "C" or better in all prerequisites. Corequisites: HRI 108 and HRI 210. **Note:** This course is only offered in the spring semester.
DTC 208	SUPERVISED FIELD EXPERIENCE: NUTRITION CARE	3	DTC 101 and HRI 105 both with a grade of "C" or better. Corequisites: DTC 102, HRI 108 and HRI 210. **Note:** This course is only offered in the spring semester.
ENG 122	ENGLISH COMPOSITION II	3	A grade of "C" or better in ENG 121 and a passing score on the reading portion of the College
OR			
ENG 125	ENGLISH COMPOSITION II: WRITING ABOUT LITERATURE	3	ENG 121 and a grade of "C" or better in RDG 011. Placement Test or a grade of "C" or better in
HRI 108	QUANTITY FOOD PRODUCTION	3	HRI 103
HRI 210	INTRODUCTION TO MEDICAL NUTRITION THERAPY	3	HRI 105 with a grade of "C" or better. **Note:** This course is only offered in the spring semester.
PED/HED	PHYSICAL EDUCATION ELECTIVE	1	
OR			
	HEALTH EDUCATION ELECTIVE	3	
Semester III			
DTC 209	SUPERVISED FIELD EXPERIENCE: FOODSERVICE SYSTEMS MANAGEMENT	4	DTC 208 and HRI 210 both with a grade of "C" or better. Corequisites: HRI 213 and HRI 203. **Note:** This course is only offered in the fall semester.
HRI 203	BANQUET AND DINING ROOM MANAGEMENT	4	HRI 108
HRI 213	FOOD SERVICE SYSTEMS MANAGEMENT IN DIETETICS	3	**Note:** This course is only offered in the fall semester.
HRI 218	NUTRITION THROUGHOUT THE LIFE SPAN	3	HRI 105 with a grade of "C" or better. **Note:** This course is only offered in the fall semester.
PSY 123	INTRODUCTORY PSYCHOLOGY	3	
Semester IV			
DTC 210	SUPERVISED FIELD EXPERIENCE: CLINICAL, COMMUNITY, FOODSERVICE	4	DTC 209, HRI 213, and HRI 218 each with a grade of "C" or better. Corequisites: HRI 205 and DTC 220. **Note:** This course is only offered in the spring semester.
DTC 220	SEMINAR IN DIETETIC TECHNOLOGY	1	DTC 209, HRI 218 both with a grade of "C" or better. Corequisites: HRI 205, DTC 210. **Note:** This course is only offered in the spring semester.
HRI 205	FOOD AND BEVERAGE CONTROLS AND PURCHASING	3	HRI 103
MAT 101	FRESHMAN MATHEMATICS	3	Appropriate score on the College Placement Test and two years of high school mathematics, MAT 013, MAT 013A/MAT 013B, or departmental approval. **Note:** Students who choose to transfer, in consultation with their Academic Advisor, should enroll in a mathematics course for which they have the appropriate academic background.
____ ____	GENERAL EDUCATION HUMANITIES ELECTIVE (GE HUM)	3	**Note:** See College Catalog or checklist of courses from which you may choose: General Education Humanities Elective (GE HUM).
SOC 121	INTRODUCTION TO SOCIOLOGY	3	

Total Credits: 68-70

Education Practitioner

DIVISION OF SOCIAL SCIENCES AND HUMANITIES (SSHUM)

PSYCHOLOGY AND EDUCATION DEPARTMENT

Associate in Applied Science (A.A.S.) Degree

Why major in Education Practitioner?

You will earn an Associate in Applied Science Degree that may allow either of two possibilities.

Transfer: Some students want to major in Education Practitioner in order to custom tailor a plan of study at Middlesex County College so that it transfers to an upper-division receiving institution.

Early Employment: Some students want to take practical and applied courses that prepare them to work immediately after this degree. Indeed, some majors actually work in the field while completing degree requirements. People already employed in educational settings often receive salary or position upgrades when they complete this degree.

If your desire is to transfer as an Education major or to go to work immediately in an education-related setting, then the Education Practitioner is the right choice. Please be certain that you tell your advisor which career path in education you wish to follow, so that she or he will be able to direct you to the proper elective choices.
(**Note:** Some receiving institutions prefer an A. A. degree).

If I major in Education Practitioner, can I find employment without completing my 4-year degree?

Substitute Teaching and Other Employment: Students are eligible for a substitute-teaching license after completion of their 60th credit. Many graduates have worked as paraprofessionals in a wide variety of educational settings (both public and private) as they continue their education at an upper division institution.

Group Teacher Approval: Whether you choose the transfer or the early employment track, this degree can help you obtain a "Group Teacher Approval" for use in private child care centers. This approval may be obtained through the State of New Jersey Department of Human Services - Division of Youth and Family Services (DYFS).
(**Note:** Advisor consultation is recommended. If the student selects applied courses for the approved electives rather than transfer-oriented courses, some of the applied courses may not be transferable).

What will I learn if I study Education Practitioner?

You will have a strong core of general education courses and practical experiences in teaching/learning field settings. Supervision is done by cooperating school personnel as well as by your college supervisor. You may select to work in Early Childhood, Special Education, Elementary Education or High School level field placements.

Are there any requirements I must satisfy before I start taking courses in my major?

Developmental Reading, Writing, Math, and Science Courses: If you need any developmental work, your performance on the Accuplacer (a skills test) determines your placement. Consultation with the department chairperson or with an advisor about your math and science choices is strongly recommended. Often, in addition to the education major, your desired future second major at the transfer institution allows the advisor or chairperson to assist you with selecting the appropriate Math and Science courses.

Background Checks: Many schools now require a police background check along with fingerprinting of those who work in educational settings. MCC students must comply with the policies that are in effect at their field placement. Students will not be able to graduate or to complete their Education Field Placement requirement unless they comply. Obtaining the appropriate background check, before the field work course and as the placement site requires, is a student responsibility.

How long will it take for me to complete this degree?

If you do not need developmental coursework, and you register for an average of 17 credits each semester, you can complete the degree in two years. You can shorten your duration by taking courses in the summer and winter sessions. **Note:** Performing at a high academic level may require a longer commitment of time. All Education Practitioner students are encouraged to strive for excellence in order to become outstanding in the education field.

Can I complete all of my requirements by enrolling in evening classes?

Almost all classes are offered at least one time each year during the evening sessions. Some courses are offered in one semester but not in the next. Students can get "out of step" if they do not take a prerequisite course in the correct semester. If you are studying on a part time basis, you should contact the department chairperson or an advisor to plan when you should take your courses.

Where should I direct specific questions about this program?

Contact Professor Gutowski, Department Chair, at 732.906.2590, or Academic Advising, at 732.906.2596.

DEGREE PROGRAM

Below are required courses and recommended course groupings and sequences for program completion. Courses may have prerequisites and corequisite requirements. Check course descriptions for additional details. Students who desire to take any courses out of sequence are permitted to do so as long as they have completed the prerequisites (if any) for the desired courses.

Courses		Credits	Requisites/Comments
Semester I			
ENG 121	ENGLISH COMPOSITION I	3	Passing score on the writing portion of the College's Placement Test or a grade of "C" or better in ENG 010; completion of RDG 009 with a "C" or better or a score on the reading portion of the College's Placement Test that exempts the students from RDG 009.
PSY 123	INTRODUCTORY PSYCHOLOGY	3	
HED 150	CONTEMPORARY HEALTH ISSUES	3	
SPE 121	PUBLIC SPEAKING	3	
MAT (# Varies)	MATH ELECTIVE I	3-4	Appropriate score on the College's Placement Test to start any of the following Math sequences: MAT 101/102, MAT 129/131, MAT 131/132 or higher levels.
Semester II			
ENG 122 OR ENG 125	ENGLISH COMPOSITION II ENGLISH COMPOSITION II: WRITING ABOUT LITERATURE	3	A grade of "C" or better in ENG 121 and a passing score on the reading portion of the College's Placement Test or a grade of "C" or better in ENG 121 and a grade of "C" or better in RDG 011.
PSY 223	CHILD PSYCHOLOGY	3	Introductory Psychology PSY 123
HUM Elective (# Varies)	GENERAL EDUCATION HUMANITIES ELECTIVE (GE HUM)	3	Students are advised to pick a humanities elective based on upper division receiving institution's requirements. Often recommended: World Literature I or II (ENG 225 or 226)
ART (# Varies)	ART ELECTIVE	3	Students are advised to pick an art elective based on upper division receiving institution's requirements. Often recommended: ART 105, 109, 145, 201, 123, 124, etc.
MAT (# Varies)	MATH ELECTIVE II	3-4	Appropriate score on the College's Placement Test to finish any of the following Math sequences: MAT 101/102, MAT 129/131, MAT 131/132 or higher.
Semester III			
BIO (# Varies)	BIOLOGY ELECTIVE	3-4	Choices are: BIO 103 (3 credits), or all 4 credit Biology courses (e.g.: BIO 105, 106, 117, 123, etc.) **Note:** Most 4 credit Biology courses are best for transfer.
MUS 140	MUSIC FUNDAMENTALS	3	Music 131 may be substituted on its acceptance by transfer institution and with chairman's permission
PSY 226	EDUCATIONAL PSYCHOLOGY: CLASSROOM APPLICATIONS	3	Introductory Psychology PSY 123. PSY 226 is a prerequisite for EDU 280, Education Field Experience.
SOC 121	INTRODUCTION TO SOCIOLOGY	3	
Approved ELE 1 (# Varies)	APPROVED ELECTIVE [1]	3	Students are advised to pick an approved elective based on transfer institution's requirements. Often recommended: History course (Consult advisor)
Semester IV			
Approved ELE 2 (# Varies)	APPROVED ELECTIVE[2]	3	Students are advised to pick an approved elective based on transfer institution's requirements. Often recommended: 4 credit Lab Science. (Not usually a Biology course – Consider SCI 155 or 220 or Consult advisor for additional choices.)
EDU 280	EDUCATION FIELD EXPERIENCE	3	PSY 226 & 122 or 125. Students are required to work in an educational setting for 90 hours.
ENG 212	CHILDREN'S LITERATURE	3	English Composition I ENG 121
Approved ELE 3 (# Varies)	APPROVED ELECTIVE [3]	3	Approved Electives are free electives chosen with an advisor. Transfer institutions often require a course in the second major in a subject area (e.g.: English or History). The second major is different from the education major.
Approved ELE 4 (# Varies)	APPROVED ELECTIVE [4]	3	See message in Approved ELE 3
Approved ELE 5 (# Varies)	APPROVED ELECTIVE [5]	3	See message in Approved ELE 3

Total Credits: 63-66

Students graduate with 67 credits if they choose a 4 credit Biology, a 4 credit science as an Approved Elective and a Math pair that totals 8 credits.

Electronic and Computer Engineering Technology

DIVISION OF BUSINESS, COMPUTER SCIENCE & ENGINEERING TECHNOLOGIES (BCSET)

ELECTRICAL ENGINEERING TECHNOLOGY DEPARTMENT

Associate in Applied Science (A.A.S.) Degree

Why major in Electronic and Computer Engineering Technology?

As an electronic and computer engineering technician, you can work as an engineering associate designing, refining, and building electronic equipment. Graduates find a career as a maintenance technician, troubleshooting and repairing electronic and computer equipment, or as a field engineer, servicing and selling electronics and computer equipment. This program is accredited by the Technology Accreditation Commission of the Accreditation Board for Engineering and Technology.

If I major in Electronic and Computer Engineering Technology, what degree can I earn?

The Associate in Applied Science Degree or the Certificate of Achievement which prepares you for career opportunities in electronics.

If I major in Electronic and Computer Engineering Technology, can I transfer to an upper division college of university?

Many upper division colleges and universities will apply many of the courses you have taken towards a bachelor's degree. The College also has a Joint Admissions agreement with The New Jersey Institute of Technology which will allow you, upon graduation from this program to enter the B.S. in Electrical Engineering Technology program with junior standing.

What will I learn if I study Electronic and Computer Engineering Technology?

You develop skills and the understanding of the theory of electronics. You develop skills in design, analysis, and the manufacture of electronic and computer equipment through courses that combine laboratory and classroom experience. The laboratories are equipped with modern industrial-grade equipment and provide for a great variety of applications of knowledge.

Are there any requirements I must satisfy before I start taking courses in my major?

Algebra I is a prerequisite for all majors. Algebra I competency must be verified with a passing score on the College's placement test. You must also have a grade of "C" or better in high school algebra II.

How long will it take for me to complete this degree?

If you do not need developmental coursework, and you register for an average of 17 credits each semester, you can complete the degree in two years. You can earn the certificate in three semesters. You can shorten the amount of time by taking courses in the summer and winter sessions.

Where should I direct specific questions about this program?

Contact Professor Waintraub, Department Chair, at 732.906.2584.

DEGREE PROGRAM

Below are required courses and recommended course groupings and sequences for program completion. Courses may have prerequisites and corequisite requirements. Check course descriptions for details.

Courses		Credits	Requisites/Comments
Fall			
MCT 101	INTRODUCTION TO TECHNOLOGY	2	MAT 013 or passing score on the College's Placement Test. Corequisites: MAT 014
MAT 129A	PRECALCULUS A	2	Appropriate score on the College's Placement Test and/or satisfactory score on the Diagnostic Examination, "C" or better in Mat 014 or MAT 014A and MAT 014B, or departmental approval. MAT 129 may be substituted for 129A and B
ENG 121 OR ENG 125	ENGLISH COMPOSITION I OR ENGLISH COMPOSITION II: WRITING ABOUT LITERATURE	3	A passing score on the writing portion of the College's Placement Test or a grade of "C" or better in ENG 010; completion of RDG 009 with a "C" or better or a score on the reading portion of the College's Placement Test that exempts the students from RDG 009.
ELT 105	FOUNDATIONS OF ELECTRICAL AND ELECTRONICS TECHNOLOGY	4	MAT 013 or appropriate score on the College's Placement Test. Corequisite: MAT 014 or higher level
MEC 123	TECHNICAL GRAPHICS/CAD I	3	
PED/HED	PHYSICAL/HEALTH ED ELECTIVE	1-3	
Semester II			
MAT 129B	PRECALCULUS B	2	MAT 129A or equivalent course MAT 129 may be substituted for 129A and B
ENG 122 OR ENG 125	ENGLISH COMPOSITION II OR ENGLISH COMPOSITION II: WRITING ABOUT LITERATURE	3	A grade of "C" or better in ENG 121 and a passing score on the reading portion of the College's Placement Test or a grade of "C" or better in ENG 121 and a grade of "C" or better in RDG 011.
ELT 110	ELECTRICAL/ELECTRONIC DEVICES AND CIRCUITS	4	ELT 105 or equivalent Corequisite: MAT 129A or MAT 129
ELT 111	DIGITAL ELECTRONICS	3	MAT 013 or appropriate score on the College Placement Test.
CSC 166	C++ PROGRAMING	3	CSC 133 may be substituted for CSC 166
____ ____	GENERAL EDUCATION HUMANITIES ELECTIVE (GE HUM)	3	
Semester III			
MAT 131A	ANALYTIC GEOMETRY AND CALCULUS PART I	2	MAT 129, or MAT 129A/129B, or appropriate score on the College's Placement Test and/or satisfactory score on the Diagnostic Examination, or departmental approval. MAT 131 can be substituted for MAT 131A and B
PHY 121	GENERAL PHYSICS I	4	MAT 129 or MAT 129B
ELT 226	MICROCOMPUTERS	3	ELT 111
ELT 210	ELECTRONIC CIRCUITS AND SYSTEMS	4	ELT 110
ELT 239	DIGITAL/DATA COMMUNICATIONS AND NETWORKING	3	ELT 111
Semester IV			
MAT 131B	ANALYTIC GEOMETRY AND CALCULUS PART II	2	MAT 131A or equivalent MAT 131 can be substituted for MAT 131A and B
PHY 122	GENERAL PHYSICS II	4	PHY 121
ELT 223	ELECTRONIC DESIGN AND MANUFACTURING	2	ELT 210, ELT 226
ELT 224	COMMUNICATION ELECTRONICS	3	ELT 210
MCT 220	INTRODUCTION TO ROBOTICS AND CONTROL SYSTEMS	4	ELT 105, MEC 123, MAT 129B or MAT 129, and PHY 121
____ ____	GENERAL EDUCATION SOCIAL SCIENCE ELECTIVE (GE SS)	3	

Total Credits: 67-69

CERTIFICATE PROGRAM

Courses		Credits	Requisites/Comments
Semester I			
ELT 105	FOUNDATIONS OF ELECTRICAL AND ELECTRONICS TECHNOLOGY	4	MAT 013 or appropriate score on the College's Placement Test. Corequisite: MAT 014 or higher level
ENG 121	ENGLISH COMPOSITION I	3	A passing score on the writing portion of the College's Placement Test or a grade of "C" or better in ENG 010; completion of RDG 009 with a "C" or better or a score on the reading portion of the College's Placement Test that exempts the students from RDG 009.
MAT 129A	PRECALCULUS I	2	Appropriate score on the College's Placement Test and/or satisfactory score on the Diagnostic Examination, "C" or better in Mat 014 or MAT 014A and MAT 014B, or departmental approval. MAT 129 may be substituted for MAT 129A and B
MCT 101	INTRODUCTION TO ENGINEERING TECHNOLOGY	2	MAT 013 or passing score on the College's Placement Test. Corequisite: MAT 014
MEC 123	TECHNICAL GRAPHICS/CAD I	3	
Semester II			
ELT 110	ELECTRICAL/ ELECTRONIC DEVICES AND CIRCUITS	4	ELT 105 or equivalent. Corequisite: MAT 129A
ELT 210	ELECTRONICS CIRCUITS AND SYSTEMS	4	ELT 110
ELT 111	DIGITAL ELECTRONICS	3	ELT 105 or equivalent. Corequisite: MAT 129A
ELT 223	ELECTRONIC DESIGN AND MANUFACTURING	2	ELT 210, ELT 226
ELT 226	MICROCOMPUTERS	3	ELT 111
MAT 129B	PRECALCULUS II	2	MAT 129A or equivalent course.
	Total Credits:	***32***	

Engineering Science

DIVISION OF BUSINESS, COMPUTER SCIENCE & ENGINEERING TECHNOLOGIES (BCSET)

ELECTRICAL ENGINEERING TECHNOLOGY DEPARTMENT

Associate in Science (A.S.) Degree

Why major in Engineering Science?

Engineers are professionals with competency based on a theoretical level of education in mathematics and the physical and technical sciences. If you enjoy solving problems and working with technical or scientific equipment, and you do well in mathematics and science, Engineering Science is a good choice of major.

If I major in Engineering Science, what degree can I earn?

The Associate in Science Degree which prepares you to transfer to upper division colleges and universities to bachelor degree programs in engineering. If you graduate from this program with a GPA of 3.0 or higher, you are guaranteed admission with full junior status to the Rutgers College of Engineering. The College also has a joint admission agreement with the New Jersey Institute of Technology. Articulation agreements with many other engineering colleges facilitate transfer with full credit.

What will I learn if I study Engineering Science?

You study theoretical and applied science, mathematics, and engineering subjects. You learn to apply mathematics and science to technical operations. You have the opportunity to study in small groups in an environment with close faculty contact.

Are there any requirements I must satisfy before I start taking courses in my major?

Algebra I is a prerequisite for all majors. Algebra I competency must be verified with a passing score on the College's placement test. You also need a grade of "C" or better in high school algebra II, geometry, advanced algebra, trigonometry, laboratory chemistry and laboratory physics.

How long will it take for me to complete this degree?

If you do not need developmental coursework, and you register for an average of 17 credits each semester, you can complete the degree in two years. You can shorten the amount of time by taking courses in the summer and winter sessions.

Where should I direct specific questions about this program?

Contact Professor Waintraub, Department Chair, at 732.906.2584.

DEGREE PROGRAM

Below are required courses and recommended course groupings and sequences for program completion. Courses may have prerequisites and corequisite requirements. Check course descriptions for details.

Courses		Credits	Requisites/Comments
Semester I			
CHM 123	GENERAL CHEMISTRY I	4	MAT 014 or appropriate score on the College Placement Test and one year of high school chemistry
CSC 133	INTRODUCTION TO COMPUTER SCIENCE USING C++	4	MAT 014 or appropriate score on College´s Placement Test. Corequisites: MAT 125 or MAT 129A MAT 129 can be substituted for MAT 129A and B
ENG 121	ENGLISH COMMUNICATIONS 1	3	A passing score on the writing portion of the College's Placement Test or a grade of "C" or better in ENG 010; completion of RDG 009 with a "C" or better or a score on the reading portion of the College Placement Test that exempts the students from RDG 009.
MAT 131	ANALYTIC GEOMETRY AND CALCULUS I	4	MAT 129, or MAT 129A/129B, or appropriate score on the College Placement Test and/or satisfactory score on the Diagnostic Examination, or departmental approval.
MEC 119	GRAPHIC SCIENCE	2	
PED/HED	PHYSICAL/HEALTH ED ELECTIVE	1-3	
Semester II			
CHM 124	GENERAL CHEMISTRY II	4	CHM 123
ENG 122	ENGLISH COMPOSITION II	3	A grade of "C" or better in ENG 121 and a passing score on the reading portion of the College Placement Test or a grade of "C" or better in ENG 121 and a grade of "C" or better in RDG 011.
OR			
ENG 125	ENGLISH COMPOSITION II: WRITING ABOUT LITERATURE		
MAT 132	ANALYTIC GEOMETRY AND CALCULUS II	4	MAT 131, MAT 131A/131B, or equivalent
PHY 131	ANALYTICAL PHYSICS I	4	One year of high school laboratory physics. Corequisites: MAT 131 or equivalent
____ ____	GENERAL EDUCATION SOCIAL SCIENCE ELECTIVE (GE SS)	3	
Semester III			
CHM 223	ORGANIC CHEMISTRY I	4	CHM 124 or equivalent
OR			
ELT 221	ELECTRIC CIRCUITS I	4	Corequisites: MAT 132 or equivalent
MAT 233	ANALYTIC GEOMETRY AND CALCULUS III	4	MAT 132 or equivalent
MEC 221	ENGINEERING MECHANICS I	3	MAT 131 or MAT 131B
PHY 132	ANALYTICAL PHYSICS II	4	PHY 131. Corequisites: MAT 132 or equivalent
____ ____	GENERAL EDUCATION HUMANITIES ELECTIVE (GE HUM)	3	
Semester IV			
CHM 224	ORGANIC CHEMISTRY II	4	CHM 223
OR			
ELT 222	ELECTRIC CIRCUITS II	4	ELT 221
OR			
MEC 222	ENGINEERING MECHANICS II	3	MEC 221
MAT 234	DIFFERENTIAL EQUATIONS	4	MAT 233 or approval of Department Chairperson of Mathematics
PHY 231	ANALYTICAL PHYSICS III	4	PHY 132, MAT 132
____ ____	GENERAL EDUCATION HUMANITIES ELECTIVE (GE HUM)	3	
____ ____	GENERAL EDUCATION SOCIAL SCIENCE ELECTIVE (GE SS)	3	

Total Credits: 71-74

English as a Second Language Program

DIVISION OF SOCIAL SCIENCES AND HUMANITIES (SSHUM)

ENGLISH AS A SECOND LANGUAGE DEPARTMENT

Who is the English as a Second Language Program designed for?

If your native language is not English, and you are not yet proficient in English, this program provides intensive language study.

How is the English as a Second Language Program different from other ESL programs?

You can study English full-time at the beginning, intermediate or advanced level. You study in class for 14 to 17 hours per week including ESL labs. You may also study in this program as a part-time student.

Can International students enroll in the ESL Program?

Yes. You may obtain an I-20 to study in this program and be admitted as a full-time student.

What is the application process for this program?

You submit a completed application form with a $25 application fee to the Office of Admissions. Make an appointment for the ESL Placement Exam by calling 732.906.2508 or visiting the Testing Center in JLC 229. After the Exam you make an appointment in the ESL Department to attend an oral interview, which is part of the placement test. You will be told what your placement is when you complete the oral interview.

What is the ESL Placement Exam?

It is a written test that takes approximately two hours to complete. The oral interview tests your speaking and listening abilities. The written test measures your grammar and writing abilities.

Who is required to take the test and can TOEFL scores be used for placement?

Anyone whose first language is not English. If you have a four-year degree and a TOEFL score of 550 or over, you may be exempt from the grammar and reading parts of the placement test, but you still are required to take the essay and oral interview tests.

When can I take the test and is there a charge?

You can take the test Thursdays, from 9 to 5 or at other times through a special appointment and approval by the Director of the Testing Center. The test is free.

If I study ESL, can I receive financial aid?

United States citizens and permanent residents may be eligible for financial aid but must declare a major. ESL is a possible major.

Where should I direct specific questions about this program?

Contact Dr. Carole Weisz, Chairperson, at 732.906.2597.

ESL PROGRAM

Below are required courses and recommended course groupings and sequences for program completion. Courses may have prerequisites and corequisite requirements. Check course descriptions for details.

ESL LEVEL I - INTENSIVE

Courses		Credits	Requisites/Comments
ESL 060	LISTENING -INTENSIVE LEVEL I	3	Placement from ESL Test
ESL 061	PHONOLOGY - INTENSIVE LEVEL I	3	Placement from ESL Test
ESL 062	DISCUSSION - INTENSIVE LEVEL I	3	Placement from ESL Test
ESL 063	STRUCTURE - INTENSIVE LEVEL I	4	Placement from ESL Test
ESL 064	WRITING - INTENSIVE LEVEL I	4	Placement from ESL Test

Total Credits : 17

ESL LEVEL II - INTENSIVE

Courses		Credits	Requisites/Comments
ESL 071	PHONOLOGY - INTENSIVE LEVEL II	3	ESL 061 or permission of Department Chairperson Corequisite: ESL 072
ESL 072	DISCUSSION/CULTURAL ORIENTATION - INTENSIVE LEVEL II	3	ESL 062 or permission of Department Chairperson Corequisite: ESL 071
ESL 073	STRUCTURE - INTENSIVE LEVEL II	4	ESL 063 or permission of Department Chairperson Corequisites: ESL 071, ESL 072, ESL 074, ESL 075
ESL 074	WRITING - INTENSIVE LEVEL II	4	ESL 064 Corequisites: ESL 071, ELS 072, ESL 073, ESL 075
ESL 075	READING/VOCABULARY - INTENSIVE LEVEL II	3	ESL 063 Corequisites: ESL 071, ESL 072, ESL 073, ESL 074

Total Credits: 17

ESL LEVEL III - INTENSIVE

Courses		Credits	Requisites/Comments
ESL 083	STRUCTURE - INTENSIVE LEVEL III	4	ESL 073 or permission of Department Chairperson Corequisites: ESL 084, ESL 085, ESL 086
ESL 084	WRITING - INTENSIVE LEVEL III	4	ESL 074 or permission of Department Chairperson Corequisites: ESL 083, ESL 085, ESL 086
ESL 085	READING/VOCABULARY - INTENSIVE LEVEL III	3	ESL 075 or permission of Department Chairperson Corequisites: ESL 083, ESL 084, ESL 086
ESL 086	DISCUSSION/PHONOLOGY -I INTENSIVE LEVEL III	3	ESL 071, ESL 072 or permission of Department Chairperson. Corequisites: ESL 083, ESL 084, ESL 085

Total Credits : 14

You may also take a mathematics course.

ESL LEVEL IV - INTENSIVE

Courses		Credits	Requisites/Comments
ESL 091	ADVANCED DISCUSSION AND PHONOLOGY LEVEL IV	3	ESL 086 or permission of Department Chairperson Corequisites: ESL 092, ESL 093, ESL 094, ESL 099
ESL 092	ADVANCED STRUCTURE IV	3	ESL 083 or permission of Department Chairperson Corequisites: ESL 086, ESL 091, ESL 093, ESL 094, ESL 099
ESL 093	ESL STRUCTURE/WRITING IV	4	ESL 084 or permission of Department Chairperson
ESL 094	ESL READING/VOCABULARY IV	4	ESL 085 or permission of Department Chairperson

Total Credits : 14

You may also take a mathematics course or one major course.

ESL LEVEL V - INTENSIVE

Courses		Credits	Requisites/Comments
ESL 099	ESL READING/WRITING V	4	ESL 093 or permission of Department Chairperson

Total credits : 4

You may also take a mathematics course or two major courses.

Middlesex County College, Department of English as a Second Language
Courses some students can take while in ESL program

If taking:	then can take:	then can take one:	then can also take one:	If strong Latino:	If HRI major	If major but check:	If H.S. BIO:
Level I	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Level II	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Level III One math with possibility of one other	Math Placement	math as indicated by placement and major	OAD 106 or any PED except fitness exercise	N.A.	N.A.	N.A.	N.A.
Level IV One math and one from major (1+1)	Math Placement	math as indicated by placement and major MAT 013	OAD 106 or any PED except fitness exercise, BUS 107 or CSC 105, CSC 133 (if CSC 133 then CSC 134, PSY 123, SOC 121, CSC 010	SPA 210	if strong, HRI 101 or HRI 103	MUS 130, MUS 131 or MAD 107	N.A.
Level V One math and one from major (1+2)	Math Placement	math as required	same as above	same as above	same as above	MAD 108, BUS 115, ACC 101, ACC 107, BIO 010 or CHM 010	Gen BIO Gen CHM

Environmental Technology

DIVISION OF SCIENCE, MATHEMATICS & HEALTH TECHNOLOGIES (SCMHT)

CHEMISTRY/PHYSICS DEPARTMENT

Associate in Applied Science (A.A.S.) Degree

Why major in Environmental Technology?

You prepare for employment as a water and wastewater technician, air pollution inspector, hazardous waste management technician, or occupational safety and health technician.

If I major in Environmental Technology, what degree can I earn?

You may earn the Associate in Applied Science Degree, which prepares you for scientific careers in pollution control, hazardous waste management, occupational safety and health and water and wastewater technology.

If I major in Environmental Technology, can I transfer to a four-year college or university?

Many upper division colleges and universities will apply the courses you have taken towards a bachelor's degree.

What will I learn if I study Environmental Technology?

You receive basic instruction in the physical, biological, and mathematical sciences, as well as in water and wastewater treatment, hazardous waste management, air pollution control and occupational safety and health.

Are there any requirements I must satisfy before I start taking courses in my major?

Algebra I is a prerequisite for all majors. Algebra I competency must be verified with a passing score on the College's placement test. You must also have a grade of "C" or better in one year of high school laboratory science.

How long will it take for me to complete this degree?

If you do not need developmental coursework, and you register for an average of 16 credits each semester, you can complete the degree in two years. The certificate can be completed in one year. You can shorten the amount of time by taking courses in the summer and winter sessions.

Where should I direct specific questions about this program?

Contact Dr. Trainor, Department Chair, at 732.906.2587.

DEGREE PROGRAM

Below are required courses and recommended course groupings and sequences for program completion.

Courses		Credits	Requisites/Comments
Semester I			
BIO 119	BIOLOGY I FOR LAB TECHNOLOGY I	4	Appropriate score on the College Placement Test or MAT 013 and one year high school laboratory science or BIO 010 or CHM 010. You may substitute BIO 123-BIO 124 for BIO 119-BIO 120 if you have completed a high school biology class.
CHM 117	CHEMISTRY I	4	MAT 013 or appropriate score on College Placement Test and one year of high school laboratory science, CHM 010 or departmental approval. You may substitute CHM 123-CHM 124 for CHM 117-CHM 118 if you have completed a high school chemistry lab course .
ENG 121	ENGLISH COMPOSITION I	3	A passing score on the writing portion of the College's Placement Test or a grade of "C" or better in ENG 010; completion of RDG 009 with a "C" or better or a score on the reading portion of the College Placement Test that exempts the students from RDG 009.
MAT 107	MATHEMATICS I	3	Appropriate score on the College Placement Test, MAT 013, MAT 013A/MAT 013B, or departmental approval. You may substitute MAR 123-MAT 124 for MAT 129-MAT 131 if you have completed two or more years of high school algebra.
PED/HED	PHYSICAL/HEALTH ED ELECTIVE	1-3	
Semester II			
BIO 120	BIOLOGY II FOR LAB TECHNOLOGY II	4	BIO 119
CHM 118	CHEMISTRY II	4	CHM 117
ENG 122	ENGLISH COMPOSITION II	3	A grade of "C" or better in ENG 121 and a passing score on the reading portion of the College's Placement Test or a grade of "C" or better in ENG 121 and a grade of "C" or better in RDG 011.
OR			
ENG 125	ENGLISH COMPOSITION II: WRITING ABOUT LITERATURE		
ENV 208	ENVIRONMENTAL HEALTH HAZARDS	3	
MAT 108	MATHEMATICS II	3	MAT 107
Semester III			
ENV 205	ATMOSPHERIC POLLUTION CONTROL	3	BIO 120, CHM 118, MAT 014 or equivalent
SCI 103	SAFETY AND FDA REGULATIONS FOR LAB TECHNICIANS	1	
ENV 220	PRINCIPLES OF OCCUPATIONAL SAFETY AND HEALTH	3	CHM 118 or equivalent
___ ___	TECHNICAL ELECTIVE (CHOOSE 1)	3-4	
___ ___	GENERAL EDUCATION SOCIAL SCIENCE ELECTIVE (GE SS) 3		
ENV 221	HAZARDOUS WASTE MANAGEMENT	3	
Semester IV			
ENV 222	WATER AND WASTEWATER ANALYSIS	3	BIO 120, CHM 118, MAT 013
SCI 104	TECHNICAL COMMUNICATIONS	1	Corequisite: ENG 121
CHM 203	PRINCIPLES OF ORGANIC CHEMISTRY LECTURE ONLY	3	CHM 118 or equivalent . You may substitute CHM 223 for CHM 203 if you have completed CHM 124 or equivalent
___ ___	GENERAL EDUCATION HUMANITIES ELECTIVE (GE HUM)	3	
___ ___	TECHNICAL ELECTIVE (CHOOSE 1)	3-4	
___ ___	TECHNICAL ELECTIVE (CHOOSE 1)	3-4	
	Total Credits:	***64-69***	

Technical Electives Choices (Choose three) Courses

		Credits	Requisites
BIO 211	PRINCIPLES OF MICROBIOLOGY	4	One year of high school laboratory biology or BIO 010 and one year of high school laboratory chemistry or CHM 010. Also appropriate score on the College Placement Test or MAT 013. BIO 120 or 124; CHM 118 or 124
OR			
BIO 221	MICROBIOLOGY	4	
CSC 105	COMPUTER APPLICATIONS AND SYSTEMS	3	
ENV 201	ADVANCED WASTEWATER OPERATIONS I	3	CHM 010, MAT 013 or a recent course in basic water and wastewater operations approved by the Department of Environmental Protection of New Jersey.
ENV 202	ADVANCED WASTEWATER OPERATIONS II	3	CHM 010, MAT 013 or a recent course in basic water and wastewater operations approved by the Department of Environmental Protection of New Jersey.
ENV 203	ADVANCED WATER OPERATIONS I	3	CHM 010, MAT 013 or a recent course in basic water and wastewater operations approved by the Department of Environmental Protection of New Jersey.
ENV 204	ADVANCED WATER OPERATIONS II	3	CHM 010, MAT 013 or a recent course in basic water and wastewater operations approved by the Department of Environmental Protection of New Jersey.
ENV 223	ENVIRONMENTAL REGULATIONS	3	
ENV 226	ENVIRONMENTAL TECHNOLOGY COOPERATIVE EDUCATION	3	

CERTIFICATE OF ACHIEVEMENT

Below are required courses and recommended course groupings and sequences for program completion.

Courses		Credits	Requisites
BIO 211	MICROBIOLOGY	4	One year of high school laboratory biology or BIO 010 and one year of high school laboratory chemistry or CHM 010. Also appropriate score on the College Placement Test or MAT 013.
CHM 117	CHEMISTRY I	4	MAT 013 or appropriate score on College Placement Test and one year of high school laboratory science, CHM 010 or departmental approval. You may substitute CHM 123-CHM 124 for CHM 117-CHM 118 if you have completed a high school chemistry lab course.
CSC 105	COMPUTER APPLICATIONS AND SYSTEMS	3	
ENG 121	ENGLISH COMPOSITION I	3	A passing score on the writing portion of the College's Placement Test or a grade of "C" or better in ENG 010; completion of RDG 009 with a "C" or better or a score on the reading portion of the College Placement Test that exempts the students from RDG 009.
ENG 122	ENGLISH COMPOSITION II	3	A grade of "C" or better in ENG 121 and a passing score on the reading portion of the College's Placement Test or a grade of "C" or better in ENG 121 and a grade of "C" or better in RDG 011.
OR			
ENG 125	ENGLISH COMPOSITION II: WRITING ABOUT LITERATURE	3	
ENV 208	ENVIRONMENTAL HEALTH HAZARDS	3	
MAT 107	MATHEMATICS I	3	Appropriate score on the College Placement Test, MAT 013, MAT 013A/MAT 013B, or departmental approval. You ay substitute MAR 123-MAT 124 for MAT 129-MAT 131 if you have completed two or more years of high school algebra.
	TAKE ONE OF THE FOLLOWING SEQUENCE:		
ENV 201	ADVANCED WASTEWATER OPERATIONS I	3	CHM 010, MAT 013 or a recent course in basic water and wastewater operations approved by the Department of Environmental Protection of New Jersey.
ENV 202	ADVANCED WASTEWATER OPERATIONS II	3	CHM 010, MAT 013 or a recent course in basic water and wastewater operations approved by the Department of Environmental Protection of New Jersey.
OR			
ENV 203	ADVANCED WATER OPERATIONS I	3	CHM 010, MAT 013 or a recent course in basic water and wastewater operations approved by the Department of Environmental Protection of New Jersey.
ENV 204	ADVANCED WATER OPERATIONS II	3	CHM 010, MAT 013 or a recent course in basic water and wastewater operations approved by the Department of Environmental Protection of New Jersey.
ENV 226	ENVIRONMENTAL TECHNOLOGY COOPERATIVE EDUCATION	3	

Total Credits: 32

Fashion Merchandising and Retail Management

DIVISION OF BUSINESS, COMPUTER SCIENCE & ENGINEERING TECHNOLOGIES (BCSET)

BUSINESS ADMINISTRATION AND MANAGEMENT DEPARTMENT

Associate in Applied Science (A.A.S.) Degree

■ Why major in Fashion Merchandising and Retail Management?

Few areas of employment offer a better outlook for trained personnel. You will find career opportunities in the areas of fashion merchandising, sales promotion, retail advertising, and supportive retail service. As a graduate, you may find work in department stores, specialty shops, discount stores, as a retailing executive, an assistant buyer, an assistant department manager, an executive trainee, an advertising assistant, or an assistant fashion coordinator.

■ If I major in Fashion Merchandising and Retail Management, what degree can I earn?

The Associate in Applied Science, which prepares you for the many challenging opportunities that, exist in the field.

■ If I major in Fashion Merchandising and Retail Management, can I transfer to a four-year college or university?

Many colleges and universities will apply the courses you have taken towards a bachelor's degree. You should meet with an academic advisor for appropriate planning.

■ What will I learn if I study Fashion Merchandising and Retail Management?

You acquire knowledge in areas of general education, business, retailing and fashion. You apply classroom theory to on-the-job situations through a cooperative education work experience or internships. Your classes prepare you for actual situations in retailing through multimedia instruction and a fully equipped retail laboratory offers students realistic preparation.

■ Are there any requirements I must satisfy before I start taking courses in my major?

Algebra I is a prerequisite for all majors. Algebra I competency must be verified with a passing score on the College's placement test.

■ How long will it take for me to complete this degree?

If you do not need developmental coursework, and you register for an average of 17 credits each semester, you can complete the degree in two years. You can shorten the amount of time by taking courses in the summer and winter sessions.

Note: Not all RET courses are offered every semester both day and evening. Please call the Department Chair at 732.906.2594 to discuss course offerings for future semesters.

■ Where should I direct specific questions about this program?

Contact Professor Bailey, Department Chair, at 732.906.2594 or **bam@middlesexcc.edu.**

DEGREE PROGRAM

Below are required courses and recommended course groupings and sequences for program completion. Courses may have prerequisites and corequisite requirements. Check course descriptions for details.

Courses		Credits	Requisites/Comments
Semester I			
ENG 121	ENGLISH COMPOSITION I	3	A passing score on the writing portion of the College's Placement Test or a grade of "C' or better in ENG 010; completion of RDG 009 with a "C" or better or a score on the reading portion of the College's Placement Test that exempts the students from RDG 009.
BUS 101	BUSINESS ORGANIZATION AND MANAGEMENT	3	
BUS 107	COMPUTER APPLICATIONS FOR BUSINESS	3	
RET 201	FASHION MERCHANDISE INFORMATION	4	Prerequisite/Corequisite: BUS 101 **NOTE:** Not all major courses are offered every semester both day and evening. Please call the Department Chair at 732.906.2594 to discuss course offerings for future semesters.
___ ___	MATHEMATICS	3-4	BUS 115, Mathematics of Finance recommended. Students with the appropriate academic prerequisites, in consultation with their Academic Advisor, should enroll in an (appropriate) Mathematics course.
Semester II			
ENG 122 OR ENG 125	ENGLISH COMPOSITION II ENGLISH COMPOSITION II: WRITING ABOUT LITERATURE	3	A grade of "C" or better in ENG 121 and a passing score on the reading portion of the College's Placement Test or a grade of "C" or better in ENG 121 and a grade of "C" or better in RDG 011.
ACC 101	FINANCIAL ACCOUNTING	4	
BUS 201	BUSINESS LAW I	3	
MKT 201	MARKETING I	3	BUS 101
RET 207	RETAIL ADVERTISING, SALES PROMOTION AND DISPLAY	3	**NOTE:** Not all major courses are offered every semester both day and evening. Please call the Department Chair at 732.906.2594 to discuss course offerings for future semesters.
Semester III			
ACC 102	MANAGERIAL ACCOUNTING	4	ACC 101
MKT 143	SALESMANSHIP	3	
RET 202	RETAIL BUYING AND MERCHANDISING	3	**NOTE:** Not all major courses are offered every semester both day and evening. Please call the Department Chair at 732.906.2594 to discuss course offerings for future semesters.
RET 205	STORE FIELD EXPERIENCE I	3	Senior status or permission of Department Chairperson. **NOTE:** Not all major courses are offered every semester both day and evening. Please call the Department Chair at 732.906.2594 to discuss course offerings for future semesters.
___ ___	GENERAL EDUCATION HUMANITIES ELECTIVE (GE HUM)	3	
___ ___	PHYSICAL OR HEALTH EDUCATION	1-3	
Semester IV			
ECO 201	PRINCIPLES OF ECONOMICS I	3	A passing score on the algebra portion on the College's Placement Test or MAT 013.
RET 204	RETAIL MANAGEMENT	3	BUS 101, RET 201, RET 202, RET 205, RET 207, MKT 143 AND MKT 201. Corequisite: RET 206 **NOTE:** Not all major courses are offered every semester both day and evening. Please call the Department Chair at 732.906.2594 to discuss course offerings for future semesters.
RET 206	STORE FIELD EXPERIENCE II	3	Senior status or permission of Department Chairperson.
___ ___	GENERAL EDUCATION SOCIAL SCIENCE ELECTIVE (GE SS)	3	
___ ___	GENERAL EDUCATION SCIENCE ELECTIVE (GE SCI)	3-4	Students may elect courses with a code of BIO, CHEM, ENV, PHYS or SCI (GE SCI) for which they have the appropriate academic preparation.
___ ___	GENERAL EDUCATION ELECTIVE	3	See listing - any GE Course
	Total Credits:	***67-69***	

Fine Arts

DIVISION OF SOCIAL SCIENCES AND HUMANITIES (SSHUM)

DEPARTMENT OF VISUAL, PERFORMING, AND MEDIA ARTS

Associate in Fine Arts (A.F.A.) Degree

Why major in Fine Arts?

The fine arts degree AFA offers the first two years of concentrated study in studio courses for students planning to transfer to a fine arts program baccalaureate or music baccalaureate program. As fine arts major you may choose to concentrate in either the art, music or theatre option.

If I major in Fine Arts, what degree can I earn?

The Associate in Fine Arts Degree. The AFA differs from the Associate in Arts Degree because it requires more hands-on studio courses while reducing the number of courses in mathematics, science and social sciences.

What will I learn if I study Fine Arts?

Fine Arts will provide a well-rounded education with a generous range of liberal arts courses required by baccalaureate fine arts programs. Specifically, you will complete a series of general education "core" requirements upon which to build conceptual and communications skills that make up a large part of every fine arts career or professional program at the baccalaureate level. In addition, you will create a body of work or enhance your skills in your chosen field in ways that will assist you in being accepted into a competitive fine arts program at a senior institution.

Are there any requirements I must satisfy before I start taking courses in my major?

Algebra I is a prerequisite for all majors. Algebra I competency must be verified with a passing score on the College's placement test.

How long will it take for me to complete this degree?

If you do not need developmental coursework, and you register for an average of 16 credits each semester, you can complete the degree in two years. You can shorten the amount of time by taking courses in the summer and winter sessions.

Where should I direct specific questions about this program?

Contact Professor Siegfried, Department Chair at 732.906.2589.

CORE DEGREE REQUIREMENTS

Below are required courses and recommended course groupings and sequences for program completion. Courses may have prerequisites and corequisite requirements. Check course descriptions for details.

Courses		Credits	Requisites/Comments
Semester I			
	COMMUNICATIONS (9 CREDITS)		
ENG 121	ENGLISH COMPOSITION I	3	A passing score on the writing portion of the College's Placement Test or a grade of "C" or better in ENG 010; completion of RDG 009 with a "C" or better or a score on the reading portion of the College's Placement Test that exempts the students from RDG 009.
ENG 122	ENGLISH COMPOSITION II	3	A grade of "C" or better in ENG 121 and a passing score on the reading portion of the College Placement Test or a grade of "C" or better in ENG 121 and a grade of "C" or better in RDG 011.
OR			
ENG 125	ENGLISH COMPOSITION II: WRITING ABOUT LITERATURE		
SPE 121	FUNDAMENTALS OF PUBLIC SPEAKING	3	
	HISTORY (6 CREDITS)		
HIS 121	HISTORY OF WESTERN CIVILIZATION I	3	
HIS 122	HISTORY OF WESTERN CIVILIZATION	3	
____ ____	GENERAL EDUCATION SOCIAL SCIENCE Elective (GE SS)	3	Choose three credits from courses designated in the course descriptions as GE SS from the following: African-American Studies, Anthropology, Economics, Political Science, Psychology and Sociology.
____ ____	**HUMANITIES (9 CREDITS)**	6	Choose six credits in sequence of the same modern language from FRE, GER, ITA, SPA. If you completed at least two years of high school study in one modern language, your level of language will be determined by a placement test excluding SPA 242.
		3	Choose three additional credits in humanities from courses designated in the course descriptions as GE HUM from the following: African-American Studies, Art, Dance, English, History, Modern Language, Music, Philosophy, Speech, and Theatre.
____ ____	MATHEMATICS AND/OR SCIENCE	6-8	Choose any math and/or science courses numbered 101 or above that when combined total 6-8 credits.
____ ____	DIVERSITY	3	Choose a minimum of three credits from courses designated as GE DIV in the course descriptions section of the current catalog. If the course is also designated as GE HUM, GE SS, GE SCI or GE PED, it may also be used to satisfy an additional Graduation requirement.
____ ____	**COMPUTER LITERACY (3 CREDITS)**		
CSC 105	COMPUTER APPLICATIONS OR SYSTEMS	3	
OR			
BUS 107	COMPUTER APPLICATIONS FOR BUSINESS	3	
____ ____	HEALTH EDUCATION/PHYSICAL EDUCATION	3-1	
____ ____	FREE ELECTIVE (3 CREDITS)	3	
	Total Credits:	***40-47***	

ART DEGREE OPTION

Below are required courses.

Courses		Credits	Requisites
ART 109	DRAWING	3	
OR			
ART 110	FIGURE DRAWING		
ART 123	ART HISTORY	3	
ART 124	ART HISTORY: RENAISSANCE TO MODERN	3	
ART 145	ART FUNDAMENTALS: TWO DIMENSIONS	3	
ART 146	ART FUNDAMENTALS: THREE DIMENSIONS	3	
ART 148	ART PORTFOLIO	1	One or more three-credit studio art courses selected from the following: ART 105, ART 109, ART 110, ART 145, ART 146, ART 150, ART 201, ART 219, ART 220, ART 221, ART 222, ART 223, ART 224 or permission of Department.
ART 149	ART STUDIO SEMINAR	1	One or more three-credit studio art courses selected from the following: ART 105, ART 109, ART 110, ART 145, ART 146, ART 150, ART 201, ART 219, ART 220, ART 221, ART 222, ART 223, ART 224 or permission of Department.
	plus one of the following:		
ART 221	PAINTING: TRADITIONAL	3	
ART 222	PAINTING: CONTEMPORARY	3	
ART 223	SCULPTURE TRADITIONAL	3	
ART 224	SCULPTURE CONTEMPORARY	3	
	plus one additional art course	*3*	

Total Credits: 63-66

MUSIC DEGREE OPTION

Below are required courses. (Also see Fine Arts Music Option.)

Courses		Credits	Requisites
MUS 123	MUSIC HISTORY: TRADITIONAL	3	
OR			
MUS 124	MUSIC HISTORY: CONTEMPORARY		
MUS 131	KEYBOARD STUDIES I	3	
MUS 132	KEYBOARD STUDIES II	3	MUS 131
MUS 140	MUSIC FUNDAMENTALS	3	
MUS 201	MUSIC NOTATION AND COMPOSITION I	3	MUS 140 or passing score on music theory placement test.
MUS 202	MUSIC NOTATION AND COMPOSITION II	3	MUS 201
	plus additional music courses to total 3 credits		

Total Credits: 61-64

THEATRE DEGREE OPTION

Below are required courses. (Also see Fine Arts Theatre Option.)

Courses		Credits	Requisites / Comments
THE 123	THEATRE HISTORY	3	
OR			
THE 152	AMERICAN MUSICAL THEATRE		
THE 124	CONTEMPORARY THEATRE	3	
THE 131	ACTING I	3	
THE 145	STAGECRAFT	4	
THE 146	PLAY PRODUCTION	4	
	Plus additional three credits in theatre or a course selected from the following: Modern Drama, Shakespeare, Oral Interpretation of Literature, Music History, Music Fundamentals or any Dance course	*3*	

Total Credits:

Fire Science Technology

DIVISION OF SCIENCE, MATHEMATICS & HEALTH TECHNOLOGIES (SCMHT)

CHEMISTRY/PHYSICS DEPARTMENT

Associate in Applied Science (A.A.S.) Degree

Why major in Fire Science Technology?

This program meets the continuing education needs of professional and volunteer fire fighters. It enables fire fighters to perform their current duties more effectively and to prepare for greater levels of responsibility within the fire service system.

If I major in Fire Science Technology, what degree can I earn?

The Associate in Applied Science Degree or the Certificate of Achievement, which prepares you for professional or volunteer jobs in fire service field.

If I major in Fire Science Technology, can I transfer to an upper division college or university?

Many upper division colleges and universities will apply some of the courses you have taken towards a bachelor's degree.

What will I learn if I study Fire Science Technology?

You develop skills and knowledge in protection systems, hydraulics, hazardous materials, building construction and codes, departmental organization, investigation, fire ground strategy and tactics, and fire prevention and inspection.

Are there any requirements I must satisfy before I start taking courses in my major?

Algebra I is a prerequisite for all majors. Algebra I competency must be verified with a passing score on the College's placement test. You must also have a grade of "C" or better in one year of high school laboratory chemistry.

How long will it take for me to complete this degree?

This program is offered exclusively in the evening. If you do not need developmental coursework, you can complete the degree in four years. You can earn the certificate in two years. You can shorten the amount of time by taking courses in the summer and winter sessions.

Where should I direct specific questions about this program?

Contact Dr. Trainor, Department Chair, at 732.906.2587.

DEGREE PROGRAM

Courses		Credits	Requisites/Comments
Semester I			
CHM 107	PRINCIPLES OF CHEMISTRY	4	One year of high school laboratory Chemistry or CHM 010.
FSC 103	INTRODUCTION TO FIRE PROTECTION	3	
ENG 121	ENGLISH COMPOSITION I	3	A passing score on the writing portion of the College's Placement Test or a "C" or better in ENG 010; completion of RDG 009 with a "C" or better or a score on the reading portion of the College Placement Test that exempts the students from RDG 009.
MAT 107	MATHEMATICS I	3	Appropriate score on the College Placement Test, MAT 013, MAT 013A and B, or departmental approval.
PED/HED	PHYSICAL/HEALTH ED ELECTIVE	1-3	
Semester II			
CSC 105	COMPUTER APPLICATIONS AND SYSTEMS	3	
ENG 122	ENGLISH COMPOSITION II	3	A grade of "C" or better in ENG 121 and a passing score on the reading portion of the College Placement Test or a Grade of "C" or better in ENG 121 and a grade of "C" or better in RDG 011.
OR			
ENG 125	ENGLISH COMPOSITION II: WRITING ABOUT LITERATURE	3	
MAT 108	MATHEMATICS II	3	MAT 107 or equivalent with Advisor approval. Students may select a higher level mathematics sequence.
FSC 204	BUILDING CONSTRUCTION	3	FSC 103 or permission of Department Chair
___ ___	GENERAL EDUCATION HUMANITIES ELECTIVE (GE HUM)	3	
Semester III			
FSC 206	FIRE STRATEGY AND TACTICS	3	FSC 103 or permission of Department Chair
FSC 207	HAZARDOUS MATERIALS FOR THE FIRE SERVICE	3	CHM 107, FSC 103 or permission of Department Chair.
FSC 209	FIRE SUPPRESSION AND DETECTION SYSTEMS	3	FSC 103 or permission of Department Chair
POS 201	UNITED STATES STATE AND LOCAL GOVERNMENT	3	
PHY 101	PRINCIPLES OF PHYSICS	4	MAT 107 or equivalent
Semester IV			
FSC 210	FIRE AND ARSON INVESTIGATION	3	FSC 103 or permission of Department Chair
FSC 212	FIRE PREVENTION AND INSPECTION	3	FSC 103 or permission of Department Chair
MGT 200	PRINCIPLES OF SUPERVISION	3	MGT 200 is offered in the spring semester only
___ ___	GENERAL EDUCATION HUMANITIES ELECTIVE (GE HUM)	3	
OR	SOCIAL SCIENCE ELECTIVE (GE SS)	3	
___ ___	FREE ELECTIVE	3	
		Total Credits: 60-62	

CERTIFICATE OF ACHIEVEMENT

Courses		Credits	Requisites
CHM 107	PRINCIPLES OF CHEMISTRY	4	One year of high school laboratory Chemistry or CH 010.
ENG 121	ENGLISH COMPOSITION I	3	A passing score on the writing portion of the College's Placement Test or a "C" or better in ENG 010; completion of RDG 009 with a "C" or better or a score on the reading portion of the College Placement Test that exempts the students from RDG 009.
FSC 103	INTRODUCTION TO FIRE PROTECTION	3	
FSC 204	BUILDING CONSTRUCTION	3	FSC 103 or permission of Department Chair
FSC 206	FIRE STRATEGY AND TACTICS	3	FSC 103 or permission of Department Chair
FSC 207	HAZARDOUS MATERIALS FOR THE FIRE SERVICE	3	CHM 107, FSC 103 or permission of Department Chair.
FSC 209	FIRE SUPPRESSION AND DETECTION SYSTEMS	3	FSC 103 or permission of Department Chair
FSC 210	FIRE AND ARSON INVESTIGATION	3	FSC 103 or permission of Department Chair
FSC 212	FIRE PREVENTION AND INSPECTION	3	FSC 103 or permission of Department Chair
MAT 107	MATHEMATICS I	3	Appropriate score on the College Placement Test, MAT 013, MAT 013A and B, or departmental approval.
		Total Credits: 31	

Health Science

DIVISION OF SCIENCE, MATHEMATICS & HEALTH TECHNOLOGIES (SCMHT)

MEDICAL LABORATORY TECHNOLOGY DEPARTMENT

Associate in Applied Science (A.A.S.) Degree

Who should consider this degree?

Any allied health practitioner who holds a certificate or license - Dental, medical and lab assistants, phlebotomists; ultrasound, surgical, and dental technicians; EMTs, paramedics, LPNs, RNs (diploma) and military trained allied health practitioners.

What are the benefits?

Credit for previous study in a specific discipline can be awarded. If you are a non-degree certified or licensed allied health practitioner or graduate of a certificate or diploma program, you may be able to earn valuable credits toward a college degree.

Admission to the Health Science program.

Admission to the College is open to anyone who holds a high school diploma or GED: or is 18 years of age and can demonstrate an ability to benefit from college. SAT scores are optional. In addition, students in the Health Science program must have non-degree certification or licensure in an allied health field. Full- or part-time study is available.

Credit for previous Allied Health training.

After successful completion of the general education requirements with a GPA of 2.0 or higher, students must submit an original post-secondary school transcript and a current license or certificate as part of the process. The number of credits awarded will be based upon an evaluation of the candidate's prior training and licensure or certification. The director of Health Technology programs and the dean of Science, Mathematics and Health Technologies will conduct the review.

Transfer.

Transfer to the bachelor's degree programs is possible. Several colleges and universities offer a program in Health Science. Formal transfer agreements are being pursued. For information about courses transferring to other colleges, contact a transfer counselor or the MLT office.

Employment opportunities.

Graduates of Health Science programs have chosen to work in: hospital laboratories, private or reference laboratories, pharmaceutical companies, insurance industry, doctor's offices, HMO's and clinics, veterinarian hospitals, assisted living facilities, long-term care facilities, research and sales. Graduates may use this degree for career advancement or change, to enhance job security, or to satisfy personal fulfillment.

Where should I direct specific questions about this program?

Contact Professor Larkin, Department Chair, at 732.906.2581.

DEGREE PROGRAM

Below are the General Education requirements program completion.
Courses may have prerequisites and corequisite requirements. Check course descriptions for details.

Allied Health Requirement: (previously completed) 30 (Maximum)
Students may receive up to 30 credits for previous allied health training.
The determination will be made based upon an evaluation of the total hours of training and the level of training and responsibility.

Electives: 24 (Maximum)
The number of electives will depend on the number of credits approved from previous training.
The student will select electives from a list of courses based on individual goals. The electives may be taken from Office Administration, Small Business Administration, Psychology, or other courses as approved by the department. A list of choices can be provided.

Courses		Credits	Requisites / Comments
ENG 121	ENGLISH COMPOSITION I	3	
ENG 122	ENGLISH COMPOSITION II	3	A grade of "C" or better in ENG 121 and a passing score on the reading portion of the College's Placement Test or a grade of "C" or better in ENG 121 and a grade of "C" or better in RDG 011.
OR			
ENG 125	ENGLISH COMPOSITIONS II: WRITING ABOUT LITERATURE		
PSY 123	INTRODUCTION PSYCHOLOGY	3	
____ ____	PHYSICAL ED ELECTIVE	1-3	
	OR		
HED 150	CONTEMPORARY HEALTH ISSUES	3	
____ ____	GENERAL EDUCATION HUMANITIES ELECTIVE (GE HUM)	3	
SPE 121	FUNDAMENTALS OF PUBLIC SPEAKING	3	
OR			
SPE 123	DISCUSSION AND DEBATE	3	
____ ____	GENERAL EDUCATION CREDITS	16-18	
CSC 107	COMPUTERS IN HEALTH TECHNOLOGIES	1	
	LABORATORY SCIENCE	8	One year sequence of lab science requirements satisfied by Biology (BIO 117 & BIO 118 or higher) or Anatomy & Physiology (BIO 111 & BIO 112) or Chemistry (CHM 117 & CHM 118 or higher).
BIO 211	PRINCIPLES OF MICROBIOLOGY	4	
____ ____	MATHEMATICS	6	Mathematics I (MAT 107) & Mathematics II (MAT 108) or higher.
	Total Credits	***65-67***	

Hotel, Restaurant and Institution Management

DIVISION OF BUSINESS, COMPUTER SCIENCE & ENGINEERING TECHNOLOGIES (BCSET)

HOTEL, RESTAURANT AND INSTITUTION MANAGEMENT DEPARTMENT

Associate in Applied Science (A.A.S.) Degree

Why major in Hotel, Restaurant and Institution Management?

You acquire the necessary practical and theoretical skills for employment in one of the nation's fastest growing industries. As a graduate, you may be employed as an assistant restaurant manager, hotel/motel assistant manager, front office manager, dining room manager, cafeteria production manager, cook, sous chef or management trainee. You are eligible for certification in several course areas by the American Hotel and Lodging Association and the National Restaurant Association.

If I major in Hotel, Restaurant and Institution Management, what degree can I earn?

The Associate in Applied Science Degree which prepares you for a career in restaurant and food service management, hotel-motel management or culinary arts. You may choose the Hotel-Motel Management Option, the Restaurant Foodservice Management Option, or the Culinary Arts Management Option which prepares you to work in hotels, motels, resorts, restaurants, clubs, cruise ships, catering centers and health care facilities.

If I major in Hotel, Restaurant and Institution Management, can I transfer to an upper division college?

Many colleges and universities with hotel and restaurant management programs, including Fairleigh Dickinson University, NYU, Montclair State University, Widener University as well as other schools, will apply the courses you have taken towards a bachelor's degree.

What will I learn if I study Hotel, Restaurant and Institution Management?

You receive training in restaurant and food service management, hotel-motel management or culinary arts. If you have limited related industry experience, you are encouraged to enroll in a cooperative work experience seminar that includes paid employment in the final semester. In Culinary Arts additional training is provided in a culinary externship.

Can I take more than one option in Hotel, Restaurant and Institution Management?

If your interests include both Hotel-Motel Management and Restaurant Foodservice Management you can apply for a dual option.

Are there any requirements I must satisfy before I start taking courses in my major?

Algebra I is a prerequisite for all majors. Algebra I competency must be verified with a passing score on the College's placement test.

How long will it take for me to complete this degree?

If you do not need to take developmental coursework, and you register for an average of 17 credits each semester, you can complete the degree in two years. You can shorten the amount of time by taking courses in the summer and winter sessions.

If I take the Culinary Certificate Program can I also work towards the A.A.S. degree?

Yes. All of the culinary courses in the certificate of achievement program may be applied to meet the requirements for the A.A.S. degree in the Restaurant Foodservice Management Option.

Why should I apply for a Technical Certificate?

The Technical Certificate was designed for those individuals who have completed a degree in another discipline and are currently working in the hospitality field. The Technical Certificates were also designed for individuals who do not have a post-secondary education and are interested in the hospitality field or who have several years of experience in the field and need to acquire a formal education for promotional opportunities.

Where should I direct specific questions about this program?

Contact Professor Laskowski-Sachnoff, Department Chair, at 732.906.2538.

CULINARY ARTS MANAGEMENT DEGREE OPTION

Below are required courses and recommended course groupings and sequences for program completion.

Courses		Credits	Requisites/Comments
Semester I			
BUS 107	COMPUTER APPLICATIONS FOR BUSINESS	3	
ENG 121	ENGLISH COMPOSITION I	3	A passing score on the writing portion of the College's Placement Test or a grade of "C" or better in ENG 010; completion of RDG 009 with a "C" or better or a score on the reading portion of the College Placement Test that exempts the students from RDG 009.
HRI 103	PRINCIPLES OF FOOD SELECTION AND PREPARATION	3	
HRI 208	FOODSERVICE SANITATION	3	
___ ___	MATHEMATICS ELECTIVE	3	BUS 115 is recommended. Students in consultation with their Academic Advisor should enroll in a mathematics course for which they have the appropriate academic background. GE MAT courses will fulfill the Mathematics Elective and the General Education Elective.
PED/HED	PHYSICAL ED ELECTIVE OR HEALTH ED ELECTIVE	1 3	
Semester II			
ENG 122 OR ENG 125	ENGLISH COMPOSITION II ENGLISH COMPOSITION II: WRITING ABOUT LITERATURE	3	A grade of "C" or better in ENG 121 and a passing score on the reading portion of the College Placement Test or a grade of "C" or better in ENG 121 and a grade of "C" or better in RDG 011.
HRI 108	QUANTITY FOOD PRODUCTION	3	HRI 103
HRI 109	PROFESSIONAL CULINARY TECHNIQUES	3	HRI 103. **NOTE:** This course is only offered in the spring semester.
HRI 115	FOODSERVICE OPERATIONS	3	**NOTE:** This course is only offered in the spring semester.
PSY 123	INTRODUCTORY PSYCHOLOGY	3	
Semester III			
HRI 107	BAKING FUNDAMENTALS	3	HRI 103. **NOTE:** This course is only offered in the fall semester.
HRI 203	BANQUET AND DINING ROOM MANAGEMENT	4	HRI 108. **NOTE:** This course is only offered during the day.
HRI 215	BEVERAGE MANAGEMENT	3	**NOTE:** This course is only offered in the fall semester.
___ ___	GENERAL EDUCATION HUMANITIES ELECTIVE (GE HUM)	3	
___ ___	GENERAL EDUCATION SOCIAL SCIENCE ELECTIVE (GE SS)	3	
Semester IV			
HRI 114	GARDE MANGER	3	HRI 103. **NOTE:** This course is only offered in the spring semester.
HRI 205	FOOD AND BEVERAGE CONTROLS AND PURCHASING	3	HRI 103
HRI ___	HRI ELECTIVE	3	Students can choose from HRI 105, HRI 110, HRI 201, HRI 202, HRI 206, HRI 213, HRI 216, HRI 217, HRI 220 and HRI 250.
___ ___	GENERAL EDUCATION ELECTIVE (GE DIV, GE HUM, GE MAT, GE SCI, OR GE SS)	3	
___ ___	GENERAL EDUCATION SCIENCE ELECTIVE (GE SCI)	3-4	Students may elect courses offered by the Biology, Chemistry or Physics Departments for which they have the appropriate academic prerequisites.
Summer Session			
HRI 111	FOOD PREPARATION PRACTICUM	3	HRI 103. Admission to the Culinary Arts Program. **NOTE:** This course is only offered in the Summer Session.
		Total Credits: 65-67	

CERTIFICATE OF ACHIEVEMENT IN CULINARY ARTS

Below are required courses and recommended course groupings and sequences for program completion.

Courses		Credits	Requisites/Comments
Semester I			
ENG 121	ENGLISH COMPOSITION I	3	A passing score on the writing portion of the College's Placement Test or a grade of "C" or better in ENG 010; completion of RDG 009 with a "C" or better or a score on the reading portion of the College Placement Test that exempts the students from RDG 009.
___ ___	GENERAL EDUCATION ELECTIVE (GE DIV, GE HUM, GE MAT, GE SCI, OR GE SS)	3	
HRI 103	PRINCIPLES OF FOOD SELECTION AND PREPARATION	3	
HRI 107	BAKING FUNDAMENTALS	3	HRI 103. **NOTE:** This course is only offered in the fall semester.
HRI 108	QUANTITY FOOD PRODUCTION	3	HRI 103
HRI 111	FOOD PREPARATION PRACTICUM	3	HRI 103. Admission to the Culinary Arts Program. **NOTE:** This course is only offered in the Summer.
HRI 114	GARDE MANGER	3	HRI 103. **NOTE:** This course is only offered in the spring semester.
HRI 115	FOODSERVICE OPERATIONS	3	**NOTE:** This course is only offered in the spring semester.
HRI 203	BANQUET AND DINING ROOM MANAGEMENT	4	HRI 108. **NOTE:** This course is only offered during the day.
HRI 205	FOOD AND BEVERAGE CONTROLS AND PURCHASING	3	HRI 103
HRI 208	FOODSERVICE SANITATION	3	
	Total Credits:	***34***	

HOTEL-MOTEL MANAGEMENT DEGREE OPTION

Below are required courses and recommended course groupings and sequences for program completion.

Courses		Credits	Requisites/Comments
Semester I			
ENG 121	ENGLISH COMPOSITION I	3	A passing score on the writing portion of the College's Placement Test or a grade of "C" or better in ENG 010; completion of RDG 009 with a "C" or better or a score on the reading portion of the College Placement Test that exempts the students from RDG 009.
HRI 101	INTRODUCTION TO HOTEL, RESTAURANT AND INSTITUTION MANAGEMENT	3	
HRI 103	PRINCIPLES OF FOOD SELECTION AND PREPARATION	3	
HRI 208	FOODSERVICE SANITATION	3	
___ ___	MATHEMATICS ELECTIVE	3	BUS 115 is recommended. Students in consultation with their Academic Advisor should enroll in a mathematics course for which they have the appropriate academic background. GE MAT courses will fulfill the Mathematics Elective and the General Education Elective.
PED/HED	PHYSICAL ED ELECTIVE OR HEALTH ED ELECTIVE	1 OR 3	
Semester II			
ACC 108	ACCOUNTING PRACTICES FOR HOTELS, RESTAURANTS AND INSTITUTIONS	4	**NOTE:** This course is only offered in the spring semester.
BUS 107	COMPUTER APPLICATIONS FOR BUSINESS	3	
ENG 122 OR ENG 125	ENGLISH COMPOSITION II ENGLISH COMPOSITION II: WRITING ABOUT LITERATURE	3	A passing score on the writing portion of the College's Placement Test or a grade of "C" or better in ENG 010; completion of RDG 009 with a "C" or better or a score on the reading portion of the College Placement Test that exempts the students from RDG 009.
HRI 108	QUANTITY FOOD PRODUCTION	3	HRI 103
HRI 110	SUPERVISORY DEVELOPMENT IN THE LODGING AND FOODSERVICE INDUSTRY	3	**NOTE:** This course is only offered in the spring semester

Courses		Credits	Requisites/Comments
Semester III			
HRI 201	HOTEL-MOTEL FRONT OFFICE OPERATIONS	3	BUS 107. **NOTE:** This course is only offered in the fall semester.
HRI 206	MERCHANDISING FOR THE HOSPITALITY INDUSTRY	3	**NOTE:** This course is only offered in the fall semester.
HRI 217	SUPERVISORY HOUSEKEEPING	3	**NOTE:** This course is only offered in the fall semester.
___ ___	GENERAL EDUCATION HUMANITIES (GE HUM)	3	
___ ___	GENERAL EDUCATION SOCIAL SCIENCE S ELECTIVE (GE SS)	3	
Semester IV			
HRI 203	BANQUET AND DINING ROOM MANAGEMENT	4	HRI 108. **NOTE:** This course is only offered during the day.
HRI 216	HOSPITALITY PROPERTY MANAGEMENT	3	**NOTE:** This course is only offered in the spring semester.
HRI ___	HRI ELECTIVE	3	Students can choose from HRI 105, HRI 115, HRI 202, HRI 204, HRI 205, HRI 213, HRI 215, HRI 220 and HRI 250.
___ ___	GENERAL EDUCATION ELECTIVE (GE DIV, GE HUM, GE MAT, GE SCI, OR GE SS)	3	
___ ___	GENERAL EDUCATION SCIENCE ELECTIVE (GE SCI)	3	Students may elect courses offered by the Biology, Chemistry or Physics Departments for which they have the appropriate academic prerequisites.

Total Credits: 66-68

TECHNICAL CERTIFICATE IN HOTEL OPERATIONS

Below are required courses and recommended course groupings and sequences for program completion.

Courses		Credits	Requisites/Comments
BUS 107	COMPUTER APPLICATIONS FOR BUSINESS	3	**NOTE:** This course is only offered in the spring semester.
HRI 110	SUPERVISORY DEVELOPMENT IN THE LODGING AND FOODSERVICE INDUSTRY	3	
HRI 201	HOTEL-MOTEL FRONT OFFICE OPERATIONS	3	BUS 107. **NOTE:** This course is only offered in the fall semester.
HRI 206	MERCHANDISING FOR THE HOSPITALITY INDUSTRY	3	**NOTE:** This course is only offered in the fall semester.
HRI 216	HOSPITALITY PROPERTY MANAGEMENT	3	**NOTE:** This course is only offered in the spring semester.
HRI 217	SUPERVISORY HOUSEKEEPING	3	**NOTE:** This course is only offered in the fall semester.

Total Credits: 18

RESTAURANT/FOODSERVICE MANAGEMENT DEGREE OPTION

Below are required courses and recommended course groupings and sequences for program completion.

Courses		Credits	Requisites/Comments
Semester I			
ENG 121	ENGLISH COMPOSITION I	3	A passing score on the writing portion of the College's Placement Test or a grade of "C" or better in ENG 010; completion of RDG 009 with a "C" or better or a score on the reading portion of the College Placement Test that exempts the students from RDG 009.
HRI 101	INTRODUCTION TO HOTEL, RESTAURANT AND INSTITUTION MANAGEMENT	3	
HRI 103	PRINCIPLES OF FOOD SELECTION AND PREPARATION	3	
HRI 208	FOODSERVICE SANITATION	3	
___ ___	MATHEMATICS ELECTIVE	3	BUS 115 is recommended. Students in consultation with their Academic Advisor should enroll in a mathematics course for which they have the appropriate academic background. GE MAT courses will fulfill the Mathematics Elective and the General Education Elective.
___ ___	PHYSICAL ED ELECTIVE OR HEALTH ED ELECTIVE	1 3	

Courses		Credits	Requisites/Comments
Semester II			
ACC 108	ACCOUNTING PRACTICES FOR HOTELS, RESTAURANTS AND INSTITUTIONS	4	**NOTE:** This course is only offered in the spring semester.
BUS 107	COMPUTER APPLICATIONS FOR BUSINESS	3	
ENG 122 OR ENG 125	ENGLISH COMPOSITION II OR ENGLISH COMPOSITION II: WRITING ABOUT LITERATURE	3	A passing score on the writing portion of the College's Placement Test or a grade of "C" or better in ENG 010; completion of RDG 009 with a "C" or better or a score on the reading portion of the College Placement Test that exempts the students from RDG 009.
HRI 108	QUANTITY FOOD PRODUCTION	3	HRI 103
HRI 110	SUPERVISORY DEVELOPMENT IN THE LODGING AND FOODSERVICE INDUSTRY	3	**NOTE:** This course is only offered in the spring semester.
Semester III			
HRI 203	BANQUET AND DINING ROOM MANAGEMENT	4	HRI 108. **NOTE:** This course is only offered during the day.
HRI 206	MERCHANDISING FOR THE HOSPITALITY INDUSTRY	3	**NOTE:** This course is only offered in the fall semester.
HRI 215	BEVERAGE MANAGEMENT	3	**NOTE:** This course is only offered in the fall semester.
PSY 123	INTRODUCTORY PSYCHOLOGY	3	
___ ___	GENERAL EDUCATION HUMANITIES (GE HUM)	3	
Semester IV			
HRI 202	FACILITIES LAYOUT AND DESIGN	3	**NOTE:** This course is only offered in the spring semester.
HRI 205	FOOD AND BEVERAGE COST CONTROLS AND PURCHASING	3	HRI 103
HRI ___	HRI ELECTIVE	3	Students can choose from HRI 105, HRI 115, HRI 201, HRI 204, HRI 213, HRI 216, HRI 217, HRI 220 and HRI 250.
___ ___	GENERAL EDUCATION ELECTIVE (GE DIV, GE HUM, GE MAT, GE SCI, OR GE SS)	3	
___ ___	GENERAL EDUCATION SCIENCE ELECTIVE (GE SCI)	3-4	Students may select courses offered by the Biology, Chemistry, or Physics Departments for which they have the appropriate academic prerequisites.
___ ___	GENERAL EDUCATION SOCIAL SCIENCE ELECTIVE (GE SS)	3	
		Total Credits: 66-68	

TECHNICAL CERTIFICATE IN RESTAURANT OPERATIONS

Below are required courses and recommended course groupings and sequences for program completion.

Courses		Credits	Requisites/Comments
BUS 107	COMPUTER APPLICATIONS FOR BUSINESS	3	
HRI 103	PRINCIPLES OF FOOD SELECTION AND PREPARATION	3	
HRI 205	FOOD AND BEVERAGE CONTROLS AND PURCHASING	3	HRI 103
HRI 206	MERCHANDISING FOR THE HOSPITALITY INDUSTRY	3	**NOTE:** This course is only offered in the fall semester.
HRI 208	FOODSERVICE SANITATION	3	
HRI 215	BEVERAGE MANAGEMENT	3	**NOTE:** This course is only offered in the fall semester.
		Total Credits: 18	

Liberal Arts

DIVISION OF SOCIAL SCIENCES & HUMANITIES (SSHUM)

LIBERAL ARTS DEPARTMENT

Associate in Arts (A.A.) Degree

Why major in Liberal Arts?

This program provides you with a foundation for lifelong intellectual development. It prepares you to adapt to, and take advantage of, an almost unlimited number of economic opportunities that the present holds and the future will create.

If I major in Liberal Arts, what degree can I earn?

The Associate in Arts Degree which prepares you to transfer to upper division colleges and universities and prepares you to continue in most majors.

What will I learn if I study Liberal Arts?

You receive a solid foundation upon which to build conceptual and communication skills and the essential components of a general education, which make up a large part of every liberal arts career or professional program at the bachelor's degree level. You also study a foreign language, which is a basic component of a liberal arts education. It broadens your world perspectives by introducing you to another culture and helps you develop an awareness of your own language and cultural identity. You may earn your degree by selecting either the general option or by choosing one of the many specialized options.

Are there any requirements I must satisfy before I start taking courses in my major?

Algebra I is a prerequisite for all majors. Competency in Algebra I must be verified with a passing score on the College's placement test. You must also have a grade of "C" or better in one year of high school laboratory science.

How long will it take for me to complete this degree?

If you do not need developmental coursework, and you register for an average of 16 credits each semester, you can complete the degree in two years. You can shorten the amount of time by taking courses in the summer and winter sessions.

Where should I direct specific questions about this program?

Contact Dean Grace S. Kehrer, at 732.906.2528.

CORE REQUIREMENTS

Below are required courses and recommended course groupings and sequences for program completion. Courses may have prerequisites and corequisite requirements. Check course descriptions for details.

Courses		Credits	Requisites/Comments
ENG 121	ENGLISH COMPOSITION	3	A passing score on the writing portion of the College's Placement Test or a Grade of "C" or better in ENG 010; completion of RDG 009 with a "C" or better or score on the reading portion of the College's Placement Test that exempts the student from RDG 009.
HIS 121	HISTORY OF WESTERN CIVILIZATION I	3	
____ ____	LANGUAGE	6	Choose two courses modern language in sequence from either; FRE, GER, ITA or SPA. If you completed at least two years of high school study in one modern language, your level of language will be determined by a placement test excluding SPA 242.
____ ____	COMPUTER LITERACY Choose any three credits LA Business Option students may take: CSC 105, BUS 107 or CSC 106*	3	*BUS 107 or CSC 105 or CSC 107 or MCT 101 or one year of high school computer applications or a programming course AND MAT 014 or appropriate score on the College Placement Test. CSC I06 is recommended for *LA Business Students who are planning to transfer to Rutgers College of Business. Student may receive permission from the Chair of Computer Science to waive CSC I05 prerequisite. There is also a credit by exam for CSC I05.
____ ____	GENERAL EDUCATION SOCIAL SCIENCE ELECTIVE (GE SS)	3	Choose two courses designated in the course description as GE SS from the following: African-American Studies, Anthropology, Economics, Political Science, Psychology and Sociology.
ENG 122 OR ENG 125	ENGLISH COMPOSITION II ENGLISH COMPOSITION II: WRITING ABOUT LITERATURE	3	A grade of "C" or better in ENG 121 and a passing score on the reading portion of the College Placement Test or a grade of "C" or better in ENG 121 and a grade of "C" or better in RDG 011.
____ ____	DIVERSITY ELECTIVE		Choose one course designated as GE DIV in the course description section. If the course is also designated as GE HUM, GE SS, GE SCI or GE PED, it may also be used to satisfy an additional graduation requirement.
HIS 122	HISTORY OF WESTERN CIVILIZATION II	3	
____ ____	GENERAL EDUCATION SOCIAL SCIENCE ELECTIVE (GE SS)	3	
SPE 121 OR SPE 123	FUNDAMENTALS OF PUBLIC SPEAKING DISCUSSION AND DEBATE	3 3	
____ ____	GENERAL EDUCATION SCIENCE ELECTIVE (GE SCI)	3-4	You should choose the science courses in consultation with an academic advisor. You should take the appropriate science courses that will transfer to an upper division college or university and for which you have the appropriate academic background. Choose two course with a minimum of seven credits from the following courses: BIO 103, BIO 105, BIO 106, ENV 207, ENV 211, ENV 212, SCI 108, SCI 155, SCI 156, SCI 157, SCI 204 or choose two courses from a one year laboratory science sequence in Biology, Chemistry or Physics depending on your major: BIO/CHM 117 - 118, BIO/CHM 123 - 124, PHY 121, PHY 122.
____ ____	MATHEMATICS ELECTIVE	6-8	You should choose the mathematics courses in consultation with an academic advisor. You should take the appropriate mathematics courses that will transfer to an upper division college or university and for which you have the appropriate academic background. Choose one of the following sequences: MAT 101 & 102 or MAT 123 & MAT 124 or MAT 129 & MAT 131 or MAT 131 & MAT 132 or MAT 131 & MAT 285. For the business option choose one of the following sequences: MAT 123 & MAT 124 or MAT 129 & MAT 131 or MAT 131 & MAT 132 or MAT 131 6 MAT 285 or by advisement.

Continued

Courses		Credits	Requisites / Comments
____ ____	LIBERAL ARTS ELECTIVES	12	Choose four courses with a minimum of twelve credits offered in the division with the following designations: AFS, ART, COM, DAN, ENG, FRE, GER, HED, HIS, ITA, LNC, MUS, PED, PHI, POS, PSY, SOC, SPA, SPE and THE. Students who select the business option must complete ACC 101, ACC 102, ECO 201 and ECO 202 for a total of fourteen credits.
____ ____	PHYSICAL/HEALTH ED ELECTIVE	1-3	You may satisfy this requirement with any HED or PED course except PED 270, HED and PED courses may also satisfy the divisional elective requirement.
____ ____	GENERAL EDUCATION SCIENCE ELECTIVE (GE SCI)	3-4	
____ ____	DIVISIONAL ELECTIVE	3	Choose one course from the following courses: AFS, ART, CJU, COM, COR, DAN, EDU, ENG, FRE, GER, HED, HIS, ITA, LNC, MUS, PED, PHI, POL, POS, PSY, SOC, SPA, SPE, and THE.
____ ____	GENERAL EDUCATION HUMANITIES ELECTIVE (GE HUM)	3	Choose one course in humanities from courses designated in the course descriptions as GE HUM from the following: African-American Studies, Art, Dance, English, History, Modern Language, Music, Philosophy, Speech and Theatre.

Total Credits: 62-70

BUSINESS DEGREE OPTION

Below are required courses and recommended course groupings and sequences for program completion.

Courses		Credits	Requisites / Comments
ACC 101	FINANCIAL ACCOUNTING	4	
ACC 102	MANAGERIAL ACCOUNTING	4	ACC 101
ECO 201	PRINCIPLES OF ECONOMICS I	3	A passing score on the algebra portion on the College´s Placement Test or MAT 013
ECO 202	PRINCIPLES OF ECONOMICS II	3	ECO 201 or permission of Department Chairperson
____ ____	Mathematics Elective Choices (select one sequence):	6-8	
MAT 123	STATISTICS I	3	MAT 014, MAT 014A/014B, or satisfactory score on the College Placement Test
MAT 124	STATISTICS II	3	MAT 123
or			
MAT 129A	PRECALCULUS (Part A)	2	Appropriate score on the College Placement Test and/or satisfactory score on the Diagnostic Examination, “C” or better in MAT 014 or MAT 014A and MAT 014B, or departmental approval.
MAT 129B	PRECALCULUS (Part B)	2	MAT129A or equivalent courses
and			
MAT 131A	ANALYTIC GEOMETRY AND CALCULUS I (Part A)	2	MAT 129 or MAT 129A/129B or appropriate score on the College Placement Test and/or satisfactory score on the Diagnostic Examination, or departmental approval.
MAT 131B	ANALYTIC GEOMETRY AND CALCULUS I (Part B)	2	MAT 131A
MAT 129	PRECALCULUS	4	Appropriate score on the College Placement Test and/or satisfactory score on the Diagnostic Examination, “B” or better in MAT 014, or departmental approval.
MAT 131A	ANALYTIC GEOMETRY AND CALCULUS I (Part A)	2	MAT 129 or MAT 129A/129B or appropriate score on the College Placement Test and/or satisfactory score on the Diagnostic Examination, or departmental approval.
MAT 131B	ANALYTIC GEOMETRY AND CALCULUS I (Part B)	2	MAT 131A
MAT 129	PRECALCULUS	4	Appropriate score on the College Placement Test and/or satisfactory score on the Diagnostic Examination, “B” or better in MAT 014, or departmental approval.
MAT 131	ANALYTIC GEOMETRY AND CALCULUS I	4	MAT 129, or MAT 129A/129B, or appropriate score on the College Placement Test and/or satisfactory score on the Diagnostic Examination, or departmental approval.
MAT 131A	ANALYTIC GEOMETRY AND CALCULUS I (Part A)	2	MAT 129 or MAT 129A/129B or appropriate score on the College Placement Test and/or satisfactory score on the Diagnostic Examination, or departmental approval.

MAT 131B	ANALYTIC GEOMETRY AND CALCULUS I (Part B)	2	MAT 131A
MAT 132	ANALYTIC GEOMETRY AND CALCULUS I I	4	MAT 131, MAT 131A/131B, or equivalent
MAT 131	ANALYTIC GEOMETRY AND CALCULUS I	4	MAT 129, or MAT 129A/129B, or appropriate score on the College Placement Test and/or satisfactory score on the Diagnostic Examination, or departmental approval.
MAT 132	ANALYTIC GEOMETRY AND CALCULUS I I	4	MAT 131, MAT 131A/131B, or equivalent
MAT 131A	ANALYTIC GEOMETRY AND CALCULUS I (Part A)	2	MAT 129 or MAT 129A/129B or appropriate score on the College Placement Test and/or satisfactory score on the Diagnostic Examination, or departmental approval.
MAT 131B	ANALYTIC GEOMETRY AND CALCULUS I (Part B)	2	MAT 131A
MAT 285	BASIC STATISTICS FOR BUSINESS	4	MAT 131 or equivalent calculus course
MAT 131	ANALYTIC GEOMETRY AND CALCULUS I (Part B)	4	MAT 129, or MAT 129A/129B, or appropriate score on the College Placement Test and/or satisfactory score on the Diagnostic Examination, or departmental approval.
MAT 285	BASIC STATISTICS FOR BUSINESS	4	MAT 131 or equivalent calculus course

Total Credits: 62-72

COMMUNICATION DEGREE OPTION

Option Below are required courses and recommended course groupings and sequences for program completion. Courses may have prerequisite and corequisite requirements. Check course descriptions for details.

Courses		Credits	Requisites
COM 105	INTRODUCTION TO COMMUNICATION STUDY	3	
COM 110	INTERPERSONAL COMMUNICATION	3	COM 105
COM 121	MASS COMMUNICATION STUDY	3	COM 105
____ ____	Recommended Courses (select one):		
	COM 115 INTERCULTURAL COMMUNICATION,	3	
	COM 131 NTRO TO BROADCASTING	3	COM 105
	COM 208 COMMUNICATION SEMINAR & FIELD EXPERIENCE	3	With permission of the Department Chairperson, COM 208 or COM 210 may be replaced with a course relevant to the student's special focus in the communication field which will assist the student in transferring to a senior institution in communication.
COM 210	RADIO BROADCASTING PRODUCTION	3	With permission of the Department Chairperson, COM 208 or COM 210 may be replaced with a course relevant to the student's special focus in the communication field which will assist the student in transferring to a senior institution in communication.
ENG 205	INTRODUCTION TO JOURNALISM	3	
LNC 123	INTRODUCTION TO THE STUDY OF HUMAN LANGUAGE	3	
SPE 123	DISCUSSION AND DEBATE	3	

Total Credits: 62-70

DANCE DEGREE OPTION

Courses		Credits	Requisites/Comments
DAN 131	ELEMENTS OF DANCE	3	
DAN 132	DANCE APPRECIATION	3	
DAN 201	METHODS AND MODERN TECHNIQUES IN DANCE	3	
DAN 202	IMPROVISATION AND COMPOSITION	3	

Total Credits: 62-70

EDUCATION DEGREE OPTION

Psychology and Education

Courses		Credits	Requisites/Comments
SOC 121	INTRODUCTION TO SOCIOLOGY	3	
and			
(Choose 3 courses)	Three advised Liberal Arts or Divisional Electives	9	Prerequisites may or may not exist for each advised Liberal Arts Elective (Check with an advisor or the catalog).
	Consult an advisor, transfer counselor, or the department chair for current recommended electives and transfer information related to receiving institutions. In Addition, you are to fulfill the 6 credit Social Sciences requirement with:		
PSY 123	INTRODUCTORY PSYCHOLOGY	3	
PSY 223	CHILD PSYCHOLOGY	3	INTRODUCTORY PSYCHOLOGY PSY 123

Total Credits: 62 - 70

You should meet with the Chairperson of the Psychology and Education Department, an advisor in the Academic Advising Center, or a counselor in the Counseling and Transfer Office to choose the most appropriate courses for transfer to the upper division college or university you plan to attend. Sometimes the student will be better able to transfer via the Education Practitioner Degree (see p. 49).

ENGLISH DEGREE OPTION

Courses		Credits	Requisites/Comments
	To satisfy the 12 credit requirement for the English degree option, you may choose any English course numbered 200 or higher. All courses have a prerequisite of ENG 122 or 125. In addition, courses with a prerequisite should be completed sequentially. For example, ENG 235 should be taken prior to ENG 236; ENG 205 should be taken before ENG 206 or ENG 214. Consult course descriptions in this catalog for details.	12	

Total Credits: 62-70

GENERAL DEGREE OPTION

Courses		Credits	Requisites/Comments
	Choose four courses with a minimum of 12 credits from the following: African-American Studies, Art, Communication, Dance, English, French, German, Health Education, History, Italian, Languages and Cultures, Music, Physical Education, Philosophy, political Science, Psychology, Sociology, Spanish, Speech, Social Science and Theater.	12	

Total Credits: 62-70

HISTORY DEGREE OPTION

Courses		Credits	Requisites/Comments
	To satisfy the 12 credit requirement choose History courses that you have not taken to satisfy the core or humanities requirements for the degree.	12	

Total Credits: 62-70

JOURNALISM DEGREE OPTION

Courses		Credits	Requisites/Comments
ENG 205	INTRODUCTION TO JOURNALISM	3	ENG 122 or ENG 125 or permission of Department Chairperson
ENG 206	JOURNALISM WORKSHOP	3	ENG 205 or permission of Department Chairperson
ENG 214	JOURNALISM/WRITING FIELD EXPERIENCE	3	ENG 205 or ENG 235 or ENG / BUS 240 and permission of Department Chairperson Corequisites: ENG 206
____ ____	Recommended Courses (select one):		
	ENG 235 CREATIVE WRITING I	3	*ENG 122 or ENG 125 or permission of Department Chairperson
	ENG 225 WORLD LITERATURE I	3	
	ENG 226 WORLD LITERATURE II	3	
	POS 201 UNITED STATES STATE LOCAL GOVERNMENT	3	

Total Credits: 62-70

MODERN LANGUAGE DEGREE OPTION

Modern Language Department
Placement Policy

One Year of Modern Language study (6 credits) is required for all Liberal Arts and Fine Arts students. Students in other curricula may select a language to complete the humanities requirement.

There are two methods to determine what language course is best for you:

Placement Test

All Liberal Arts students who have had two or more years of French, German, Italian or Spanish are require to take a placement test to determine the language level that is appropriate for them. All other students are strongly encouraged to take advantage of this full evaluation of their language proficiency. Otherwise, they will be placed according to previous Language Background. To take the test you may go to the Testing Center at JLC Room 229. The test is offered Mondays 9:00 to 4:00 p.m., Tuesdays, Wednesdays and Fridays 9:00 to 4:00. Testing schedules may vary. You may call the Testing Center at (732) 906-2508 to get the latest schedule.

Previous Language Background

If the student has had a modern language in high school, he/she may be placed at a more advanced level than they would if they had no foreign language background at all. For the purpose of determining what level will be the most appropriate, the student can skip one semester course for every year of senior high school language study completed with a grade of B or better. The courses should have been taken in the last three years. The chart below will help you find the right course for you.

Pre-Requisites

121 Level – None
122 Level – 121 or at least one year of high school language study with B or better.
221 Level – 122 or at least two years of high school language study with B or better.
222 Level – 221 or at least three years of high school language study with B or better.
210 Level – This course is meant for people who are native speakers.

Courses 223 Level – 224 Level – 226 Level - 228 Level 231- Level 232 Level are open to students who:

1. Have completed the Intermediate level (221-222 or 210)
2. Are native speakers.
3. Have done a minimum of four years of the language in high school with a grade of at least B at every level.
4. Have been recommended by a faculty member.

DEPARTMENT OF MODERN LANGUAGES CLEP CREDIT GRANTING POLICY
The Modern Language Department awards credit for the CLEP examination at the elementary and intermediate levels. The Department awards a maximum of three CLEP credits, depending upon the score a student achieves. The CLEP exam only tests for listening and reading, not for speaking or for writing. Thus, students may receive credit for the 121 elementary level or for 221, the intermediate level. CLEP makes it possible for a student to receive credit by examination for life experience or independent learning for which the student has not received previous academic credit. Therefore, a student who has had formal education in a given language for which he or she has already received academic credit, will not receive credit. The minimum score needed to receive credit for the elementary level 121 is 55 in French, 50 in German, 55 in Spanish. The minimum score needed to receive credit for the intermediate level 221 is 66 in French, 63 in German, 68 in Spanish. Students who acquired a given language in their home as an ancestral ethnic language, but who have had little or no formal instruction in that language, may take the CLEP examination in that language at any level for up to three humanities-elective credits, provided that the language in question is taught at Middlesex County College. Students in that situation are encouraged to complete their foreign language requirement in that same language, and also to achieve competence in that language, by taking advanced-level courses in literature, civilization, and composition. Regarding transferability of CLEP credits, please consult the catalogue of the institution to which you wish to transfer.

MODERN LANGUAGE DEGREE OPTION

Courses		Credits	Requisites/Comments
	To satisfy the 12 credit requirement choose Modern Languages courses that you have not taken to satisfy the core requirements for the degree. Recommended elective courses:	12	
LNC 123	INTRODUCTION TO THE STUDY OF HUMAN LANGUAGE		
COM 115	INTERCULTURAL COMMUNICATION		
	*See Modern Language Department Placement Policy		
	TOTAL CREDITS :	***62-70***	

MUSIC DEGREE OPTION

Music Degree Option (Also see Fine Arts: Music Option)
Below are required courses and recommended course groupings and sequences for program completion.
Courses may have prerequisite or corequisite requirements. Check course descriptions for details.

Courses		Credits	Requisites/Comments
MUS 131	KEYBOARD STUDIES I	3	
MUS 132	KEYBOARD STUDIES II	3	MUS 131
MUS 140	MUSIC FUNDAMENTALS	3	
MUS 201	MUSIC NOTATION AND COMPOSITION I	3	MUS 140 or a passing score on music theory placement test.
MUS 202	MUSIC NOTATION AND COMPOSITION II	3	MUS 201
	Total Credits:	***65-73***	

PHYSICAL EDUCATION/RECREATION DEGREE OPTION

Courses		Credits	Requisites
HED 150	CONTEMPORARY HEALTH ISSUES	3	
HED 200	HUMAN SEXUALITY & FAMILY LIFE	3	
PED 225	FIRST AID, CPR AND SAFETY EDUCATION	3	
	Three One Credit activity classes offered by the department	3	
	Total Credits:	***62-70***	

POLITICAL SCIENCE DEGREE OPTION

Courses		Credits	Requisites/Comments
POS 121	INTRODUCTORY GOVERNMENT AND POLITICS	3	
POS 220	UNITED STATES NATIONAL GOVERNMENT	3	
Choose two courses from the following:			
POS 201	UNITED STATES STATE AND LOCAL GOVERNMENT	3	
POS 222	FOREIGN GOVERNMENTS: A COMPARATIVE ANALYSIS	3	
POS 231	CONSTITUTIONAL LAW	3	POS 121 or POS 201 or POS 220
	Total Credits:	***62-68***	

PSYCHOLOGY DEGREE OPTION

Psychology and Education

Courses		Credits	Requisites/Comments
4 courses of PSYCHOLOGY ELECTIVES	To satisfy the 12 credit requirement, choose Psychology courses that you have not taken to satisfy the 6 credit Social Science Elective core requirements for the degree. You should meet with the Chairperson of the Psychology and Education Department, an advisor in the Academic Advising Center, or a counselor in the Counseling and Transfer Office to choose the most appropriate courses for transfer to the upper division college or university you plan to attend.	12	Most Psychology Elective courses have the prerequisite of INTRODUCTORY PSYCHOLOGY PSY 123

Total Credits: 62 - 70

SOCIAL AND REHABILITATION SERVICES DEGREE OPTION

Courses		Credits	Requisites/Comments
PSY 123	INTRODUCTORY PSYCHOLOGY1	3	
SOC 121	INTRODUCTION TO SOCIOLOGY I1	3	
SOC 131	CONTEMPORARY SOCIAL PROBLEMS	3	SOC 121
SOC 141	INTRODUCTION TO SOCIAL WORK AND SOCIAL WELFARE POLICY	3	
SOC 205	MINORITY GROUPS IN U.S SOCIETY	3	
SOC 210	METHODS OF SOCIAL CASEWORK AND COUNSELING	3	

Total Credits: 62-68

SOCIAL SCIENCES DEGREE OPTION

Below are required courses and recommended course groupings and sequences for program completion.

Courses	Credits	Requisites/Comments
Choose Liberal Arts Electives from: POS, PSY or SOC. (Courses that you have not taken to satisfy the core or Social Science requirements for the degree)	12	

Total Credits: 62-68

SOCIOLOGY DEGREE OPTION

Courses	Credits	Requisites/Comments
To satisfy the 12 credit requirement choose Sociology courses that you have not taken to satisfy the core or social science requirements for the degree.	12	

Total Credits: 62-68

THEATRE DEGREE OPTION

Theatre Degree Option (also see Fine Arts: Theatre Option)
Below are required courses and recommended course groupings and sequences for program completion. Courses may have prerequisite and corequisite requirements. Check course descriptions for details.

Courses		Credits	Requisites / Comments
THE 145	STAGECRAFT	4	
THE 146	PLAY PRODUCTION	4	
Choose two courses of the following:			
DAN 131	ELEMENTS OF DANCE	3	
DAN 132	DANCE APPRECIATION	3	
DAN 201	METHODS AND MODERN TECHNIQUES IN DANCE	3	
SPE 124	ORAL INTERPRETATION	3	
THE 105	INTRODUCTION TO THEATRE	3	
THE 123	THEATRE HISTORY	3	
THE 124	CONTEMPORARY THEATRE	3	
THE 131	ACTING I	3	
THE 132	ACTING II	3	THE 131
THE 152	AMERICAN MUSICAL THEATRE	3	
		Total Credits:	***62-70***

VISUAL ARTS DEGREE OPTION

VISUAL ARTS DEGREE OPTION (See also Fine Arts Degree)
Below are required courses and recommended course groupings and sequences for program completion. Courses may have prerequisite and corequisite requirements. Check course descriptions for details.

Courses		Credits	Requisites / Comments
ART 145	ART FUNDAMENTALS: TWO DIMENSIONS	3	
ART 146	ART FUNDAMENTALS: THREE DIMENSIONS	3	
Choose two courses of the following:			
ART 123	ART HISTORY: ANCIENT TO RENAISSANCE	3	
ART 124	ART HISTORY: RENAISSANCE TO MODERN	3	
ART 125	ART HISTORY: MODERN TO CONTEMPORARY	3	
		Total Credits:	***62-70***

WRITING DEGREE OPTION

Courses	Credits	Requisites / Comments
The Writing Degree / Liberal Arts Option will involve a minimum of 12 required credit hours. To satisfy the 12 credit requirement for the Writing degree option, you may select any English course from the following list of (writing-intensive) courses: - ENG 205 Introduction to Journalism - ENG 206 Journalism Workshop - ENG 235 Creative Writing I - ENG 236 Creative Writing II - ENG 237 Advanced Writing Workshop - ENG 238 Technical Writing - ENG 240 Business Communication - ENG 260 Scriptwriting Consult course descriptions in this catalog for details.	12 credits	
	Total Credits:	***62-70***

Management

DIVISION OF BUSINESS, COMPUTER SCIENCE & ENGINEERING TECHNOLOGIES (BCSET)

BUSINESS ADMINISTRATION AND MANAGEMENT DEPARTMENT

Associate in Applied Science (A.A.S.) Degree

Why major in Management?

Management is a people-oriented career requiring you to have an understanding of the role of management in a complex and dynamic society. If you have experience in a particular field, earning your degree in Management may open up employment and promotion opportunities in various aspects of industry, commerce, specialized institutions, and government.

If I major in Management, what degree can I earn?

You can earn the Associate in Applied Science in Management or the Certificate of Achievement in Management Support Services. If I major in Management, can I transfer to a four-year college or university? Many colleges and universities will apply the courses you have taken towards a bachelor's degree. You should meet with an academic advisor for appropriate planning.

What will I learn if I study Management?

You establish or upgrade your managerial skills. The program is a comprehensive blend of social science theories, organizational behavior and design, classical management theories, managerial processes, functions, and decision-making. Note: Not all MGT courses are offered every semester both day and evening. Please call the Department Chair at 732.906.2594 to discuss course offerings for future semesters.

Are there any requirements I must satisfy before I start taking courses in my major?

Algebra I is a prerequisite for all majors. Algebra I competency must be verified with a passing score on the College's placement test.

How long will it take for me to complete this degree?

If you do not need developmental coursework, and you register for an average of 16 credits each semester, you can complete the degree in two years. If you average 15 credits each semester, you can complete the certificate in one calendar year. You can shorten the amount of time by taking courses in the summer and winter sessions. Some major courses in the management program are offered only in the evenings. Note: Not all major courses are offered every semester both day and evening. Please call the Department Chair at 732.906.2594 to discuss course offerings for future semesters.

Where should I direct specific questions about this program?

Contact Professor Bailey, Department Chair, at 732.906.2594 or bam@middlesexcc.edu.

DEGREE PROGRAM

Below are required courses and recommended course groupings and sequences for program completion. Courses may have prerequisites and corequisite requirements. Check course descriptions for details.

Courses		Credits	Requisites/Comments
Semester I			
BUS 101	BUSINESS ORGANIZATION AND MANAGEMENT	3	
BUS 107	COMPUTER APPLICATIONS FOR BUSINESS	3	
ENG 121	ENGLISH COMPOSITION I	3	A passing score on the writing portion of the College's Placement Test or a grade of "C" or better in ENG 010; completion of RDG 009 with a "C" or better or a score on the reading portion of the College's Placement Test that exempts the students from RDG 009.
___ ___	MATHEMATICS REQUIREMENT	3-4	BUS 115, Mathematics of Finance recommended. Students with the appropriate academic prerequisites, in consultation with their Academic Advisor, should elect the appropriate Mathematics course.
___ ___	GENERAL EDUCATION SOCIAL SCIENCE ELECTIVE (GE SS)	3	
Semester II			
ACC 101	FINANCIAL ACCOUNTING	4	
ECO 201	PRINCIPLES OF ECONOMICS I	3	A passing score on the algebra portion on the College's Placement Test or MAT 013
ENG 122 or ENG 125	ENGLISH COMPOSITION II ENGLISH COMPOSITION II: WRITING ABOUT LITERATURE	3	A grade of "C" or better in ENG 121 and a passing score on the reading portion of the College's Placement Test or a grade of "C" or better in ENG 121 and a grade of "C" or better in RDG 011.
MGT 210	CONCEPTS OF BUSINESS MANAGEMENT	3	BUS 101
___ ___	GENERAL EDUCATION SOCIAL SCIENCE ELECTIVE (GE SS) OR	3	
___ ___	GENERAL EDUCATION HUMANITIES ELECTIVE (GE HUM)		
Semester III			
ACC 102	MANAGERIAL ACCOUNTING	4	ACC 101
MGT 205	PRINCIPLES OF LABOR RELATIONS	3	BUS 101 OR MGT 220. NOTE: Not all major courses are offered every semester both day and evening. Please call the Department Chair at 732.906.2594 to discuss course offerings for future semesters.
ECO 202	PRINCIPLES OF ECONOMICS II	3	ECO 201
MGT 220	HUMAN RESOURCES MANAGEMENT	3	NOTE: Not all major courses are offered every semester both day and evening. Please call the Department Chair at 732.906.2594 to discuss course offerings for future semesters.
___ ___	GENERAL EDUCATION HUMANITIES ELECTIVE (GE HUM)	3	
___ ___	PHYSICAL OR HEALTH EDUCATION	1-3	
Semester IV			
BUS 201	BUSINESS LAW I	3	
MGT 214	OPERATIONS MANAGEMENT	3	MGT 210 NOTE: Not all major courses are offered every semester both day and evening. Please call the Department Chair at 732.906.2594 to discuss course offerings for future semesters.
MGT 216	SEMINAR IN MANAGEMENT EXPERIENCES	3	Final course for majors: The following courses are prerequisites for MGT 216: ACC 102, ECO 202, ENG 122, MGT 205, MGT 210, MGT 220. Co-req: MGT 214 NOTE: Not all major courses are offered every semester both day and evening. Please call the Department Chair at 732.906.2594 to discuss course offerings for future semesters.
___ ___	RECOMMENDED BUSINESS ELECTIVE The following business electives are recommended for management majors: MGT 208 -MANAGEMENT FIELD EXPERIENCE MKT 201 - MARKETING I		 MGT 210 BUS 101
___ ___	GENERAL EDUCATION SCIENCE ELECTIVE (GE SCI)	3-4	Students may elect courses with a code of BIO, CHM, ENV, PHY or SCI for which they have the appropriate academic preparation.

Total Credits: 63 - 65

MANAGEMENT SUPPORT SERVICES CERTIFICATE PROGRAM

Courses		Credits	Requisites/Comments
ENG 121	ENGLISH COMPOSITION I	3	A passing score on the writing portion of the College's Placement Test or a grade of "C" or better in ENG 010; completion of RDG 009 with a "C" or better or a score on the reading portion of the College's Placement Test that exempts the students from RDG 009.
ENG 122 OR	ENGLISH COMPOSITION II		A grade of "C" or better in ENG 121 and a passing score on the reading portion of the College's
ENG 125	ENGLISH COMPOSITION II: WRITING ABOUT LITERATURE	3	Placement Test or a grade of "C" or better in ENG 121 and a grade of "C" or better in RDG 011.
BUS 101	BUSINESS ORGANIZATION AND MANAGEMENT	3	
BUS 240	BUSINESS COMMUNICATIONS	3	ENG 122 or ENG 125 or permission of Department Chair NOTE: Not all major courses are offered every semester both day and evening. Please call the Department Chair at 732.906.2594 to discuss course offerings for future semesters.
MGT 210	CONCEPTS OF BUSINESS MANAGEMENT	3	BUS 101
MGT 220	HUMAN RESOURCES MANAGEMENT	3	NOTE: Not all major courses are offered every semester both day and evening. Please call the Department Chair at 732.906.2594 to discuss course offerings for future semesters.
MGT 205	PRINCIPLES OF LABOR RELATIONS	3	BUS 101 or MGT 220 NOTE: Not all major courses are offered every semester both day and evening. Please call the Department Chair at 732.906.2594 to discuss course offerings for future semesters.
___ ___	GENERAL EDUCATION SOCIAL SCIENCE ELECTIVE (GE SS)	3	
___ ___	BUSINESS ELECTIVE The following business electives are recommended: MKT 201 - MARKETING I MGT 200 - PRINCIPLES OF SUPERVISION MGT 208 MANAGEMENT FIELD EXPERIENCE	3	 BUS 101 MGT 210 NOTE: Not all major courses are offered every semester both day and evening. Please call the Department Chair at 732.906.2594 to discuss course offerings for future semesters.
___ ___	BUSINESS ELECTIVE The following business electives are recommended: MKT 201 - MARKETING I MGT 200 - PRINCIPLES OF SUPERVISION MGT 208 MANAGEMENT FIELD EXPERIENCE		 BUS 101 MGT 210 NOTE: Not all major courses are offered every semester both day and evening. Please call the Department Chair at 732.906.2594 to discuss course offerings for future semesters.

Total Credits: 30

Marketing

DIVISION OF BUSINESS, COMPUTER SCIENCE & ENGINEERING TECHNOLOGIES (BCSET)

BUSINESS ADMINISTRATION AND MANAGEMENT DEPARTMENT

Associate in Applied Science (A.A.S.) Degree

Why major in Marketing?

The distribution of goods and services is one of the fastest growing business fields in the nation. If you are an alert, vigorous individual who is capable of bringing new ideas and talents to a dynamic and diversified business establishment, this major would be a good choice for you. Career possibilities include employment as a marketing trainee, marketing research assistant, advertising assistant, customer relation's representative, or sales representative.

If I major in Marketing, what degree can I earn?

You can earn the Associate in Applied Science in Marketing.

If I major in Marketing, can I transfer to a four-year college or university?

Many colleges and universities will apply the courses you have taken towards a bachelor's degree. You should meet with an academic advisor for appropriate planning.

What will I learn if I study Marketing?

You acquire a firm base of knowledge of business law and mathematics, accounting, computer applications, and economics. You also study courses in general education and specific courses in marketing. Note: Not all MKT courses are offered every semester both day and evening. Please call the Department Chair at 732.906.2594 to discuss course offerings for future semesters.

Are there any requirements I must satisfy before I start taking courses in my major?

Algebra I is a prerequisite for all majors. Algebra I competency must be verified with a passing score on the College's placement test.

How long will it take for me to complete this degree?

If you do not need developmental coursework, and you register for an average of 16 credits each semester, you can complete the degree in two years. You can shorten the amount of time by taking courses in the summer and winter sessions.

Where should I direct specific questions about this program?

Contact Professor Bailey, Department Chair, at 732.906.2594 or bam@middlesexcc.edu.

DEGREE PROGRAM

Below are required courses and recommended course groupings and sequences for program completion. Courses may have prerequisites and corequisite requirements. Check course descriptions for details.

Courses		Credits	Requisites/Comments
Semester I			
ACC 101	FINANCIAL ACCOUNTING	4	
BUS 101	BUSINESS ORGANIZATION AND MANAGEMENT	3	
___ ___	MATHEMATICS REQUIREMENT	3-4	BUS 115, Mathematics of Finance recommended. Students with the appropriate academic prerequisites, in consultation with their Academic Advisor, should elect the appropriate Mathematics course.
BUS 107	COMPUTER APPLICATIONS FOR BUSINESS	3	
ENG 121	ENGLISH COMPOSITION I	3	A passing score on the writing portion of the College's Placement Test or a grade of 'C' or better in ENG 010; completion of RDG 009 with a 'C' or better or a score on the reading portion of the College's Placement Test that exempts the students from RDG 009.
Semester II			
ACC 102	MANAGERIAL ACCOUNTING	4	ACC 101
BUS 201	BUSINESS LAW I	3	
ENG 122	ENGLISH COMPOSITION II	3	A grade of 'C' or better in ENG 121 and a passing score on the reading portion of the College's Placement Test or a grade of 'C' or better in ENG 121 and a grade of 'C' or better in RDG 011.
OR			
ENG 125	ENGLISH COMPOSITION II: WRITING ABOUT LITERATURE		
MKT 201	MARKETING I	3	BUS 101
___ ___	GENERAL EDUCATION SOCIAL SCIENCE ELECTIVE (GE SS)	3	
Semester III			
___ ___	RECOMMENDED BUSINESS ELECTIVE: MKT 209 - MARKETING FIELD EXPERIENCE OR BUS 202 - BUSINESS LAW II	3	 MKT 201 OR BUS 201
ECO 201	PRINCIPLES OF ECONOMICS I	3	A passing score on the algebra portion on the College's Placement Test or MAT 013.
MKT 202	MARKETING II	3	MKT 201 NOTE: Not all major courses are offered every semester both day and evening. Please call the Department Chair at 732.906.2594 to discuss course offerings for future semesters.
MKT 203	PRINCIPLES OF ADVERTISING	3	BUS 101
___ ___	PHYSICAL OR HEALTH EDUCATION	1-3	
___ ___	GENERAL EDUCATION SOCIAL SCIENCE ELECTIVE (GE SS) OR GENERAL EDUCATION HUMANITIES ELECTIVE (GE HUM)	3	
Semester IV			
ECO 202	PRINCIPLES OF ECONOMICS II	3	ECO 201 or permission of Department Chair
MKT 143	SALESMANSHIP	3	
MKT 206	MARKETING MANAGEMENT SEMINAR	3	Pre/co-req: ACC 102, BUS 101, ECO 201, ENG 122, MKT 202, MKT 203 NOTE: Not all major courses are offered every semester both day and evening. Please call the Department Chair at 732.906.2594 to discuss course offerings for future semesters.
___ ___	GENERAL EDUCATION SCIENCE ELECTIVE (GE SCI)	3-4	Students may elect courses with a code of BIO, CHM, ENV, PHY or SCI for which they have the appropriate academic preparation.
___ ___	GENERAL EDUCATION HUMANITIES ELECTIVE (GE HUM)	3	
	Total Credits:	***63-65***	

Mathematics

DIVISION OF SCIENCE, MATHEMATICS & HEALTH TECHNOLOGIES (SCMHT)

MATHEMATICS DEPARTMENT

Associate in Science (A.S.) Degree

Why major in Mathematics Transfer?

This program parallels the first two years of a baccalaureate degree program in mathematics. The mathematics major prepares you, upon graduation, to transfer to a four-year college or university to pursue professional careers requiring quantitative reasoning and analytical thinking. Traditional mathematics occupations consist of teaching positions in schools and colleges or research positions in universities or industry. Other related mathematics fields include statistics, survey and market research, operations research, computer systems design and programming, economics and finances, and robotics and aerodynamics. Careers in applied mathematics usually focus on developing mathematical models for technical and scientific data, whether in physics, chemistry, biology, engineering or medicine.

If I major in Mathematics, what degree can I earn?

You will earn an Associate in Science Degree, which prepares you for transfer to upper division colleges and universities.

Are there any requirements I must satisfy before I start taking courses in my major?

You must demonstrate proficiency in elementary (MAT 013 or MAT 013A/013B) and intermediate (MAT 014 or MAT 014A/014B) algebra, as well as precalculus (MAT 129 or MAT 129A/129B). In addition, you must successfully complete all courses required by the College Placement Tests, and fulfill the science course prerequisites. The science courses of biology and chemistry require a high school laboratory course with a minimum grade of C or the equivalent developmental science courses (BIO 010, CHM 010).

How long will it take for me to complete this degree?

If you do not need developmental coursework, and you register for an average of 16 credits each semester, you can complete the degree in two years. You can shorten the amount of time by taking courses in the summer and winter sessions.

Where should I direct specific questions about this program?

Contact Dr. DeLucia, Mathematics Department Chair, at 732.906-2585.

MATHEMATICS OPTION - SCIENCE TRANSFER DEGREE

Below are required courses and recommended course groupings and sequences for program completion. Courses may have prerequisites and corequisite requirements. Check course descriptions for details.

Courses		Credits	Requisites/Comments
Semester I			
BIO 123	GENERAL BIOLOGY I	4	One year of high school laboratory biology or BIO 010 and one year of high school laboratory chemistry or CHM 010. Also appropriate score on the College's Placement Test or MAT 013
	OR		
CHM 123	GENERAL CHEMISTRY I	4	MAT 014, MAT 014A/014Bor appropriate score on the College's Placement Test and One year of high school chemistry
ENG 121	ENGLISH COMPOSITION I	3	A passing score on the writing portion of the College's Placement Test or a grade of "C" or better in ENG 010; completion of RDG 009 with a "C" or better or a score on the reading portion of the College's Placement Test that exempts the students from RDG 009
MAT 131	ANALYTIC GEOMETRY & CALCULUS I OR MAT 131A to be followed by MAT 131B	4	Appropriate score on the College's Placement Test and/or satisfactory score on the Diagnostic Examination, "C" or better in MAT 129 or MAT 129A/129B, or departmental approval.
	GENERAL EDUCATION SOCIAL SCIENCE ELECTIVE (GE SS)	3	
	PHYSICAL/HEALTH ED ELECTIVE	1-3	
Semester II			
BIO 124	GENERAL BIOLOGY II	4	BIO 123
	OR		
CHM 124	GENERAL CHEMISTRY II	4	CHM 123
ENG 122	ENGLISH COMPOSITION II	3	A grade of "C" or better in ENG 121 and a passing score on the reading portion of the College's Placement Test or a grade of "C" or better in ENG 121 and a grade of "C" or better in RDG 011
	OR		
ENG 125	ENGLISH COMPOSITION II: WRITING ABOUT LITERATURE	3	A grade of "C" or better in ENG 121 and a passing score on the reading portion of the College's Placement Test or a grade of "C" or better in ENG 121 and a grade of "C" or better in RDG 011
MAT 132	ANALYTIC GEOMETRY & CALCULUS II	4	MAT 131, MAT 131A/131B or equivalent
	COMPUTER SCIENCE ELECTIVE	3-4	Choose CSC 109 or higher
	GENERAL EDUCATION SOCIAL SCIENCE ELECTIVE (GE SS)	3	
Semester III			
MAT 233	ANALYTIC GEOMETRY & CALCULUS III	4	MAT 132 or equivalent
	MATHEMATICS ELECTIVE	4	Choose from MAT 206, 210, 257, 285
PHY 121	GENERAL PHYSICS I	4	MAT 129 You may substitute PHY 131-132 for PHY 121-122
	GENERAL ELECTIVE	3	Except SSD 101
	GENERAL EDUCATION HUMANITIES ELECTIVE (GE HUM)	3	
Semester IV			
MAT 234	DIFFERENTIAL EQUATIONS	4	MAT 233 or approval of Department Chairperson of Mathematics
	MATHEMATICS ELECTIVE	4	Choose from MAT 206, 210, 257, 285
PHY 122	GENERAL PHYSICS I	4	PHY 121 You may substitute PHY 131-132 for PHY 121-122
	GENERAL EDUCATION HUMANITIES ELECTIVE (GE HUM)	3	
	Total Credits:	***65-68***	

Mechanical Engineering Technology

DIVISION OF BUSINESS, COMPUTER SCIENCE & ENGINEERING TECHNOLOGIES (BCSET)

MECHANICAL-CIVIL/CONSTRUCTION ENGINEERING TECHNOLOGY DEPARTMENT

Associate in Applied Science (A.A.S.) Degree

Why major in Mechanical Engineering Technology?

Mechanical Engineering Technology provides the right combination of theory and hands-on training for the field of automated, flexible manufacturing. The program emphasizes mechanical design, computer aided drafting and designs and robotics. Expertise in a wide variety of automated manufacturing applications prepares you for a career as a technician or engineer aide. This program is accredited by the Technology Accreditation Commission of the Accreditation Board for Engineering and Technology.

If I major in Mechanical Engineering Technology, what degree can I earn?

The Associate in Applied Science Degree which prepares you for a career in Computer Assisted Design (CAD) drafting, mechanical design, material testing, fluid power, or as an engineering assistant.

If I major in Mechanical Engineering Technology, can I transfer to an upper division college or university?

You may choose to participate in the Joint Admissions Program with the New Jersey Institute of Technology. Many other upper division colleges and universities will apply some of the courses you have taken towards a bachelor's degree.

Are there any requirements I must satisfy before I start taking courses in my major?

Algebra I is a prerequisite for all majors. Algebra I competency must be verified with a passing score on the College's placement test. You must also have a grade of "C" or better in high school algebra II and geometry.

How long will it take for me to complete this degree?

If you do not need developmental coursework, and you register for an average of 17 credits each semester, you can complete the degree in two years. You can shorten the amount of time by taking courses in the summer and winter sessions.

Where should I direct specific questions about this program?

Contact Professor Rubino, Department Chair, at 732.906-2586.

DEGREE PROGRAM

Below are required courses and recommended course groupings and sequences for program completion.

Courses		Credits	Requisites/Comments
Semester I			
MCT 101	INTRODUCTION TO TECHNOLOGY	2	MAT 013 or passing score on the College's Placement Test Corequisites: MAT 014
MAT 129A	PRECALULUS A	2	Appropriate score on the College Placement Test and/or satisfactory score on the Diagnostic Examination, "C" or better in MAT 014 or MAT 014A and MAT 014B, or departmental approval.
ENG 121	ENGLISH COMPOSITION I	3	A passing score on the writing portion of the College's Placement Test or a grade of "C" or better in ENG 010; completion of RDG 009 with a "C" or better or a score on the reading portion of the College Placement Test that exempts the students from RDG 009
ELT 105	FOUNDATIONS OF ELECTRONICS TECHNOLOGY	4	MAT 013 or appropriate score on College Placement Test Corequisite: MAT 014 or higher level
MEC 123	TECHNICAL GRAPHICS/CAD I	3	
	PHYSICAL/HEALTH ED ELECTIVE	1/ 3	
Semester II			
MAT 129B	PRECALCULUS	2	MAT 129A or equivalent courses.
ENG 122	ENGLISH COMPOSITION II	3	A grade of "C" or better in ENG 121 and a passing score on the reading portion of the College Placement Test or a grade of "C" or better in ENG 121 and a grade of "C" or better in RDG 011
CIT 105	STATICS FOR TECHNICIANS	3	MCT 101, MAT 129A or MAT 129
CMT 124	APPLIED TECHNICAL GRAPHICS/CAD II	3	MEC 123
MEC 130	MANUFACTURING PROCESS & MATERIALS	4	
	HUMANITIES ELECTIVE (GE HUM ELECTIVE)	3	
Semester III			
MAT 131A	ANALYTIC GEOMETRY & CALCULUS I (PART A)	2	MAT 129 or MAT 129B or appropriate score on the College Placement Test and/or satisfactory score on the Diagnostic Examination, or departmental approval.
PHY 121		4	MAT 129
CIT 203	STRENGTH OF MATERIALS	4	CIT 105
MEC 228	KINEMATICS DESIGN	4	MEC 123 and MAT 129B or MAT 129
MEC 250	SOLID MODELING	3	MEC 123
Semester IV			
MAT 131B	ANALYTIC GEOMETRY & CALCULUS I (PART B)	2	MAT 131A
PHY 122	GENERAL PHYSICS II	4	PHY 121
MCT 220	INTRODUCTION TO ROBOTICS AND CONTROL SYSTEMS	4	ELT 105, MEC 123, PHY 121, MAT 129B or MAT 129
MEC 204	FLUID MECHANICS	4	CIT 105, MAT 129B or MAT 129
	SOCIAL SCIENCE ELECTIVE (GE SS)	3	
	Total Credits:	***67-69***	

Mecomtronics Engineering Technology

DIVISION OF BUSINESS, COMPUTER SCIENCE & ENGINEERING TECHNOLOGIES (BCSET)

ELECTRICAL ENGINEERING TECHNOLOGY DEPARTMENT

Associate in Applied Science (A.A.S.) Degree

Why major in Mecomtronics Engineering Technology?

Mecomtronics combines the areas of mechanical, electronics, computers and telecommunications technology. As an engineering technician you will work individually, or as a member of a professional team, in the applied aspects of science and engineering devoted to the implementation and extension of existing and continually emerging new technologies.

If I major in Mecomtronics Engineering Technology, what degree can I earn?

The Associate in Applied Science Degree which prepares you to begin your career after graduation. Career opportunities exist in business, industry and government.

If I major in Mecomtronics Engineering Technology, can I transfer to an upper division college of university?

Many upper division colleges and universities will apply some of the courses you have taken towards a bachelor's degree in engineering technology, engineering and technology education.

What will I learn if I study Mecomtronics Engineering Technology?

You acquire knowledge and skills in demand by business and industry in the areas of administration, installations and maintenance of computer and telecommunications system; automated systems development, operation and maintenance; assist with manufacturing processes, planning management and operation, as well as apply quality principles for improvement of products.

Are there any requirements I must satisfy before I start taking courses in my major?

Algebra I is a prerequisite for all majors. Algebra I competency must be verified with a passing score on the College's placement test. You must also have a grade of "C" or better in high school algebra II.

How long will it take for me to complete this degree?

If you do not need developmental coursework, and you register for an average of 17 credits each semester, you can complete the degree in two years.

Where should I direct specific questions about this program?

Contact Professor Waintraub, Department Chair, at 732.906.2584.

DEGREE PROGRAM

Below are required courses and recommended course groupings and sequences for program completion. Courses may have prerequisites and corequisite requirements. Check course descriptions for details.

Courses		Credits	Requisites/Comments
Semester I			
ENG 131	RESEARCH, COMPOSITION AND PRESENTATION I	2	A passing score on the College Placement Test or a grade of "C" or better in ENG 010
MAT 145	INTEGRATED MATHEMATICS I	2	Higher level mathematics course can be substituted with departmental approval
MCT 101	INTRODUCTION TO ENGINEERING TECHNOLOGY	2	MAT 013 or passing score on the College's Placement Test Corequisites: MAT 014
MCT 103	FOUNDATION OF MECOMTRONICS	4	
PHY 145	MECOMTRONICS PHYSICS I	2	Higher level physics course can be substituted with departmental approval
	PHYSICAL/HEALTH ED ELECTIVE	1-3	
	GENERAL EDUCATION SOCIAL SCIENCE (GE SS)	3	
Semester II			
ENG 132	RESEARCH, COMPOSITION AND PRESENTATION II	2	A grade of "C" or better in ENG 131
MAT 146	INTEGRATED MATHEMATICS II	2	Higher level mathematics course can be substituted with departmental approval
MCT 102	SUPPORT AND MAINTENANCE OF COMPUTER SYSTEMS	2	MCT 101, MCT 103 Corequisites: MCT 104, MCT 106, PHY 146, MAT 146, ENG 132
MCT 104	ELECTRICAL AND MECHANICAL POWER SYSTEMS	4	MCT 101, MCT 103 Corequisites: MCT 102, MCT 106, MAT 146, PHY 146, ENG 132
MCT 106	AUTOMATED SYSTEMS	4	MCT 101, MCT 103 Corequisites: MCT 102, MCT 104, MAT 146, PHY 146, ENG 132
PHY 146	MECOMTRONICS PHYSICS II	2	Higher level physics course can be substituted with departmental approval
Semester III			
ENG 133	RESEARCH, COMPOSITION AND PRESENTATION III	2	A grade of "C" or better in ENG 132
MAT 245	INTEGRATED MATHEMATICS III	2	Higher level mathematics course can be substituted with departmental approval
MCT 201	TELECOMMUNICATIONS WITH INDUSTRIAL APPLICATIONS	3	MCT 102, MCT 104, MCT 106 Corequisites: MCT 203, MCT 205, ENG 133, MAT 245, PHY 245
MCT 203	CONTROL AND AUTOMATION OF MANUFACTURING SYSTEMS	3	MCT 104, MCT 106 Corequisites: ENG 133, MAT 245, MCT 201, MCT 205, PHY 245
MCT 205	MANUFACTURING PROCESSES AND QUALITY MANAGEMENT	4	MCT 106 Corequisites: MCT 203, ENG 133, MAT 245, PHY 245
PHY 245	MECOMTRONICS PHYSICS III	2	Higher level physics course can be substituted with departmental approval
Semester IV			
MAT 246	INTEGRATED MATHEMATICS IV	2	Higher level mathematics course can be substituted with departmental approval
MCT 202	SPECIAL TOPICS IN ENGINEERING TECHNOLOGY	3	MCT 201, MCT 203, MCT 205 Corequisites: MAT 246, PHY 246
MCT 206	CAPSTONE PROJECT	3	MCT 201, MCT 203, MCT 205 Corequisites: MAT 246, PHY 246
PHY 246	MECOMTRONICS PHYSICS IV	2	Higher level physics course can be substituted with departmental approval
	GENERAL EDUCATION SOCIAL SCIENCE (GE SS)	3	
	TECHNICAL ELECTIVE OR CO-OP 1	3-4	Requires fourth-semester status in Mecomtronics Engineering Technology and permission of the Department Chairperson.
	TECHNICAL ELECTIVE CHOICES (SELECT ONE):		
CSC 125	WEB PAGE DESIGN AND DEVELOPMENT	3	CSC 108 or permission of Department Chairperson
CSC 133	INTRODUCTION TO COMPUTER SCIENCE USING C++	4	MAT 014 or appropriate score on College's Placement Test Corequisites: MAT 125 or MAT 127 or MAT 129 or MAT 110I
CSC 230	MULTIMEDIA PRODUCTION AND AUTHORING TOOLS	4	CSC 110 (Recommended - MAD 121) or relevant experience.
ELT 224	COMMUNICATION ELECTRONICS	3	ELT 210
MCT 208	MECOMTRONICS AND TELEMEDIA TECHNOLOGY FIELD EXPERIENCE	3	MAT 013 or passing score on the College's Placement Test Corequisites: MAT 014

Total Credits: 64-67

Media Arts & Design

DIVISION OF SOCIAL SCIENCES AND HUMANITIES (SSHUM)

DEPARTMENT OF VISUAL, PERFORMING, AND MEDIA ARTS

Associate in Applied Science (A.A.S.) Degree

What will I learn if I study Marketing Art & Design?

Your studies combine computer-linked commercial photography and commercial art with business and general education. The program emphasizes hands-on experience in the laboratory or studio to develop both your creative ability and the mechanical skills essential to business-oriented art and photography careers. The faculty who teach your major courses have professional experience in the fields of commercial art and photography as well as in marketing and business.

If I major in Media Arts & Design, what degree can I earn?

The Associate in Applied Science which prepares you for a career as a commercial artist, or a photographer, in advertising agencies, company advertising departments, publishing companies, photography studios, color reproduction laboratories, printing firms, or retail establishments.

If I major in Media Arts & Design, can I transfer to a four-year college or university?

Many colleges and universities will apply the courses you have taken for your degree towards a bachelor's degree. Articulation agreements exist with some colleges that will accept you as a junior and accept all of your courses.

Why major in Media Arts & Design?

There is a growing need for computer graphic artists. This program includes a cooperative work experience option. As a senior, if you choose this option, you may be placed in a paid approved position that will enhance your competency by providing hands-on experience with state-of-the-art equipment used by professional designers and photographers. You spend a semester working part-time on a one-to-one basis with a graphic designer or commercial photographer learning the latest techniques used in these fields. Job coordinators visit you at work to hold progress review sessions with you and your employer. You also attend a weekly co-op seminar on campus.

Are there any requirements I must satisfy before I start taking courses in my major?

Algebra I is a prerequisite for all majors. Algebra I competency must be verified with a passing score on the College's placement test.

How long will it take for me to complete this degree?

If you do not need developmental coursework, and you register for an average of 16 credits each semester, you can complete the degree in two years. You can shorten the amount of time by taking courses in the summer and winter sessions.

Where should I direct specific questions about this program?

Contact Professor Siegfried, Department Chair at 732.906.2589.

ADVERTISING GRAPHICS DESIGN DEGREE OPTION

Below are required courses and recommended course groupings and sequences for program completion.

Courses		Credits	Requisites / Comments
Semester I			
BUS 107	COMPUTER APPLICATIONS FOR BUSINESS	3	
ENG 121	ENGLISH COMPOSITION I	3	A passing score on the writing portion of the College's Placement Test or a grade of "C" or better in ENG 010; completion of RDG 009 with a "C" or better or a score on the reading portion of the College Placement Test that exempts the students from RDG 009.
MAD 107	PHOTOGRAPHY I	3	
MAD 113	TWO-DIMENSIONAL DESIGN	3	
MAD 117	FREEHAND DRAWING	3	
___ ___	PHYSICAL EDUCATION ELECTIVE	1	
	OR	OR	
	HEALTH EDUCATION ELECTIVE	3	
Semester II			
BUS 101	BUSINESS ORGANIZATION AND MANAGEMENT	3	
ENG 122	ENGLISH COMPOSITION II	3	A grade of "C" or better in ENG 121 and a passing score on the reading portion of the College Placement Test or a grade of "C" or better in ENG 121 and a grade of "C" or better in RDG 011.
OR	OR		
ENG 125	ENGLISH COMPOSITION II: WRITING ABOUT LITERATURE		
MAD 102	ART IN INDUSTRY AND COMMERCE (GE HUM)	3	
MAD 108	PHOTOGRAPHY II	3	MAD 107.
MAD 114	THREE-DIMENSIONAL DESIGN	3	MAD 113 and MAD 117.
MAD 118	GRAPHIC DESIGN SKILLS	3	MAD 113 and MAD 117.
Semester III			
AGD 213	TYPOGRAPHY	3	All MAD courses except MAD 121.
AGD 219	DIGITAL GRAPHICS	3	All MAD courses except MAD 121.
MAT 101	FRESHMAN MATHEMATICS I	3	Appropriate score on the College Placement Test and two years of high school mathematics, MAT 013, MAT013A/MAT013B, or departmental approval. Note: Students who choose to transfer, in consultation with their Academic Advisor, should enroll in a mathematics course for which they have the appropriate academic background.
MKT 143	SALESMANSHIP	3	
OR			
MKT 203	PRINCIPLES OF ADVERTISING	3	BUS 101.
___ ___	GENERAL EDUCATION HUMANITIES ELECTIVE (GE HUM)	3	
Semester IV			
AGD 212	ADVERTISING DESIGN	3	AGD 213 and AGD 219.
AGD 214	PRINT PRODUCTION	3	AGD 219.
AGD 280	PORTFOLIO	3	All MAD courses except MAD 121 and six credits of AGD courses. Corequisites: the remaining six credits of AGD courses.
___ ___	GENERAL EDUCATION SCIENCE ELECTIVE (GE SCI)	3-4	Students may elect courses offered by the Biology, Chemistry or Physics Departments for which they have the appropriate academic prerequisites.
___ ___	GENERAL EDUCATION SOCIAL SCIENCE ELECTIVE (GE SS)	3	
	Total Credits:	***64-66***	

PROFESSIONAL COMMERCIAL PHOTOGRAPHY DEGREE OPTION

Below are required courses and recommended course groupings and sequences for program completion.

Courses		Credits	Requisites/Comments
Semester I			
BUS 107	COMPUTER APPLICATIONS FOR BUSINESS	3	
ENG 121	ENGLISH COMPOSITION I	3	A passing score on the writing portion of the College's Placement Test or a grade of "C" or better in ENG 010; completion of RDG 009 with a "C" or better or a score on the reading portion of the College Placement Test that exempts the students from RDG 009.
MAD 107	PHOTOGRAPHY I	3	
MAD 113	TWO DIMENSIONAL DESIGN	3	
MAD 117	FREEHAND DRAWING	3	
___ ___	PHYSICAL EDUCATION ELECTIVE	1	
	OR	OR	
	HEALTH EDUCATION ELECTIVE	3	
Semester II			
BUS 101	BUSINESS ORGANIZATION AND MANAGEMENT	3	
ENG 122	ENGLISH COMPOSITION II	3	A grade of "C" or better in ENG 121 and a passing score on the reading portion of the College Placement Test or a grade of "C" or better in ENG 121 and a grade of "C" or better in RDG 011.
OR	OR		
ENG 125	ENGLISH COMPOSITION II: WRITING ABOUT LITERATURE		
MAD 102	ART IN INDUSTRY AND COMMERCE (GE HUM)	3	
MAD 108	PHOTOGRAPHY II	3	MAD 107.
MAD 114	THREE-DIMENSIONAL DESIGN	3	MAD 113 and MAD 117.
MAD 118	GRAPHIC DESIGN SKILLS	3	MAD 113 and MAD 117.
Semester III			
MAT 101	FRESHMAN MATHEMATICS I	3	Appropriate score on the College Placement Test and two years of high school mathematics, MAT 013, MAT013A/MAT013B, or departmental approval. Note: Students who choose to transfer, in consultation with their Academic Advisor, should enroll in a mathematics course for which they have the appropriate academic background.
MKT 143	SALESMANSHIP	3	
OR	OR	OR	
MKT 203	PRINCIPLES OF ADVERTISING	3	BUS 101.
PCP 221	COLOR PRINTING METHODS AND PRACTICE	3	All MAD courses except MAD 121.
PCP 225	PRODUCT AND STOCK PHOTOGRAPHY	3	All MAD courses except MAD 121.
___ ___	GENERAL EDUCATION HUMANITIES ELECTIVE (GE HUM)	3	
Semester IV			
PCP 224	DIGITAL IMAGERY	3	PCP 221 and PCP 225.
PCP 226	PROFESSIONAL/STUDIO PHOTOGRAPHY	3	All MAD courses except MAD 121.
PCP 280	PORTFOLIO	3	All MAD courses except MAD 121, and six credits of PCP courses. Corequisites: the remaining six credits of PCP courses.
___ ___	GENERAL EDUCATION SCIENCE ELECTIVE (GE SCI)	3-4	Students may elect courses offered by the Biology, Chemistry or Physics Departments for which they have the appropriate academic prerequisites.
___ ___	GENERAL EDUCATION SOCIAL SCIENCE ELECTIVE (GE SS)	3	
		Total Credits:	***64-66***

Graphics for Digital Media

This Technical Certificate is intended to enhance the current curriculum for students in the Media Arts & Design program and/or to broaden the skills of those individuals who have their field design experience outside of this particular area. The certificate is designed to provide students with skills and information relevant to current industry practices in the field of graphic design as related to the Internet. The market for Graphic Designers and Photographers is shifting toward those individuals who are knowledgeable in digital and on-line based technologies.

Notes

1. This TECHNICAL CERTIFICATE is designed for students that have already completed a degree in MAD, or those with previous field experience in photography and/or design.

2. Students must have completed one of the following, or demonstrate the equivalent proficiency, prior to beginning this certificate:
OAD 114
BUS 107

3. It is recommended that the student, who is eligible, take an advanced course in either Advertising Graphic Design or Professional Commercial Photography, especially PCP 224 (Computer Imagery.) In the case of a PCP course, the lab would be 3 hours and the resultant credit hours 3.

TECHNICAL CERTIFICATE IN GRAPHIC ARTS FOR DIGITAL MEDIA

Below are required courses and recommended course groupings and sequences for program completion.

Courses		Credits	Requisites/Comments
CSC108	INTRODUCTION TO THE INTERNET	2	Prior completion of one of the following courses: CSC 105, CSC 107, OR BUS 107 or equivalent Microcomputer experience.
CSC 230	MULTIMEDIA PRODUCTION AND AUTHORING TOOLS	4	CSC 110 (Recommended ñ MAD 121) or relevant experience.
MAD 121	GRAPHICS FOR COMPUTER AUTHORS AND PRESENTERS	3	Corequisites: BUS 107 or CSC 105 or MCT 101 or equivalent.
DMA 210	WEB PAGE DESIGN AND LAYOUT	3	MAD 121 or relevant experience.
DMA 212	WEB ANIMATION AND MOTION GRAPHICS	3	MAD 121 or relevant experience.
___ ___	FREE ELECTIVE	3	
		Total Credits:	***18***

Medical Laboratory Technology

DIVISION OF SCIENCE, MATHEMATICS & HEALTH TECHNOLOGIES (SCMHT)

MEDICAL LABORATORY TECHNOLOGY DEPARTMENT

The Program in Medical Laboratory Technology is accredited by the National Accrediting Agency for Clinical Laboratory Science (NAACLS)

Associate in Applied Science (A.A.S.) Degree

Why major in Medical Laboratory Technology?

Qualified personnel are needed to work for laboratories in the community. You can find positions in hospitals, reference laboratories, research laboratories, pharmaceutical companies, veterinary laboratories, as well as sales and quality control. As a technician you perform scientific analyses that facilitate physicians' diagnoses and treatment of diseases.

If I major in Medical Laboratory Technology, what degree can I earn?

The Associate in Applied Science Degree which prepares you for a career as a medical laboratory technician, working as a member of the paramedical team. Graduates qualify to meet requirements for certification by the National Certification Agency (NCA), American Society of Clinical Pathologists, and other certifying bodies.

What will I learn if I study Medical Laboratory Technology?

You receive an integrated experience, with lectures and laboratory practices both on-campus and in clinical facilities off-campus. You learn how to test specimens accurately and swiftly, with the highest ethical standards.

Are there any requirements I must satisfy before I start taking courses in my major?

Algebra I is a prerequisite for all majors. Algebra I competency must be verified with a passing score on the College's placement test. You must have a "C" or better in high school laboratory biology and laboratory chemistry. As a result of your performance on the College's placement test, you may need developmental coursework. All developmental coursework must be completed before you will be considered for admission to the program.

How long will it take for me to complete this degree?

If you register for an average of 17 credits each semester, you can complete the degree in two years. You must register for the summer session following your first year.

Are there any special requirements once I am admitted to this major?

You must meet the academic standards of progress outlined at left to stay in the program.

Where should I direct specific questions about this program?

Contact Professor Larkin, Department Chair, at 732.906.2581.

DEGREE PROGRAM

Below are required courses and recommended course groupings and sequences for program completion.
Courses may have prerequisites and corequisite requirements. Check course descriptions for details.
The Program in Medical Laboratory Technology is accredited by the National Accrediting Agency for Clinical Laboratory Science (NAACLS)

Courses		Credits	Requisites
Semester I			
BIO 119	BIOLOGY FOR LAB TECHNOLOGY I [1]	4	Appropriate score on the College Placement Test or MAT 013 and one year high school laboratory science or BIO 010 or CHM 010
CHM117	CHEMISTRY I [1]	4	MAT 013 or appropriate score on the College Placement Test and one year of high school laboratory science or departmental approval.
ENG121	ENGLISH COMPOSITION I	3	A passing score on the writing portion of the College's Placement Test or a grade of 'C' or better in ENG 010; completion of RDG 009 with a 'C' or better or a score on the reading portion of the College Placement Test that exempts the students from RDG 009.
MAT107	MATHEMATICS I [2]	3	Appropriate score on the College Placement Test, MAT 013, MAT 013A/MAT 013B, or departmental approval.
MED101	INTRODUCTION TO MEDICAL LABORATORY I	2	Admission to the Medical Laboratory Technology program required or departmental approval. MED 101 is only offered in the fall.
Semester II			
BIO120	BIOLOGY FOR LAB TECHNOLOGY II [1]	4	BIO 119
CHM118	CHEMISTRY II [1]	4	CHM 117
ENG122	ENGLISH COMPOSITION II	3	A grade of 'C' or better in ENG121 and a passing score on the reading portion of the College Placement Test or a grade of 'C' or better in ENG121 and a grade of 'C' or better in RGD 011
MAT108	MATHEMATICS II [2]	3	MAT 107
MED102	INTRODUCTION TO MEDICAL LABORATORY II	3	BIO 119, CHM 117, ENG 121, MAT 107, MED 101 MED. MED 102 is only offered in the spring.
PSY123	INTRODUCTION TO PSYCHOLOGY	3	
Summer			
MED210	MEDICAL LABORATORY TECHNOLOGY I [3]	6	BIO 120, CHM 118, ENG 122, MAT 108, MED 102, and permission of the Division of Mathematics, Science and Health Technologies. MED 210 is only offered in the summer
Semester III			
BIO211	PRINCIPLES OF MICROBIOLOGY [4]	4	One year of high school laboratory biology or BIO 010 and one year of high school laboratory chemistry or CHM 010. Also appropriate score on the College Placement Test or MAT 013.
CHM201	PRINCIPLES OF ORGANIC CHEMISTRY	4	CHM 118 or equivalent
MED211	MEDICAL LABORATORY TECHNOLOGY II [5]	8	MED 210. MED 211 is only offered in the fall
____ ____	PHYSICAL/HEALTH EDUCATION	1-3	
Semester IV			
CHM202	BIOCHEMISTRY	4	CHM 201
MED212	MEDICAL LABORATORY TECHNOLOGY III [5]	8	MED 211, BIO 211 MED 212 is only offered in the
____ ____	GENERAL EDUCATION HUMANITIES (GE HUM)	3	
	Total Credits:	***74-76***	

Nursing

DIVISION OF SCIENCE, MATHEMATICS & HEALTH TECHNOLOGIES (SCMHT)

JOINT PROGRAM WITH THE UNIVERSITY OF MEDICINE AND DENTISTRY OF NEW JERSEY SCHOOL OF NURSING DEPARTMENT

Associate in Science (A.S.) Degree

If I major in Nursing, can I transfer to a four-year college or university?

The courses you take can be applied to the Bachelor of Science Degree. The College has established an articulation agreement with the University of Medicine and Dentistry of New Jersey to facilitate transfer into UMDNJ's program with Ramapo College of New Jersey and the New Jersey Institute of Technology.

If I major in Nursing, what degree can I earn?

The Associate in Science Degree which prepares you for entry-level positions in nursing and to take the National Council Licensure Examination for Registered Nurses (NCLEXÆ-RN). This program has full accreditation by the New Jersey Board of Nursing and The National League for Nursing (NLN).

What does joint program mean?

The Joint Nursing Program is offered collaboratively by the University of Medicine and Dentistry of New Jersey (UMDNJ) and Middlesex County College. All courses are offered on the campus of MCC. The general education courses are taught by the MCC faculty and the nursing courses are taught by the UMDNJ nursing faculty.

Are there any special requirements I must satisfy before I start taking courses in my major?

Algebra I must be verified with a passing score on the College's placement test, math SAT score of 500 or within the last 5 years or college level math You must be a New Jersey resident and have a "C" or better in high school laboratory biology and laboratory Chemistry. If you have previous college credit within the last 5 years you must have a GPA of 2.0 or higher to be considered. When you apply, you must take the National League for Nursing RN Preentrance Exam. As a result of your performance on the College's placement test, you may need developmental coursework. All developmental coursework must be completed before you will be considered for admission to the program.

How long will it take for me to complete this degree?

If you register for an average of 17 credits each semester, you can complete the degree in two years. If you have health care experience as an LPN, and are highly motivated, you may obtain credit for previously acquired nursing knowledge and skills by taking advantage of the Bridge Option. You must pass a written test and a clinical performance evaluation in order to receive credit for nursing courses.

Are there any special requirements once I am admitted to this major?

You must maintain a GPA of 2.0 or higher and meet the academic standards of progress outlined at right to stay in the program.

Are there additional requirements after graduation to be eligible for licensure?

The New Jersey State Board of Nursing requires that an applicant for licensure as a registered nurse must submit to the Board evidence in such form as the Board may prescribe that the applicant is of good moral character, is not a habitual user of drugs and has never been convicted or has not pleaded nolo contendere, non vult contendere or non vult to an indictment, information or complaint alleging a violation of any Federal or State law relating to narcotic drugs. Application for licensure may be denied by the Board if violations exist. Application for the Board of Nursing also may deny licensure if an applicant has charges pending or has ever been convicted of a felony or misdemeanor and/or been found guilty of professional misconduct or negligence. These matters should be cleared with the New Jersey Board of Nursing before applying for admission to the Joint Nursing Program.

Where should I direct specific questions about this program?

Contact Dawn Kozlowski, PhD, RN - Assistant Dean UMDNJ-MCC Joint ASN Program at 732.906.4660 or email Dawn_Kozlowski@middlesexcc.edu

DEGREE PROGRAM

Below are required courses and recommended course groupings and sequences for program completion. Courses may have prerequisites and corequisite requirements. Check course descriptions for details.
Joint Program with the University of Medicine and Dentistry of New Jersey (UMDNJ) School of Nursing

Courses		Credits	Requisites / Comments
Semester I			
BIO 111	HUMAN ANATOMY & PHYSIOLOGY I	4	One year of high school laboratory biology or BIO 010 and one year of high school laboratory chemistry or CHM 010 and appropriate score on the College Placement Test or MAT 013
ENG 121	ENGLISH COMPOSITION I	3	A passing score on the writing portion of the College's Placement Test or a grade of "C" or better in ENG 010; completion of RDG 009 with a "C" or better or a score on the reading portion of the College Placement Test that exempts the students from RDG 009
PSY 123	INTRODUCTORY PSYCHOLOGY	3	
NRS 111	FOUNDATIONS OF NURSING	6	Admission into the nursing program. American Heart CPR Certification; Co-requisites:† BIO 111, NRS 112, ENG 121, PSY 123
NRS 112	PRINCIPLES AND PRACTICE OF HEALTH PROMOTION	3	Acceptance into a health technologies curriculum or permission of the Dean of Health Technologies and the nursing faculty administrator.† Co-requisites: NRS 111 for nursing students, BIO 111, ENG 121
Semester II			
BIO 112	HUMAN ANATOMY & PHYSIOLOGY II	4	BIO 111
CSC 107	COMPUTERS IN HEALTH TECHNOLOGIES	1	Student may take other CSC courses with Department Chairperson's permission
ENG 122	ENGLISH COMPOSITION II	3	A grade of "C" or better in ENG 121 and a passing score on the reading portion of the College
or			
ENG 125	ENGLISH COMPOSITION II: WRITING ABOUT LITERATURE	3	Placement Test or a grade of "C" or better in ENG 121 and a grade of "C" or better in RDG 011
NRS 115	FAMILY HEALTH ACROSS THE LIFE SPAN	8	NRS 111, NRS 112, BIO 111, PSY 123; Corequisites: BIO 112
Semester III			
SOC ____	SOCIOLOGY ELECTIVE	3	
____ ____	GENERAL EDUCATION HUMANITIES ELECTIVE (GE HUM)	3	
BIO 211	PRINCIPLES OF MICROBIOLOGY	4	One year of high school laboratory biology or BIO 010 and one year of high school laboratory chemistry or CHM 010. Also appropriate score on the College Placement Test or MAT 013
NRS 211	NURSING OF ADULTS I	8	NRS 111, NRS 112, NRS 115, BIO 112; Corequisites: BIO 211
Semester IV			
____ ____	GENERAL EDUCATION HUMANITIES ELECTIVE (GE HUM)	3	
PED ____	PHYSICAL/HEALTH EDUCATION ELECTIVE	1-3	
HRI 212	NORMAL & CLINICAL NUTRITION	4	NRS 115, BIO112
NRS 212	NURSING OF ADULTS II	8	NRS 211, BIO 211; Corequisites: HRI 212
		Total Credits: 69-71	

(33 credits mandatory in nursing; 36-38 credits in general education)
Standards of Progress:

1. Maintain a cumulative grade point average of 2.0.
2. Must achieve a "C" grade or better in all nursing and science courses in order to progress in the curriculum.
3. An unsatisfactory grade (i.e. a grade less than "C") in NRS 111 results in dismissal from the Joint A.S. in Nursing Program. The student has the option to reapply to the Nursing Program.
4. If a student earns a grade of less then "C" in any science or nursing course other than NRS 111, the student may retake the course once and must achieve a grade of "C" or better; any subsequent failure(s) in a nursing or science course will result in a dismissal from the Nursing Program. The student has the option to reapply to the Nursing Program; This policy begins and applies to science courses taken in the semester the student receives written notification of acceptance into the Nursing Program;
5. Attendance and participation in all scheduled learning activities; and
6. Adherence to the policies of UMDNJ and MCC and their affiliating health care agencies.
7. UMDNJ-SN Students must complete their Academic Nursing Program within 5 years of beginning enrollment in their first nursing course.
8. Students who do not successfully complete the major nursing sequence under these conditions may not continue in the program.
9. Each nursing student prior to matriculation must undergo a complete history and physical examination and be in compliance with the UMDNJ Student Policy on Immunizations and Immune Status.
10. Students will be required to have a criminal background check performed with results deemed favorable by the University and/or a clinical facility as a condition of their admission or initial enrollment and/or continued enrollment. An offer of admission will not be final and enrollment not permitted until the completion of the background check with results deemed favorable by the University. Admission may be denied or rescinded, or enrollment terminated, or a visiting student refused based upon the results of the criminal background check. Students must sign a form authorizing the University of Medicine and Dentistry of New Jersey (UMDNJ) to have a criminal background check performed on them by a consumer reporting agency engaged by the University to conduct such checks and complete an Accepted Applicant Disclosure Form requiring information about previous convictions and/or guilty or no contest pleas to crimes, misdemeanors or other offenses (refer to UMDNJ Policy 00-01-20-95:00).

Office Administration

DIVISION OF BUSINESS, COMPUTER SCIENCE & ENGINEERING TECHNOLOGIES (BCSET)

OFFICE ADMINISTRATION DEPARTMENT

Associate in Applied Science (A.A.S.) Degree

Why major in Office Administration?

Technology continues to change the office environment, and office personnel at all levels must keep pace to maintain a professional edge. Job opportunities are available part-time while attending Middlesex and full time upon graduation. As a graduate of this program, you can play a strategic role in helping an organization run smoothly. As a senior or graduate, you are eligible to take the Certified Professional Secretary Examination (CPS) given by the International Association of Administrative Professionals (IAAP).

If I major in Office Administration, what degree can I earn?

You have three choices with this major. You can earn the Associate in Applied Science Degree, the Certificate of Achievement, or the Business Software Applications Technical Certificate, all of which prepare you to become an integral member of a professional office team.

If I major in Office Administration, can I transfer to a four-year college or university?

Many colleges and universities will apply the courses you have taken for your degree towards a bachelor's degree.

What will I learn if I study Office Administration?

You acquire a background in business and general education, enhanced by the development of high-level technological and organizational skills including decision making, time management, teamwork, and setting priorities as well as the ability to use a variety of software packages. Through cooperative work experiences, you apply skills and classroom theory to on-the-job situations.

Are there any requirements I must satisfy before I start taking courses in my major?

Algebra I is a prerequisite for all majors. Competency must be verified with a passing score on the College's placement test. Keyboarding skill is required.

How long will it take for me to complete this degree?

If you do not need to take developmental coursework, and you register for an average of 17 credits each semester, you can complete the degree in two years. You can complete the certificate program in one year if you register for one-half of the required credits each semester. You can shorten the amount of time by taking courses in the summer and winter sessions or by taking Credit-By-Exam.
Note: Not all OAD courses are offered every semester both day and evening. Please call the Department Chair at (732) 906-2578 to discuss course offerings for future semesters.

If you have been working as an Office Professional, you may have acquired some of the skills needed for the degree.

Contact Professor Pam, Department Chair, at (732) 906-2578.

DEGREE PROGRAM

Below are required courses and recommended course groupings and sequences for program completion. Courses may have prerequisites and corequisite requirements. Check course descriptions for details.

Courses		Credits	Requisites/Comments
Semester I			
BUS 101	BUSINESS ORGANIZATION AND MANAGEMENT	3	
ENG 121	ENGLISH COMPOSITION I	3	A passing score on the writing portion of the College's Placement Test or a grade of "C" or better in ENG 010; completion of RDG 009 with a "C" or better or a score on the reading portion of the College's Placement Test that exempts the students from RDG 009
OAD 101	DOCUMENT PROCESSING I	3	Keyboarding experience is necessary to enroll in this class. Credit-by-Exam is available for this course. For additional information, contact the Department Chairperson.
OAD 122	INFORMATION PROCESSING I	3	Corequisite: OAD 101
____ ____	PHYSICAL/HEALTH ED ELECTIVE	1-3	
____ ____	GENERAL EDUCATION MATHEMATICS REQUIREMENT (GE MAT)	3	
Semester II			
OAD 102	DOCUMENT PROCESSING II	3	OAD 101 or permission of Department Chair. Credit-by-Exam is available for this course. For additional information contact the Department Chairperson
OAD 107	TRANSCRIPTION FOR BUSINESS	3	
OAD 123	INFORMATION PROCESSING II	3	OAD 122
ACC 101	FINANCIAL ACCOUNTING	4	
ENG 122	ENGLISH COMPOSITION II	3	A grade of "C" or better in ENG 121 and a passing score on the reading portion of the College's Placement Test
or			
ENG 125	ENGLISH COMPOSITION II: WRITING ABOUT LITERATURE	3	or a grade of "C" or better in ENG 121 and a grade of "C" or better in RDG 011.
Semester III			
OAD 207	ADVANCED TRANSCRIPTION FOR BUSINESS	3	OAD 107
OAD 210	RECORDS MANAGEMENT	3	
OAD 211	CONTEMPORARY OFFICE PROCEDURES	3	OAD 102, OAD 107, OAD 123 OR Permission of Department Chairperson
OAD 223	INTEGRATED SOFTWARE APPLICATIONS	3	OAD 102 & OAD 123 OR OAD 110, OAD113, OAD 114, & OAD 116 or Permission of Department Chairperson
____ ____	GENERAL EDUCATION SCIENCE ELECTIVE (GE SCI)	3	
____ ____	GENERAL EDUCATION HUMANITIES ELECTIVE (GE HUM)	3	
Semester IV			
OAD 224	OFFICE PROJECTS	3	OAD 223
OAD 213	ADMINISTRATIVE OFFICE MANAGEMENT	3	OAD 211
OAD 208	OFFICE ADMINISTRATION COOPERATIVE WORK EXPERIENCE	3	OAD 211& a 2.0 GPA in Office Administration courses or Permission of Department Chairperson
____ ____	GENERAL EDUCATION ELECTIVE	3	
____ ____	GENERAL EDUCATION SOCIAL SCIENCE ELECTIVE (GE SS)	3	

Total Credits: 65/67

CERTIFICATE OF ACHIEVEMENT

Below are required courses and recommended course groupings and sequences for program completion.

Courses		Credits	Requisites/Comments
OAD 101	DOCUMENT PROCESSING I	3	Keyboarding experience is necessary to enroll in this course. Credit-by-exam is available. For additional information contact the Department Chairperson
OAD 102	DOCUMENT PROCESSING II	3	OAD 101. Credit-by-exam is available. For additional information contact the Department Chairperson
OAD 107	TRANSCRIPTION FOR BUSINESS	3	
OAD 122	INFORMATION PROCESSING I	3	Corequisite OAD 101
OAD 123	INFORMATION PROCESSING II	3	OAD 122
OAD 211	CONTEMPORARY OFFICE PROCEDURES	3	OAD 102, OAD 107, PAD 123 OR Permission of Department Chairperson
OAD 223	INTEGRATED SOFTWARE APPLICATIONS	3	OAD 102 & OAD 123 OR OAD 110, OAD 113, OAD 114 & OAD OAD 116 OR Permission of Department Chairperson
OAD 224	OFFICE PROJECTS	3	OAD 223
ENG 121	ENGLISH I	3	A passing score on the writing portion of the College's Placement Test or a grade of "C" or better in ENG 010; completion of RDG 009 with a "C" or better or a score on the reading portion of the College's Placement Test that exempts the students from RDG 009
____ ____	GENERAL EDUCATION MATHEMATICS ELECTIVE (GE MAT)	3	
____ ____	GENERAL EDUCATION ELECTIVE	3	

TOTAL CREDITS 33

Paralegal Studies

DIVISION OF BUSINESS, COMPUTER SCIENCE & ENGINEERING TECHNOLOGIES (BCSET)

ACCOUNTING AND LEGAL STUDIES DEPARTMENT

Associate in Applied Science (A.A.S.) Degree

Why major in Paralegal Studies?

As a Paralegal, you are a trained specialist, who, under the supervision of an attorney, performs a wide variety of legal tasks. These tasks may include legal research, law office management and preparation of legal documents. Only an attorney may provide legal services directly to the public. The US and NJ Departments of Labor rank Paralegal as one of the fastest growing careers.

If I major in Paralegal Studies, what degree can I earn?

You have two choices with this major, which is also known as Legal Assistant. You can earn the Associate in Applied Science which prepares you for employment in law offices, corporate legal departments, legal services corporations, state government offices, title companies and federal and state courts. If you have already earned an A.A., A.S., A.A.S., B.A. or B.S. degree, you can earn the Certificate of Achievement. If you have one of the fastest growing careers one of these degrees plus three years of full-time paralegal work experience, you can earn the Technical Certificate.

If I major in Paralegal Studies, can I transfer to a four-year college or university?

Many colleges and universities will apply the courses you have taken towards a bachelor's degree.

Are there any requirements I must satisfy before I start taking courses in my major?

You must demonstrate proficiency in keyboarding or typewriting by either completing OAD 010, Keyboarding for Computers, or by appropriate waiver of the Office Administration Department Chairperson. You must either have a high school diploma or have passed an equivalency examination. Algebra I is a prerequisite for all majors. Algebra I competency must be verified with a passing score on the College's placement test.

How long will it take for me to complete this degree?

If you do not need developmental coursework, and you register for an average of 17 credits each semester, you can complete the degree in two years. If you do not need developmental coursework, you can complete the certificate in 3 semesters. You can shorten the amount of time by taking courses in the summer and winter sessions.

What are the objectives of this program?

1. Provide a strong, flexible program for the quality education of the occupationally competent paralegal.
2. Provide a paralegal education program that leads to the opportunity for employment of its graduates by a wide range of employers.
3. Provide paralegals with a well-rounded, balanced education founded on a beneficial mix of general education, theory, and practical courses, stressing understanding and reasoning rather than rote learning of facts.
4. Support the general principle of ethical legal practice, professional responsibility and the prohibitions against the unauthorized practice of law by non-lawyers.
5. Provide an educational program that is responsive to the needs of the State of New Jersey and contributes to the advancement of legal professionals.
6. Provide a program that instills respect for the legal profession and its foundations, institutions, and quest for justice.
7. Maintain equality of opportunity in the educational program without discrimination or segregation on the grounds of race, color, religion, national origin or sex. Our overall objective is to provide quality education for paralegals so that they might assist the legal profession in rendering more personal, economical services to a greater number of persons.

How are these objectives met?

1. Through flexible curriculum planning which stresses a balance among general education courses, law related courses, legal specialty courses, and electives.
2. Through continual assessment of the need for the program as evidenced by the legal profession's response to regular surveys and the ability of the program to place graduates.
3. By keeping the enrollment of the program to a size which will insure a good student-teacher ratio and give graduates a good chance for paralegal employment. This is determined in the same method as number 2 above.
4. By providing the program with a well qualified full-time director with the necessary time to devote to the extensive administrative duties of the position.

What will I be able to do when I complete the program?

1. Use the law library, including encyclopedias, reporter systems, digests, and practice manuals, including updating sources; utilize computer-assisted research including WESTLAW, reporter systems, statutes, administrative codes, updating sources and extended databases.
2. Understand and use rules governing courts and basic litigation procedures including telephone technique, client interviews, complaints, interrogatories, and motions.
3. Use forms and filing procedures relevant to typical legal proceedings.
4. Use forms and filing procedures in real and personal property transactions, including Real Estate Settlement Procedures Act.

NOTE: For students matriculating in this program, degree credit will not ordinarily be given for any course designated PLS which was completed more than six years prior to completion of the degree program.

Where should I direct specific questions about this program?

Contact Professor Ellison, Department Chair
Professor Volk, Assistant Chair

DEGREE PROGRAM

Below are required courses and recommended course groupings and sequences for program completion. Courses may have prerequisite and corequisite requirements. Check course descriptions for details. The program is approved by the American Bar Association and the College is a member of the American Association for Paralegal Education.

Courses		Credits	Requisites / Comments
Semester I			
BUS 107	COMPUTER APPLICATIONS FOR BUSINESS	3	
ENG 121	ENGLISH COMPOSITION I	3	A passing score on the writing portion of the College's Placement Test or a grade of "C" or better in ENG 010; completion of RDG 009 with a "C" or better or a score on the reading portion of the College Placement Test that exempts the students from RDG 009
PLS 100	INTRODUCTION TO THE PARALEGAL PROFESSION	2	
PLS 101	LEGAL RESEARCH	3	Prerequisites or corequisites: ENG 121 and PLS 100
PLS113	LEGAL WRITING	2	Prerequisites or corequisites: ENG 121, PLS 100 and PLS 101
____ ____	GENERAL EDUCATION SOCIAL SCIENCE ELECTIVE (GE SS)	3	
Semester II			
PLS 121	ADVANCED LEGAL RESEARCH	2	Prerequisites: PLS 100, PLS 101, PLS 113 and BUS 107
ENG 122 or ENG 125	ENGLISH COMPOSITION II or ENGLISH COMPOSITION II: WRITING ABOUT LITERATURE	3	A grade of "C" or better in ENG 121 and a passing score on the reading portion of the College Placement Test or a grade of "C" or better in ENG 121 and a grade of "C" or better in RDG 011
PLS 104	PROPERTY TRANSACTIONS	4	PLS 100, PLS 101, PLS 113.† Prerequisite or Corequisite PLS 121
PLS 110	LITIGATION PROCEDURE	4	PLS 100, PLS 101, PLS 113. Prerequisite or Corequisite PLS 121
PLS 111	CONTRACTS & THE UNIFORM COMMERCIAL CODE	3	PLS 100, PLS 101, PLS 113. Prerequisite or Corequisite PLS 121
Semester III			
PLS 108	TORTS	3	PLS 100, PLS 101, PLS 113. Prerequisite or Corequisite PLS 121
PLS 112	BUSINESS ORGANIZATIONS AND GOVERNMENT REGULATION	3	PLS 100, PLS 101, PLS 111, PLS 113 and PLS 121
____ ____	PARALEGAL ELECTIVES: One of the following is required.		
PLS 105	FAMILY LAW	3	PLS 100, PLS 101, PLS 110, PLS 113, PLS 121
PLS 106	WILLS AND ESTATE ADMINISTRATION	3	PLS 100, PLS 101, PLS 113. Prerequisite or
PLS 107	LAW OFFICE MANAGEMENT	3	Corequisite PLS 121 and PLS 104, or PLS 108
PLS 109	CRIMINAL LAW AND PROCEDURE	3	or PLS 109 and permission of the Department
PLS 208	PARALEGAL FIELD EXPERIENCE	3	Chairman or Program Director.
____ ____	GENERAL EDUCATION HUMANITIES ELECTIVE (GE HUM)	3	
____ ____	Physical/Health Ed Elective	1,3	
____ ____	Mathematics Elective	3,4	BUS 115 will satisfy the math requirements. Students considering transfer to a baccalaureate program should consult an academic advisor as to other math choices.
Semester IV			
ECO 201	ECONOMICS I	3	A passing score on the algebra portion on the College Placement Test or MAT 013
PLS 280	SENIOR SEMINAR FOR PARALEGALS	3	PLS 100, PLS 101, PLS 104, PLS 108, PLS 110, PLS 111, PLS 112, PLS 113 and PLS 121
____ ____	PARALEGAL ELECTIVES: One of the following is required.		
PLS 105	FAMILY LAW	3	PLS 100, PLS 101, PLS 113. Prerequisite or
PLS 106	WILLS AND ESTATE ADMINISTRATION	3	Corequisite PLS 121, PLS 100, PLS 101, PLS 110,
PLS 107	LAW OFFICE MANAGEMENT	3	PLS 113, PLS 121 and PLS 104, or PLS 108 or
PLS 109	CRIMINAL LAW AND PROCEDURE	3	PLS 109 and permission of the Department
PLS-208	PARALEGAL FIELD EXPERIENCE	3	Chairman or Program Director.
____ ____	GENERAL EDUCATION HUMANITIES (GE HUM) or SOCIAL SCIENCE (GE SS)	3	
____ ____	GENERAL EDUCATION SCIENCE ELECTIVE	3,4	
	Total Credits:	***63-67***	

CERTIFICATE OF ACHIEVEMENT

The Certificate Program in Paralegal Studies is designed for the person who already has a college degree - Associates, Bachelors or higher. The Program is approved by the American Bar Association and the College is a member of the American Association for Paralegal Education.*

** Holders of A.S. and A.A.S. degrees must show that they have taken 18 credits of general education†† courses.† Holder of A.A. degrees are presumed to have satisfied the general education requirement.*

Courses		Credits	Requisites / Comments
ENG 121	ENGLISH COMPOSTION I	3	A passing score on the writing portion of the College's Placement Test or a grade of "C" or better in ENG 010; completion of RDG 009 with a "C" or better or a score on the reading portion of the College Placement Test that exempts the students from RDG 009. This course may be satisfied by acceptable transfer credits or by Credit by Examination or CLEP credits.
ENG 122 or	ENGLISH COMPOSTION II	3	This course may be satisfied by acceptable transfer credits or by Credit by Examination or CLEP credits.
ENG 125	ENGLISH COMPOSITION II: WRITING ABOUT LITERATURE	3	
PLS 100	INTRODUCTION TO THE PARALEGAL PROFESSION	2	
PLS 101	LEGAL RESEARCH	3	Prerequisites or Corequisites: ENG 121 and PLS 100
PLS 113	LEGAL WRITING	2	Prerequisites or Corequisites: ENG 121 PLS 100 and PLS 101
PLS 104	PROPERTY TRANSACTIONS	4	PLS 100, PLS 101, PLS 113. Prerequisite or Corequisite PLS 121
PLS 108	TORTS	3	PLS 100, PLS 101, PLS 113. Prerequisite or Corequisite PLS 121
PLS 110	LITIGATION PROCEDURE	4	PLS 100, PLS 101, PLS 113. Prerequisite or Corequisite PLS 121
PLS 111	CONTRACTS AND THE UNIFORM COMMERCIAL CODE	3	PLS 100, PLS 101, PLS 113. Prerequisite or Corequisite PLS 121
PLS 112	BUSINESS ORGANIZATIONS AND GOVERNMENT REGULATIONS	3	PLS 100, PLS 101, PLS 111, PLS 113. Prerequisite or Corequisite PLS 121
PLS 121	ADVANCED LEGAL RESEARCH	2	PLS 100, PLS 101, PLS 113
PLS 280	SENIOR SEMINAR FOR PARALEGALS	3	PLS 100, PLS101, PLS104, PLS 108, PLS 110, PLS 111, PLS 112, PLS 113 and PLS 121
		Total Credits: 35	
	PARALEGAL ELECTIVES: You may, but are not required to, select one or more of the following electives:		
PLS 105	FAMILY LAW	3	Prerequisites: PLS 100, PLS 101, PLS 113 and as a prerequisite or corequisite PLS 121.
PLS 106	WILLS AND ESTATE ADMINISTRATION	3	
PLS 107	LAW OFFICE MANAGEMENT	3	Prerequisites: PLS 100, PLS 101, PLS 110, PLS 113,
PLS			
PLS 109	CRIMINAL LAW AND PROCEDURE	3	121 and PLS 104, or PLS 108 or PLS 109 and permission
PLS 208	PARALEGAL FIELD EXPERIENCE	3	of the department chairman or program director.

TECHNICAL CERTIFICATE

The Technical Certificate Program in Paralegal Studies is designed for the person who already had a college degree - Associates, Bachelors or higher and three years full time (or part time equivalent) work experience required. The Program is approved by the American Bar Association and the College is a member of the American Association for Paralegal Education.*

** Holders of A.S. and A.A.S. degrees must show that they have taken 18 credits of general education courses. Holder of A.A. degrees are presumed to have satisfied the general education requirement.*

Courses		Credits	Requisites
PLS 100	INTRODUCTION TO THE PARALEGAL PROFESSION	2	
PLS 101	LEGAL RESEARCH	3	Prerequisite or Corequisite: PLS 100
PLS 113	LEGAL WRITING	2	Prerequisite or Corequisite: PLS 100 and PLS 101
PLS 111	CONTRACTS AND THE UNIFORM COMMERCIAL CODE	3	PLS 100, PLS 101, PLS 113. Prerequisite or Corequisite PLS 121
PLS 121	ADVANCED LEGAL RESEARCH	2	PLS 100, PLS 101, PLS 113
PLS 280	SENIOR SEMINAR FOR PARALEGALS	3	PLS 100, PLS 101, PLS 111, PLS 113, PLS 121 and one Paralegal Elective
____	ELECTIVES: Choose one of the following electives.		
PLS 104	PROPERTY TRANSACTIONS	4	PLS 100, PLS 101, PLS 113. Prerequisite or Corequisite PLS 121
PLS 105	FAMILY LAW	3	
PLS 106	WILLS AND ESTATE ADMINISTRATION	3	
PLS 107	LAW OFFICE MANAGEMENT	3	
PLS 108	TORTS	3	
PLS 109	CRIMINAL LAW AND PROCEDURE	3	
PLS 110	LITIGATION PROCEDURE	4	
PLS 112	BUSINESS ORGANIZATIONS AND GOVERNMENT REGULATIONS	3	PLS 100, PLS 101, PLS 111, PLS 113. Prerequisite or Corequisite PLS 121
		Total Credits: 18-19	

Pharmacy Assistant

DIVISION OF SCIENCE, MATHEMATICS & HEALTH TECHNOLOGIES (SCMHT)

BIOLOGY DEPARTMENT

Why earn a Pharmacy Assistant Certificate?

As a pharmacy assistant, you can assist in various technical activities in a pharmacy under the supervision of a licensed pharmacist. You can maintain patient records; set-up, package and label medication doses; fill and dispense routine orders for stock supplies in patient care areas; maintain drug supply inventories and mix drugs with injectable fluids.

If I major in Pharmacy Assistant Certificate program, what do I earn?

The Certificate of Achievement which prepares you to enter the field as supportive personnel in hospitals or community pharmacies.

If I major in Pharmacy Assistant Certificate, can I transfer to an upper division college or university?

Many upper division colleges and universities will apply some of the courses you have taken towards a bachelor's degree program in science or pharmacy. See Department chair for specific details. Students specifically seeking to major in pharmacy should consider Chemistry Option - Science Transfer.

Are there any requirements I must satisfy before I start taking courses in my major?

Algebra I is a prerequisite for all majors. Algebra I competency must be verified with a passing score on the College's placement test. You must also have one year of high school laboratory chemistry with a grade of "C" or better.

How long will it take for me to complete this certificate?

If you do not need developmental coursework, and you register for an average of 17 credits each semester, you can complete the certificate in one year. You can shorten the amount of time by taking courses in the summer and winter sessions.

Where should I direct specific questions about this program?

Contact Professor Przygoda, Department Chair, at 732.906.2592.

CERTIFICATE PROGRAM

Below are required courses and recommended course groupings and sequences for program completion. Courses may have prerequisites and corequisite requirements. Check course descriptions for details.

Courses		Credits	Requisites/Comments
Semester I			
BIO 106	HUMAN BIOLOGY, BIOMEDICAL ISSUES AND SOCIETY	4	Appropriate score on the College Placement test or MAT 013 or MAT 013A/MAT 013B and one year high school laboratory science or a 3 credit college level science course with a grade of "C" or better
CHM 107	PRINCIPLES OF CHEMISTRY	4	One year of high school laboratory chemistry or CHM 010. You may substitute CHM 117 or CHM 123
CSC 107	COMPUTERS IN HEALTH TECHNOLOGIES	1	You may substitute a higher level computer science course
ENG 121	ENGLISH COMPOSITION I	3	A passing score on the writing portion of the College's Placement Test or a grade of "C" or better in ENG 010; completion of RDG 009 with a "C" or better or a score on the reading portion of the College's Placement Test that exempts the students from RDG 009
MAT 107	MATHEMATICS I	3	Appropriate score on the College Placement Test, Mat 013, MAT 013A/MAT 013B, or departmental approval. You may substitute MAT 129-131 for MAT 107-108
Semester II			
ENG 122 OR ENG 125	ENGLISH COMPOSITION II ENGLISH COMPOSITION II: WRITING ABOUT LITERATURE	3	A grade of "C" or better in ENG 121 and a passing score on the reading portion of the College's Placement Test or a grade of "C" or better in ENG 121 and a grade of "C" or better in RDG 011 You may substitute ENG 125
HED 150	CONTEMPORARY HEALTH ISSUES	3	
HIS 130	HEALTH CARE AND MEDICINE IN THE WESTERN WORLD	3	
MAT 108	MATHEMATICS II	3	Mat 107
PHA 101	INTRODUCTION TO PHARMACY	4	CHM 107 and appropriate score on the College Placement Test or MAT 013. You may substitute MAT 013A plus MAT 013B
PSY 123	INTRODUCTORY PSYCHOLOGY	3	
	Total Credits:	***35***	

Physics

DIVISION OF SCIENCE, MATHEMATICS & HEALTH TECHNOLOGIES (SCMHT)

CHEMISTRY/PHYSICS DEPARTMENT

Associate in Science (A.S.) Degree

Why major in Physics Transfer?

This program parallels the first two years of baccalaureate degree programs in physics related fields. Your major prepares you upon graduation, to transfer to a four-year college or university to pursue studies in physics, applied Physics, computational Physics, astronomy, astrophysics, geology, meteorology, material sciences, and other related fields.

If I major in Science Transfer, what degree can I earn?

The Associate in Science Degree which prepares you to transfer to upper division colleges.

What will I learn if I study Science Transfer?

You concentrate on the theoretical and applied sciences, and mathematics. Your studies prepare you to meet the challenges of advanced study in professional careers.

Are there any requirements I must satisfy before I start taking courses in my major?

You must have a grade of "C" or better in high school algebra II, geometry, advanced algebra and trigonometry, laboratory chemistry and laboratory physics. You must also pass the College's placement test.

How long will it take for me to complete this degree?

If you do not need developmental coursework, and you register for an average of 16 credits each semester, you can complete the degree in two years. You can shorten the amount of time by taking courses in the summer and winter sessions.

Where should I direct specific questions about this program?

Contact Dr. Trainor, Department Chair, at 732.906.2587 .

PHYSICS OPTION - SCIENCE TRANSFER DEGREE

Below are required courses and recommended course groupings and sequences for program completion.

Courses		Credits	Requisites/Comments
Semester I			
CHM 123	GENERAL CHEMISTRY I	4	MAT 014 or appropriate score on the College Placement Test and one year of high school chemistry or CHM 010
ENG 121	ENGLISH COMPOSITION I	3	A passing score on the writing portion of the College's Placement Test or a grade of "C" or better in ENG 010; completion of RDG 009 with a "C" or better or a score on the reading portion of the College Placement Test that exempts the students from RDG 009
MAT 131	ANALYTICAL GEOMETRY AND CALCULUS I	4	MAT 129, or MAT 129A/129B, or appropriate score on the College Placement Test and/or satisfactory score on the Diagnostic Examination, or departmental approval
___ ___	GENERAL EDUCATION SOCIAL SCIENCE ELECTIVE (GE SS)	3	
___ ___	PHYSICAL/HEALTH ED ELECTIVE	1-3	
Semester II			
CHM 124	GENERAL CHEMISTRY II	4	CHM 123
MAT 132	ANALYTICAL GEOMETRY AND CALCULUS II	4	MAT 131, MAT 131A/131B, or equivalent
PHY 131	ANALYTICAL PHYSICS I	4	One year of high school laboratory physics, MAT 131 or equivalent
___ ___	GENERAL EDUCATION SOCIAL SCIENCE ELECTIVE (GE SS)	3	
ENG 122	ENGLISH COMPOSITION II	3	A grade of "C" or better in ENG 121 and a passing score on the reading portion of the College Placement Test or a grade of "C" or better in ENG 121 and a grade of "C" or better in RDG 011
Semester III			
MAT 210	LINEAR ALGEBRA	4	MAT 132
MAT 233	ANALYTICAL GEOMETRY AND CALCULUS III	4	MAT 132 or equivalent
PHY 132	ANALYTICAL PHYSICS II	4	PHY 131. MAT 132 or equivalent
___ ___	GENERAL EDUCATION HUMANITIES ELECTIVE (GE HUM)	3	
Semester IV			
MAT 234	DIFFERENTIAL EQUATIONS	4	MAT 233 or approval of Department Chairperson of Mathematics
PHY 231	ANALYTICAL PHYSICS III	4	PHY 132, MAT 132
	COMPUTER SCIENCE ELECTIVE	3-4	CSC 105 or higher
	GENERAL EDUCATION HUMANITIES ELECTIVE (GE HUM)	3	
		Total Credits:	***62-65***

Psychosocial Rehabilitation and Treatment

DIVISION OF SCIENCE, MATHEMATICS & HEALTH TECHNOLOGIES (SCMHT)

JOINT PROGRAM WITH THE UNIVERSITY OF MEDICINE AND DENTISTRY OF NEW JERSEY PSYCHIATRIC REHABILITATION AND BEHAVIORAL HEALTH CARE DEPARTMENT

Associate in Science (A.S.) Degree

Why major in Psychosocial Rehabilitation and Treatment?

It is an exciting and innovative field in which service providers assist people in obtaining the skills, support and resources they will need to achieve success and satisfaction in their living, learning, working and social environments. The overall goals of this field are promotion of recovery, community integration, and improved quality of life for people coping with psychiatric disabilities.

If I major in Psychosocial Rehabilitation and Treatment, what degree can I earn?

The Associate in Science Degree that prepares you for a career assisting individuals with psychiatric disabilities in community based service settings. Program graduates can transfer all of their credits to the UMDNJ Bachelor of Science Degree Program in Psychiatric Rehabilitation & Psychology

What will I learn if I study Psychosocial Rehabilitation and Treatment?

Courses focus on imparting the knowledge, practical skills and attitudes needed to provide support and services to people with psychiatric disabilities in a variety of community settings that provide social, vocational, residential and case management services.

Are there any requirements I must satisfy before I start taking courses in my major?

Algebra I is a prerequisite for all majors. Algebra I competency must be satisfied with a passing score on the College's placement test. You must have a "C" or better in one year of a high school laboratory science. As a result of your performance on the College's placement test, you may need developmental coursework. All developmental coursework must be completed before you will be considered for admission to the program. PSR majors need to complete 18 credits of general education and Introduction to Psychosocial Rehabilitation (PSR101) before beginning the professional phase of the program (PSR102 and beyond).

How long will it take for me to complete this degree?

The degree can be completed in 5 semesters. Part time study is also an option.

Are there any special requirements once I am admitted to this major?

You must meet the academic standards of progress outlined at right to stay in the program. You must meet with program director each semester prior to registration.

Where should I direct specific questions about this program?

Contact Professor Nora Barrett, Program Director, at 732.906-4177 or **barretnm@umdnj.edu**

DEGREE PROGRAM

Below are required courses and recommended course groupings and sequences for program completion. Courses may have prerequisites and corequisite requirements. Check course descriptions for details.

Courses		Credits	Requisites/Comments
Semester I			
ENG 121	ENGLISH COMPOSITION I	3	A passing score on the writing portion of the College's Placement Test or a grade of "C" or better in ENG 010; completion of RDG 009 with a "C" or better or a score on the reading portion of the College's Placement Test that exempts the students from RDG 009
CSC 107	COMPUTERS IN HEALTHCARE	1	
PSY 123	INTRODUCTION TO PSYCHOLOGY	3	
BIO 105	HEREDITY, EVOLUTION AND SOCIETY	4	Appropriate score on the College Placement Test or MAT 013 and one year high school laboratory science or a 3-credit college level science course with a grade of "C" or better.
PHI 123	ETHICS	3	
____ ____	PHYSICAL EDUCATION OR HEALTH ELECTIVE	1-3	
Semester II			
ENG 122 OR ENG 125	ENGLISH COMPOSITION II WRITING ABOUT LITERATURE	3	A grade of "C" or better in ENG 121 and a passing score on the reading portion of the College's Placement Test or a grade of "C" or better in ENG 121 and a grade of "C" or better in RDG 011
SOC 121	INTRODUCTION TO SOCIOLOGY	3	
PSY 235	ABNORMAL PSYCHOLOGY	3	PSY 123
PSR 101	INTRODUCTION TO PSYCHOSOCIAL REHABILITATION	3	
BIO 106	HUMAN BIOLOGY, BIOMEDICAL ISSUES AND SOCIETY	4	Appropriate score on the College Placement Test or MAT 013 and one year high school laboratory science or a 3-credit college-level science course with a grade of "C" or better
____ ____	GENERAL EDUCATION HUMANITIES ELECTIVE (GE HUM)	3	

NOTE: A minimum of 18 General Education credits and PSR 101 must be taken before entering the professional phase of the program (i.e. PSR 102 and beyond). Students in the professional phase of the program register through UMDNJ and pay the current UMDNJ undergraduate tuition rate and fees. Most PSR courses are offered on the UMDNJ Scotch Plains Campus.

Semester III Spring			
PSR 102	COMMUNICATION TECHNIQUES	3	PSR 101
PSR 103	GROUP DYNAMICS	3	PSR 101
PSR 104	CLINICAL PRINCIPLES IN PSYCHOSOCIAL REHABILITATION	3	PSR 101
Semester IV Fall			
PSR 207	COMMUNITY RESOURCE MANAGEMENT	3	Corequisite PSR 210
PSR 210	CLINICAL PRACTICUM IN PSR I	6	PSR 101, PSR 102, PSR 103, PSR 104
Semester V Spring			
PSR 209	EMERGING TOPICS IN PSYCHOSOCIAL REHABILITATION	3	Corequisite PSR 211
PSR 211	CLINICAL PRACTICUM IN PSR II	6	PSR 210
	Total Credits:	***61-63***	

Standards of Progress:

1. Must achieve a "C" or better in all PSR courses
2. May retake a PSR course only once and obtain a passing grade (i.e. "C" or better)

Radiography Education

DIVISION OF SCIENCE, MATHEMATICS & HEALTH TECHNOLOGIES (SCMHT)

RADIOGRAPHY EDUCATION DEPARTMENT

Associate in Applied Science (A.A.S.) Degree

The program in Radiography is fully accredited by the Joint Committee on Education in Radiologic Technology and the NJ DEP Radiologic Technology Board of Examiners

Why major in Radiography Education?

There is a national demand for individuals trained in this allied health discipline. Positions are available in hospitals, industry, private physicians', chiropractors' offices and clinics. Related jobs can be found in x-ray equipment, manufacturing firms and medical supply companies.

If I major in Radiography Education, what degree can I earn?

The Associate in Applied Science Degree. Graduates of this program qualify to take the American Registry of Radiologic Technologists "Board" examination for National Registration as well as New Jersey State Licensure.

What will I learn if I study Radiography Education?

Extensive study in radiographic principles provides you with comprehensive theoretical and practical knowledge and skills. Instruction takes place in well-equipped classrooms, small group study areas and a laboratory area containing two energized radiographic units with associated film processing area. Clinical practical experience is provided by rotations at our affiliated hospitals providing the "hands-on" experience necessary to perform the tasks of an entry-level radiographer. The curriculum also includes the general education and science courses required for the Associates in Applied Science degree.

Are there any requirements I must satisfy before I start taking courses in my major?

You must have a "C" or better in high school laboratory biology and laboratory chemistry. Algebra I is a prerequisite for all majors. Algebra I competency must be verified with a passing score on the College's placement test. As a result of your performance on the College's placement test, you may need developmental coursework. All developmental coursework must be completed before you will be considered for admission to the program.

How long will it take for me to complete this degree?

In accordance with NJ State law, this program runs for a minimum of 24 consecutive months. You must register for major coursework in the summer session for both years. If you register for an average of 16 credits each semester, you can complete the degree in a two-year period.

Are there any special requirements once I am admitted to this major?

You must meet the academic standards of progress outlined to progress through the curriculum. Students are also required to have completed CPR for health care providers prior to entering the clinical practice phase of the program.

Where should I direct specific questions about this program?

Contact Professor Snopek, Department Chair, at 732.906.2583 or **Albert_Snopek@middlesexcc.edu**

DEGREE PROGRAM- CAREER TRACK

Below are required courses and recommended course groupings and sequences for program completion. Courses may have prerequisites and corequisite requirements. Check course descriptions for details.

Courses		Credits	Requisites/ Comments
Semester I			
RAD 128	BASIC MEDICAL PRINCIPLES	4	
RAD 141	RADIOGRAPHIC POSITIONING, ANATOMY & PATHOLOGY I	2	
RAD 142	RADIOGRAPHIC POSITIONING LABORATORY I	1	
RAD 171	RADIOGRAPHIC IMAGING AND SCIENCE I	4	
RAD 190	CLINICAL ORIENTATION	1	Prerequisite(s): CPR certification for health care professionals
BIO 131	HUMAN STRUCTURE AND FUNCTION	4	Prerequisite(s): One year of high school laboratory biology or BIO 010 and one year of high school laboratory chemistry or CHM 010 and appropriate score on the College Placement Test or MAT 013
PSY 123	INTRODUCTORY PSYCHOLOGY	3	
Semester II			
RAD 139	RADIATION PROTECTION AND BIOLOGY	2	Prerequisite(s): RAD 128, RAD 141, RAD 142, RAD 171, RAD 190 Corequisites: RAD 143, RAD 144, RAD 172, RAD 210
RAD 143	RADIOGRAPHIC POSITIONING, ANATOMY & PATHOLOGY II	2	Prerequisite(s): RAD 128, RAD 141, RAD 142, RAD 171, RAD 190 Corequisites: RAD 139, RAD 144, RAD 172, RAD 210
RAD 144	RADIOGRAPHIC POSITIONING LABORATORY II	1	Prerequisite(s): RAD 128, RAD 141, RAD 142, RAD 171, RAD 190 Corequisites: RAD 139, RAD 144, RAD 172, RAD 210
RAD 172	RADIOGRAPHIC IMAGING AND SCIENCE II	2	Prerequisite(s): RAD 128, RAD 141, RAD 142, RAD 171, RAD 190 Corequisites: RAD 139, RAD 143, RAD 144, RAD 210
RAD 210	CLINICAL PRACTICUM I	2	Prerequisite(s): RAD 128, RAD 141, RAD 142, RAD 171, RAD 190 Corequisites: RAD 139, RAD 143, RAD 144, RAD 172
	GENERAL EDUCATION ELECTIVE	3	
	GENERAL EDUCATION ELECTIVE	3	
Summer Session			
RAD 145	RADIOGRAPHIC POSITIONING, ANATOMY & PATHOLOGY III	3	Prerequisite(s): RAD 139, RAD 143, RAD 144, RAD 172, RAD 210 Corequisites: RAD 146
RAD 146	RADIOGRAPHIC POSITIONING LABORATORY III	1	Prerequisite(s): RAD 139, RAD 143, RAD 144, RAD 172, RAD 210 Corequisites: RAD 145
RAD 220	CLINICAL PRACTICUM II	2	Prerequisite(s): RAD 145, RAD 146
Semester III			
RAD 247	RADIOGRAPHIC POSITIONING, ANATOMY & PATHOLOGY IV	2	Prerequisite(s): RAD 145, RAD 146, RAD 220 Corequisites: RAD 230, RAD 248, RAD 273
RAD 248	RADIOGRAPHIC POSITIONING LABORATORY IV	1	Prerequisite(s): RAD 145, RAD 146, RAD 220 Corequisites: RAD 230, RAD 247, RAD 273
RAD 275	RADIOGRAPHIC PHYSICS AND EQUIPMENT MAINTENANCE 3		Prerequisite(s): RAD 145, RAD 146, RAD 172, RAD 220 Corequisites: RAD 230, RAD 247, RAD 248
RAD 230	CLINICAL PRACTICUM III	2	Prerequisite(s): RAD 220 Corequisites: RAD 247, RAD 248, RAD 273
ENG 121	ENGLISH I	3	ENG 121 ENGLISH COMPOSITION I 3 A passing score on the writing portion of the College's Placement Test or a grade of "C" or better in ENG 010; completion of RDG 009 with a "C" or better or a score on the reading portion of the College's Placement Test that exempts the students from RDG 009
HUM -	HUMANITIES ELECTIVE	3	

Courses		Credits	Requisites/ Comments
Semester IV			
RAD 250	CLINICAL PRACTICUM IV	3	Prerequisite(s): RAD 230, RAD 247, RAD 248, RAD 273 Corequisites: RAD 256, RAD 285
RAD 256	RADIOGRAPHIC SEMINAR I	2	Prerequisite(s): RAD 230, RAD 247, RAD 248, RAD 273 Corequisites: RAD 250, RAD 285
RAD 285	ADVANCED RADIOGRAPHIC IMAGING	2	Prerequisite(s): RAD 230, RAD 247, RAD 248, RAD 273 Corequisites: RAD 250, RAD 256
CSC 107	COMPUTERS IN HEALTH TECHNOLOGIES	1	
ENG 122	ENGLISH II	3	Prerequisite(s): A grade of "C" or better in ENG 121 and a passing score on the reading portion of the College Placement Test or a grade of "C" or better in ENG 121 and a grade of "C" or better in RDG 011
PHYSICAL EDUCATION / HEALTH		1/3	
Summer Session			
RAD 260	CLINICAL PRACTICUM V	3	Prerequisite(s): RAD 250, RAD 256, RAD 285
RAD 257	RADIOGRAPHIC SEMINAR II	2	Prerequisite(s): RAD 256, RAD 260
		Total Credits: 71 - 73	

Standards of Progress:

1. Maintain a cumulative grade point average of 2.0.
2. Must achieve a "C" grade or better in all Radiography courses in order to progress through the curriculum.
3. Must achieve a "C" grade or better in all science courses to satisfy degree requirements.
4. Must complete the Radiography Education program in no fewer than two and no more than five consecutive years from the point of admission to the full time program track. Students who do not complete the major Radiography course under these conditions may not continue in the program.

DEGREE PROGRAM -TRANSFER TRACK

Courses		Credits	Requisites
Semester I			
RAD 128	BASIC MEDICAL PRINCIPLES	4	
RAD 141	RADIOGRAPHIC POSITIONING, ANATOMY & PATHOLOGY I	2	
RAD 142	RADIOGRAPHIC POSITIONING LABORATORY I	1	
RAD 171	RADIOGRAPHIC IMAGING & SCIENCE I	4	
RAD 190	CLINICAL ORIENTATION	1	Prerequisite(s): CPR certification for health care professionals
BIO 111	HUMAN ANATOMY & PHYSIOLOGY I	4	Prerequisite(s): One year of high school laboratory biology or BIO 010 and one year of high school laboratory chemistry or CHM 010 and appropriate score on the College Placement Test or MAT 013
PSY 123	INTRODUCTORY PSYCHOLOGY	3	
Semester II			
RAD 139	RADIATION PROTECTION AND BIOLOGY	2	Prerequisite(s): RAD 128, RAD 141, RAD 142, RAD 171, RAD 190 Corequisites: RAD 143, RAD 144, RAD 172, RAD 210
RAD 143	RADIOGRAPHIC POSITIONING, ANATOMY & PATHOLOGY II	2	Prerequisite(s): RAD 128, RAD 141, RAD 142, RAD 171, RAD 190 Corequisites: RAD 139, RAD 144, RAD 172, RAD 210
RAD 144	RADIOGRAPHIC POSITIONING LABORATORY II	1	Prerequisite(s): RAD 128, RAD 141, RAD 142, RAD 171, RAD 190 Corequisites: RAD 139, RAD 144, RAD 172, RAD 210
RAD 172	RADIOGRAPHIC IMAGING & SCIENCE II	2	Prerequisite(s): RAD 128, RAD 141, RAD 142, RAD 171, RAD 190 Corequisites: RAD 139, RAD 143, RAD 144, RAD 210
RAD 210	CLINICAL PRACTICUM I	2	Prerequisite(s): RAD 128, RAD 141, RAD 142, RAD 171, RAD 190 Corequisites: RAD 139, RAD 143, RAD 144, RAD 172
BIO 112	HUMAN ANATOMY & PHYSIOLOGY II	4	Prerequisite(s): BIO 111 A continuation of BIO 111. A study of the structure and function of the body is continued by examining the endocrine, reproductive, circulatory, digestive, respiratory and excretory systems.

Courses		Credits	Requisites/ Comments
Summer Session			
RAD 145	RADIOGRAPHIC POSITIONING, ANATOMY & PATHOLOGY III	3	Prerequisite(s): RAD 139, RAD 143, RAD 144, RAD 172, RAD 210 Corequisites: RAD 146
RAD 146	RADIOGRAPHIC POSITIONING LABORATORY III	1	Prerequisite(s): RAD 139, RAD 143, RAD 144, RAD 172, RAD 210 Corequisites: RAD 145
RAD 220	CLINICAL PRACTICUM II	2	Prerequisite(s): RAD 145, RAD 146
Semester III			
RAD 247	RADIOGRAPHIC POSITIONING, ANATOMY & PATHOLOGY IV	2 2	Prerequisite(s): RAD 145, RAD 146, RAD 220 Corequisites: RAD 230, RAD 248, RAD 273
RAD 248	RADIOGRAPHIC POSITIONING LABORATORY IV	1	Prerequisite(s): RAD 145, RAD 146, RAD 220 Corequisites: RAD 230, RAD 247, RAD 273
RAD 275	RADIOGRAPHIC PHYSICS AND EQUIPMENT MAINTENANCE	3	Prerequisite(s): RAD 145, RAD 146, RAD 172, RAD 220 Corequisites: RAD 230, RAD 247, RAD 248
RAD 230	CLINICAL PRACTICUM III	2	Prerequisite(s): RAD 220 Corequisites: RAD 247, RAD 248, RAD 273
ENG 121	ENGLISH I	3	Prerequisite(s): A passing score on the writing portion of the College's Placement Test or a grade of "C" or better in ENG 010; completion of RDG 009 with a "C" or better or a score on the reading portion of the College Placement Test that exempts the students from RDG 009
	HUMANITIES ELECTIVE	3	
Semester IV			
RAD 250	CLINICAL PRACTICUM IV	3	Prerequisite(s): RAD 230, RAD 247, RAD 248, RAD 273 Corequisites: RAD 256, RAD 285
RAD 256	RADIOGRAPHIC SEMINAR I	2	Prerequisite(s): RAD 230, RAD 247, RAD 248, RAD 273 Corequisites: RAD 250, RAD 285
RAD 285	ADVANCED RADIOGRAPHIC IMAGING	2	Prerequisite(s): RAD 230, RAD 247, RAD 248, RAD 273 Corequisites: RAD 250, RAD 256
CSC 107	COMPUTERS IN HEALTH TECHNOLOGIES	1	
ENG 122	ENGLISH II	3	Prerequisite(s): A grade of "C" or better in ENG 121 and a passing score on the reading portion of the College Placement Test or a grade of "C" or better in ENG 121 and a grade of "C" or better in RDG 011
	PHYSICAL EDUCATION / HEALTH	1/3	
Summer Session			
RAD 260	CLINICAL PRACTICUM V	3	Prerequisite(s): RAD 250, RAD 256, RAD 285
RAD 257	RADIOGRAPHIC SEMINAR II	2	Prerequisite(s): RAD 256, RAD 260
		Total Credits:	***69-71***

Standards of Progress:

1. Maintain a cumulative grade point average of 2.0.
2. Must achieve a "C" grade or better in all Radiography courses in order to progress through the curriculum.
3. Must achieve a "C" grade or better in all science courses to satisfy degree requirements.
4. Must complete the Radiography Education program in no fewer than two and no more than five consecutive years from the point of admission to the full time program track. Students who do not complete the major Radiography course under these conditions may not continue in the program.

Respiratory Care

DIVISION OF SCIENCE, MATHEMATICS & HEALTH TECHNOLOGIES (SCMHT)

JOINT PROGRAM WITH THE UNIVERSITY OF MEDICINE AND DENTISTRY OF NEW JERSEY RESPIRATORY THERAPY DEPARTMENT

Associate in Science (A.S.) Degree

If I major in Respiratory Care, what degree can I earn?

The Associate in Science Degree which prepares you for a career as a respiratory therapist.

Why major in Respiratory Care?

If you would like to help people of all ages recover from serious illness, and if you like working with high tech equipment, you'll like working in Respiratory Care. All major courses taught at UMDNJ, Newark.

What will I learn if I study Respiratory Care?

You will learn the latest techniques used to diagnose, treat and prevent cardiopulmonary disorders among infants, children and adults. You will also learn the work skills needed to get and maintain a satisfying job in the fast-paced health care environment.

Do I need any special skills before I start taking courses in my major?

Algebra I is a prerequisite for all majors. Algebra I competency must be verified with a passing score on the College's placement test. You must also have a "C" or better in high school laboratory biology and laboratory chemistry and algebra II. As a result of your performance on the College's placement test, you may need developmental coursework. All developmental coursework must be completed before you will be considered for admission to the program.

How long will it take for me to complete this degree?

You can complete the degree in two years. You must register for the summer session at the end of your first year.

Are there any special requirements once I am admitted to this major?

You must meet the academic standards of progress outlined at right to stay in the program.

Where should I direct specific questions about this program?

Contact Professor Albert Heuer, Program Director, at 973.972.5503 or Dr. Reginald Luke, Dean, at 732.906.2533.

DEGREE PROGRAM

Below are required courses and recommended course groupings and sequences for program completion. Courses may have prerequisite and corequisite requirements. Check course descriptions for details.

Courses		Credits	Requisites/Comments
Semester I			
BIO 111	HUMAN ANATOMY AND PHYSIOLOGY I	4	One year of high school laboratory biology or BIO 010 and one year of high school laboratory chemistry or CHM 010. Also appropriate score on the College's Placement Test or MAT 013
CHM 119	GENERAL, ORGANIC AND BIOCHEMISTRY 1	4	One year of high school laboratory chemistry or CHM 010 and MAT 014 or appropriate score on the College's Placement Test
CSC 107	COMPUTERS IN HEALTH TECHNOLOGIES	1	
ENG 121	ENGLISH COMPOSITION I	3	A passing score on the writing portion of the College's Placement Test or a grade of "C" or better in ENG 010; completion of RDG 009 with a "C" or better or a score on the reading portion of the College Placement Test that exempts the students from RDG 009
MAT 107	MATHEMATICS I	3	Appropriate score on the College Placement Test, MAT 013, MAT 013A/MAT 013B, or departmental approval
	GENERAL EDUCATION HUMANITIES ELECTIVE (GE HUM)	3	
Semester II			
BIO 112	HUMAN ANATOMY AND PHYSIOLOGY II	4	BIO 111
BIO 211	PRINCIPLES OF MICROBIOLOGY	4	One year of high school laboratory biology or BIO 010 and one year of high school laboratory chemistry or CHM 010. Also appropriate score on the College's Placement Test or MAT 013
ENG 122	ENGLISH II	3	A grade of "C" or better in ENG 121 and a passing score on the reading portion of the College Placement Test or a grade of "C" or better in ENG 121 and a grade of "C" or better in RDG 011
OR			
ENG 125		3	A grade of "C" or better in ENG 121 and a passing score on the reading portion of the College Placement Test or a grade of "C" or better in ENG 121 and a grade of "C" or better in RDG 011
PED/HED	PHYSICAL/HEALTH ED ELECTIVE	1-3	
PSY 123	INTRODUCTORY PSYCHOLOGY	3	
	ONE ADDITIONAL GE HUM ELECTIVES	3	
	TWO ADDITIONAL GE SS ELECTIVES	6	
Summer Session			
RST 100	CORE CONCEPTS IN RESPIRATORY CARE	1	BIO 111 and acceptance into the Respiratory Care Program - Clinical Phase Corequisite: RST 102
RST 101	FUNDAMENTALS OF RESPIRATORY CARE	4	Corequisite(s): RST 100, RST 102
RST 102	CLINICAL PRACTICE I	1	Corequisite(s): RST 100, RST 101
RST 103	APPLIED CARDIOPULMONARY PATHOPHYSIOLOGY I	2	
Semester III			
RST 203	APPLIED CARDIOPULMONARY PATHOPHYSIOLOGY II	2	Prerequisite: RST 103
RST 207	CARDIOPULMONARY PHARMACOLOGY	2	Prerequisite: RST 103
RST 208	PRINCIPLES OF VENTILATORY SUPPORT	4	Prerequisite: RST 101 Corequisite: RST 209
RST 209	CLINICAL PRACTICE II	2	Prerequisite(s): RST 101, RST 102 Corequisite: RST 208
RST 210	CARDIOPULMONARY EVALUATION	2	Prerequisite: RST 103
Semester IV			
RST 201	PATIENT MANAGEMENT IN CRITICAL CARE	3	Prerequisite: RST 208 Corequisite: RST 211
RST 211	PEDIATRIC/NEONATAL RESPIRATORY CARE	3	Prerequisite: RST 208 Corequisite: RST 215
RST 212	LONG-TERM, HOME AND REHABILITATION CARE	3	
RST 215	CLINICAL PRACTICE III	3	Prerequisites: RST 208, RST 209

Total Credits: 74-76

Standards of Progress:

1. Maintenance of cumulative grade point average of 2.5.
2. Must achieve a "C" grade or better in all Respiratory Care and science courses in order to progress in the curriculum.
3. May have only one (1) unsatisfactory grade (i.e. grade less than "C") in any Respiratory Care or science course for the duration of the program.
4. May retake a Respiratory Care or science course only once and obtain a passing grade (i.e. "C" or better).

NOTE: Currently, all Respiratory Care Courses (RST) are offered only at the UMDNJ campus in Newark. In order to continue to the Clinical Phase of the Respiratory Care Courses, you must have completed almost all the major science and general education courses prior to the summer session. All RST courses are assessed the UMDNJ tuition and fee rates.

Small Business Management/ Entrepreneurial Studies

DIVISION OF BUSINESS, COMPUTER SCIENCE & ENGINEERING TECHNOLOGIES (BCSET)

BUSINESS ADMINISTRATION AND MANAGEMENT DEPARTMENT

Associate in Applied Science (A.A.S.) Degree

Why major in Small Business Management/ Entrepreneurial Studies?

Small Business Management/Entrepreneurial Studies is for people who intend to start, or who already operate a small business. If you have a skill, an idea, a thing you have always liked to do - and you want to be your own boss - this program can help you realize your goal of running a successful business.

If I major in Small Business Management/ Entrepreneurial Studies, what degree can I earn?

You have several choices with this major. You can earn an Associate in Applied Science Degree, a Certificate of Achievement or a Technical Certificate. The degree program incorporates general education courses with the small business management curriculum. The Certificate of Achievement is designed for those with no prior college course work and includes English composition with the small business management curriculum. The Technical Certificate program is geared toward people who already hold a college degree and intend to operate a small business.

If I major in Small Business Management/ Entrepreneurial Studies, can I transfer to a four-year college or university?

Many colleges and universities will apply the courses you have taken towards a bachelor's degree. You should meet with an academic advisor for appropriate planning.

What will I learn if I study Small Business Management/Entrepreneurial Studies?

You will study the elements that are necessary for a thriving business; business plan, capital needs, marketing strategies, legal and tax issues, forms of ownership, employee management, new technologies, sales, marketing and new product development. You will acquire skills particular to entrepreneurs but transferable to the general business environment. Note: Not all SBM courses are offered every semester both day and evening. Please call the Department Chair at (732) 906-2594 to discuss course offerings for future semesters. All developmental coursework must be completed before you will be considered for admission to the program.

Are there any requirements I must satisfy before I start taking courses in my major?

You must demonstrate proficiency in keyboarding or typewriting by either completing OAD 010, Keyboarding for Computers or by appropriate waiver of the Office Administration Department Chairperson. Algebra I is a prerequisite for all majors. You may satisfy this requirement with a grade of "C" or better in high school Algebra I. Algebra I competency must be verified with a passing score on the College's placement test.

How long will it take for me to complete this degree?

If you do not need developmental coursework, and you register for an average of 16 credits each semester, you can complete the degree in two years. If you do not need developmental coursework, and you register for an average of 15 credits each semester, you can complete the certificate in one year. You can shorten the amount of time by taking courses in the summer and winter sessions. Some major courses in the Small Business Management program may only be offered in the evenings and not every semester.

Where should I direct specific questions about this program?

Contact Professor Bailey, Department Chair, at (732) 906-2594 or **bam@middlesexcc.edu.**

DEGREE PROGRAM

Below are required courses and recommended course groupings and sequences for program completion. Courses may have prerequisites and corequisite requirements. Check course descriptions for details.

Courses		Credits	Requisites/Comments
Semester I			
ENG 121	ENGLISH COMPOSITION I	3	A passing score on the writing portion of the College's Placement Test or a grade of 'C' or better in ENG 010; completion of RDG 009 with a 'C' or better or a score on the reading portion of the College's Placement Test that exempts the students from RDG 009.
BUS 101	BUSINESS ORGANIZATION AND MANAGEMENT	3	
BUS 115	MATHEMATICS OF FINANCE	3	Passing score on the College's Placement Test or MAT 013
BUS 107	COMPUTER APPLICATIONS FOR BUSINESS	3	
___ ___	GENERAL EDUCATION SOCIAL SCIENCE ELECTIVE (GE SS)	3	
Semester II			
ENG 122 OR ENG 125	ENGLISH COMPOSITION II OR ENGLISH COMPOSITION II: WRITING ABOUT LITERATURE	3	A grade of 'C' or better in ENG 121 and a passing score on the reading portion of the College's Placement Test or a grade of 'C' or better in ENG 121 and a grade of 'C' or better in RDG 011.
SBM 110	ACCOUNTING FOR SMALL BUSINESS	4	NOTE: Not all major courses are offered every semester both day and evening. Please call the Department Chair at 732.906.2594 to discuss course offerings for future semesters.
SBM 120	SMALL BUSINESS MANAGEMENT	3	NOTE: Not all major courses are offered every semester both day and evening. Please call the Department Chair at 732.906.2594 to discuss course offerings for future semesters.
SBM 130	MARKETING AND SALES FOR SMALL BUSINESS	3	NOTE: Not all major courses are offered every semester both day and evening. Please call the Department Chair at 732.906.2594 to discuss course offerings for future semesters
___ ___	GENERAL EDUCATION HUMANITIES ELECTIVE (GE HUM)	3	
Semester III			
BUS 201	BUSINESS LAW I	3	
SBM 210	ADVERTISING AND PROMOTION FOR SMALL BUSINESS	3	NOTE: Not all major courses are offered every semester both day and evening. Please call the Department Chair at 732.906.2594 to discuss course offerings for future semesters.
SBM 220	LEADERSHIP AND SUPERVISION	3	NOTE: Not all major courses are offered every semester both day and evening. Please call the Department Chair at 732.906.2594 to discuss course offerings for future semesters.
___ ___	BUSINESS ELECTIVE	3	Courses with MKT or MGT for which students have the appropriate preparation are recommended or see Department Chair.
___ ___	GENERAL EDUCATION SOCIAL SCIENCE ELECTIVE (GE SS)	3	
___ ___	PHYSICAL/HEALTH EDUCATION	1-3	
Semester IV			
SBM 230	RISK AND FINANCIAL MANAGEMENT	3	NOTE: Not all major courses are offered every semester both day and evening. Please call the Department Chair at 732.906.2594 to discuss course offerings for future semesters.
SBM 240	CO-OP/INTERNSHIP IN SMALL BUSINESS	3	Senior status in SBM Curricula or written permission of Department Chairperson
SBM 250	SEMINAR IN ENTREPRENEURIAL STUDIES	3	BUS 101, SBM 110, SBM 120, SBM 130, SBM 210 or permission of Department Chairperson NOTE: Not all major courses are offered every semester both day and evening. Please call the Department Chair at 732.906.2594 to discuss course offerings for future semesters.
___ ___	GENERAL EDUCATION SCIENCE ELECTIVE (GE SCI)	3-4	General Education Science Elective, students may elect courses with a code of BIO, CHEM, ENV, PHY or SCI for which they have the appropriate academic preparation.
___ ___	GENERAL EDUCATION ELECTIVE	3	Any GE course
		Total Credits: 62-64	

TECHNICAL CERTIFICATE

Below are required courses for program completion. Courses may have prerequisite and corequisite requirements. Check course descriptions for details. Designed for the person with a college degree. Assumes Basic Skills and General Education (including Math) requirements are satisfied.

Courses		Credits	Requisites/Comments
BUS 101	BUSINESS ORGANIZATION AND MANAGEMENT	3	
SBM 110	ACCOUNTING FOR SMALL BUSINESS	4	NOTE: Not all major courses are offered every semester both day and evening. Please call the Department Chair at 732.906.2594 to discuss course offerings for future semesters.
SBM 120	SMALL BUSINESS MANAGEMENT	3	NOTE: Not all major courses are offered every semester both day and evening. Please call the Department Chair at 732.906.2594 to discuss course offerings for future semesters.
SBM 130	MARKETING AND SALES FOR SMALL BUSINESS	3	NOTE: Not all major courses are offered every semester both day and evening. Please call the Department Chair at 732.906.2594 to discuss course offerings for future semesters.
SBM 210	ADVERTISING AND PROMOTION FOR SMALL BUSINESS	3	NOTE: Not all major courses are offered every semester both day and evening. Please call the Department Chair at 732.906.2594 to discuss course offerings for future semesters.
OR			
SBM 230	RISK AND FINANCIAL MANAGEMENT		
SBM 250	SEMINAR IN ENTREPRENEURIAL STUDIES	3	BUS 101, SBM 110, SBM 120, SBM 130, SBM 210 or permission of Department Chairperson. NOTE: Not all major courses are offered every semester both day and evening. Please call the Department Chair at 732.906.2594 to discuss course offerings for future semesters.

Total Credits: 19

CERTIFICATE OF ACHIEVEMENT

Below are required courses for program completion. Courses may have prerequisite and corequisite requirements. Check course descriptions for details. Designed for the person with a college degree. Assumes Basic Skills and General Education (including Math) requirements are satisfied.

Courses		Credits	Requisites/Comments
BUS 101	BUSINESS ORGANIZATION AND MANAGEMENT	3	
BUS 107	COMPUTER APPLICATIONS FOR BUSINESS	3	
ENG 121	ENGLISH COMPOSITION I	3	A passing score on the writing portion of the College's Placement Test or a grade of 'C' or better in ENG 010; completion of RDG 009 with a 'C' or better or a score on the reading portion of the College's Placement Test that exempts the students from RDG 009.
ENG 122	ENGLISH COMPOSITION II	3	A grade of 'C' or better in ENG 121 and a passing score on the reading portion of the College's Placement Test or a grade of 'C' or better in ENG 121 and a grade of "C" or better in RDG 011.
OR			
ENG 125	ENGLISH COMPOSITION II: WRITING ABOUT LITERATURE		
SBM 110	ACCOUNTING FOR SMALL BUSINESS	4	NOTE: Not all major courses are offered every semester both day and evening. Please call the Department Chair at 732.906.2594 to discuss course offerings for future semesters.
SBM 120	SMALL BUSINESS MANAGEMENT	3	NOTE: Not all major courses are offered every semester both day and evening. Please call the Department Chair at 732.906.2594 to discuss course offerings for future semesters.
SBM 130	MARKETING AND SALES FOR SMALL BUSINESS	3	NOTE: Not all major courses are offered every semester both day and evening. Please call the Department Chair at 732.906.2594 to discuss course offerings for future semesters.
SBM 210	ADVERTISING AND PROMOTION FOR SMALL BUSINESS	3	NOTE: Not all major courses are offered every semester both day and evening. Please call the Department Chair at 732.906.2594 to discuss course offerings for future semesters.
SBM 230	RISK AND FINANCIAL MANAGEMENT	3	NOTE: Not all major courses are offered every semester both day and evening. Please call the Department Chair at 732.906.2594 to discuss course offerings for future semesters.
SBM 250	SEMINAR IN ENTREPRENEURIAL STUDIES	3	BUS 101, SBM 110, SBM 120, SBM 130, SBM 210 or permission of Department Chairperson. NOTE: Not all major courses are offered every semester both day and evening. Please call the Department Chair at 732.906.2594 to discuss course offerings for future semesters.

Total Credits: 31

Teacher Aide

DIVISION OF SOCIAL SCIENCES AND HUMANITIES (SSHUM)

PSYCHOLOGY AND EDUCATION DEPARTMENT

If I major in Teacher Aide, what certification can I earn?

The Certificate of Achievement which prepares you for a job working with children in an educational setting.

If I major in Teacher Aide, can I use the credits I have earned towards a degree?

You can apply the credits you earn towards the Associate in Applied Science Degree in Education Practitioner. (see p. 49)

What will I learn if I study Teacher Aide?

Your program combines general education courses with practical experiences in teaching/learning settings.

Are there any special requirements I must satisfy before I start taking courses in my major?

Algebra I is a prerequisite for all majors. Algebra I competency must be verified with a passing score on the College's placement test.

How long will it take for me to complete this certificate?

If you do not need developmental coursework, and you register for an average of 16 credits each semester, you can complete the certificate in one year.

Where should I direct specific questions about this program?

Contact Academic Advising at 732.906.2596 or Professor Gutowski, Department Chairperson, at 732.906.2590.

TEACHER AIDE CERTIFICATE

Below are required courses and recommended course groupings and sequences for program completion.

Courses		Credits	Requisites/Comments
Semester I			
ENG 121	ENGLISH I	3	Passing score on the writing portion of the College's Placement Test or a grade of "C" or better in ENG 010; completion of RDG 009 with a "C" or better or a score on the reading portion of the College's Placement Test that exempts the students from RDG 009
PSY 123	INTRODUCTORY PSYCHOLOGY	3	
PSY 226	EDUCATIONAL PSYCHOLOGY: CLASSROOM APPLICATIONS	3	PSY 123 or permission of chairperson - Student with education work experience must see chairperson for possibility of prerequisite waiver. PSY 226 is a necessary prerequisite for EDU 280 Education Field Experience.
EDU OR HED (# Varies)	EDUCATION or HEALTH EDUCATION ELECTIVE (only choose one course)	3	Recommended: HED 150 or HED 209, or one Education elective, such as EDU 121, 207, or 210, etc. Check with Chairperson for any other possibilities.
EDU 208	CREATIVE ACTIVITIES FOR YOUNG CHILDREN	3	
Semester II			
PSY 223	CHILD PSYCHOLOGY	3	Introductory Psychology PSY 123
MAT (# Varies)	MATH ELECTIVE I	3 - 4	Appropriate score on the College's Accuplacer Placement Test for one of the following Math courses: MAT101, 123,129,131, or any higher level Math.
SOC 121	INTRODUCTION TO SOCIOLOGY	3	
ENG 212	CHILDREN'S LITERATURE	3	English Composition I ENG 121
EDU 280	EDUCATION FIELD EXPERIENCE	3	PSY 226 & ENG 122 or 125. Students are required to work in an educational setting for 90 hours.
	Total Credits:	***30 - 31***	

Telecommunication Networking Technology

DIVISION OF BUSINESS, COMPUTER SCIENCE & ENGINEERING TECHNOLOGIES (BCSET)

ELECTRICAL ENGINEERING TECHNOLOGY DEPARTMENT

Associate in Applied Science (A.A.S.) Degree

Why major in Telecommunication Networking Technology?

Telecommunication Networking Technology deals with the transmission of digital information over local and wide-area networks. The telecom industry has an ongoing need for technicians in such areas as computer installation and operations, network installation and troubleshooting, router configuration, video and teleconferencing, cable installation and multimedia authoring.

If I major in Telecommunication Networking Technology, what degree can I earn?

The Associate in Applied Science Degree which prepares you to begin your career after graduation. Career opportunities exist in business and industry.

If I major in Telecommunication Networking Technology, can I transfer to an upper division college or university?

Many upper division colleges and universities will apply some of the courses you have taken towards a bachelor's degree.

What will I learn if I study Telecommunication Networking Technology?

You acquire a background in digital and analog electronics, computer technology, multimedia authoring and presentations, local and wide area networking, videoconferencing and remote and automated testing. Additionally, you study mathematics, science, and general education.

Are there any requirements I must satisfy before I start taking courses in my major?

Algebra is a prerequisite for all majors. Algebra I competency must be verified with a passing score on the College placement test. You must also have a grade of "C" or better in one year of a high school laboratory science.

How long will it take for me to complete this degree?

If you do not need developmental coursework and you register for an average of 17 credits each semester, you can complete the degree in two years.

Where should I direct specific questions about this program?

Contact Professor Waintraub, Department Chair, at 732.906.2584.

DEGREE PROGRAM

Below are required courses and recommended course groupings and sequences for program completion. Courses may have prerequisites and corequisite requirements. Check course descriptions for details.

Courses		Credits	Requisites/Comments
Semester I			
ENG 131	RESEARCH, COMPOSITION AND PRESENTATION I	2	A passing score on the College Placement Test or a grade of "C" or better in ENG 010
MAD 121	GRAPHICS FOR COMPUTER AUTHORS AND PRESENTERS AND PRESENTERS	3	Corequisites: BUS 107 or CSC 105 or MCT 101 or equivalent
MAT 141	MATHEMATICS FOR TELECOMMUNICATIONS I	2	Higher level mathematics course can be substituted with departmental approval
MCT 101	INTRODUCTION TO ENGINEERING TECHNOLOGY	2	MAT 013 or passing score on the College's Placement Test Corequisites: MAT 014
PHY 141	FOUNDATIONS OF PHYSICS I	2	Higher level physics course can be substituted with departmental approval
TCT 103	PRODUCT MAINTENANCE I (DIGITAL)	4	
Semester II			
ENG 132	RESEARCH, COMPOSITION AND PRESENTATION II	2	A grade of "C" or better in ENG 131
MAT 142	MATHEMATICS FOR TELECOMMUNICATIONS II	2	Higher level mathematics course can be substituted with departmental approval
PHY 142	FOUNDATIONS OF PHYSICS II	2	Higher level physics course can be substituted with departmental approval
TCT 104	PRODUCT MAINTENANCE II (ANALOG)	4	TCT 103, MCT 101 Corequisites: MAT 142, PHY 142, ENG 132
CSC 230	MULTIMEDIA PRODUCTION AND AUTHORING TOOLS	3	CSC 110 (Recommended - MAD 121) or relevant experience.
GENERAL EDUCATION HUMANITIES (GE HUM)		3	
Semester III			
ENG 133	RESEARCH, COMPOSITION AND PRESENTATION III	2	A grade of "C" or better in ENG 132
MAT 241	MATHEMATICS FOR TELECOMMUNICATIONS III	2	Higher level mathematics course can be substituted with departmental approval
PHY 241	FOUNDATIONS OF PHYSICS III	2	Higher level physics course can be substituted with departmental approval
TCT 201	PC AND LAN HARDWARE	4	TCT 104 Corequisites: MAT 241, PHY 241
TCT 221	WIDE-AREA NETWORKING I	4	TCT 104, TCT 122 Corequisites: MAT 241, PHY 241
	GENERAL EDUCATION SOCIAL SCIENCE (GE SS)	3	
Semester IV			
PHY 242	FOUNDATIONS OF PHYSICS IV	2	Higher level physics course can be substituted with departmental approval
MAT 242	MATHEMATICS FOR TELECOMMUNICATIONS IV	2	Higher level mathematics course can be substituted with departmental approval
CSC 251	WINDOWS 2000 PROFESSIONAL ADMINISTRATION	3	CSC 110 or TCT 103 Corequisites: CSC 200 or TCT 201
TCT 222	WIDE-AREA NETWORKING II	4	TCT 221, TCT 201 Corequisites: MAT 242, PHY 242
	PHYSICAL/HEALTH ED ELECTIVE	1-3	
	TECHNICAL ELECTIVE OR CO-OP	3-4	
	TECHNICAL ELECTIVE CHOICES (SELECT ONE):		
BUS 101	BUSINESS ORGANIZATION AND MANAGEMENT	3	
BUS 201	BUSINESS LAW I	3	
CSC 247	NETWARE SYSTEM ADMINISTRATION	3	CSC 105 Corequisites: CSC 110
CSC 133	INTRODUCTION TO COMPUTER SCIENCE USING C++	4	MAT 014 or appropriate score on College's Placement Test Corequisites: MAT 125 or MAT 127 or MAT 129 or MAT 110 I
CSC 160	INTRODUCTION TO UNIX	3	Two years of high school Algebra and Geometry or MAT 014
CSC 165	BEGINNERS C-PROGRAMMING	3	
MCT 208			
MECOMTRONICS AND TELEMEDIA TECHNOLOGY FIELD EXPERIENCE		3	Mecomtronics Technology Field Experience (MCT 102, MCT 104, MCT 106), Telecommunications Networking Technology Field Experience (TCT 104, TCT 122)
		Total Credits: 63-66	

Course Descriptions

Course descriptions are listed alphabetically by subject area. The three letters identify the subject area and are followed by three numbers that identify the course. The numbers in parentheses indicate the number of lecture and lab hours, respectively, scheduled per week in a typical 14-week semester. By adding the numbers, students can determine the number of contact hours required per week for each course. (NOTE: Courses meet for more hours per week during sessions shorter than 14 weeks, such as those held during the summer.)

The number of credits is used to calculate tuition and fees, to determine credit load and full-time/part-time status, and are the normal academic measure to monitor progress toward the requirements for a degree. Courses listed as "credit equivalent" do not count toward the degree requirements and are used solely for the calculation of charges. However, the courses do represent program requirements for many students based upon past academic performance and/or the results of the College Placement Test.

Prerequisites are courses or other requirements that must be satisfied before enrolling in a course.

Corequisites may be satisfied prior to enrollment or may be taken at the same time. Italicized information at the end of some course descriptions provides additional important information about the course.

Courses that satisfy any of the General Education requirements are coded as follows:

GE COM Communications
GE CSC Computer Science
GE DIV Diversity
GE HUM Humanities
GE MAT Mathematics
GE PED Physical Education/Health
GE SCI Nature Sciences
GE SS Social Sciences

Courses coded GE DIV satisfies the diversity requirement, those coded GE HUM satisfy the humanities elective requirement and those coded GE SS satisfy the social sciences elective requirement.

All courses coded GE PED satisfies both the Physical Education/Health Graduation Requirement and the General Education elective requirement included in some programs. Activity courses listed under "PED" satisfy Physical Education/Health Education Graduation Requirement, but not the General Education Requirement.

To determine which courses satisfy the computer science, mathematics, and natural science requirements for a particular degree program, refer to the section in this catalog on Degree Requirements and also the Plan of Study for the specific degree or certificate in the appropriate Division. Not all programs require computer science, mathematics, and natural science courses.

The General Education requirement in communications is also specified in the individual program outlines included in this catalog. In programs that include a "General Education Elective," any course with a "GE" designation may be used to satisfy that requirement, regardless of the General Education category.

ACCOUNTING

ACC 101
- **FINANCIAL ACCOUNTING**
  Credits: 4 (4-0)
  Covers the accounting cycle from the recording and analyzing procedures through the summarizing procedures and preparation of general purpose financial statements; the introduction of accounting for corporations with emphasis on the capital structure of the corporation. Enables students to continue strengthening academic writing skills while developing an appreciation for literature. By reading, discussing, and writing about poetry, short

ACC 102
- **MANAGERIAL ACCOUNTING**
  Credits: 4 (4-0)
  Prerequisite(s): ACC 101
  Covers the statement of cash flows; financial statement analysis, the nature of Managerial Accounting, job order cost systems, process cost systems, cost allocation and activity-based costing; analyses for managerial decision-making; budgeting, standard cost systems, accounting for decentralized operations and transfer pricing.

ACC 108
- **ACCOUNTING PRACTICES FOR HOTELS**
  Credits: 4 (4-0)
  Basic concepts and techniques of accounting principles as applied to the public hospitality industry. Emphasizes internal control, departmental reports, and operating statistics.

ACC 202
- **COST ACCOUNTING**
  Credits: 4 (4-0)
  Prerequisite(s): ACC 102
  Instruction in the principles of cost accounting and the keeping of cost records. Job order, process, standard cost systems and a survey of other costing techniques and applications.

ACC 203
- **ACCOUNTING SYSTEMS AND PROCEDURES**
  Credits: 3 (3-3)
  Prerequisite(s): ACC 102
  Introduces accounting students to all types of accounting information systems (AIS), especially those systems that employ state-of-the-art information technology. Students learn to design, and evaluate AIS with an eye toward their improvement. The course will also focus on risk exposures, controls and security measures related to AIS. Students will be exposed to leading small business accounting software, specifically QuickBooks.

ACC 206
- **TAX ACCOUNTING**
  Credits: 3 (3-0)
  Prerequisite(s): ACC 102
  Federal income tax laws, rules, and regulations with particular emphasis on their application to individuals. Instruction and practice in the preparation of tax returns of individuals and research and reporting tax problems.

ACC 207
- **AUDITING**
  Credits: 3 (3-0)
  Prerequisite(s): ACC 212 or permission of Department Chair
  Designed to acquaint the student with current concepts in auditing, the coverage of Generally Accepted Auditing Standards, accounting concepts and procedures, and the preparation and interpretation of the audit report.

ACC 208

- **ACCOUNTING FIELD EXPERIENCE**

Credits: 3 (1-12)

Prerequisite(s): ACC 102 and written permission of the Department Chair and the Director of Cooperative Education and Internships

A cooperative work experience program whereby students are employed in an accounting position to gain the practical experience necessary for success in accounting. Supervision of this departmentally approved position is provided by the College through on-the-job visits and individual progress review sessions. Students are required to establish learning objectives related to their position in order to effect the attainment of specific job competencies. Students attend a biweekly two-hour seminar on campus and work a minimum of 180 hours a semester. Individuals must be recommended by the faculty of the department.

ACC 211

- **INTERMEDIATE ACCOUNTING I**

Credits: 4 (4-0)

Prerequisite(s): ACC 102

A review of the accounting cycle for a manufacturing and for a merchandise operation. Emphasizes the capital structure of the corporation and the theory and concepts underlying accounts such as cash, receivables, inventories and investments.

ACC 212

- **INTERMEDIATE ACCOUNTING II**

Credits: 4 (4-0)

Prerequisite(s): ACC 211

A continuation of ACC 211. Concludes the theoretical study of the major accounts on the financial statements. Emphasizes the analytical process relevant to comparative analysis, application of funds, income tax allocation and price-level impact on financial statements.

ACC 280

- **SENIOR ACCOUNTING SEMINAR**

Credits: 3 (3-0)

Prerequisite(s): ACC 202, ACC 211, BUS 107, BUS 202

Corequisites: ACC 212

Students integrate their knowledge of theoretical concepts and practical application of intermediate and cost accounting, business law and use of computers through case analysis and the completion of assigned projects.

ADVERTISING GRAPHICS DESIGN

(See Media Arts & Design for prerequisite courses)

AGD 212

- **ADVERTISING DESIGN II**

Credits: 3 (2-3)

Prerequisite(s):

This course is designed to give the student the feel of working, in teams, on a professional advertising campaign. Two presentations are required: first, a researched exposition of the product or service, and second, the team presentation of the final advertising campaign, along with portfolios of their individual contributions. Typical elements required are: corporate identity, magazine or trade journal ads, billboards or posters, direst mail pieces, sample packaging, storyboards for video ads, etc. The final presentation is videotaped.

AGD 213

- **TYPOGRAPHY**

Credits: 3 (2-3)

Prerequisite(s): All MAD courses except MAD 121

Students become versed in fundamentals of layout and typographic design. Topics include history, letterform drawing, type anatomy, fonts, white space usage, and the use of grid systems for layouts. Through a series of design problems, students will learn to use type as an effective visual element relevant to layout and content. Historical and contemporary models of layout and type usage will be explored through both traditional hand and digital means. The course covers layout and typographic standards of many types of publication, both print and electronic. Students submit a complete portfolio at the end of the semester.

AGD 214

- **PRINT PRODUCTION**

Credits: 3 (2-3)

Prerequisite(s): All MAD courses except MAD 121 and AGD 219

Students learn the steps to produce mechanicals for print applications. The history of printing and conventional, as well as digital, printing processes are explored. Production problems such as screens, ink limits, proofing, and cost control are addressed. Pre-press workflow is covered including: color systems, file formats, image resolution, separations, trapping, paper selection, and preflighting. Emphasis is on producing trouble-free files for commercial print. Students submit a complete portfolio of work at the end of the semester.

AGD 219

- **DIGITAL GRAPHICS**

Credits: 3 (2-3)

Prerequisite(s): All MAD courses except MAD 121

Students will examine technical and aesthetic imaging problems in print and advertising. Conceptual and analytical thinking will be stressed in creating original visual statements. In-depth Illustrator and Photoshop methods will be covered in the development and editing of CMYK artwork. As the complexity of the projects increases, advanced material, such as color spaces, masking, layers, and filters will be addressed. Topics covered will include input and output methods, image editing, color standards and corrections, photo collage, conceptual illustration, and special effects.

AGD 222

- **MEDIA ARTS & DESIGN FIELD EXPERIENCE**

Credits: 3 (1-12)

Prerequisites: Senior status in advertising graphics design option or professional commercial photography option

A cooperative work experience program whereby students are provided with a job that will enhance their competency by getting practical hands-on experience on state-of-the-art technology utilized by commercial designers and photographers. Students are assigned to work on a one-to-one basis with a professional designer or photographer using the latest techniques and equipment. Supervision of this departmentally approved position is provided by the College through on-the- job visits and individual progress review sessions. Students are required to describe their objectives and attain specific job skills. Students attend a biweekly two-hour seminar on campus and work a minimum of 180 hours during the semester. Open to senior students recommended by the faculty of the department. Career interest and goals taken into account. Marketing Art and Design Field Experience is not a graduation requirement.

AGD 280

- **PORTFOLIO**

Credits: 3 (2-3)

Prerequisite(s): All MAD courses except MAD 121 and six credits of AGD courses. Corequisite(s): the remaining six AGD credits.

Students learn about job discovery and search, resume creation, both paper and electronic, employment letter writing, and interviewing techniques. This is in addition to the primary goal of producing a professional level portfolio, both on paper and in digital /electronic formats. They will also be guided in discovering their professional strengths and goals through an individual self-evaluation process. Field trips are undertaken. Purchase of portfolio materials will be required.

AFRICAN-AMERICAN STUDIES

AFS 121 GE SS

- **INTRODUCTION TO AFRICAN-AMERICAN STUDIES**

Credits: 3 (3-0)

Introduction to the foundations and approaches of African-American studies. Examines historical, sociological, psychological, religious and philosophical perspectives of the African-American experience.

AFS 123 GE HUM GE DIV

- **INTRODUCTION TO AFRICAN CIVILIZATIONS**

Credits: 3 (3-3)

The historical development of African civilizations from earliest times to the present. Focuses on the cultural, political, social, and economic factors which shaped Africa and its people.

AFS 231 GE HUM GE DIV

- **AFRICAN-AMERICAN HISTORY**

Credits: 3 (3-3)

This course surveys the history of African Americans in the United States from African origin to the present. Special attention will be given to the social, political, economic experiences and events that have helped shape the African American community.

ART

(For related courses, see Media Arts & Design)

ART 105 GE HUM

- **INTRODUCTION TO ART**

Credits: 3 (3-0)

A combination lecture and studio course designed to increase appreciation of art through experimentation with materials in a variety of media. Includes exploration of elementary two-and-three-dimensional problems in design. Field trips.

ART 109 GE HUM

- **DRAWING**

Credits: 3 (3-0)

A workshop and lecture course exploring media, concepts and techniques of drawing. Skill in representing objects, landscape, human and imaginative form is approached through practice and the examination of the works of previous and present day artists. Individual criticism aimed at personal growth of artistic ability and insight. Outside assignments to be reviewed by instructor. Field trips.

ART 110 GE HUM

- **FIGURE DRAWING (FORMERLY DRAWING II)**

Credits: 3 (3-0)

Practice combining nature and the imagination is directed toward exploring form and developing the basic techniques of drawing the undraped figure. Field trips.

ART 115 GE HUM GE DIV

- **SURVEY OF NON-WESTERN ART**

Credits: 3 (3-0)

A survey of the visual expressions, traditions, philosophies, materials and aesthetics of art created in Africa, Asia and the Americas. Development from ancient times to the present, as well as diverse cultural influences on western artists will be explored. Slide presentations, films, and field trips to museums and art galleries are included.

ART 120 GE HUM GE DIV

- **SURVEY OF AMERICAN ART**

Credits: 3 (3-3)

A survey of American art from Native American art to the present day. The course will concentrate on the evolution of the nation's art in its historical, social, political, cultural, and geographical context. The focus will be on major trends in painting, sculpture, architecture and photography. Slide presentations, films, and field trips to museums and art galleries are included. Course fee.

ART 123 GE HUM

- **ART HISTORY: ANCIENT TO RENAISSANCE**

Credits: 3 (3-0)

Examines developments in painting, sculpture and architecture fro prehistory to the High Renaissance in Western art. Significant periods emphasized through slides and films. Field trips.

ART 124 GE HUM

- **ART HISTORY: RENAISSANCE TO MODERN**

Credits: 3 (3-0)

Examines developments in painting, sculpture and architecture from the High Renaissance to the twentieth century in Western art. Significant artists and their contributions to techniques. Field trips.

ART 125 GE HUM

- **ART HISTORY: MODERN TO CONTEMPORARY**

Credits: 3 (3-0)

Examines developments in painting, sculpture and architecture in Western Art since the Industrial Revolution to the present day via major styles, movements and significant artists. Field trips.

ART 145 GE HUM

- **ART FUNDAMENTALS: TWO DIMENSIONS**

Credits: 3 (2-2)

A studio course to explore two-dimensional concepts and develop visual thinking in relation to various fine arts areas such as drawing and painting. Open to non-art majors as an elective. Required of art majors.

ART 146 GE HUM

- **ART FUNDAMENTALS: THREE DIMENSIONS**

Credits: 3 (2-2)

A studio course to explore three-dimensional design concepts and develop visual thinking in relation to various fine arts areas such as sculpture and ceramics. Mixed media — the interaction of two-and three-dimensional concepts — is explored. Open to non-art majors as an elective. Required of art majors.

ART 148

- **ART PORTFOLIO**

Credits: 1 (1-0)

Prerequisite(s): One or more three-credit studio art courses or permission of department

Student artwork is developed and expanded into a coherent portfolio. The course focuses on the preparation of a body of work for presentation in a professional manner and for effective transfer to senior institutions. Issues of quality, range of style and techniques, and methods of representing work in a critical setting are addressed. Field trip required.

ART 149

- **ART STUDIO SEMINAR**

Credits: 1 (1-0)

Prerequisite(s): One or more three-credit studio art courses or permission of department

Art studio issues are addressed as they relate to the artist in contemporary society. The motivations, relevance and the nature of art-making in American and global culture are investigated. The creation of subject matter for artistic expression that is personally meaningful is placed in a larger aesthetic context. The conceptual links among all the visual arts are explored. Field trip required.

ART 150 GE HUM

- **INTRODUCTION TO MIXED MEDIA**

Credits: 3 (3-0-3)

This introduction to mixed media explores the techniques and concepts of collage making and involves composing images using a variety of materials including papers, fabrics and found objects. The emphasis is on the pictorial applications of collage, but some experience is given to its three-dimensional extension, assemblage. A survey of the medium's relevance in modern and contemporary art is explored, along with its connections to the other visual arts. Field trip required.

ART 201 GE HUM

- **CERAMICS: HANDBUILDING**

Credits: 3 (3-0)

Experience in the various hand-building and decorating techniques as well as some experience in the process of stacking and firing the kiln. Field trips.

ART 202 GE HUM

- **CERAMICS: WHEELTHROWING**

Credits: 3 (3-0)

Prerequisite(s): ART 201

Basic skill is developed in the use of the potter's wheel. Study of glaze materials and use of original glaze techniques. Field trips.

ART 205

- **ADVANCED CERAMICS WORKSHOP**

Credits: 3 (3-0)

Prerequisite(s): ART 202 or demonstrated throwing ability

Advanced throwing techniques and surface treatments, including englobe decoration, wax resist, lusters, and glazes. Thrown forms are used to experiment with various techniques. Slides, lectures and a museum visit will supplement the weekly demonstrations. Critiques will enable students to develop both their work and critical facilities.

ART 208

- **ART SEMINAR AND COOPERATIVE EDUCATION WORK EXPERIENCE**

Credits: 3 (1-16)

Prerequisite(s): Permission of Department Chair

A cooperative work experience program whereby students are employed in a visual arts position in order to gain some of the practical experience necessary for success in various aspects of visual arts: artistic, technical and/or administrative. The College provides supervision of this department approved position through on-the-job visits and individual progress sessions. Students are required to establish learning objectives related to their positions in order to effect the attainment of specific job competencies. Students attend a biweekly, two-hour seminar on campus and work a minimum of 180 hours throughout the semester. Individuals must be recommended by the chair of the Visual Arts Department and register with the Counseling and Career Services Department.

ART 219 GE HUM

- **GRAPHIC ARTS: TRADITIONAL (FORMERLY PRINTMAKING: MONOPRINT & RELIEF)**

3 credits (3-0-3)

Introductory Graphic Arts are explored through the practice of two traditional and evolving graphic techniques, including the processes of monoprinting, collography (collage graphics) and the similar methods of woodcutting and linocutting. Technical control, basic pictorial concepts, and an awareness of the cultural application of the monoprint and the basic relief print are emphasized. A materials fee and a field trip are required.

ART 220 GE HUM

- **GRAPHIC ARTS: CONTEMPORARY (FORMERLY PRINTMAKING: SCREEN AND INTAGLIO)**

3 credits (3-0-3)

Introductory Graphic Arts are explored through the practice of two evolving graphic techniques: screenprinting and intaglio - a method from which multiples may be created. Technical control, basic pictorial concepts, and an awareness of the cultural application of the screenprint and the intaglio print are emphasized. A materials fee and a field trip are required.

ART 221 GE HUM

- **PAINTING: TRADITIONAL**

Credits: 3 (3-0)

The language and materials of painting are explored through still life, landscape and live model. Practice of easel techniques are enhanced by the examination of traditional paintings past and present. A materials fee and a field trip are required. Students will provide some of their own supplies.

ART 222 GE HUM

- **PAINTING: CONTEMPORARY**

Credits: 3 (3-0)

Objective and imaginative form in painting is explored through traditional and experimental techniques incorporating individual interpretation on guided projects. Study of modern art movements and contemporary artists are combined with studio assignments. A materials fee and a field trip are required. Students will provide some of their own supplies.

ART 223 GE HUM

- **SCULPTURE: TRADITIONAL**

Credits: 3 (3-0)

An exploration of language and materials of traditional sculpture. Development of skill and understanding the basic elements of sculptural form through modeling, carving and casting. Examination of the works of sculptors through slides, films, books and field trips. A materials fee is assessed to cover the cost of materials required for the course.

ART 224 GE HUM

- **SCULPTURE: CONTEMPORARY**
  Credits: 3 (3-0)
  An exploration of language and materials of contemporary sculpture. Development of skill and understanding of the basic elements of sculptural form through guided projects using the tools and techniques for sculpture in the round. An examination of past and contemporary sculptors and styles through slides, films, books and field trips. A materials fee is assessed to cover the cost of materials required for the course.

AUTOMOTIVE TECHNOLOGY

AUT 108

- **AUTOMOTIVE TECHNOLOGY WORK EXPERIENCE I**
  Credits: 3 (1-12)
  Prerequisite(s): AUT 122, 124, 126
  A cooperative work experience program employing students in a technical position in order to gain practical experience necessary for success in the automotive service industry. Supervision of this departmentally approved position is provided by the College through on-the-job visits and individual progress review sessions. Students are required to describe their objectives and attain specific job skills. Students attend a weekly seminar on campus and work for a minimum of 180 hours for the duration of the session. Students must register with the Department of Cooperative Education.

AUT 111

- **MINOR AUTOMOTIVE SERVICES**
  Credits: 3 (0-6)
  Introduces shop operations, customer relations, flat rate manuals, safety, organizational design, pays structure, equipment, tools and basic operational theories. Includes service procedures of lubrication, batteries, the cooling system, wheels and tires and new car pre-delivery service.

AUT 115

- **AUTOMOTIVE BRAKE SYSTEMS**
  Credits: 2 (0-5)
  Covers diagnosis and repair of both drum and disc brake systems, power brake boosters, master cylinders, wheel cylinders and related component parts.

AUT 117

- **AUTOMOTIVE ELECTRICAL SYSTEMS**
  Credits: 3 (0-6)
  Covers the automobile electrical system including batteries, wiring, lighting, alternators, generators, starters and voltage regulators. Includes the use of electrical test equipment and schematics. Stresses the proper care and use of tools.

AUT 122

- **ANALYSIS AND TUNE UP**
  Credits: 3 (0-6)
  Prerequisite(s): AUT 111
  Corequisites: AUT 124, AUT 126
  Covers techniques for diagnosing the automobile engine and other areas. Stresses electronics and conventional ignition systems. Introduces carburetion and injection systems. Complete tune-up procedures, using the latest test equipment, are studied to ensure the proper application to the automobile.

AUT 124

- **AUTOMOTIVE HVAC SYSTEMS**
  Credits: 3 (0-6)
  Prerequisite(s): AUT 111
  Focuses on the principles of operation and service techniques applied to automobile air conditioning systems. Topics include components familiarization, testing, diagnosing, charging and repair practices.

AUT 126

- **ALIGNMENT, SUSPENSION AND STEERING SYSTEMS**
  Credits: 2 (0-5)
  Prerequisite(s): AUT 111
  A study of the proper techniques and procedures for complete front-end service, wheel alignment, replacement of worn parts, balancing wheels and related front-end and steering mechanisms.

AUT 208

- **AUTOMOTIVE TECHNOLOGY WORK EXPERIENCE II**
  Credits: 3 (1-12)
  Prerequisite(s): AUT 211, 213, 216, 217
  A cooperative work experience program employing students in a technical position in order to gain practical experience necessary for success in the automotive service industry. Supervision of this departmentally approved position is provided by the College through on-the-job visits and individual progress review sessions. Students are required to describe their objectives and attain specific job skills. Students attend a bi-weekly seminar on campus and work for a minimum of 180 hours for the duration of the session. Students must register with the Department of Cooperative Education.

AUT 211

- **STANDARD TRANSMISSION & DRIVE TRAIN**
  Credits: 3 (0-6)
  Prerequisite(s): AUT 108
  A study of the operating principles, construction, and maintenance of the manual transmission and related drive train components.

AUT 213

- **AUTOMATIC TRANSMISSION I**
  Credits: 3 (0-6)
  Prerequisite(s): AUT 108
  Corequisites: AUT 211
  A study of the theory, operation and diagnosis of automatic transmissions. Rebuilding of automatic transmissions is introduced.

AUT 216

- **FUEL AND EMISSION SYSTEMS**
  Credits: 3 (0-6)
  Prerequisite(s): AUT 108
  Corequisites: AUT 217
  A study of the principles and functions of the automotive fuel system including the carburetor, fuel pump, gas tank and emission control systems. Stresses the diagnosis and fuel injection and their components.

AUT 217

- **ENGINE DIAGNOSTICS & REPAIR I**
  Credits: 3 (0-6)
  Prerequisite(s): AUT 108
  Corequisites: AUT 216
  A study of the operational theory of the internal combustion engine. Engine rebuilding, mechanical diagnosis and failure analysis are introduced. Emphasis is on the proper use of hand tools, measuring instruments and equipment.

AUT 226

- **AUTOMATIC TRANSMISSION II**
  Credits: 2 (0-5)
  Prerequisite(s): AUT 213, AUT 208
  A continuation of Automatic Transmission I. Transmission rebuilding is continued with emphasis on in-service automotive repair.

AUT 228

- **ENGINE DIAGNOSTICS & REPAIR II**

Credits: 3 (0-6)

Prerequisite(s): AUT 217, AUT 208

A continuation of Engine Diagnostics and Repair I. Engine rebuilding is continued with emphasis on the proper use of hand tools, measuring instruments and equipment.

AUT 229

- **AUTOMOTIVE ELECTRICITY AND ELECTRONICS**

Credits: 3 (0-6)

Prerequisite(s): AUT 208

Corequisites: AUT 226, AUT 228

An introduction to electrical/electronic principles and applications to automotive systems. Covers DC and AC circuit fundamentals, wiring diagrams, electronic devices, use of test equipment and troubleshooting techniques.

BIOLOGY

(For related courses, see Science)

BIO 010

- **BASIC BIOLOGY**

Credit equivalents: 4 (3-3)

Corequisite: Appropriate score on the College Placement Test or MAT 013

An introduction equivalent to one year of high school biology. The basic principles and terminology of biological sciences. Recommended for students with insufficient background in biology to prepare them for college level biology courses. C is the minimum acceptable grade for movement from one remedial/developmental level to another and for completion of remediation/development requirements.

BIO 103 GE SCI GE DIV

- **PLANTS, PEOPLE AND CULTURE**

Credits: 3 (2-2)

A general one-semester introductory course in plant biology. Topics to be included are basic plant structures and functions, psychoactive drugs, plant poisons, medicinal uses, as well as economic and ornamental uses. Plants and their impact on society from both a contemporary and historical perspective will be examined. Inquiry based laboratory exercises, audiovisual materials, research using the Internet and current readings are included. Recommended for non-science majors.

BIO 104 GE SCI GE DIV

- **MYSTERIES OF THE MICROBIAL WORLD**

Credits: 3 (2-2)

A one-semester hands-on approach to microbial diversity. Topics include the history, ecology, medical and commercial use of bacteria, fungi, protozoa and other microorganisms. Course material includes units such as Night on the Town (disease transmission), Microbe Safari (microbial diversity) and Back to the Future (genetics and biotechnology). Collaborative laboratory activities, class discussions, Internet work and field trips are an integral art of the course. A research paper is required. Recommended for nonscience majors.

BIO 105 GE SCI

- **HEREDITY, EVOLUTION AND SOCIETY**

Credits: 4 (3-2)

Prerequisite(s): Appropriate score on the College Placement Test or MAT 013 and one year high school laboratory science or a 3-credit college level science course with a grade of "C" or better

An introduction to classical and modern genetics and evolutionary theory. A survey on the historic and scientific developments leading to our current concepts of heredity and evolution. The individual and societal implications of the powerful ideas and technologies associated with modern genetics and evolutionary theory. Includes computer simulations, audio-visual materials and laboratory observations (without dissection). Recommended for non-science majors.

BIO 106 GE SCI

- **HUMAN BIOLOGY, BIOMEDICAL ISSUES AND SOCIETY**

Credits: 4 (3-2)

Prerequisite(s): Appropriate score on the College Placement Test or MAT 013 and one year high school laboratory science or a 3-credit college-level science course with a grade of "C" or better

An introduction to the functioning of the human body; a survey of selected body systems in health and disease. There will be discussions and written assignments concerning human biological issues from both historical and current perspectives. Laboratory exercises (without dissection), audiovisual materials, computer simulations and current readings are included. Recommended for non-science majors.

BIO 108 GE SCI

- **ESSENTIALS OF HUMAN ANATOMY AND PHYSIOLOGY**

Credits: 4 (3-2)

Prerequisite(s): Appropriate score on the College Placement Test or MAT 013 and one year high school laboratory biology or chemistry or BIO 010 or CHM 010

A one semester survey of the cells, tissues, and systems of the human body. Structural, functional, and biochemical features of the integumentary, skeletal, muscular, nervous, endocrine, special senses, digestive, respiratory, lymphatic, urinary and reproductive systems in health and disease are studied and examined. Recommended for non-science majors. This course fulfills the science requirement for Dietetic Technology students.

BIO 111 GE SCI

- **HUMAN ANATOMY AND PHYSIOLOGY I**

Credits: 4 (3-3)

Prerequisite(s): One year of high school laboratory biology or BIO 010 and one year of high school laboratory chemistry or CHM 010 and appropriate score on the College Placement Test or MAT 013

A study of human cells and tissues as they relate to organs and systems. Structural and functional features of the integumentary, skeletal, muscular and nervous systems are examined. Recommended for students in the health sciences.

BIO 112 GE SCI

- **HUMAN ANATOMY AND PHYSIOLOGY II**

Credits: 4 (3-3)

Prerequisite(s): BIO 111

A continuation of BIO 111. A study of the structure and function of the body is continued by examining the endocrine, reproductive, circulatory, digestive, respiratory and excretory systems.

BIO 117 GE SCI

- **BIOLOGY I**

Credits: 4 (3-3)

Prerequisite(s): Appropriate score on the College Placement Test or MAT 013 and one year high school laboratory science or BIO 010 or CHM 010

A general study of the physical and chemical properties of living material, cell organelles, transport cell division, energy transformations in photosynthesis and cellular respiration, plant and animal tissues, the classification of organisms and genetics.

BIO 118 GE SCI

- **BIOLOGY II**

Credits: 4 (3-3)

Prerequisite(s): BIO 117

A continuation of Biology 117. Emphasis is on supporting life processes, animal systems, evolution, ecosystems and communities.

BIO 119 GE SCI

BIOLOGY FOR LAB TECHNOLOGY I
Credits: 4 (3-3)

Prerequisite(s): Appropriate score on the College Placement Test or MAT 013 and one year high school laboratory science or BIO 010 or CHM 010

A general study of cell biology including chemistry, organelles, membranes, cell division, energy transformations, and genetics. Plant and animal tissues and classification of living things are also introduced. The labs focus on the skills required for lab technicians such as preparation and calculation of solutions, proper documentation and safety considerations. Emphasis is on the care and use of basic laboratory instruments, such as microscopes, balances and spectrophotometers.

BIO 120 GE SCI

BIOLOGY FOR LAB TECHNOLOGY II
Credits: 4 (3-3)

Prerequisite(s): BIO 119

This course is a continuation of Bio 119 with emphasis on evolution, adaptation, life processes in plants and animals, and ecology. The labs are divided into two major projects emphasizing plant and animal care. The labs stress the development of specific technical skills such as hypothesis development, experimental design, data management and documentation, data analysis and written reports.

BIO 123 GE SCI

GENERAL BIOLOGY I
Credits: 4 (3-3)

Prerequisite(s): One year of high school laboratory biology or BIO 010 and one year of high school laboratory chemistry or CHM 010. Also appropriate score on the College Placement Test or MAT 013

A study of the basic principles and origins of life; the chemistry of living things; cell structure, function and reproduction; cell metabolic processes; plant taxonomy, anatomy, physiology and reproduction; Mendelian genetics and modern genetics principles. Required of science transfer students in biology and chemistry.

BIO 124 GE SCI

GENERAL BIOLOGY II
Credits: 4 (3-3)

Prerequisite(s): BIO 123

A continuation of BIO 123. Emphasis is on plant and animal systems, evolution and ecology.

BIO 131 GE SCI

HUMAN STRUCTURE AND FUNCTION
Credits: 4 (3-3)

Prerequisite(s): One year of high school laboratory biology or BIO 010 and one year of high school laboratory chemistry or CHM 010 and appropriate score on the College Placement Test or MAT 013

A one semester survey of the cells, tissues, organs and systems of the human body designed to establish a basic knowledge in human anatomy and physiology. The structural and functional features of the integumentary, skeletal, muscular, nervous, endocrine, sensory, digestive, cardiovascular, lymphatic, respiratory, urinary and reproductive systems will be studied and examined. Offered only for career track students in Radiographic Technology.

BIO 205

METHODS IN DNA TECHNOLOGY
Credits: 3 (2-3)

Prerequisite(s): BIO 120; CHM 118 or 124; MAT 108 (or departmental approval)

This is a laboratory course which emphasizes application and mastery of general skills learned in previous semesters as well as specific skills relating to recombinant DNA technology such as restriction digestion, gel electrophoresis, transformation, plasmid preparations, PCR (polymerase chain reaction) and Southern transfers. Students will gain extensive hands-on experience in nucleic acid techniques and manipulations.

BIO 206

PROTEIN PURIFICATION AND TISSUE CULTURE TECHNIQUES
Credits: 3 (2-3)

Prerequisite(s): BIO 205
Corequisite: CHM 220 (must co-enroll)

The course is designed to be a continuation of BIO 205. It will build on skills acquired and mastered in BIO 205. This course will develop new skills in protein manipulation, separation techniques, and plant/animal tissue culture techniques. Students will apply the skills they acquired throughout the Biotechnology curriculum to complete a Capstone project. Must co-enroll with CHM 220.

BIO 211

PRINCIPLES OF MICROBIOLOGY
Credits: 4 (3-3)

Prerequisite(s): One year of high school laboratory biology or BIO 010 and one year of high school laboratory chemistry or CHM 010. Also appropriate score on the College Placement Test or MAT 013

An introductory study of the microbial world with emphasis on the nature and behavior of microorganisms, the interrelationships that operate between microbes and the human host in health and disease, and the principles of prevention and control of infectious disease. Laboratory experience develops techniques in the proper handling, observation and identification of microbial cultures. Recommended for students in the health sciences.

BIO 221

MICROBIOLOGY
Credits: 4 (3-3)

Prerequisite(s): BIO 118, 120, or 124; CHM 118 or 124

A comprehensive study of microorganisms, with emphasis on bacteria. Topics include: cellular and viral structure and function, taxonomy, microbial metabolism and genetics, physical and chemical methods of controlling microorganisms and concepts of pathogenicity and immunology. The laboratory exercises emphasize practical skills in manipulating, observing, controlling and identifying microbes.

BIO 224

APPLIED MICROBIOLOGY
Credits: 4 (3-3)

Prerequisite(s): BIO 221

Topics include: microbial ecology, aquatic microbiology, including water and wastewater treatment; microbiology of air, soil and food; dairy microbiology; industrial microbiology. In the laboratory, students learn standard methods of analysis for microorganisms in the environment.

BIO 226

BIOLOGICAL TECHNOLOGY COOPERATIVE EDUCATION
Credits: 3 (1-12)

Prerequisite(s): Permission of the Department Chair

A cooperative work experience program in which students are employed in a technical position in order to gain some of the practical experience necessary for success in biological technology. Supervision of this departmentally approved position is provided by the college through on-the-job visits and individual progress review sessions. Students are required to describe their objectives and attain specific job skills. Students attend a biweekly, two hour seminar on campus and work a minimum of 180 hours per semester. Individuals must be recommended by the faculty of the department and registered with the Department of Cooperative Education.

BIO 228

GENETICS
Credits: 4 (3-3)

Prerequisite(s): BIO 124, CHM 124 or Permission of the Department Chair

Mendelian and molecular concepts of heredity and their relationship to cell function, development and evolution. Topics include structure, function of genes, patterns of inheritance, nature and causes of mutations, mechanisms of gene regulation and population genetics. Lab includes genetics of fruit flies, fungi, bacteria, human pedigree analysis and modern molecular techniques.

BIO 240

- **RESEARCH IN BIOLOGY**

Credits: 4 (0 -8)

Prerequisite(s): BIO 124, CHM 124, ENG 121 and approval by the Department Chairperson

Students will engage in a scientific investigation under the guidance of a research scientist in an academic institution. A faculty member of the Middlesex County College Biology Department will monitor the project. The research scientist and the MCC Biology Faculty will jointly assess the student's work. The assessment includes between 85-130 hours of lab work, a written report and oral presentation. This course can be used to fulfill the Sci/Mat elective or Bio Elective but not both, for the Science Transfer Biology Program. Students are expected to provide their own transportation.

BUSINESS

BUS 010

- **FRESHMAN SEMINAR IN BUSINESS**

Credit equivalents: 3 (3-0)

Provides students with the tools to ensure success through good study skills, including note taking, time management, listening, test-taking, problem solving, etc. Touch operation of the computer keyboard (including alphabet, number, and symbol keys) is also emphasized through hands-on instruction.

BUS 101

- **BUSINESS ORGANIZATION AND MANAGEMENT**

Credits: 3 (3-0)

The planning, supervision, control and performance of activities involved in the production of goods and services. The problems of human relations and labor-management and the functions of human resources, marketing, purchasing, production and finance are explored from the standpoint of effectively carrying on business that relates positively to the society of which it is a part.

BUS 107

- **COMPUTER APPLICATIONS FOR BUSINESS**

Credits: 3 (3-0)

Introduces the terminology and use of current PC hardware and software for processing and communicating data. Emphasis, through hands-on, teacher led instruction in the computer lab, is placed on the use of Microsoft's popular applications: Word, Excel, PowerPoint, and Access in a business environment.

BUS 115

- **MATHEMATICS OF FINANCE**

Credits: 3 (3-0)

Prerequisite(s): Passing score on the College Placement Test or successful completion of MAT 013

A study of the mathematics and terminology related to buying and selling, time value of money using simple and compound interest, basic statistics with charts and graphs, and fundamentals of investing.

BUS 201

- **BUSINESS LAW I**

Credits: 3 (3-0)

Brief surveys of the American legal system, procedural law, crimes and torts, administrative agencies, consumer, environmental and planning law. Detailed study of the substantive law of contracts, personal property and bailments and sales law. (In applicable areas the Uniform Commercial Code is covered as well as the common law principles.)

BUS 202

- **BUSINESS LAW II**

Credits: 3 (3-0)

Prerequisite(s): BUS 201

Detailed study of the substantive law of commercial paper, agency and employment, security devices, bankruptcy, partnerships and corporations and real property. Decedents' estates, wills and trusts as well as insurance laws are surveyed. (In applicable areas the Uniform Commercial Code is covered as well as the common law principles.)

BUS 205

- **BUSINESS COMMUNICATIONS**

Credits: 3 (3-0)

Prerequisite(s): A passing score on the College Placement Test or a grade of "C" or better in ENG 010

A practical approach to writing reports, memos and business letters and making oral presentations. Writing techniques relating to the nature of audience, the effectiveness of language, purpose and other rhetorical considerations.

BUS 240

- **BUSINESS COMMUNICATION**

Credits: 3 (3-0)

Prerequisite(s): ENG 122 or ENG 125 or permission of Department Chair

The course will focus on oral and written communication theory and practice appropriate for a variety of business situations. Students will generate and examine routine and special business correspondence, strategic electronic communication, and informational and analytical business reports; conduct business research; refine team-oriented skills; and design/deliver oral presentations. The following concepts will be emphasized: the nature of audience; business communication forms/formats; tone, style, and diction; purpose; clarity and complexity; and other relevant rhetorical issues. This course is cross-listed in the English and Business departments. Students may not earn credit for both BUS 240 and ENG 240.

CHEMICAL PROCESS TECHNOLOGY

CPT 100

- **INTRODUCTION TO CHEMICAL PROCESS TECHNOLOGY**

Credits: 3 (3-0)

This course serves as an introduction to the process industries- chemical, petrochemical, pharmaceutical, and food. The course focuses on technician duties, responsibilities and expectations; process terminology; plant organization and a general overview of process equipment, systems and operations. Plant tours will be conducted.

CPT 205

- **PROCESS EQUIPMENT & INSTRUMENTATION**

4 credits (3-3)

Prerequisite(s): CHM 118, PHY 101, MAT 108

The purpose of this hands-on course is to introduce students to practical fluid, heat, and mass transfer theory as evident in typical industrial chemical processes. Students will learn about the operation of processing equipment such as: reactors, dryers, filters, motors, pumps, valves, gauges, transmitters, utilities, piping, tubing, computers, control loops, and process diagrams. A simple pilot plant will be designed, built, and tested. This course will give chemical operators, process technicians, chemical technicians, chemists, and students of chemistry the opportunity to learn chemical engineering theory and accepted practice. The course is aligned with the American Chemical Society's "Voluntary Industry Standards for Chemical Process Industries Technical Workers" (11/94), where applicable, and is also consistent with the goals of the Greater New Jersey Process Technology Alliance.

CHEMISTRY

(For related courses, see Science)

CHM 010

- **BASIC CHEMISTRY**
  Credit equivalents: 4 (4-2)
  Prerequisite(s): MAT 013 or appropriate score on the College Placement Test
  An introduction to the fundamental principles of chemical structure and reactions. Includes applications in related laboratory work. C is the minimum acceptable grade for movement from one remedial/developmental level to another and for completion of remediation/developmental requirements.

CHM 107 GE SCI

- **PRINCIPLES OF CHEMISTRY**
  Credits: 4 (3-2)
  Prerequisite(s): One year of high school laboratory chemistry or CHM 010
  An introduction to basic concepts of inorganic, organic and biochemistry. Topics include the metric system, ionic and covalent bonding, acids, bases, and salts, radioactivity, solutions, colloids, emulsions, gases, and important organic compound classes such as alcohols, ethers, esters, carbohydrates, proteins, lipids and enzymes.

CHM 117 GE SCI

- **CHEMISTRY I**
  Credits: 4 (4-3)
  Prerequisite(s): MAT 013 or appropriate score on College Placement Test and one year of high school laboratory science or departmental approval A foundation course involving a study of the metric system, bonding, periodic table, chemical equations, mole-related concepts, stoichiometry and gas law. Laboratory experiences stress proper lab technique, use of equipment, treatment of data and safety.

CHM 118 GE SCI

- **CHEMISTRY II**
  Credits: 4 (4-3)
  Prerequisite(s): CHM 117
  A continuation of CHM 117. Topics include qualitative and quantitative solution chemistry, acid-base theory, chemical equilibria, oxidation-reduction and basic electrochemistry. Laboratory experiences cover qualitative analysis and volumetric methods of analysis. The volumetric techniques include acid-base and redox titrations and spectrophotometric analysis. The computer is used to analyze data.

CHM 119 GE SCI

- **GENERAL, ORGANIC AND BIOCHEMISTRY I**
  Credits: 4 (3-3)
  Prerequisite(s): One year of high school laboratory chemistry or CHM 010 and MAT 014 or appropriate score on College Placement Test
  An introduction to the concepts of inorganic, organic, and biochemistry. Topics include: the metric system, atomic structure, periodic law, ionic and covalent bonding, nuclear radiation, chemical reactions and stoichiometry, gas laws, liquids and solids, acids, bases and salts, solutions, colloids and electrolytes, chemical kinetics and equilibrium and an introduction to hydrocarbon chemistry. Laboratory experiments conducted for each of the major topics. Recommended for health sciences, liberal arts students.

CHM 120 GE SCI

- **GENERAL, ORGANIC AND BIOCHEMISTRY II**
  Credits: 4 (3-3)
  Prerequisite(s): CHM 119
  A continuation of CHM 119. Topics include hydrocarbon and functional group organic chemistry, carbohydrates, lipids and proteins, including the metabolism of these substances, nucleic acids, and the chemistry of blood and urine. Laboratory experiments conducted for each of the major topics.

CHM 123 GE SCI

- **GENERAL CHEMISTRY I**
  Credits: 4 (4-3)
  Prerequisite(s): MAT 014 or appropriate score on the College Placement Test and one year of high school chemistry
  A theoretical treatment of principles and laws underlying atomic structure, chemical reactions, enthalpy changes, bonding and states of matter integrated with descriptive material and quantitative calculations. Laboratory experiences reinforce both theoretical and quantitative aspects of the lecture topics.

CHM 124 GE SCI

- **GENERAL CHEMISTRY II**
  Credits: 4 (4-3)
  Prerequisite(s): CHM 123
  A continuation of CHM 123 concentrating on properties of liquids, solutions and solids, kinetics, gas phase equilibrium, properties of acids and bases, acid-base and solubility equilibria, thermodynamics and electrochemistry. The laboratory includes qualitative and quantitative determinations related to lecture topics.

CHM 201

- **PRINCIPLES OF ORGANIC CHEMISTRY**
  Credits: 4 (4-3)
  Prerequisites: CHM 118, CHM 124 or Equivalent
  An introduction to the basic concepts of organic chemistry in a non-mechanistic approach. Laboratory experiences include the basic techniques of organic synthesis and the related techniques used in the isolation and purification of organic compounds.

CHM 202 GE SCI

- **BIOCHEMISTRY**
  Credits: 4 (3-3)
  Prerequisite(s): CHM 201
  An introduction to the chemistry of compounds present in living systems. Topics include the structure and properties of carbohydrates, lipids, proteins and nucleic acids and the metabolism of these substances in the body. Laboratory experiments include the qualitative and quantitative analysis of these compounds. A one-semester course.

CHM 203

- **PRINCIPLES OF ORGANIC CHEMISTRY**
  Credits: 3 (3-0)
  Prerequisite(s): CHM 118 or equivalent
  An introduction to the basic concepts of organic chemistry in a nonmechanistic approach. Laboratory experiences include the basic techniques of organic synthesis and the related techniques used in the isolation and purification of organic compounds. A one semester course.

CHM 219

- **CLASSICAL VOLUMETRIC AND SPECTROPHOTOMETRIC ANALYSIS**
  Credits: 5 (4-4)
  Prerequisite(s): CHM 118, MAT 014 or equivalent
  Covers the theory relating to the quantitative techniques of volumetric, gravimetric and spectrophotometric analysis. Topics include evaluation of measurements, concentration calculations, acid-base and precipitation equilibria. Laboratory experiments cover classical volumetric and gravimetric analysis and use of visible spectrometers.

CHM 220

- **METHODS OF CHROMATOGRAPHIC SEPARATION**
  Credits: 4 (3-4)
  Prerequisite(s): CHM 219, CHM 201 or equivalent
  An overview of the theory and equipment of modern instrumentation in the chemistry laboratory. These include Infrared UV/Visible, Nuclear Magnetic Resonance, and Mass Spectrometry. The course also explores different techniques of separation including gas, high performance liquid, and thin layer Chromatography.

CHM 223 GE SCI

- **ORGANIC CHEMISTRY I**
  Credits: 4 (4-3)
  Prerequisite(s): CHM 124 or equivalent
  A mechanistic study of the preparation and chemical reactivity of alkanes, alkenes, and alkynes. Conformational analysis and stereochemistry of organic compounds. Laboratory experience includes basic techniques for the preparation, isolation, purification, and identification of organic compounds.

CHM 224 GE SCI

- **ORGANIC CHEMISTRY II**
  Credits: 4 (4-3)
  Prerequisite(s): CHM 223
  A mechanistic study of the preparation and chemical reactivity of alcohols, phenols, ethers, aldehydes, ketones, amines, carboxylic acids, and carboxylic acid derivatives. Laboratory experience includes the characterization and identification of organic compounds using modern spectroscopic techniques: IR, 1H-NMR, 13C-NMR, and Mass Spectrometry(MS). Introduction to basic techniques of chromatography (GC,HPLC) are also included.

CHM 226

- **CHEMICAL TECHNOLOGY COOPERATIVE EDUCATION**
  Credits: 3 (1-12)
  Prerequisite(s): CHM 201 or CHM 223, CHM 219 and Department approval
  A cooperative work experience program employing students in technical positions to gain practical experience necessary for success in chemical technology. Supervision of this departmentally approved position is provided by the college through on-the-job visits and individual progress review sessions. Students are required to describe their objectives and attain specific job skills. Students attend a biweekly, two hour seminar on campus and work a minimum of 180 hours a semester. Individuals must be recommended by the faculty of the department and register with the Department of Cooperative Education.

CHM 240

- **RESEARCH IN CHEMISTRY**
  Credits: 4 (0 -8)
  Prerequisite(s): BIO 124, CHM 124, ENG 121 and approval by the Department Chairperson
  Students will engage in a scientific investigation under the guidance of a research scientist in an academic institution. A faculty member of the Middlesex County College Chemistry Department will monitor the project. The research scientist and the MCC Biology Faculty will jointly assess the student's work. The assessment includes between 85-130 hours of lab work, a written report and oral presentation. This course can be used to fulfill the Sci/Mat elective or Chemistry Elective but not both, for the Science Transfer Chemistry Program. Students are expected to provide their own transportation.

CIVIL/CONSTRUCTION ENGINEERING TECHNOLOGY

(For related courses , see Mecomtronics)

CIT 104

- **CONSTRUCTION SURVEYING I**
  Credits: 3 (1-3-2)
  Prerequisite(s): MAT 129A
  Introduction to surveying, measurement theory, field and office procedures and error analysis. Lectures emphasize the concepts, computations, analysis and adjustments of leveling, angle observation, distance measure and control traverses. Field exercises stress the techniques of distance measure from rough pacing to use of the Electronic Distance Measure instrument, as well as the correct procedures for horizontal and vertical angle observations. Students prepare drawings and maps from their field notes.

CIT 105

- **STATICS FOR TECHNICIANS**
  Credits: 3 (3-0)
  Prerequisite(s): MCT 101, MAT 129A
  Practical study of statics for the engineering technology student. Topics include: force system resultants, force system equilibrium, load analysis of structural trusses and frames, friction, cross-sectional area properties, centroid, moment of inertia, radius of gyration, and polar moment of inertia. Use of the TI-86 calculator or approved equivalent is required for the solution of several types of problems.

CIT 125

- **CONSTRUCTION ESTIMATING**
  Credits: 3 (0-0-6)
  Prerequisite(s) MAT 013
  An introductory course to familiarize students with the drawings and quantity takeoff with related material and labor costs used in the construction industry. Students will examine and interpret construction drawings to determine quantities and related costs of materials and labor. Topics will include area and volume calculations, blueprint reading, quantity calculations, use of engineering scales, material costs, labor costs, overhead and profit. Laboratory projects reinforce the lecture material and emphasize proper estimating procedures and format. The student will be exposed to Microsoft Excel in preparation of the material and cost summaries. Students will prepare a quantity estimate for a small construction project. Basic discussions will be presented for cost estimating of residential and commercial construction projects. Unit cost estimating will be incorporated in the proposed estimated. Specifications and specification standards will be reviewed as set forth by the CSI.

CIT 151

- **URBAN AND SUBURBAN DEVELOPMENT**
  Credits: 3 (3-0)
  Prerequisite(s): CIT 205
  Land using planning, zoning and planning boards, general building codes, local control surveys land data systems, subdivision design, professional land planning systems.

CIT 203

- **STRENGTH OF MATERIALS**
  Credits: 4 (3-3)
  Prerequisite(s): CIT 105
  The study of strength of materials with emphasis on practical applications. Topics include: material properties, axial and torsional stress and strain, shear and moment diagrams, bending moment and shear stresses, beam design, theoretical and specification column analysis and design, connection analysis, and combined stresses using Mohr's Circle. Weekly laboratory experiments and formal written reports are used to reinforce lecture material. Oral presentation required. Graphical calculator required.

CIT 205

- **CONSTRUCTION SURVEYING II**
  Credits: 3 (2-3)
  Prerequisite(s): CIT 104
  A continuation of Construction Surveying I with emphasis on the methods of layout construction projects. Topics include: traverse computations and adjustment; control surveys for topography, N.J. State Plane Coordinates: horizontal and vertical curve calculations and stakeout methods, radial stakeouts; pipeline and utility stakeouts, road and street stakeouts; building stakeouts, earthwork calculations and Right of Way acquisition computations. Computer software is available to aid in the computations.

CIT 210

- **SOILS IN CONSTRUCTION**

Credits: 2 (1-0-2)

Prerequisite(s): CIT 105

Basic study of soils and soil mechanics in construction and environmental projects. Topics include: Index properties; soil classification systems; soil moisture; shear strength; subsurface stresses; lateral earth pressure; settlement; bearing capacity; subsurface investigations; landfill soil utilization and use of geosynthetics for stabilization and prevention of groundwater contamination.

CIT 212

- **WATER RESOURCES TECHNOLOGY**

Credits: 3 (1-3-2)

Prerequisite(s): MAT 129B and CIT 105

A study of hydrology and hydraulics as they relate to storm water generation and collection; wastewater collection and treatment and water treatment and distribution systems. Topics include: Hydrology and runoff; pipeline and open channel hydraulics; waste water treatment; pump selection; reservoir and detention design; drainage structures; water pollution and flood control. Laboratory exercises consist of selected design projects. Computer software is available for design and analysis.

CIT 215

- **SOIL MECHANICS AND MATERIAL TESTING**

Credits: 3 (0-0-6)

Prerequisite(s): CIT 105 Statics for Technicians

A basic study of soil mechanics in construction and environmental projects. Topics include: Index properties, soil classification systems, soil moisture, shear strength, subsurface stresses, lateral earth pressure, settlement; bearing capacity, subsurface investigations, landfill soil utilization and use of geosynthetics for stabilization and prevention of groundwater contamination. These topics are covered in lectures dealing with theory and practical computations. The laboratory part of the course will cover standard testing of soil samples to determine the engineering properties of the soil. Aggregates for concrete mixes are tested for acceptability. Concrete mixes are designed and tested for strength and workability.

CIT 217

- **STRUCTURAL DESIGN**

Credits: 3 (3-0)

Prerequisite(s) CIT 203

Practical applications of strength of materials using the American Institute of Steel Construction (AISC) manual in allowable stress design and American Concrete Institute (ACI) manual for reinforced concrete design. Topics include: principles of structural design for steel and reinforced concrete; steel framing analysis and design; reinforced concrete beam, girder, column and footing design.

CIT 252

- **BOUNDARY LAW**

Credits: 3 (3-0)

An introductory course, which analyzes elements of boundary law, consisting of legal research, evidence, procedures and the synthesis needed for surveying of land.

CIT 260

- **CIVIL/CONSTRUCTION DESIGN PROJECT**

Credits: 2 (0-0-6)

Prerequisite(s) CIT 203, CIT 205, CIT 125

Corequisite(s) CIT 212, CIT 217

Practical applications of strength of materials using the American Institute of Steel Construction (AISC) manual in allowable stress design and American Concrete Institute (ACI) manual for reinforced concrete design. Topics include: principles of structural design for steel and reinforced concrete; steel framing analysis and design; reinforced concrete beam, girder, column and footing design.

CMT 124

- **APPLIED TECHNICAL GRAPHICS/CAD II**

Credits: 3 (0-0-6)

Prerequisite(s): MEC 123

A study and execution of drawings encountered in mechanical and civil/construction engineering. Topics include: Mechanical assembly and detail drawings related to mating parts and surface quality, HVAC duct and piping drawings, structural steel fabrication and reinforced concrete drawings. Using surveyor's notes and calculations associated with horizontal and vertical control survey plans, deed plans and topographical plans are generated. All drawings are developed using AutoCAD software. The completion of a comprehensive final project is required.

COMMUNICATION

COM 105

- **INTRODUCTION TO COMMUNICATION STUDY**

Credits: 3 (3-0)

Surveys the field of communication studies, including the production, transmission and reception of messages among persons, groups, organizations and cultures.

COM 110

- **INTERPERSONAL COMMUNICATION**

Credits: 3 (3-0)

Prerequisite(s): COM 105

This course explores the ways people interact verbally and nonverbally and introduces the basic theories and modes of interpersonal communication as well as relationship development. Interpersonal contexts will be examined including initial encounters, friendships, marriage, family and professional settings. Activities include participation in groups, pairs, and interactive communication situations.

COM 115 GE HUM GE DIV

- **INTERCULTURAL COMMUNICATION**

Credits: 3 (3-0)

This course provides a general orientation to and overview of the communication between cultures. The emphasis will be upon offering insight into how cultural differences and similarities impact upon the relationship between culture and communication. The focus will deal with the challenges of communication in a culturally diverse society and offer techniques for improving communication between members of different cultures.

COM 121

- **MASS COMMUNICATION STUDY**

Credits: 3 (3-0)

Prerequisite(s): COM 105 or permission of Department Chair

A survey of the institutions, history and technology of the mass communication media, concentrating on radio, television, film and other electronic and print media forms. Topics include the growth of print and electronic media, and the relationship among government, media and the public, including the social responsibility and ethics of mass communication.

COM 131

- **INTRODUCTION TO BROADCASTING**

Credits: 3 (3-0)

Prerequisite(s): COM 105 or permission of Department Chair

A comprehensive introduction to the historical development and regulatory policies of radio and television broadcasting. Emphasizes the social, economic and ethical impact of radio and television on society and its citizens.

COM 208

- **COMMUNICATION SEMINAR & FIELD EXPERIENCE**
  Credits: 3 (1-12)
  Prerequisite(s): Permission of Department Chair
  A cooperative program in which the student may gain experience in a communication-related position in radio, television or public relations in order to gain some of the practical experience necessary for growth and success. Supervision of this departmentally approved position is provided by the College through site visits and individual progress review related to the position in order to effect the attainment of specific competencies. The student attends a biweekly, two-hour seminar on campus and serves a minimum of 180 hours during the semester.

COM 210

- **RADIO BROADCASTING PRODUCTION**
  Credits: 3 (3-0)
  Classroom and studio practice in the preparation and presentation of radio materials including writing, announcing, news casting, interviewing, musical and dramatic programming. Practical concerns involve studio recording techniques, editing of audio tapes and program organization and management. The emphasis is on effective communication and ethical and aesthetic values in a production setting. Hands-on experience with equipment conducted in the campus radio studio, WMCC.

CORRECTION ADMINISTRATION

(For related courses, see Criminal Justice)

COR 201

- **INTRODUCTION TO CORRECTION ADMINISTRATION**
  Credits: 3 (3-0)
  Prerequisites or Corequisites: CJU 123
  Examine the vast spectrum of systems, processes and people involved in the correctional field. Emphasizes the legal impact of the correctional process as well as correctional management theories and applications. Particular attention will be given to the massive changes of modern correctional facilities and emerging prison issues such as overcrowding, drugs and the AIDS problem.

COR 207

- **CORRECTIONAL INSTITUTIONS**
  Credits: 3 (3-0)
  Prerequisites or Corequisites: CJU 123
  Provide a thorough examination of the major issues that correctional institutions must deal with daily as well as the long-term effects of decision and policy making. Particular attention given to treatment programs, their uses and limitations. Provides an overview of the past and current status of penal servitude. Explains the lifestyle of the offender in correctional facilities and evaluates efforts to integrate the institutional experience with the post-release life of the inmates.

COR 280

- **CORRECTIONS EXTERNSHIP**
  Credits: 3 (2-6)
  Prerequisites or Corequisites: COR 201 or COR 207
  A cooperative work experience program in which students enhance their skills by getting hands-on experience in county or state correctional facilities. Supervision of this departmentally approved position is provided by the College through on-the-job visits and individual progress review sessions. Students are required to describe their objectives and attain specific job skills. Students attend a biweekly, two-hour seminar on campus and work a minimum of 180 hours a semester.

COMPUTER SCIENCE

CSC 010

- **CONCEPTS IN COMPUTERS**
  Credit equivalents: 3 (3-0)
  Introduces computer concepts. Topics include computer terminology, hardware, software, problem solving techniques, elementary concepts of sequence, selection and repetition. Provides hands-on experience of PC's using Microsoft Word for Windows and BASIC, and interactive software. Recommended for students interested in Computer Science who are enrolled in developmental courses such as RDG 009, MAT 010, or MAT 013.

CSC 105

- **COMPUTER APPLICATIONS AND SYSTEMS**
  Credits: 3 (3-0)
  This course defines computers and computer applications and their use in business, industry, and government. Students completing this course will be computer fluent. Students will understand the capabilities and limitations of computers and know how to use them. In addition, students will understand computers and their ethical, legal, and societal implications. Topics include the history of computers, hardware devices, software programs, terminology, privacy of information, ethical behavior, and the influence of computers on people and society. Hands-on experience includes: using a Windows operating system, a word processor, designing and implementing spreadsheets and producing presentations. This course is recommended for anyone who will be involved with computers and the use of computer application software.

CSC 106

- **INTERMEDIATE PC APPLICATIONS WITH PROGRAMMING**
  Credits: 4 (3-2)
  Prerequisite(s): BUS 107 or CSC 105 or CSC 107 or MCT 101 or one year of high school computer applications or a programming course AND MAT 014 or appropriate score on the College Placement Test
  This course introduces students to a problem solving approach to computer applications through the uses of spreadsheets, database presentation management, a programming language and Internet skills. It emphasizes Visual Basic and Microsoft Excel, in additional to surveying fundamental computer concepts, and is designed for students who already possess a familiarity with computer applications. It is recommended for students planning to transfer to an upper division college that has a computer programming requirement in its computer literacy course. This course is suitable for liberal arts, science and business students.

CSC 107

- **COMPUTERS IN HEALTH TECHNOLOGIES**
  Credits: 1 (0-2)
  Computer applications and their use in the health technology fields. Discusses the major components of a computer, instructs in the use of software application packages including word processing and database, and exposes a student to a personal computer operating system. Students gain experience using Microsoft Word and ACCESS.

CSC 108

- **INTRODUCTION TO THE INTERNET**
  Credits: 2 (2-0)
  Prerequisites recommended: Prior completion of one of the following courses: CSC 105, CSC 107, or BUS 107 or equivalent Microcomputer experience
  Introduction the skills necessary to use the Internet and the World Wide Web including the use of electronic mail, newsgroups, remote logins, file transfers, Web browsers, hypertext documents, and internet addressing. Includes intranets and how they are used in organizations. Students learn to select an Internet Service Provider (ISP), and then use the Internet for business applications. Emphasizes terminology used on the Internet and the appropriate behavior ("netiquette") for Internet users.

CSC 109 GE CSC

"BASIC" PROGRAMMING AND SYSTEMS
Credits: 3 (2-2)

Prerequisite(s): Two years of high school Algebra or MAT 013 or appropriate score on the College Placement Test
Corequisites: MAT 014

The history, art and discipline of computer programming and problem-solving techniques using the BASIC language and the implications for change in the present and future of society. Major emphasis is on problem solving using computers from a personal and professional point of view. Topics include top-down programming design, structural control logic, elementary data structures and sequential file handling.

CSC 110

MICROCOMPUTER OPERATING SYSTEMS AND ARCHITECTURE
Credits: 3 (2-2)

Prerequisite(s): CSC 105 or BUS 107

Students learn the role of microcomputer operating systems and how the operating systems interact with the computer. The course covers the structure and function of hardware including input/output devices, memory, central processing unit, storage devices, communications devices, and buses. The commonly used microcomputer operating systems Windows and DOS will be discussed and emphasized with hands-on exercises covering topics including: disk maintenance, directory and file management, batch files, interaction of graphical user interface, and utilities. Configuration and optimization of standard hardware and system software will also be discussed.

CSC 116

INTRODUCTION TO INFORMATION SYSTEMS SECURITY
Credits: 3 (3-0)

Prerequisite(s): CSC 105 or CSC 106 or BUS 107

Introduces the student to the field of Information Security. The managerial, legal, ethical and technical aspects of information security are covered. Students will learn about the need for information security, planning for security, and risk management. The function of firewalls, virtual private networks, intrusion detection systems, cryptography, and access control mechanisms will be discussed. Physical security and the role of personnel in properly executing security standards and controls are also covered.

CSC 125

WEB MARKUP LANGUAGES
Credits: 3 (2-2)

Prerequisite(s): MAT 014 or above and CSC 133 or permission of chair

Focuses on using the markup languages HTML and XML to create Web documents. HTML will be used to produce Web Pages and XML will be used to produce documents that are in a portable form, suitable for electronic data exchange. Other extensions and supplements to these languages such as Cascading Style Sheets (CSS), XHTML, schema languages (DTD and XML Schema) and translating tools (XSL) will be covered.

CSC 133

INTRODUCTION TO COMPUTER SCIENCE USING C++
Credits: 4 (3-1-2)

Prerequisite(s): MAT 014 or appropriate score on College's Placement Test
Corequisites: MAT 125 or MAT 127 or MAT 129 or MAT 110

Introduces programming and problem solving using an object- oriented programming language C++. Algorithm development and basic problem solving techniques are introduced. Fundamental topics of computer programming including sequence, selection, repetition, input/output, functions, parameter passing, scope, lifetime, and arrays are discussed in detail. This is the first major course in Computer Science and is required of all students pursuing a degree in any of the three options offered by the department. The course is also recommended for students in other programs seeking a rigorous introduction to computer programming.

CSC 134

OBJECT ORIENTED PROGRAMMING USING C++
Credits: 4 (3-3)

Prerequisite(s): CSC 133, MAT 125 or MAT 127 or MAT 129
Corequisites: MAT 126 or MAT 128 or MAT 131 or MAT 131A

Builds on the C++ foundation developed in CSC 133 and is the second core course required for students in the Computer Information System and Computer Science Transfer programs. It discusses the software engineering principles of encapsulation and reuse, and how they lead to abstract data types. The object oriented programming features of classes, inheritance, polymorphism and composition are covered, along with the C++ features of constructors and operator overloading. Students implement programs using these features in the C++ programming language.

CSC 160

INTRODUCTION TO UNIX FOR WEB DEVELOPMENT
Credits: 3 (3-0)

Prerequisite(s): MAT 014 or higher and CSC 133 or permission of chair

An introduction to the UNIX operating system and its use for web server administration. Presents the UNIX file system, text editing, basic UNIX commands and the creation of simple shell programs. Web server concepts are introduced and the Apache web server is installed and configured.

CSC 166

C++ PROGRAMMING
Credits: 3 (2-2)

This is an introductory programming course using the C++ programming language. Students are introduced to algorithm development and problem solving techniques. Fundamental topics of computer programming are discussed, including: data types, operators, input/output, arrays, and control structure (such as: selection, repetition and functions). No previous programming experience is required. This course is required for engineering technology students. Computer Science major my not take this course.

CSC 200

NETWORKING TECHNOLOGIES
Credits: 3 (3-0)

Prerequisite(s): CSC 110

Provides the student with a thorough understanding of the basic concepts of data communications, networking, and connectivity. This includes the topics covered in the Novell Networking Technologies course and the topics covered in the Microsoft Networking Essentials course. Upon successful completion of the course, the student will be prepared to take the associated certification test in either Novell Networking Technologies or Microsoft Networking Essentials.

CSC 205

COMPUTER SCIENCE WORK EXPERIENCE I
Credits: 3 (1-12)

Prerequisite(s): Completion of all courses in first year of CIS or Network Administration Option

A cooperative work experience program in which the student is employed in a computing/information systems position in order to gain some of the practical experience necessary for success in the computing field. Supervision of this departmentally approved position is provided by the College through on-the-job visits and individual progress review sessions. Students are required to describe their objectives and attain specific job skills. The student attends a biweekly, two-hour seminar on campus and works a minimum of 180 hours a semester. The individual must be selected by the cooperating employer and recommended by the chair of the Computer Science Department.

CSC 206

- **COMPUTER SCIENCE WORK EXPERIENCE II**
  Credits: 3 (1-12)
  Prerequisite(s): CSC 205
  Continuation of CSC 205 to include practical experience in the organization and operation of Information Technology departments. A term project is required that discusses the working experiences and learning objectives of the students and is presented to the class.

CSC 208

- **VISUAL BASIC PROGRAMMING**
  Credits: 4 (3-3)
  Prerequisite(s): CSC 133
  The Visual BASIC programming language, presenting top-down structured programming, visual interface design and implementation, functions, procedures, arrays, data file access methods, graphics programming, and database access programming. Hands-on experience with event-driven programming for an interactive Graphical User Interface under Windows is introduced. The creation and customizing of forms, controls (menu bars, scrolling list boxes, buttons, arrays of controls), their properties and their underlying BASIC programs (methods) will be studied. Error-handling routines and advanced debugging techniques will be used to produce reliable programs.

CSC 211

- **PROGRAMMING IN JAVA**
  Credits: 4 (3-3)
  Prerequisite(s): CSC 134
  Students learn to design, write, compile, test, and execute Java programs. Students create both stand-alone and client/ server applications using the Java programming language. Enhancement of Web Site functionality and embedding Java Applets in HTML code are taught. Platform independent graphical user interfaces is built using Java's Abstract Window Toolkit (AWT).

CSC 225

- **SYSTEMS ANALYSIS**
  Credits: 3 (2-3)
  Prerequisite(s): CSC 134
  Introduces systems analysis and design course for computer programmers and systems analysts. Presents an overview of information systems and the systems development life cycle. Stresses the techniques for systems documentation using case tools. Classical and structured methods for describing data flow, data modeling, process flow, file design, input and output design, and program specifications is utilized to document systems. Also surveys other important skills for the systems analyst such as fact-finding, communications, and project management.

CSC 230

- **MULTIMEDIA PRODUCTION AND AUTHORING TOOLS**
  Credits: 4 (3-2)
  Prerequisite(s): CSC 110 (Recommended - MAD 121) or relevant experience.
  Students learn how to incorporate the multimedia components of graphics, text, video, animation and sound into an interactive presentation. Topics discussed include the hardware and software needed to author multimedia titles and the design of multimedia projects. Students get hands-on experience with Director and author their own multimedia presentations.

CSC 233

- **COMPUTER ARCHITECTURE AND ASSEMBLY LANGUAGE I**
  Credits: 4 (3-2)
  Prerequisite(s): CSC 133 or permission of chair
  Corequisites: CSC 134 or permission of chair
  Fundamentals of computer architecture and assembly language programming. Topics include data representation, binary arithmetic, program flow, indexing, addressing and subprogram development. Programs will be developed and run in an assembly language.

CSC 234

- **COMPUTER ARCHITECTURE AND ASSEMBLY LANGUAGE II**
  Credits: 4 (3-2)
  Prerequisite(s): CSC 233
  Continuation of CSC 233, including a systems view of linking programs, the functions of operating system modules (the linkage editor, loaders, control program, interrupt handler's device drivers, etc.), virtual storage concepts, and command languages. Programs are written in IBM Assembly language. The computer organization topics include an overview of computer systems organization (processor, memory, I/O and interrupt handling), the digital logic level, the machine level, and the operating system level.

CSC 235

- **DATA STRUCTURES**
  Credits: 4 (3-1-2)
  Prerequisite(s): CSC 134, MAT 126 or MAT 131
  Different techniques of storing, accessing and processing data as utilized in the development of programs and algorithms. Topics include linked lists, stacks, queues, trees, recursion and graphs. Algorithms for applications such as sorting, searching and merging will be analyzed and implemented. Solutions are designed using object-oriented techniques and implemented in the C++ programming language. This is the third course in the C++ programming sequence and is required for students in the Computer Science Transfer Option.

CSC 239

- **DATABASE SYSTEM CONCEPTS**
  Credits: 3 (2-3)
  Prerequisite(s): CSC 134
  This course provides the student with a thorough understanding of the principles of relational database design, implementation, and usage. The use of Structured Query Language (SQL) is presented through both lectures and hands-on laboratory assignments using the Oracle relational database package and Oracle's Developer utilities for developing and maintaining database applications.

CSC 241

- **WEB PROGRAMMING**
  Credits: 4 (3-3)
  Prerequisite(s): CSC 134
  This course will provide students with the information necessary to develop web sites using HTML, CSS, JavaScript, CGI and Perl. Client side processing in JavaScript and server side processing in Perl and CGI will be used in hands-on projects to create dynamic web pages and process form data. Students will also develop web pages with links, images, tables, forms and style sheets.

CSC 245

- **UNIX AND SHELL PROGRAMMING**
  Credits: 4 (3-3)
  Prerequisite(s): CSC 133
  The basic concepts of the UNIX and Linux operating systems, including files, processes and input/output. Features of the UNIX and Linux shells are explored, namely: input and output redirection, pipes, filters, pattern matching, shell variables and commands, and shell program control structures. Students learn the Bourne and Korn shells and develop the ability to write shell programs of moderate difficulty, covering a variety of application types.

CSC 246

- **UNIX AND WEB SERVER ADMINISTRATION**
  Credits: 3 (2-3)
  Prerequisite(s): CSC 245
  Builds on the basic understanding of UNIX and shell programming developed in CSC 245. UNIX is the dominant operating system of Internet routers and Web servers. This course covers the essential elements of designing a client/server UNIX configuration, installing it, and keeping it running in an effective fashion. Local Area Networks (LANs), Wide Area Networks (WANs), and the TCP/IP protocol suites are a fundamental part of the UNIX client-server configuration, and are fully covered. The installation of UNIX applications is also covered, with electronic mail tools and Web browsers as primary examples of these applications. The emphasis is on serving UNIX client/ server needs on a global basis as occurs in a modern multinational corporation.

CSC 247

- **NETWARE SYSTEM ADMINISTRATION**
  Credits: 3 (2-3)
  Prerequisite(s): CSC 105
  Corequisites: CSC 110
  Taught using NetWare 5.1 environment and will provide the students with the necessary knowledge and skills to become a Certified Novell Administrator (CNA). Topics include terminology, hardware and software requirements, workstation configuration, setting up various types of objects, managing the file system, securing the network, implementing login scripts, configuring distributed print services, managing resources, and setting up application delivery. This course covers the topic included in the Novell course #560: NetWare 5.1 Administration. Upon successful completion of this course, the student will be prepared to take the associated certification test.

CSC 248

- **NETWARE SERVICE AND SUPPORT**
  Credits: 3 (2-2)
  Prerequisite(s): CSC 200, CSC 247
  Provides students with the knowledge necessary to support and service a Novell network. Cabling, network interface cards, storage devices, and other Novell network hardware components will be studied. Hardware and software installation, troubleshooting, and the use of network diagnostic and repair utilities will also be examined. Students conduct research on hardware and software issues using the Web. Students learn to debug NetWare printing. This course includes topics covered in Novell course #580 NetWare Service and Support version 2. Upon successful completion of this course, the student will be prepared to take the associated certification test.

CSC 251

- **WINDOWS WORKSTATION ADMINISTRATION**
  Credits: 3 (2-2)
  Prerequisite(s): CSC 110 or TCT 103
  Corequisites: CSC 200 or TCT 201
  Provides students with the knowledge and skills necessary to perform day-to-day administration in a Windows-based network. Topics include creating and administering user and group accounts policies, profiles and synchronization, managing resources, auditing, and setting up and maintaining the printing environment, Internet Connection Firewall, Remote Desktop Protocol, remote installation, security zones, and wireless and mobile computing. Hands-on exercises will enable the student to implement the tasks necessary to become a Windows administrator in a Microsoft Active Directory environment. Successful completion of this course will prepare the student to take the associated certification test.

CSC 252

- **WINDOWS SERVER ADMINISTRATION**
  Credits: 3 (2-2)
  Prerequisite(s): CSC 251
  Provides a foundation for systems administration of servers in a Windows-based network. Topics include the network architecture, server installation and configuration, physical and logical storage devices, Active Directory and domain management of users, groups, and computer accounts, resource security, remote administration, systems monitoring and performance, network printing, Internet web services, and disaster recovery implementation. Hands-on exercises are provided to allow the student to perform the above-mentioned tasks. Successful completion of this course will prepare the student to take the associated Microsoft Windows Server Certification Exam.

CSC 261

- **INFORMATION TECHNOLOGY MANAGEMENT**
  Credits: 3 (3-0)
  Prerequisite(s): CSC 200, CSC 134, CSC 251, ENG 121
  This course covers the technical and managerial issues involved in managing the Information Technology environment of an organization including: computer and network architecture, telecommunications, databases, operations, systems development and strategic planning. Students will investigate a broad range of managerial issues as well as the relationship between technical and managerial strategies.

COUNSELING AND CAREER SERVICES

CPS 021

- **CAREER AND EDUCATIONAL PLANNING**
  Credit equivalents: 3 (3-0)
  A practical course that guides students through the process of career and educational decision-making. Personal assessment of interests, values, skills and strengths are related to career and educational exploration to enhance goal achievement and personal motivation.

CPS 041

- **STRATEGIES FOR SUCCESS**
  Credit equivalents: 3 (3-0)
  Second course in a two-semester sequence for students in Project Connections. Provides an opportunity for students to learn strategies for academic success and to plan for successful transitions in career and education. Focuses on a better understanding of LD issues and self advocacy, to become familiar with the Adaptive Lab Equipment, to set career and educational goals and design strategies to accomplish them.

CRIMINAL JUSTICE

(For related courses, see Correction Administration & Police Science)

CJU 123

- **CRIMINAL JUSTICE I**
  Credits: 3 (3-0)
  Examines both the substantive and procedural criminal law with a special focus on the administration of justice. Particular attention will be given to the role of the police, courts and correctional systems and how each separate entity must function with the framework of Constitutional law. Special emphasis will be on New Jersey statutory law and court rules.

CJU 124

- **CRIMINAL JUSTICE II**
  Credits: 3 (3-0)
  Prerequisite(s): CJU 123
  A continuation of Criminal Justice I. Particular emphasis on the New Jersey court system including detailed discussions of the role of prosecutors versus defense attorneys; pretrial, trial and post-trial functions and the constant influence of ethical considerations.

DANCE

(For related courses, see Physical Education and Recreation)

DAN 131 GE HUM GE DIV

- **ELEMENTS OF DANCE**
  Credits: 3 (3-3)
  Provides fundamental movement skills, and body awareness in Modern Dance, basic training at the elementary level of Ballet technique, introduction to a cross section of Jazz technique, movement styles and rhythms, theory and practical application in the principles of dance forms. Additional focus will be on the ethnicity (African roots) in jazz, modern dance as the American dance form, and ballet based on European (French, Russian, Italian) techniques. Emphasizes placement, strength, flexibility, coordination, musicality within the different dance idioms; the exploration of space, time and energy as the raw materials in dance; the specific vocabulary relating to the different dance techniques and the creative experience of short movement patterns.

DAN 132

- **DANCE APPRECIATION**
  Credits: 3 (3-3)
  Designed to inform the student about dance as a performing art, through the critical evaluations of the various dance styles. An examination of dance in world cultures will also be included, especially the cross-cultural contribution of dance. Discusses the role and collaboration of performers/dancers, choreographers, artistic advisors, composers, technicians and the audience. Includes lectures, lecture-demos, discussions, selected readings, films, videotapes, slides, live performances, and experimental dance/movement sessions. Attendance at recommended dance performances is required. Written reports are required.

DAN 201 GE HUM

- **METHODS AND MODERN TECHNIQUES IN DANCE**
  Credits: 3 (3-3)
  Provides development in Modern Dance through theory and practical application. Emphasizes the practice of composition skills, clarity of movement, initiation, body articulation, and dynamics of performance. Focuses on the development of small group work and solos, including form and structure. Attendance is required at two professional dance productions. Written reports must be submitted.

DAN 202 GE HUM

- **IMPROVISATION AND COMPOSITION**
  Credits: 3 (3-3)
  A comprehensive approach introducing the creative and theoretical aspects of contemporary dance, with a focus on improvisation toward composition. Dance studies will be designed through problem-solving experiences, exploration of resources, use of ideas, knowledge of forms, development of craft. Emphasizes the excitement of making choices and taking chances. Studies will be performed as works in progress at the end of the semester (informal showing, individual or group). Class sessions will include lectures, films, discussions, selected readings on theory, philosophy, current trends of dance, and experimental dance/movements.

DENTAL HYGIENE

DHY 102

- **DENTAL RADIOLOGY**
  Credits: 2 (1-2)
  The nature, production, and utilization of x-rays as theoretical and technically related to dentistry. Exposure, processing and mounting techniques as well as film interpretation. Introduction to hazards and safeguards.

DHY 105

- **ORAL ANATOMY AND HISTOLOGY**
  Credits: 4 (3-4)
  Detailed anatomical and histological study of the oral cavity. Emphasis on the teeth and related bones, muscles, nerves, glands and blood vessels. Didactic materials are supplemented by laboratory exercises.

DHY 107

- **PREVENTIVE ORAL HEALTH SERVICES I**
  Credits: 4 (2-6)
  Introduction to primary dental hygiene services. The basic sciences are related to the performance of such services as taking the medical and dental history oral inspection, scaling and polishing teeth and patient education. Didactic materials are supplemented by laboratory and clinical exercises. May not be audited.

DHY 108

- **PREVENTIVE ORAL HEALTH SERVICES II**
  Credits: 5 (2-10)
  Prerequisite(s): DHY 102, DHY 105, DHY 107 and current CPR certification
  Clinical practice on patients of selected difficulty, encompassing the areas of oral inspection, Extra and Intra oral radiology, prophylaxis and patient education. Lecture material covers clinic related skills as well as a general reference to the entire scope of practice of this profession. May not be audited.

DHY 111

- **NUTRITION AND ORAL HEALTH**
  Credits: 2 (2-0)
  Prerequisite(s): DHY 102, DHY 105, DHY 107
  Fundamental principles of essential nutrients, nutrient requirements, dietary sources, nutrient deficiencies and excesses. Provides sound nutrition principles in assessing and evaluating total general health and its relationship to oral health. Students develop and plan implementation of nutritional counseling as part of preventive dental education for clinic patients.

DHY 203

- **GENERAL AND ORAL PATHOLOGY**
  Credits: 2 (2-0)
  Prerequisite(s): DHY 108, DHY 110, DHY 204, DHY 205
  An introduction to the basic principles of pathology. A consideration of common diseases affecting the human body and knowledge of how to correlate basic principles of general pathology to oral diseases and lesions. Special attention focused on abnormal conditions of the oral cavity.

DHY 204

- **DENTAL MATERIALS**
  Credits: 2 (1-2)
  Prerequisite(s): DHY 102, DHY 105, DHY 107
  A study of the chemical and physical properties of materials most commonly used in dental practice. Includes demonstration and performance of basic laboratory and operatory procedures as related to these materials.

DHY 205

- **PERIODONTOLOGY**
  Credits: 2 (2-0)
  Prerequisite(s): BIO 211, DHY 102, DHY 105, DHY 107
  A detailed study of the periodontium in both the healthy and diseased states. Includes the etiology, histopathology, description, and treatment of periodontal diseases and emphasizes the dental hygienist's role in initial periodontal therapy.

DHY 207

- **DENTAL HEALTH EDUCATION**
  Credits: 2 (2-0)
  Prerequisite(s): DHY 108, DHY 110, DHY 204, DHY 205
  Introduces educational concepts, objectives, and methodology in dental health instruction at various levels. The materials and methods used in individual and group teaching of dental health are included, preparing the student to teach in a classroom setting, in professional groups, and in a variety of community situations.

DHY 208

- **PHARMACOLOGY**
  Credits: 2 (2-0)
  Prerequisite(s): BIO 112, CHM 107, DHY 203, DHY 207, DHY 211, DHY 215
  Designed to acquaint the dental hygienist with pharmacology as it relates to the dental office. The classification use and action of drugs will be emphasized. Prescription writing, the importance of the patient's health history and emergency care of adverse reaction will also be included.

DHY 210

- **PUBLIC HEALTH**
  Credits: 2 (1-3)
  Prerequisite(s): DHY 203, DHY 207, DHY 211, DHY 215
  Understanding the scope of Federal, State and Local public health practices, historical developments and current legist ration related to health care. Field experience required.

DHY 211

- **PREVENTIVE ORAL HEALTH SERVICES III**
  Credits: 5 (1-13)
  Prerequisite(s): DHY 108, DHY 110, DHY 204, DHY 205 and current CPR
  Continuation of DHY 108 emphasizing more challenging clinical skills. Students develop treatment plans and do more detailed patient assessments. An understanding of medical conditions and complications related to dental treatment is covered in lecture. May not be audited.

DHY 212

- **PREVENTIVE ORAL HEALTH SERVICES IV**
  Credits: 5 (1-13)
  Prerequisite(s): DHY 203, DHY 207, DHY 211, DHY 215 and current CPR certification
  Continuation of DHY 211 with emphasis on improving clinical skills on patients of higher level of difficulty. Prepares students for successful completion of board examinations and employment.

DHY 215

- **ADVANCED PERIODONTOLOGY**
  Credits: 1 (1-1)
  Prerequisite(s): DHY 108, DHY 110, DHY 204, DHY 205
  An expanded study of periodontal disease include evaluation and monitoring of the disease process; latest concepts in treatment; the relationship of periodontics to other dental specialties; and the critique of related literature. Students develop and present clinical case studies in class. Various guest lecturers share their expertise.

DIETETIC TECHNOLOGY

(For related courses, see Hotel, Restaurant and Institution Management)

DTC 101

- **INTRODUCTION TO DIETETIC TECHNOLOGY**
  Credits: 1 (1-0)
  An introduction to the organization of food service in health care facilities and the role of the dietetic technician.

DTC 102

- **TOOLS AND TECHNIQUES OF THE NUTRITION CARE PROCESS**
  Credits: 1 (1-0)
  Prerequisite(s): DTC 101, HRI 103, HRI 105. Students must have earned a grade of "C" or better in all prerequisites.
  Corequisites: HRI 108, HRI 210
  An introduction to the total organization of health care facilities, departmental functions and responsibilities, as well as professional and paraprofessional interrelationships.

DTC 208

- **SUPERVISED FIELD EXPERIENCE: NUTRITION CARE**
  Credits: 3 (0-9)
  Prerequisite(s): DTC 101, HRI 105. Both with a grade of "C" or better.
  Corequisites: DTC 102, HRI 108, HRI 210
  A clinical experience designed to introduce students to the organization of food service in a specific health care facility and to provide an integrated approach to the nutritional care of patients.

DTC 209

- **SUPERVISED FIELD EXPERIENCE: FOODSERVICE SYSTEMS MANAGEMENT**
  Credits: 4 (1-9)
  Prerequisite(s): DTC 208, HRI 210. Both with a grade of "C" or better.
  Corequisites: HRI 213, HRI 203
  A foodservice systems management experience in a health care facility designed to give students an opportunity to apply classroom theory to quantity food production, patient and employee food service, and personnel management.

DTC 210

- **SUPERVISED FIELD EXPERIENCE: CLINICAL, COMMUNITY, FOODSERVICE**
  Credits: 4 (0-12)
  Prerequisite(s): DTC 209, HRI 213, and HRI 218 all with a grade of "C" or better.
  Corequisites: HRI 205, DTC 220
  A clinical experience in acute care, long-term care, school food service and community based nutrition programs designed to emphasize the managerial functions of planning and control in relation to food procurement, inventory management, cost accounting and nutritional management of patients; a culminating experience.

DTC 220

- **SEMINAR IN DIETETIC TECHNOLOGY**
  Credits: 1 (1-0)
  Prerequisite(s): DTC 209, HRI 218. Both with a grade of "C" or better.
  Corequisites: HRI 205, DTC 210
  Explores the expanding dimensions of the dietetic technician's role in health care business and industry, school food service, public health, foodservice, and research and prepares the student for entry-level positions.

DIGITAL MEDIA ARTS

(See Media Arts & Design for prerequisite courses)

DMA 210

- **WEB PAGE DESIGN AND LAYOUT**
  Credits: 3 (1-3)
  Prerequisite(s): MAD 121
  Introduction to web publishing with an emphasis on design and content. Students will learn to use the latest tools for electronic publication, including HTML, and web authoring tools such as Dreamweaver for the production of web pages. They will also learn aspects of layout that are unique to web design. In addition students will explore exciting areas of electronic publishing such as animation, sound and video.

DMA 212

- **WEB ANIMATION AND MOTION GRAPHICS**
  Credits: 3 (1-3)
  Prerequisite(s): MAD 121
  Exploration of computer based approaches to creating original visual imagery for use in interactive multimedia. Introduction to the integration of sound, graphics, video, and text on the desktop. Hands-on experience with Macromedia Flash, Adobe Photoshop, Image Ready, and non-linear postproduction using Adobe Premiere and/or Apple Final Cut Pro and QuickTime. Introduction to special effects and composing using Adobe After Effects to create movies, animation, and special effects for distribution on video, DVD/CD and the internet. Overview of career opportunities.

ECONOMICS

ECO 201 GE SS

- **PRINCIPLES OF ECONOMICS I**

Credits: 3 (3-0)

Prerequisite(s): A passing score on the algebra portion on the College's Placement Test or MAT 013

Introduces the foundations of economic analysis and explores the problems of macroeconomics, including national income, equilibrium analysis, and fiscal and monetary policy. The public sector of the national economy is also stressed.

ECO 202 GE SS

- **PRINCIPLES OF ECONOMICS II**

Credits: 3 (3-0)

Prerequisite(s): ECO 201 or permission of Department Chair

Microeconomics: includes such topics as the price system, allocation of resources, distribution of income and the prospects for economic change. International trade is also studied.

EDUCATION

EDU 121

- **INTRODUCTION TO EDUCATION**

Credits: 3 (3-0)

Analyzes the interaction of culture and education, develops from a historical perspective the evolution of modern education and examines contemporary issues and problems in American education. Students are required to complete a 25-hour volunteer assignment working in a teaching/learning setting.

EDU 207

- **INTRODUCTION TO EARLY CHILDHOOD EDUCATION**

Credits: 3 (3-0)

The physical and mental health needs of young children, as well as curriculum, equipment and learning procedures appropriate for early school years are considered. Studies of current trends and issues in early childhood education are considered, with emphasis on established and innovative programs in the field.

EDU 208

- **CREATIVE ACTIVITIES FOR YOUNG CHILDREN**

Credits: 3 (3-0)

An examination of the significance of creative play in the education of young children. Students learn to understand, use and direct activities in art, music and science for preschoolers. Selection and use of audiovisual materials are considered. How young children learn and when they are ready to learn are concepts that this course develops. These concepts provide the rationale for planning creative activity programs.

EDU 210

- **EDUCATION FOR EXCEPTIONAL CHILDREN**

Credits: 3 (3-0)

An introduction to the educational programs for exceptional and special learners. Current as well as historical specialized programs and issues. Recent research of special students' needs. Rationale-based strategies and instructional techniques to use with the exceptional population.

EDU 280

- **EDUCATION FIELD EXPERIENCE**

Credits: 3 (3-6)

Prerequisite(s): PSY 226, ENG 122

Observation and analysis of the teaching/learning experience in settings from preschool to high school. Includes observation, research and application of current practices in light of psychological, philosophical and historical theories of education. Requires a research paper and 90 field work hours.

ELECTRICAL AND COMPUTER ENGINEERING TECHNOLOGY

(For related courses see also Mecomtronics, MCT 101: Introduction to Engineering Technology and MCT 220: Introduction to Robotics and Control Systems)

ELT 105

- **FOUNDATIONS OF ELECTRICAL AND ELECTRONICS TECHNOLOGY**

Credits: 4 (3-3)

Prerequisite(s): MAT 013 or appropriate score on College Placement Test
Corequisite: MAT 014 or higher level

Study of electrical and electronic devices and circuits. Topics include: current and voltage, energy and power, AC/DC and elementary electronic circuits, electrical safety, wiring and electric motors. Computers are used for simulation and analysis of electric circuits. Theory is supplemented by laboratory experimentation.

ELT 110

- **ELECTRICAL/ELECTRONICS DEVICES AND CIRCUITS**

Credits: 4 (3-3)

Prerequisite(s): ELT 105 or equivalent
Corequisite: MAT 129A

Continuation of ELT 105. Topics include: Electric circuits theorems, capacitance and inductance type devices, operational amplifier and transistor circuits. Computers are used in the analysis of electric circuits. Theory is supplemented by laboratory experimentation.

ELT 111

- **DIGITAL ELECTRONICS**

Credits: 3 (2-3)

Prerequisite(s): MAT 013 or appropriate score on the College Placement Test. A study of a digital electronic circuits and systems. Introduces number system and Boolean Algebra topics. Digital electronic circuits and systems are analyzed and designed. Topics covered are: logic gates, Flip-Flops, registers, counters, arithmetic logic circuits, memories and various logic families.

ELT 208

- **ELECTRONIC AND COMPUTER ENGINEERING TECHNOLOGY WORK EXPERIENCE**

Credits: 3 (1-4)

Prerequisite(s): ELT 111, ELT 110

A cooperative work experience program whereby students are employed in a technical position in order to gain some of the practical experience necessary for success in technology. Supervision of this departmentally approved position is provided by the College through on-the-job visits and individual progress review sessions. Students are required to describe their objectives and attain specific job skills. Students attend a biweekly, two-hour seminar on campus and work for a minimum of 13 hours a week. Students are required to work a total of 180 hours during the semester. Students must be recommended by the Department faculty. Students must register with the Department of Cooperative Education.

ELT 210

- **ELECTRONIC CIRCUITS AND SYSTEMS**

Credits: 4 (3-3)

Prerequisite(s): ELT 110

Continuation of ELT 110. Study of time-domain and frequency-domain concepts as it relates to passive and active circuits and systems. Additional topics, such as power supply applications, power control and power amplifier circuits are studied. Computers are used for simulation and analysis of electronic circuits. Laboratory experiments are used to supplement the studies of electronic circuits and to verify analytical results.

ELT 221

- **ELECTRIC CIRCUITS I**
  Credits: 4 (3-3)
  Corequisite: MAT 132
  An introduction to electric circuit theory. Topics include: the mathematical development, current voltage, resistance, power, passive electrical components, laws of electricity and network theorems. Stresses analysis techniques. Theory is supplemented by laboratory work. Recommended for engineering students.

ELT 222

- **ELECTRIC CIRCUITS II**
  Credits: 4 (3-3)
  Prerequisite(s): ELT 221
  A continuation of ELT 221. A study of the pharos concept, AC power, complex frequency, resonance, Fourier analysis techniques, Lap lace transforms, polyphone circuits, and two port networks. Laboratory experiments supplement theoretical topics.

ELT 223

- **ELECTRONIC DESIGN AND MANUFACTURING**
  Credits: 2 (0-6)
  Prerequisite(s): ELT 210, ELT 226
  A study of electronic design and manufacturing techniques. Students perform individual technical projects which encompass all phases of modern design, development, and manufacturing processes. Topics such as: Cost Analysis, Engineering Design, Component Section, Time Scheduling, Printed Circuit Board Layout and Fabrication Techniques, and Product Evaluation are discussed. Monolithic and Hybrid IC fabrication techniques are studied.

ELT 224

- **COMMUNICATION ELECTRONICS**
  Credits: 3 (2-3)
  Prerequisite(s): ELT 210
  An introduction to signal processing methods, analog and digital modulation techniques, radio receivers and transmitters, and microwave systems.

ELT 226

- **MICROCOMPUTERS**
  Credits: 3 (2-3)
  Prerequisite(s): ELT 111
  A study of the hardware, software, interfacing and programming of microcomputers. Students demonstrate the application of the microcomputer through laboratory projects.

ELT 239

- **DIGITAL DATA COMMUNICATIONS AND NETWORKING**
  Credits: 3 (2-3)
  Prerequisite(s): ELT 111
  A study of various types of data communications systems including WANS and LANS, systems components, network structures, and interface techniques are examined. Laboratory work includes use of TCP/IP protocol analysis. Installations of networks, configuring of routers, and general troubleshooting of hardware and software network problems.

EMERGENCY MANAGEMENT

EMP 100

- **INTRODUCTION TO EMERGENCY MANAGEMENT**
  Credits: 3
  This course will present a broad overview of the emergency management system. The principles of emergency management, including preparedness, response, mitigation, recovery, and associated strategies will be covered. The role of federal, state and local governments as well as private agencies responsible for emergency management will be explored.

ENGLISH

ENG 009

- **WRITING SKILLS FOR COLLEGE I**
  Credit equivalents: 4 (3-1)
  For students whose College Placement Test scores show they need intensive work to improve their writing abilities. Objectives are designed to develop the ability to write in Standard American English. Instruction is provided in sentence structure, punctuation, and usage; students regularly practice writing effective sentences, paragraphs and short essays. Students may have to enroll in ENG 010 after successfully completing ENG 009. C is the minimum acceptable grade for movement from one remedial/developmental level to another and for completion of remediation/developmental requirements.

ENG 010

- **WRITING SKILLS FOR COLLEGE II**
  Credits: 3 (3-0)
  Prerequisite(s): Appropriate score on the College Placement Test or a grade of "C" or better in ENG 009
  Designed to improve fundamental skills of Standard American English through the writing of effective sentences, paragraphs, and essays and to build confidence in beginning writers. Correct spelling, punctuation and grammar are stressed. C is the minimum acceptable grade for movement from one remedial/developmental level to another and for completion of remediation/developmental requirements.

ENG 110

- **INTRODUCTION TO RESEARCH WRITING**
  Credits: 3 (3-0)
  Prerequisite(s): Appropriate scores on the reading and writing portions of the College Placement Test or a grade of "C" or better in RDG 009 and ENG 009 Corequisites: RDG 011, ENG 010. Both with a grade of "C" or better, or passing the reading and writing portions of the College Placement Test waives the corequisite
  An introduction to the basic strategies of library research and formal research writing. Through a variety of research projects and writing assignments across the curriculum requiring use of source materials, students will write between 5,000 and 7,000 words and learn both MLA and APA formats. (Does not fulfill the requirement for composition-ENG 121 and ENG 122/125, and cannot be used to fulfill Liberal Arts elective requirements.)

ENG 121 GE COM

- **ENGLISH COMPOSITION I**
  Credits: 3 (3-0)
  Prerequisite(s): A passing score on the writing portion of the College's Placement Test or a grade of "C" or better in ENG 010; completion of RDG 009 with a "C" or better or a score on the reading portion of the College Placement Test that exempts the students from RDG 009
  Through a variety of writing projects requiring description, characterization, narration, illustration, process analysis, comparison and contrast, and definition, as well as through a documented essay, students develop competence writing clear, correct, effective English prose. Extensive reading materials serve as structural models and as the basis for discussion and for the writing of essays involving response, analysis, and synthesis. During the course, the student will write between 7,000 and 10,000 words, including drafts and revisions.

ENG 122 GE COM

- **ENGLISH COMPOSITION II**
  Credits: 3 (3-0)
  Prerequisite(s): A grade of "C" or better in ENG 121 and a passing score on the reading portion of the College Placement Test or a grade of "C" or better in ENG 121 and a grade of "C" or better in RDG 011
  Through writings, reading of essays, short stories and poems, and speaking, the student will continue to learn and to practice the skills of clear, correct, effective English. Through a variety of writing projects, requiring techniques such as cause and effect, analysis, evaluation, classification, argumentation and persuasion, as well as through a formal research (library) paper, students will write between 7,000 and 10,000 words, including drafts and revisions.

ENG 125 GE COM

- **ENGLISH COMPOSITION II: WRITING ABOUT LITERATURE**
  Credits: 3 (3-0)
  Prerequisite(s): A grade of ´C´ or better in ENG 121 and a passing score on the reading portion of the College Placement Test or a grade of ´C´ or better in ENG 121 and a grade of ´C´ or better in RDG 011
  Enables students to continue strengthening academic writing skills while developing an appreciation for literature. By reading, discussing, and writing about poetry, short stories, drama, and critical essays, students continue to practice skills introduced in English Composition I and learn techniques important to argumentation, critical analysis, literary interpretation, and literary research. Various writing projects, including a formal full-length research paper on a literary topic – amounting to between 7,000 and 10,000 words – are required. This course may be substituted for ENG 122 and carries full credit for graduation in all programs.

ENG 131 GE COM

- **RESEARCH, COMPOSITION AND PRESENTATION I**
  Credits: 2 (2-0)
  Prerequisite(s): A passing score on the College Placement Test or a grade of "C" or better in ENG 010
  Written and oral communication skills for students in the Mecomtronics Engineering Technology and Telemedia Communications Technology programs. Students read and write technical documents and prepare a variety of written and oral projects and a documented research report. Develop competence in clear, correct, effective written English. Students will write between 5,000 and 7,000 words, including drafts and revisions, present two formal oral reports and learn basic word processing skills.

ENG 132 GE COM

- **RESEARCH, COMPOSITION AND PRESENTATION II**
  Credits: 2 (2-0)
  Prerequisite(s): A grade of "C" or better in ENG 131
  Continuation of ENG 131. Emphasizes more complex written projects, oral reports and presentations and a documented field research report. In addition, the student develops competence in the reading and writing of technical documents, the analysis and interpretation of written material and the use of written sources as the starting point for expository writing. Students continue to develop interviewing, oral communication and presentation skills and learn how to prepare visual materials. Students will write between 5,000 and 7,000 words, including drafts and revisions, and present two formal oral reports. For Mecomtronics Engineering Technology and Telemedia Communications Technology majors.

ENG 133 GE COM

- **RESEARCH, COMPOSITION AND PRESENTATION III**
  Credits: 2 (2-0)
  Prerequisite(s): A grade of "C" or better in ENG 132
  Continuation of ENG 132. Emphasizes more complex written projects - augmentation and persuasion - and a documented research project that integrates oral reports and presentations. In addition, students develop additional competence in the reading and writing of technical documents, the analysis and interpretation of written material - including poetry, drama and fiction - and the use of written sources as the starting point for expository writing. Students polish interviewing, oral communication and presentation skills; prepare visual materials; participate in team writing projects and prepare a resume. Students will write between 5,000 and 7,000 words, including drafts and revisions, and present two formal oral reports. For Mecomtronics Engineering Technology and Telemedia Communications Technology majors.

ENG 205 GE HUM

- **INTRODUCTION TO JOURNALISM**
  Credits: 3 (3-0)
  Prerequisite(s): ENG 122 or ENG 125 or permission of Department Chair
  Introduces the prospective reporter to the various forms of journalistic writing, including news and feature stories, editorials, and opinion columns. Students learn to recognize, weigh, gather, report and edit the news as they learn to develop, organize and publish their work as professional reporters working on the staff of the College newspaper. In addition, they are introduced to the major historical trends in journalism as well as the ethical and moral issues that journalists face each day as they per form their jobs.

ENG 206

- **JOURNALISM WORKSHOP**
  Credits: 3 (3-0)
  Prerequisite(s): ENG 205 or permission of Department Chair
  An advanced course in journalism emphasizing the development of editorial skills and actual newspaper production. Membership on the school newspaper is required.

ENG 212 GE HUM

- **CHILDREN'S LITERATURE**
  Credits: 3 (3-0)
  Prerequisite(s): ENG 121
  Surveys the field of children's literature. Covers many forms of this literature, both traditional and modern. Attention is given to ways of helping children enjoy literature. It is strongly recommended that all degree students complete ENG 122 or 125 before registering for this course.

ENG 214 GE HUM

JOURNALISM/WRITING FIELD EXPERIENCE
Credits: 3 (2-6)

Prerequisite(s): ENG 205 or ENG 235 or BUS 205 and permission of Department Chair
Corequisites: ENG 206
A cooperative work experience through which students are employed in a professional writing or journalism position to gain the practical experience necessary for success in the field. Supervision of this departmentally approved position is provided by the College through the instructor's on-the job visits and individual progress reviews. Students are required to describe their objectives and attain specific job skills. They attend a biweekly two-hour seminar on campus and work a minimum of 180 hours during the semester.

ENG 215 GE HUM

SCIENCE FICTION
Credits: 3 (3-0)

Prerequisite(s): ENG 122 or ENG 125 or permission of Department Chair
Significant works of science fiction like those of Shelley, Verne, Wells, Huxley, Asimov, Heinlein and Bradbury are read and analyzed. Major topics include science fiction as a literary genre, the advance of technology and its effects on society and the individual, and the scientist as evil genius.

ENG 220 GE HUM

DETECTIVE FICTION
Credits: 3 (3-0)

Prerequisite(s): ENG 122 or ENG 125 or permission of Department Chair
A study of the *Who Done It?* as it evolved in America and spread through the world as a popular genre. Students read, analyze, and write about crime/mystery fiction with emphasis on the development of the character of the detective. Writers include but are not limited to Poe, Conan Doyle, Hammett, Chandler, Chesterton, Freeman, Bramah, Futrelle, Ross MacDonald, McBain, Christie, Ibarguengoita, Sayers, P.D. James, Robert Parker, Simenon, Sjowall & Wahloo, Rendell, Stribling, Togawa, and Van der Wetering.

ENG 221 GE HUM

ENGLISH LITERATURE I
Credits: 3 (3-0)

Prerequisite(s): ENG 122 or ENG 125 or permission of Department Chair
Works by major authors in English literature from the Anglo-Saxon period through 1789 are read and analyzed. Authors studied include the Beowulf poet, Chaucer, Shakespeare, Milton, the metaphysical poets, Swift and Blake.

ENG 222 GE HUM

ENGLISH LITERATURE II
Credits: 3 (3-0)

Prerequisite(s): ENG 122 or ENG 125 or permission of Department Chair
Works by major authors in English literature from 1789 to the present are read and analyzed. Authors studied include Wordsworth, Shelley, Keats, Tennyson, Browning, Yeats, Joyce, and Eliot.

ENG 225 GE HUM GE DIV

WORLD LITERATURE I
Credits: 3 (3-0)

Prerequisite(s): ENG 122 or ENG 125 or permission of Department Chair
An introduction to masterpieces of world literature to 1500. A variety of cultural, intellectual, historical and literary perspectives are explored in selections by authors from Asia, Africa, and Continental Europe. Students complete reading, writing, and research assignments designed to develop the skills of literary interpretation and analysis.

ENG 226 GE HUM GE DIV

WORLD LITERATURE II
Credits: 3 (3-0)

Prerequisite(s): ENG 122 or ENG 125 or permission of Department Chair
An introduction to masterpieces of world literature from 1500. A variety of cultural, intellectual, historical and literary perspectives are explored in selections by authors from Asia, Africa, Continental Europe and Latin America. Students complete reading, writing, and research assignments designed to develop the skills of literary interpretation and analysis.

ENG 227 GE HUM GE DIV

LITERATURE OF BLACK AMERICA
Credits: 3 (3-0)

Prerequisite(s): ENG 122 or ENG 125 or permission of Department Chair
The literature of the black American from African and Pre-Civil War songs and tales to the writers of the Reconstruction, the early 1900's, the Harlem renaissance, the WPA Writers-Workshop, and the new black writers of the 1990's.

ENG 228 GE HUM

MODERN BRITISH AND AMERICAN POETRY
Credits: 3 (3-0)

Prerequisite(s): ENG 122 or ENG 125 or permission of Department Chair
British and American poets from the time of Dickinson through the 20th century are read and analyzed. Poets studied could include Dickinson, Whitman, Yeats, Frost, Stevens, Eliot, Hughes, Auden, Brooks, Ginsberg, Sexton, Rich, and Plath.

ENG 233 GE HUM

INTRODUCTION TO THE NOVEL
Credits: 3 (3-0)

Prerequisite(s): ENG 122 or ENG 125 or permission of Department Chair
The novel from its earliest forms to the present. Authors include Fielding, Austen, Dickens, Melville, James, Flaubert, Dostoevski, Joyce and Faulkner. Works are analyzed in terms of genre, point of view, structure, characterization and theme.

ENG 234 GE HUM

INTRODUCTION TO SHAKESPEARE
Credits: 3 (3-0)

Prerequisite(s): ENG 122 or ENG 125 or permission of Department Chair
An introduction to Shakespeare's dramas. Students read, discuss, and write about selected histories, comedies, and tragedies. Included is a discussion of the Elizabethan theater.

ENG 235 GE HUM

CREATIVE WRITING I
Credits: 3 (3-0)

Prerequisite(s): ENG 122 or ENG 125 or permission of Department Chair
A basic course in creative and imaginative writing. Various literary forms are discussed and undertaken by the students. Student manuscripts are extensively analyzed and criticized.

ENG 236 GE HUM

CREATIVE WRITING II
Credits: 3 (3-0)

Prerequisite(s): ENG 122 or ENG 125 or permission of Department Chair
A continuation of ENG 235. Various literary forms are discussed and undertaken. Student manuscripts are extensively analyzed and criticized by both students and instructor. Students focus on one major writing project. Various forms, techniques and styles of imaginative writing are discussed via an investigation of professional as well as student writing.

ENG 237 GE COM

- **ADVANCED WRITING WORKSHOP**
  Credits: 3 (3-0)
  Prerequisite(s): ENG 122 or ENG 125 or permission of Department Chair
  An advanced writing course in which students continue to improve composition skills by interacting with both instructor and peers (including students from various curricula) to form a community of writers. Students are required to undertake sustained reading of books, periodicals, and monographs in their fields, and to complete research and other writing projects on topics related to their majors and fields of interest.

ENG 238

- **TECHNICAL WRITING**
  Credits: 3 (3-0)
  Prerequisite(s): ENG 122 or ENG 125 or permission of Department Chair
  An advanced writing course designed especially for the students majoring in the various A.S. and A.A.S. curricula (with the exception of business majors). Enhances students' skills for technology communication projects with particular emphasis on informal and formal report writing. It emphasizes clarity, conciseness, objectivity and practicality of style.

ENG 239 GE HUM GE DIV

- **WOMEN IN LITERATURE**
  Credits: 3 (3-0)
  Prerequisite(s): ENG 122 or ENG 125 or permission of Department Chair
  Writers who have shaped woman as a literary image and spoken with a woman's voice in novels, short stories and poems.

ENG 240 GE COM

- **BUSINESS COMMUNICATION**
  Credits: 3 (3-0)
  Prerequisite(s): ENG 122 or ENG 125 or permission of Department Chair
  This course focuses on oral and written communication theory and practice appropriate for a variety of business situations. Students generate and examine routine and special business correspondence, strategic electronic communication, and informational and analytical business reports; conduct business research; refine team oriented skills; and design/deliver oral presentations. The following concepts are emphasized: the nature of audience; business communication forms/formats; tone, style, and diction; purpose; clarity and complexity; and other relevant rhetorical issues. This course is cross-listed in the English and Business departments. Students may not earn credit for both BUS 240 and ENG 240.

ENG 243 GE HUM

- **LITERATURE OF THE UNITED STATES: BEGINNINGS TO 1880**
  Credits: 3 (3-0)
  Prerequisite(s): ENG 122 or ENG 125 or permission of Department Chair
  A survey of works illustrating the literary experience in the United States from colonial times to 1880. Various cultural, intellectual, historical and literary perspectives are explored. Students complete reading, writing, and research assignments to develop the skills of literary interpretation and analysis.

ENG 244 GE HUM

- **LITERATURE OF THE UNITED STATES: 1880-1945**
  Credits: 3 (3-0)
  Prerequisite(s): ENG 122 or ENG 125 or permission of Department Chair
  A survey of works illustrating the literary experience in the United States from 1880 to 1945. Various cultural, intellectual, historical and literary perspectives are explored. Students complete reading, writing, and research assignments to develop the skills of literary interpretation and analysis.

ENG 245 GE HUM

- **LITERATURE OF THE UNITED STATES: WORLD WAR II TO PRESENT**
  Credits: 3 (3-0)
  Prerequisite(s): ENG 122 or ENG 125 or permission of Department Chair
  A survey of works illustrating the literary experience in the United States from World War II to the present. Students complete reading, writing, and research assignments about contemporary American authors such as Albee, Angelou, Baldwin, Brooks, Heller, Oates, O'Connor and Updike, whose works provide perspectives on the social, moral, and political changes taking place in contemporary society.

ENG 247 GE HUM

- **PRINCIPLES OF LITERARY STUDY: INTRODUCTION TO POETRY**
  Credits: 3 (3-0)
  Prerequisite(s): ENG 122 or ENG 125 or permission of Department Chair
  Introduces students to the principles of studying and analyzing different poetic forms. While reading, listening to, discussing and writing about various kinds of poems by such poets as Shakespeare, Milton, Keats, Frost, Plath, and others, students learn to evaluate and appreciate poetry by understanding such concepts as figurative language, poetic speaker and situation, meter, sound, form, and rhyme. Students are required to write a number of literary analyses.

ENG 248 GE HUM

- **INTRODUCTION TO SHORT FICTION**
  Credits: 3 (3-0)
  Prerequisite(s): ENG 122 or ENG 125 or permission of Department Chair
  Students read short fiction by various authors of the 19th and 20th centuries and discover ways of talking and writing about it. Concepts such as point of view, character and plot are introduced. Students learn how to read with greater appreciation and skill and to see literature as a means to understand themselves and their world.

ENG 249 GE HUM

- **BIOGRAPHY AND AUTOBIOGRAPHY**
  Credits: 3 (3-0)
  Prerequisite(s): ENG 122 or ENG 125 or permission of Department Chair
  An examination through letters, memoirs, journals, autobiography, and biography of some of the seminal figures of our time. Through discussion and written response, the impact of cultural, ethnic, economic, and political factors on the individual and the expression of such influences as they emerge in the writings are analyzed. The readings focus on individuals who represent the following: artists (art, dance, music, film), authors/playwrights/poets, scientists, politicians/statesmen, religious/philosophical figures.

ENG 250 GE HUM GE DIV

- **GAY AND LESBIAN LITERATURE**
  Credits: 3 (3-0)
  Prerequisite(s): ENG 122 or ENG 125 or permission of Department Chair
  Students read works which have either homosexuality as a prominent theme or prominent homosexual characters. Writers include, but are not limited to, Sappho, Catullus, Walt Whitman, Gertrude Stein, Virginia Woolf, Allen Ginsberg, Martin Duberman, Rita Mae Brown, Audre Lorde, Susan Sontag, Adrienne Rich, Minnie Bruce Pratt and Paul Monette. Old world and new world cultures, as well as a variety of genres, will be discussed in this course.

ENG 253 GE HUM GE DIV

- **MYTHOLOGY IN LITERATURE**
  Credits: 3 (3-0)
  Prerequisite(s): ENG 122 or ENG 125 or permission of Department Chair
  Myths of ancient cultures are read and discussed through some of their great epics, plays, poems and histories.

ENG 254 GE HUM

- **LITERATURE AND FILM**

Credits: 3 (3-0)

Prerequisite(s): ENG 122 or ENG 125 or permission of Department Chair

Works by writers such as Steinbeck, Bronte, Warren, Shakespeare and Dickens and their transfer to film by such directors as Ford, Wyler, Rossen, Olivier, and Lean are studied. A study of the literary and cinematic approaches taken by each is included.

ENG 255 GE HUM

- **INTRODUCTION TO FILM**

Credits: 3 (3-0)

Prerequisite(s): ENG 122 or ENG 125 or permission of Department Chair

This course centers on the rudiments of film in order to understand the stylistic conventions, the business behind movie making, and the ways movies reflect and change our perceptions of language and life.

ENG 257 GE HUM

- **THE LITERATURE OF EVIL**

Credits: 3 (3-0)

Prerequisite(s): ENG 122 or ENG 125 or permission of Department Chair

Works by writers such as Euripides, Shakespeare, Machiavelli, Marlowe, Milton, Hawthorne, Poe, Shelley, Blatty, Tryon, and O'Connor are studied. Students discuss various genres and types of evil characters as well as dominant motifs in the literature of evil.

ENG 258 GE HUM

- **MODERN DRAMATIC LITERATURE**

Credits: 3 (3-0)

Prerequisite(s): ENG 122 or ENG 125 or permission of Department Chair

An introductory study of modern dramatic literature, including plays by Ibsen, Shaw, Chekhov, Brecht, Beckett, Williams, Miller and O'Neill. Major works are analyzed for literary style, form and content; discussions touch on topics such as alienation, theatre of the absurd, existentialism in drama, tragicomedy, dramatic irony, and tragedy of the common man, and the playwright as social agitator.

ENG 260 GE HUM

- **SCRIPTWRITING**

Credits: 3 (3-0)

Prerequisite(s): ENG 122 or ENG 125 or permission of Department Chair

Scriptwriting is designed for the student who needs a course in generating story ideas, dialogue and presentational information for marketing, educational, industrial and/or entertainment arenas as well as for playwriting. During the course, students analyze the components of a script and review numerous published scripts with the intention of creating their own viable scripts. Also, students will write and work with dialogue, plot, scene development, storyboarding and distinctive script formats required for various media.

ENG 254 GE HUM

- **LITERATURE AND FILM**

Credits: 3 (3-0)

Prerequisite(s): ENG 122 or ENG 125 or permission of Department Chair

Scriptwriting is designed for the student who needs a course in generating story ideas, dialogue and presentational information for marketing, educational, industrial and/or entertainment arenas as well as for playwriting. During the course, students analyze the components of a script and review numerous published scripts with the intention of creating their own viable scripts. Also, students will write and work with dialogue, plot, scene development, storyboarding and distinctive script formats required for various media.

ENGLISH AS A SECOND LANGUAGE

ESL 060

- **LISTENING-INTENSIVE LEVEL I**

Credit equivalents: 3 (3-0)

A beginning level listening course to help students comprehend basic interaction in a variety of contexts. Students acquire new vocabulary in addition to aural comprehension through classroom activities using tapes, workbook exercises, dictations, and participation in group communication activities.

ESL 061

- **PHONOLOGY-INTENSIVE LEVEL I**

Credit equivalents: 3 (3-0)

Pronunciation at the beginning level. Students learn the vowel and consonant sounds of English and the ability to produce them correctly. Students practice transferring this knowledge to dialogues and short conversations. Methods of self-monitoring and correction are taught.

ESL 062

- **DISCUSSION-INTENSIVE LEVEL I**

Credit equivalents: 3 (3-0)

Oral communication at the beginning level. Students participate in social conversations and acquire basic vocabulary in order to communicate better. Appropriate cultural behavior will be discussed in the context of social interaction.

ESL 063

- **STRUCTURE-INTENSIVE LEVEL I**

Credit equivalents: 4 (3-1)

A basic course in English structure in the context of listening, speaking, reading and writing. Approximately 1,000 vocabulary items are presented. Students are required to attend one hour of individualized work in the ESL Learning Center in addition to class hours.

ESL 064

- **WRITING-INTENSIVE LEVEL I**

Credit equivalents: 4 (3-1)

A basic course in writing. Students learn to write grammatically correct simple sentences. More complex sentences will be practiced later and guided writing will be done based upon pictures, personal experience and other stimuli.

ESL 071

- **PHONOLOGY-INTENSIVE LEVEL II**

Credit equivalents: 3 (3-0)

Prerequisite(s): ESL 061 or permission of Department Chair

Corequisites: ESL 072

An intermediate course in pronunciation. Students review the vowel and consonant sounds, and intensive practice is done on contrasting the different vowel sounds. Accented and unaccented syllables are addressed and practice starts on intonation.

ESL 072

- **DISCUSSION/CULTURAL ORIENTATION-INTENSIVE LEVEL II**

Credit equivalents: 3 (3-0)

Prerequisite(s): ESL 062 or permission of Department Chair

Corequisites: ESL 071

A course in oral communication at the intermediate level. Attention paid to conversation techniques and strategies in different situations. Addresses the cultural conventions of communicating in American English.

ESL 073

- **STRUCTURE-INTENSIVE LEVEL II**
  Credit equivalents: 4 (3-1)
  Prerequisite(s): ESL 063 or permission of Department Chair
  Corequisites: ESL 071, ESL 072, ESL 074, ESL 075
  A review of the basic structures in ESL 063 and an introduction to more advanced verb tenses and more complex and advanced structural items. Students required to attend one hour of individualized work in the ESL Learning Center in addition to class hours.

ESL 074

- **WRITING-INTENSIVE LEVEL II**
  Credit equivalents: 4 (3-1)
  Prerequisite(s): ESL 064
  Corequisites: ESL 071, ELS 072, ESL 073, ESL 075
  Develops skills in written structures at the intermediate level. Students review how to form a good sentence and then learn to combine these sentences to form a good paragraph. Students are required to attend one hour of individualized work in the ESL Learning Center in addition to class hours.

ESL 075

- **READING/VOCABULARY-INTENSIVE LEVEL II**
  Credit equivalents: 3 (3-0)
  Prerequisite(s): ESL 063
  Corequisites: ESL 071, ESL 072, ESL 073, ESL 074
  Introduces students to reading. Vocabulary development is an integral part of this course. Emphasizes comprehension and vocabulary through context clues.

ESL 083

- **STRUCTURE-INTENSIVE LEVEL III**
  Credit equivalents: 4 (3-1)
  Prerequisite(s): ESL 073 or permission of Department Chair
  Corequisites: ESL 084, ESL 085, ESL 086
  A continuation of ESL 073 introducing additional structural items. Students will review verb tenses and question forms, and learn advanced verb tenses and modal auxiliaries to have a good functional knowledge of American English grammar. Students will be required to attend a one-hour individualized work session in the ESL Lab in addition to their class hours.

ESL 084

- **WRITING-INTENSIVE LEVEL III**
  Credit equivalents: 4 (3-1)
  Prerequisite(s): ESL 074 or permission of Department Chair
  Corequisites: ESL 083, ESL 085, ESL 086
  A continuation of ESL 074. Emphasizes expanding paragraph development. Attention paid to more advanced, complex grammar in the context of writing. Students are required to attend one-hour individualized work in the ESL Learning Center in addition to class hours.

ESL 085

- **READING/VOCABULARY-INTENSIVE LEVEL III**
  Credit equivalents: 3 (3-0)
  Prerequisite(s): ESL 075 or permission of Department Chair
  Corequisites: ESL 083, ESL 084, ESL 086
  Students practice reading longer passages than in previous courses. Emphasizes vocabulary development, comprehension, context clues and increased reading speed. Introduces specific reading attack skills for specific types of reading.

ESL 086

- **DISCUSSION/PHONOLOGY-INTENSIVE LEVEL III**
  Credit equivalents: 3 (3-0)
  Prerequisite(s): ESL 071, ESL 072 or permission of Department Chair
  Corequisites: ESL 083, ESL 084, ESL 085
  Advanced review of all the sounds of English and work on syllables, stress, and intonation. Addresses listening skills. Students have the opportunity to learn different conventions of communication through discussions. An oral presentation is required.

ESL 091

- **ADVANCED DISCUSSION AND PHONOLOGY LEVEL IV**
  Credit equivalents: 3 (3-0)
  Prerequisite(s): ESL 086 or permission of Department Chair
  Corequisites: ESL 092, ESL 093, ESL 094, ESL 099
  Designed to facilitate the ESL student's transition to subject matter classrooms and the workplace. The focus of the course is understanding and participating fully in the American College classroom and the workplace. Students will develop discussion skills required in the classroom and the workplace. The emphasis will be placed on aural comprehension and oral presentation. Advanced topics in American English phonology including contrastive intonation will be addressed.

ESL 092

- **ADVANCED STRUCTURE IV**
  Credit equivalents: 3 (3-0)
  Prerequisite(s): ESL 083 or permission of Department Chair
  Corequisites: ESL 086, ESL 091, ESL 093, ESL 094, ESL 099
  An advanced structure course that will review verb tenses included in ESL 083. Advanced structures such as gerunds, infinitives, participial phrases and various types of clauses will be introduced. Students will practice these structures in the context of writing.

ESL 093

- **ESL STRUCTURE/WRITING IV**
  Credit equivalents: 4 (3-1)
  Prerequisite(s): ESL 084 or permission of Department Chair
  An advanced structure/writing course reviewing all of the structures covered in previous courses. Special attention made to the advanced structures necessary for good composition. Paragraph practice with an introduction to the various types of expository writing. Individualized work is required in the ESL Learning Center in addition to class hours. C is the minimum acceptable grade for movement from one remedial/ developmental level to another and for completion of remediation/developmental requirements to include all credit equivalent courses.

ESL 094

- **ESL READING/VOCABULARY IV**
  Credit equivalents: 4 (3-1)
  Prerequisite(s): ESL 085 or permission of Department Chair
  Review and utilize all of the skills developed in previous courses. Continued emphasis upon comprehension, advanced vocabulary development and increased reading speed. Students read and interpret advanced reading passages. Individualized work is required in the ESL Learning Center in addition to class hours. C is the minimum acceptable grade for movement from one remedial/developmental level to another and for completion of remediation/ developmental requirements to include all credit equivalent courses.

ESL 099

- **ESL READING/WRITING V**
  Credit equivalents: 4 (3-1)
  Prerequisite(s): ESL 093 or permission of Department Chair
  Advanced course in reading/writing to improve composition skills through interpretation of reading passages. Students analyze readings and develop good expository essays in response to the readings. Individualized work is required in the ESL Learning Center in addition to class hours. C is the minimum acceptable grade for movement from one remedial/developmental level to another and for completion of remediation/developmental requirements to include all credit equivalent courses.

ENGLISH AS A SECOND LANGUAGE TRANSITION

EST 009

- **ENGLISH AS A SECOND LANGUAGE TRANSITION**
  Credits: 4 (3-1)
  For former ESL students whose test scores show they need intensive work to improve their writing abilities. Develop the ability to write in Standard American English. Provides instruction in sentence structure, punctuation and usage, taking into consideration the needs of second language learners; students regularly practice writing effective sentences, paragraphs and short essays. This course is in place of ENG 009 and students may have to enroll in ENG 010 after successfully completing EST 009. C is the minimum acceptable grade for movement from one remedial/developmental level to another for completion of remediation/developmental requirements.

ENVIRONMENTAL TECHNOLOGY

ENV 201

- **ADVANCED WASTEWATER OPERATIONS I**
  Credits: 3 (3-0)
  Prerequisite(s): CHM 010, MAT 013 or a recent course in basic water and wastewater operations approved by the Department of Environmental Protection of New Jersey
  Covers such topics as wastewater and characteristics, pre and primary treatment processes, biological treatment, and disinfection. Both ENV 201 and 202 must be taken to prepare a student for N.J. State Level 2 (or higher) Wastewater Operators License. ENV 201 and 202 are recommended to be taken in sequence, but they may be completed in reverse order if necessary.

ENV 202

- **ADVANCED WASTEWATER OPERATIONS II**
  Credits: 3 (3-0)
  Prerequisite(s): CHM 010, MAT 013 or a recent course in basic water and wastewater operations approved by the Department of Environmental Protection of New Jersey
  Covers topics such as Physical Straining Processes, Ultimate Effluent Disposal, Sludge Treatment Systems, Ultimate Sludge Disposal, Total Treatment Systems, and Plant Operations. Although ENV 201 and 202 are recommended to be taken in sequence, they may be completed in reverse order if necessary.

ENV 203

- **ADVANCED WATER OPERATIONS I**
  Credits: 3 (3-0)
  Prerequisite(s): CHM 010, MAT 013 or a recent course in basic water and wastewater operations approved by the Department of Environmental Protection of New Jersey
  Sources of water and their characteristics, water cycle balance, reservoirs in New Jersey, surface and ground water supplies, methods of analysis, disinfection, tastes, and odors. Both ENV 203 and 204 must be taken to make students eligible for New Jersey State Water Operator License exams. ENV 203 and 204 are not sequenced and may be completed in reverse order if desired.

ENV 204

- **ADVANCED WATER OPERATIONS II**
  Credits: 3 (3-0)
  Prerequisite(s): CHM 010, MAT 013 or a recent course in basic water and wastewater operations approved by the Department of Environmental Protection of New Jersey
  Water treatment operations including pretreatment and filtration, distribution systems, records, budgeting, and supervision. Both ENV 203 and 204 must be taken to make students eligible for the New Jersey State Water Operator License exams. ENV 203 and 204 are not sequenced and may be completed in reverse order if desired.

ENV 205

- **ATMOSPHERIC POLLUTION CONTROL**
  Credits: 3 (3-0)
  Prerequisite(s): BIO 118, CHM 118, MAT 014 or equivalent
  A survey of community air pollution stressing problems and the technology used for their detection and control. Students will learn about air monitoring equipment and air sampling procedures used in the field. Effects of air pollutants on the community will be considered on the basis of air quality standards. Techniques used to control air pollution emissions from both mobile and stationary sources will be discussed.

ENV 207

- **ENVIRONMENTAL ISSUES IN OUR DIVERSE SOCIETY**
  Credits: 3 (2-2)
  This course looks at the environmental issues that affect people living today. Students will learn about people from a variety of cultures and different geographical regions of the world, studying their histories, how they live, how technology affects them, and how they manage their environmental issues. Each issue will be reviewed by studying its origin, the effect it has on today's society, and its impact on the generations to come.

ENV 208

- **ENVIRONMENTAL HEALTH HAZARDS**
  Credits: 3 (2-2)
  A survey of current environmental health problems with emphasis on communicable diseases, waste disposal, water and air pollution control, food sanitation, pest control, hazardous waste disposal, and other topics. Applicable federal and New Jersey regulations are studied.

ENV 211 GE SCI

- **CRITICAL ISSUES IN AIR AND WATER POLLUTION**
  Credits: 4 (3-2)
  Prerequisite(s): MAT 013 or appropriate score on the College Placement Test and one year of high school laboratory science
  Basic topics include the values, attitudes, and concepts necessary to understand and appreciate the interrelationships among people, their culture and their biophysical environment. Emphasis is on the air and water environment. Includes laboratory and field trips. Env 211 and 212 are not sequential and may be taken in either order.

ENV 212 GE SCI

- **GLOBAL ENVIRONMENTAL ISSUES**
  Credits: 4 (3-3)
  Prerequisite(s): MAT 013 or appropriate score on the College Placement Test and one year of high school laboratory science
  Focuses on solid and hazardous wastes, toxicology, food, soils, energy and radiation. Includes laboratory and field trips. ENV 211 and 212 are not sequential and may be taken in either order.

ENV 220

- **PRINCIPLES OF OCCUPATIONAL SAFETY AND HEALTH**
  Credits: 3 (2-3)
  Prerequisite(s): CHM 118 or equivalent
  An introduction to industrial hygiene. This course examines the sampling and analytical techniques required to evaluate the safety and health hazards associated with the chemical, physical, biological and other stresses in the industrial environment. This course gives the student an understanding of the Fundamentals of Occupational Safety and Health and prepares the student for further training in Industrial Hygiene.

ENV 221

- **HAZARDOUS WASTE MANAGEMENT**
  Credits: 3 (3-0)
  Covers in detail the Resource and Recovery Act regulations as they pertain to the generation, transportation, storage, and disposal of hazardous wastes.

ENV 222

- **WATER AND WASTEWATER ANALYSIS**
  Credits: 3 (2-3)
  Prerequisite(s): BIO 118, CHM 118, MAT 013
  A systematic study of laboratory procedures as applied to water and wastewater analysis. The course provides the student with an understanding of both the theory and the laboratory techniques required to perform all analyses needed to determine the sanitary characteristics of water. The student will also learn how to perform analytical tests to characterize wastewater.

ENV 223

- **ENVIRONMENTAL REGULATIONS**
  Credits: 3 (4-0)
  This course will provide students with an overview of environmental regulations affecting industry on a state and national level. Specific topics covered include: The Clean Air Act, The Clean Water Act, Resource Conservation and Recovery Act (RCRA), Occupational Safety and Health (OSHA), Environmental Cleanup and Responsibility Act (ECRA), Toxic Substance Control Act (TSCA), Superfund, Asbestos, Indoor Air Quality and Underground Storage Tanks.

ENV 226

- **ENVIRONMENTAL TECHNOLOGY COOPERATIVE EDUCATION**
  Credits: 3 (1-12)
  Prerequisite(s): ENV 201 or ENV 203 and permission of Department Chair
  Corequisites: ENV 202 or ENV 204
  A cooperative work experience program in which the student is employed in a technical position in order to gain some of the practical experience necessary for success in Environmental Technology. Supervision of this approved position is provided by the College through on-the-job visits and individual progress review sessions. The student attends a biweekly, two-hour seminar on campus and works a minimum of 180 hours per semester. The student must be recommended by the faculty of the department in order to participate in this experience.

FASHION MERCHANDISING AND RETAIL MANAGEMENT

RET 201

- **FASHION MERCHANDISE INFORMATION**
  Credits: 4 (4-0)
  Corequisite: BUS 101
  The fashion and technical characteristics of various textiles and nontextiles and how students can use this information in developing a good sales presentation.

RET 202

- **RETAIL BUYING AND MERCHANDISING**
  Credits: 3 (3-0)
  The latest techniques employed in the merchandising division of a store. The functions of the buyer and buyer's problems are analyzed and discussed. The analysis and determination of consumer demand, when and how much to buy, sources of supply, formulation and merchandise plans for profit, and planning and control of stock.

RET 204

- **RETAIL MANAGEMENT**
  Credits: 3 (3-0)
  Prerequisite(s): BUS 101, RET 201, RET 202, RET 205, RET 207, MKT 143, and 201
  Corequisites: RET 206
  The management principles and practices used in stores with emphasis on organization, operations, and customer relations.

RET 205

- **STORE FIELD EXPERIENCE I**
  Credits: 3 (1-12)
  Prerequisite(s): Senior status in Fashion Merchandising and Retail Management or permission of Department Chair
  A cooperative work experience program employing students in retail stores to gain some of the practical experience necessary for success in retailing. Supervision of this departmentally approved position is provided by the College through on-the-job visits and individual progress review sessions. Students are required to establish learning objectives related to their positions in order to effect the attainment of specific job competencies. Students attend a biweekly, two-hour seminar on campus and work a minimum of 180 hours a semester. Students must register with the Department of Cooperative Education.

RET 206

- **STORE FIELD EXPERIENCE II**
  Credits: 3 (1-12)
  Prerequisite(s): Senior status in Fashion Merchandising and Retail Management or permission of Department Chair
  A cooperative work experience program employing students in retail positions to gain practical experience necessary for success in retailing. Supervision of this departmentally approved position is provided by the College through on-the-job visits and individual progress review sessions. Students are required to establish learning objectives related to their positions in order to effect the attainment of specific job competencies. Students attend a weekly, one-hour seminar on campus and work a minimum of 180 hours a semester. Students must register with the Department of Cooperative Education.

RET 207

- **RETAIL ADVERTISING, SALES PROMOTION, AND DISPLAY**
  Credits: 3 (2-2)
  Techniques of advertising, sales promotion, and display to promote sales. Topics include policies and procedures used in planning and preparing advertisements, evaluation and selection of media, planning and coordinating advertising, sales promotion, and display.

FIRE SCIENCE TECHNOLOGY

FSC 103

- **INTRODUCTION TO FIRE PROTECTION**
  Credits: 3 (3-0)
  Introduces the history and philosophy of fire protection including a review of statistics of loss of life and property by fire; introduction to agencies involved in fire protection systems and extinguishing agents; firefighting strategy and tactics; fire department organization and equipment; legislative developments; and the discussion of current related problems and future needs related to fire protection, including the study of legal rights, duties, liability concerns and responsibilities of fire department organizations.

FSC 204

- **BUILDING CONSTRUCTION**
  Credits: 3 (3-0)
  Prerequisite(s): FSC 103 or permission of Department Chair
  Provides fire service personnel with an understanding of the basic principles of building's construction and how design considerations and materials selection affect the life safety of both the buildings occupants and fire fighters. The five different types of construction will be covered in detail; wood frame, ordinary, non-combustible, mill and fire-resistive. Case studies of catastrophic fire losses will be examined from the building construction viewpoint and new construction materials and techniques will be explored.

FSC 206

- **FIRE STRATEGY AND TACTICS**
  Credits: 3 (3-0)
  Prerequisite(s): FSC 103 or permission of Department Chair
  Principles of fire control through preplanning and fire ground decision making; The "size-up" emphasizes life safety of occupants and fire fighting personnel as well as effective utilization of manpower, apparatus, and equipment for preservation of life and confinement of fire. Case studies of fire ground decisions are reviewed.

FSC 207

- **HAZARDOUS MATERIALS FOR THE FIRE SERVICE**
  Credits: 3 (3-0)
  Prerequisite(s): CHM 107, FSC 103 or permission of Department Chair
  Chemical characteristics related to storage, transportation and handling of hazardous materials, i.e., flammables, combustibles, oxidizers, explosives, compressed gasses. Emphasizes emergency response, mitigation and fire suppression. Students will also receive certification in the AWARENESS and OPERATIONAL levels of hazmat responder requirements as per OSHA 1910.120. Provides an introduction to the TECHNICIAN and INCIDENT COMMANDER levels of hazmat responder requirements.

FSC 209

- **FIRE SUPPRESSION AND DETECTION SYSTEMS**
  Credits: 3 (3-0)
  Prerequisite(s): FSC 103 or permission of Department Chair
  Fundamentals of design and installation of fixed fire protection systems. Selection and application of fire suppression and detection systems as well as engineering principles are covered. Systems studied will include, but are not limited to: sprinkler, standpipe, dry chemical, foam, halon, carbon dioxide, smoke/heat/fire detection, evacuation/public address and explosion. Case studies address issues related to systems selection, installation, and maintenance.

FSC 210

- **FIRE AND ARSON INVESTIGATION**
  Credits: 3 (3-0)
  Prerequisite(s): FSC 103 or permission of Department Chair
  Fire causes, natural and accidental; fire and police investigation; orientation and introduction to arson and incendiarism; laws of arson; technical analysis of arson and fraud; collection and preservation of evidence; photography, diagrams, and notes; interviewing and detention of witnesses; records, reports, briefs, and court procedures; arson prevention; processing of criminal evidence and pertinent procedures required by statute.

FSC 212

- **FIRE PREVENTION AND INSPECTION**
  Credits: 3 (3-0)
  Prerequisite(s): FSC 103 or permission of Department Chair
  Basic principles of fire prevention and inspection, emphasizing recognition of fire hazards, and the protection systems minimizing and/or coping with these hazards; includes methods of building inspection, enforcement of applicable laws, codes and ordinances and consideration of practical test facilities.

FRENCH

FRE 121 GE HUM

- **ELEMENTARY FRENCH I**
  Credits: 3 (3-0)
  Systematic training in speaking, reading and writing the French language. Laboratory work is required. For students with little or no previous knowledge of French.

FRE 122 GE HUM

- **ELEMENTARY FRENCH II**
  Credits: 3 (3-0)
  Prerequisite(s): FRE 121
  Continuation of FRE 121

FRE 221 GE HUM

- **INTERMEDIATE FRENCH I**
  Credits: 3 (3-0)
  Prerequisite(s): FRE 122 or two years of high school French
  Continuation of principles established during the first year: review of grammar, reading, and conversation. Emphasis on conversational activities and original compositions. Laboratory work is required.

FRE 222 GE HUM

- **INTERMEDIATE FRENCH II**
  Credits: 3 (3-0)
  Prerequisite(s): FRE 221 or FRE 224 or FRE 228 or permission of Department Chair
  Continuation of FRE 221.

FRE 224 GE HUM GE DIV

- **CONTEMPORARY FRENCH LITERATURE**
  Credits: 3 (3-0)
  Prerequisite(s): FRE 221 or higher or permission of Department Chair
  Reading, analysis and discussion of works of representative Francophone writers from the late 19th and 20th centuries. Readings and discussions are primarily in French with a strong emphasis on the analysis of short stories, plays, poems, modern era and excerpts of novels.

FRE 228 GE HUM GE DIV

- **FRENCH CIVILIZATION AND CULTURE**

Credits: 3 (3-0)

Prerequisite(s): FRE 221 or higher or permission of Department Chair

Reading, analysis and discussion of French civilization and culture of major periods from prehistoric times to the present. Readings and discussions primarily in French. This course may be taken in lieu of FRE 222 to complete the modern language requirement for the A.A.

FRE 231 GE HUM

- **FRENCH CONVERSATION AND COMPOSITION I**

Credits: 3 (3-0)

Prerequisite(s): FRE 222 or a minimum of three years of high school French

An advanced course providing intensive training in speaking and writing colloquial French. Includes oral and written reports and discussions.

FRE 232 GE HUM

- **FRENCH CONVERSATION AND COMPOSITION II**

Credits: 3 (3-0)

Prerequisite(s): FRE 231

Continuation of FRE 231.

GERMAN

GER 121 GE HUM

- **ELEMENTARY GERMAN I**

Credits: 3 (3-0)

Basic skills: listening, speaking, reading, writing. Supporting work in the language laboratory. For students beginning German or with less than two years of German in high school.

GER 122 GE HUM

- **ELEMENTARY GERMAN II**

Credits: 3 (3-0)

Prerequisite(s): GER 121

Continuation of GER 121.

GER 221 GE HUM

- **INTERMEDIATE GERMAN I**

Credits: 3 (3-0)

Prerequisite(s): GER 122 or two years of secondary school German

Review and continued study of grammatical structures. Practice in listening and reading skills; emphasis on speaking and writing based on modern German short stories and cultural topics. Supporting work in the language laboratory.

GER 222 GE HUM

- **INTERMEDIATE GERMAN II**

Credits: 3 (3-0)

Prerequisite(s): GER 221 or higher or permission of Department Chair

Continuation of GER 221.

GER 224 GE HUM GE DIV

- **MODERN GERMAN LITERATURE**

Credits: 3 (3-0)

Prerequisite(s): GER 221 or higher or permission of Department Chair

Introduces major writers of the modern era; emphasis is on short stories by authors from Austria, Germany, and Switzerland.

GER 228 GE HUM GE DIV

- **GERMAN CULTURE AND CIVILIZATION**

Credits: 3 (3-0)

Prerequisite(s): GER 221 or higher

Survey of the major aspects of German culture and civilization, both historical and contemporary. Extensive use of media: film, slides, recordings.

GER 231 GE HUM

- **GERMAN CONVERSATION AND COMPOSITION I**

Credits: 3 (3-0)

Prerequisite(s): GER 222 or equivalent

Emphasis on speaking and writing skills; vocabulary buildings in contemporary cultural, social, and literary contexts; expanded study of syntax and grammar through example and expression.

GER 232 GE HUM

- **GERMAN CONVERSATION AND COMPOSITION II**

Credits: 3 (3-0)

Prerequisite(s): GER 231 or equivalent

Continuation of GER 231.

HEALTH

(For related courses, see Physical Education, Recreation and Dance)

HED 150 GE PED GE DIV

- **CONTEMPORARY HEALTH ISSUES**

Credits: 3 (3-0)

This is a survey course designed to enable students to understand the biological, physiological, psychological, social and cross-cultural aspects of wellness. Topics include but are not limited to: establishing a basis for wellness, understanding sexuality, making responsible decisions about substance use and abuse, getting fit, protecting oneself against disease and environmental risk factors.

HED 200 GE PED GE DIV

- **HUMAN SEXUALITY AND FAMILY LIFE**

Credits: 3 (3-0)

A survey course designed to enable students to understand the biological, physiological, psychological, social, and cultural aspects of sexuality and human sexual behavior. An examination of multicultural influences is an integral part of the course. At the option of the professor, students are evaluated by quizzes, exams, a research paper and group work.

HED 205 GE PED

- **NUTRITION FOR THE ACTIVE PERSON**

Credits: 3 (3-0)

All areas of nutrition are examined, as it affects the active person. Emphasizes the essential dietary nutrients, the body's nutritional reaction to increased activity demands, meal planning, body weight and composition, and long and short-term effects of nutrition. A research paper is required.

HED 209

- **CHILD HEALTH AND NUTRITION**

Credits: 3 (3-0)

Basic principles and research findings concerning the health and nutrition of young children in group settings are examined. Sensitivity to mental and physical health; planning nutrition programs, and optimal physical care in child care centers are examined.

HEATING, VENTILATING AND AIR CONDITIONING DESIGN TECHNOLOGY

HVA 106

- **HVAC DRAFTING**
  Credits: 2 (0-6)
  Prerequisite(s): MEC 123 or equivalent
  A continuation of MEC 123. Emphasis is on the specialized topics used in the HVAC industry. Topics include: reading building construction drawings (particularly mechanical plans), orthographic and isometric ductwork drawings, sectional drawings and details, standard HVAC symbols, sheet metal developments, electrical control diagrams, and HVAC specifications. Laboratory time is divided between using the conventional drafting board and the computer aided drafting system.

HVA 201

- **HVAC DESIGN PRINCIPLES I**
  Credits: 4 (3-3)
  Prerequisite(s): HVA 102, MAT 108
  An introduction to the design principles necessary for designing heating, refrigeration, and air conditioning systems. A survey of the scope of the HVAC industry precedes the topics of heating load analysis, boilers and furnaces, hydronic piping systems, cooling load analysis and Psychometrics analysis. Laboratory design projects included.

HVA 202

- **HVAC DESIGN PRINCIPLES II**
  Credits: 4 (3-3)
  Prerequisite(s): HVA 201
  A continuation of design principles covered in HVA 201. Topics include: fluid flow in pipes and ducts, fan and air distribution devices, centrifugal pumps, expansion tanks, air conditioning system design, refrigeration system design, energy conservation, planning and designing HVAC systems, and solar energy system design. Laboratory design projects included.

HVA 203

- **HVAC EQUIPMENT LABORATORY**
  Credits: 1 (0-3)
  Prerequisite(s): HVA 102
  Performance testing and evaluation of air conditioning, refrigeration and heating systems. Laboratory projects include the analysis of: solar energy systems, cooling towers, commercial air and water cooled refrigeration systems, ductwork systems, and various heating and cooling systems. Oral presentation required.

HVA 204

- **MECHANICAL ESTIMATING AND PLANNING**
  Credits: 3 (2-3)
  Prerequisite(s): HVA 202
  An introduction to the techniques and practices of quantity take-offs and cost estimates of mechanical systems including sheet metal, piping, electrical, site utility work, materials, HVAC equipment and labor. Bids are prepared at the budget stage, conceptual stage, and final design stage. Bidding strategies, labor and material problems, and energy management systems are discussed. Projects are planned utilizing the critical path method and cost engineering methods.

HVA 210

- **THERMODYNAMICS OF REFRIGERATION**
  Credits: 3 (3-0)
  Prerequisite(s): MAT 108
  Thermodynamics analysis of the mechanical refrigeration cycle and its associated equipment. Topics include: Properties of Matter, Ideal Gas Processes, The First & Second Laws of Thermodynamics, Mollier and p-h Diagrams, Psychometric Properties of Air, Reciprocating Compressors, Evaporators, System Equilibrium, Condensers and Cooling Towers.

HISTORY

(See also African-American Studies)

HIS 121 GE HUM

- **HISTORY OF WESTERN CIVILIZATION I**
  Credits: 3
  The historical development of Western civilization from ancient times to approximately 1715 AD. Emphasis is on the social, economic, political, and cultural forces that helped to shape the West, beginning with the early Mediterranean civilizations and following through to the subsequent rise of European civilization.

HIS 122 GE HUM

- **HISTORY OF WESTERN CIVILIZATION II**
  Credits: 3 (3-0)
  Europe and the world since 1715. Emphasis is on the emerging nation-state political system, the Industrial Revolution of the nineteenth century, and intellectual history of the nineteenth and twentieth centuries, the rise of totalitarianism in the twentieth century, and the world balance of power since 1914.

HIS 123 GE HUM GE DIV

- **HISTORY OF CIVILIZATION IN EAST ASIA**
  Credits: 3 (3-0)
  This course is designed to trace the social, economic, political, and cultural forces that shaped the cultures of the Far East from ancient times to the present. Emphasis is on the cultural similarities and differences between ways of life in India, China and Japan and the civilization of the West. (For a similar study of the Third World see HIS 124).

HIS 124 GE HUM GE DIV

- **HISTORY OF CIVILIZATION IN THE THIRD WORLD**
  Credits: 3 (3-0)
  This course is designed to trace the social, economic, political, and cultural forces that shaped the cultures of the Third World from ancient times to the present. Emphasis is on the cultural similarities and differences between ways of life in Pre-Columbian (Maya, Aztec, Inca) America, the Middle East and Africa and the civilization of the West. (For a similar study of East Asia see HIS 123)

HIS 130 GE HUM

- **HEALTH CARE AND MEDICINE IN THE WESTERN WORLD**
  Credits: 3 (3-0)
  Examines the historical development of health and medical care in societies from the ancient Greek to the modern American. Emphasis on scientific and technological advancement, care of the ill, treatment of disease, and training of health care practitioners. Discussion of the values of each historical period and the relationships between social values, ethics and prescribed health care.

HIS 202 GE HUM GE DIV

- **ANCIENT EGYPT'S HISTORY: AN INTRODUCTION**
  Credits: 3 (3-0)
  Traces the genesis, rise, and development of the high culture and dynastic civilization of pharaonic Egypt from the Predynastic Period through New Kingdom (approx. 3500 to 1000 BC) An interdisciplinary approach will be used that takes into account the effects that geography and topography had on Egypt's cultural development. Topics discussed will include language, religion, mummification, funerary architecture, and art. Course will be illustrated with slides as well as with artifacts and artifact-facsimiles.

HIS 221 GE HUM

- **UNITED STATES HISTORY I**
  Credits: 3 (3-0)
  Historical importance of the Puritan heritage, the American Revolution, the Constitution, Jacksonian democracy, Manifest Destiny, and the Civil War to understand pre-Civil War America.

HIS 222 GE HUM

- **UNITED STATES HISTORY II**
  Credits: 3 (3-0)
  Historical importance of Reconstruction, the rise of big business, the Progressive Movement, the World Wars, the New Deal, and the Cold War. Understanding American institutions and values from the Civil War to the present.

HIS 240 GE HUM

- **TECHNOLOGY AND WESTERN CULTURE**
  Credits: 3 (3-0)
  An introduction to the historical significance of technological development on the structure of modern society. The development, usage and impact of selected technologies as they relate to the historical development of Western Civilization.

HIS 245 GE HUM GE DIV

- **HISTORY OF MAJOR WORLD RELIGIONS**
  Credits: 3 (3-0)
  This course is designed to explore the historical origins and evolution of the beliefs and contemporary practices of Judaism, Christianity, Islam, Hinduism, Buddhism, Taoism, Confucianism, and Shintoism. Attention is given to the interaction of the specific religions and the cultures in which they are practiced.

HIS 256 GE HUM

- **HISTORY OF THE TWENTIETH CENTURY**
  Credits: 3 (3-0)
  Cultural and intellectual history, assessing the effect of historical events on the lives of individuals, as well as societies. Focus on increased government influence over the lives of its citizens, especially in the area of politics and economics.

HIS 258 GE HUM GE DIV

- **HISTORY OF WOMEN**
  Credits: 3 (3-0)
  This course is designed to enable both women and men to understand the background of women in the Western World. Emphasis is placed upon the roles of women in various societies and upon the contributions made by women. Several women's movements will be studied in detail.

HIS 260 GE HUM GE DIV

- **DIMENSIONS OF PREJUDICE, GENOCIDE AND THE HOLOCAUST**
  Credits: 3 (3-0)
  Enhances students' understanding of global genocide and the Holocaust of World War II. A variety of studies will permit students to gain a broader understanding of prejudice and racism, as well as to develop their insight and knowledge of human inhumanity. Comparisons of worldwide genocides will be traced throughout the 20th century, with special focus on the Nazi Holocaust. Attention will be given to major issues pertaining to conscience and moral responsibility regarding prejudice, genocide and the Holocaust.

HOTEL, RESTAURANT AND INSTITUTION MANAGEMENT

HRI 101

- **INTRODUCTION TO HOTEL, RESTAURANT, AND INSTITUTION MANAGEMENT**
  Credits: 3 (3-0)
  An introduction to the lodging and feeding industry: its history and development, current trends, its organization, its challenges and opportunities for service.

HRI 103

- **PRINCIPLES OF FOOD SELECTION AND PREPARATION**
  Credits: 3 (1-4)
  A study of the classification, selection, and preparation of foods. Emphasis on working techniques and the development of professional skills.

HRI 105

- **BASIC NUTRITION**
  Credits: 3 (3-0)
  Corequisites: BIO 108
  Principles of nutrition including the various essential nutrients in foods and their functions in the human body.

HRI 107

- **BAKING FUNDAMENTALS**
  Credits: 3 (1-5)
  Prerequisite(s): HRI 103
  Practical baking fundamentals for quality and quantity production of sweet dough, breads, pies, cakes, pastries and specialty bakery and dessert products, including cake decorating.

HRI 108

- **QUANTITY FOOD PRODUCTION**
  Credits: 3 (1-4)
  Prerequisite(s): HRI 103
  The study and application of techniques, standards, and principles of quantity cookery. Emphasis is on the flow of food production through the kitchen of foodservice operations, and the development of skills in culinary arts.

HRI 109

- **PROFESSIONAL CULINARY TECHNIQUES**
  Credits: 3 (1-4)
  Prerequisite(s): HRI 103
  The study of professional cooking based on a knowledge of ingredients and procedures with an emphasis on classical culinary methods, menu planning and influences on modern American cuisine.

HRI 110

- **SUPERVISORY DEVELOPMENT IN THE LODGING & FOODSERVICE INDUSTRY**
  Credits: 3 (3-0)
  An introduction to the principles of effective supervision by today's hospitality managers. Supervisory skills that impact the working relationships between supervisors and employees.

HRI 111

- **FOOD PREPARATION PRACTICUM**
  Credits: 3 (1-13)
  Prerequisite(s): HRI 103. Admission to the Culinary Arts Program
  A practicum designed to develop and refine professional food preparation and production skills through an approved on-site industry experience. Learning activities are planned, supervised and evaluated by qualified chefs and/or food production managers in coordination with the program coordinator.

HRI 114

- **GARDE MANGER**
  Credits: 3 (1-5)
  Prerequisite(s): HRI 103
  Decorating foods and platters for a la carte and buffet production. Food specialties such as sculptures, aspics, pates, chaudfroids, terrines, galantines and sauces are prepared.

HRI 115

- **FOODSERVICE OPERATIONS**
  Credits: 3 (3-0)
  Introduction to the restaurant and catering business including terminology, principles of foodservice management and elements of dining room service.

HRI 201

- **HOTEL-MOTEL FRONT OFFICE OPERATIONS**
  Credits: 3 (2-2)
  Prerequisite(s): BUS 107
  Theory and practice in front office management for small and large properties. Function and operation of systems and equipment used in the front office through the complete guest cycle. Practical applications of management concepts through lab exercises and computer simulation.

HRI 202

- **FACILITIES LAYOUT AND DESIGN**
  Credits: 3 (2-2)
  Study of physical property, selection, design, operation, and maintenance of equipment essential for hotel, restaurant, and institution operations.

HRI 203

- **BANQUET AND DINING ROOM MANAGEMENT**
  Credits: 4 (2-4)
  Prerequisite(s): HRI 108
  The application of management techniques through the experience of planning and managing luncheons catered by students in the curriculum. The course provides opportunities to apply principles of menu planning, food cost control, sanitation, food production, employee supervision, marketing and guest service.

HRI 204

- **SEMINAR AND COOPERATIVE WORK EXPERIENCE**
  Credits: 3 (1-12)
  Prerequisite(s): HRI 101, HRI 103, HRI 208 or permission of Department Chair
  A critical review and analysis of operations, materials, and equipment based on current reports in trade journals and periodicals. Discussion of employment experiences in industry. The influence of menu and clientele on preparation and functions of management in the food and lodging industry. Students attend a two hour biweekly seminar campus and complete a minimum of 180 hours a semester of related work experience.

HRI 205

- **FOOD AND BEVERAGE CONTROLS AND PURCHASING**
  Credits: 3 (2-2)
  Prerequisite(s): HRI 103
  Principles and management of cost control systems for planning, controlling and analyzing costs related to food, labor, and other expenses in food service operations. Principles and theories of food procurement, including management, safety, and ethical considerations in the procurement process. Industry certification.

HRI 206

- **MERCHANDISING FOR THE HOSPITALITY INDUSTRY**
  Credits: 3 (2-2)
  Principles and practices of public hospitality merchandising. Use of advertising and promotional media as related to internal and external sales. Laboratory practice in creating promotional materials.

HRI 208

- **FOODSERVICE SANITATION**
  Credits: 3 (3-0)
  Techniques and procedures for employing safe practice in food service including food sanitation and microbiology, food spoilage and food-borne illnesses, and education and training in sanitation of food service personnel. Industry certification.

HRI 210

- **INTRODUCTION TO MEDICAL NUTRITION THERAPY**
  Credits: 3 (3-0)
  Prerequisite(s): HRI 105 with a grade of "C" or better
  Explores the nutritional management of disease. Application of nutrition principles to the nutritional care of patients/clients as a result of disease development.

HRI 212

- **NORMAL AND CLINICAL NUTRITION**
  Credits: 4 (3-3)
  Prerequisite(s): NRS 115, BIO 112
  The scientific study of nutrients including: protein, lipids, carbohydrates, vitamins and minerals as it relates to digestion, absorption and metabolism will be explored. An introduction to the nutrition care process, the assessment of nutrition status, interactions between drugs and nutrients, the relationship of disease to nutrition status, and the principles of nutrition management of various diseases will be emphasized. Nursing students only.

HRI 213

- **FOOD SERVICE SYSTEMS MANAGEMENT IN DIETETICS**
  Credits: 3 (3-0)
  The study of and application of concepts and theories in foodservice systems management including: human resources, labor laws, materials management, information technology, physical resources, financial management, quality improvement techniques and theories, marketing, and menu planning.

HRI 215

- **BEVERAGE MANAGEMENT**
  Credits: 3 (2-2)
  An introduction to planning, equipping, staffing, operating, and marketing, regulations and terms of the trade as they relate to purchasing, control, merchandising and bar management. The identification, use and service of wines and other alcoholic beverages.

HRI 216

- **HOSPITALITY PROPERTY MANAGEMENT**

Credits: 3 (3-0)

Property management including the care of guest rooms, and public space, security, parking, laundry, recreation rooms, and pools, and other outdoor recreation facilities with emphasis in staffing, equipment, capital investment, rentals and renovations.

HRI 217

- **SUPERVISORY HOUSEKEEPING**

Credits: 3 (3-0)

The fundamentals of housekeeping management. Management functions, tools and practices required in lodging and institutional housekeeping departments.

HRI 218

- **NUTRITION THROUGHOUT THE LIFE SPAN**

Credits: 3 (3-0)

Prerequisite(s): HRI 105 with a grade of "C" or better

Explores the principles and impact of nutrition on preconception, pregnancy, lactation, infancy, childhood, adolescence, adulthood and aging. For every phase of life, investigates characteristics of normal growth and development, nutrition assessment, the most common nutritional deficiencies seen, nutrient needs and practical means of delivering nutrition. Practice in planning meals appropriate for each stage of life is included.

HRI 220

- **TRAINING DEVELOPMENT OF HOSPITALITY MANAGEMENT**

Credits: 3 (3-0)

Training needs in the hospitality industry. The systematic design of instruction, the evaluation of training programs, and management of the training function.

HRI 240

- **FOOD SCIENCE AND TECHNOLOGY**

Credits: 3 (2-3)

Prerequisite(s): HRI 103

Corequisite: CHM 120 OR CHM 201

A study of scientific and sensory principles of food evaluation as it relates to food science, quality assurance and experimentation and application in food preparation. Emphasis is on the integration of theory and research studies combined with laboratory work.

HRI 250

- **LAW FOR HOSPITALITY OPERATIONS**

Credits: 3 (3-0)

A basic course in hotel, motel, and restaurant law. Introduces fundamental laws, rules and regulations applicable to the hospitality industry.

INDUSTRIAL TECHNOLOGY

IND 103

- **OCCUPATIONAL SAFETY AND HEALTH AND THE OSHA LAW**

Credits: 3 (3-0)

A study of the requirements and implications of The Occupational Safety and Health Act (OSHA) on the working environment. Topics included are accident causes and costs, workers' compensation, controlling unsafe acts and conditions, OSHA standards, inspection rights, enforcement procedures and penalties.

IND 104

- **INSPECTION TECHNIQUES**

Credits: 3 (2-2)

A study of the selection, operation, and use of measuring instruments, mechanical, pneumatic, optical, and electronic gauges and non-destructive tests utilized by inspectors to control product quality. Laboratory assignments provide hands-on experience in the selection, set-up, and use of inspection tools for checking manufacturing specifications.

IND 203

- **STATISTICAL QUALITY CONTROL I**

Credits: 3 (3-0)

A two-course sequence that provides students with the tools necessary to apply statistics to quality control problems. Topics include objectives of statistical quality control, fundamental statistical concepts, and fundamental concepts of probability. Laboratory assignments supplement the lecture material.

IND 204

- **STATISTICAL QUALITY CONTROL II**

Credits: 3 (3-0)

Prerequisite(s): IND 203

A continuation of IND 203. Topics include quality control charts, acceptance sampling, aspects of life testing, reliability and cost of quality decisions. Laboratory assignments provide hands-on experience in quality control.

IND 207

- **QUALITY CONTROL CONCEPTS AND TECHNIQUES**

Credits: 3 (3-0)

An introduction to the concepts and techniques of quality control as used in industry today. Topics include quality policies and objectives, economics, organization, maintenance, reliability and specifications of quality control.

ITALIAN

ITA 121 GE HUM

- **ELEMENTARY ITALIAN I**

Credits: 3 (3-0)

Use of integrated materials allows students to acquire and employ the fundamentals of speaking, reading and writing the language. Laboratory work is required. For students with little or no knowledge of Italian.

ITA 122 GE HUM

- **ELEMENTARY ITALIAN II**

Credits: 3 (3-0)

Prerequisite(s): ITA 121

A continuation of ITA 121. Use of integrated materials allows students to acquire and employ the fundamentals of speaking, reading and writing the language. Laboratory work is required.

ITA 221 GE HUM

INTERMEDIATE ITALIAN I

Credits: 3 (3-0)

Prerequisite(s): ITA 122 or two years of high school Italian

A review and reinforcement of the principles established on the elementary level: emphasis on conversational activities, readings from selected works of literature and compositions.

ITA 222 GE HUM

- **INTERMEDIATE ITALIAN II**

Credits: 3 (3-0)

Prerequisite(s): ITA 221 or equivalent

A review and reinforcement of the principles established on the elementary level: emphasis on conversational activities, readings from selected works of literature and compositions.

LANGUAGES AND CULTURES

LNC 123 GE HUM DIV

- **INTRODUCTION TO THE STUDY OF HUMAN LANGUAGE**
  Credits: 3 (3-0)
  The course introduces and explores the areas of language acquisition, dialects, social variations of language, language and ethnicity, language and gender, and cross-cultural and multi-cultural perspectives of language. The student will get a broad understanding of phonology, morphology, syntax, semantics and pragmatics in the context of English and its history.

MANAGEMENT

MGT 200

- **PRINCIPLES OF SUPERVISION**
  Credits: 3 (3-0)
  Supervisory practices and principles with maximum opportunities for practical involvement in applying theory to real-life situations. Emphasizes first-and middle-level supervisory positions. Stresses the aspects of job leadership and effective human relations. Includes procedures for dealing with interpersonal relationships among and between employees and management, quality circles, quality of work life, conflict management, cost benefit analysis, organization development, time management and stress management. Recommended for persons employed in or seeking entry-level employment in supervisory positions in business, industry or public service.

MGT 205

- **PRINCIPLES OF LABOR RELATIONS**
  Credits: 3 (3-0)
  Prerequisite(s): BUS 101 or MGT 220
  A survey course that evaluates union growth and structure. A study of the nature of the labor market, collective bargaining, labor legislation, wages, employment, and productivity. An analysis of policies and techniques of employers, wage earners, and government in trying to find solutions to the labor problems in American society.

MGT 208

- **MANAGEMENT FIELD EXPERIENCE**
  Credits: 3 (1-12)
  Prerequisite(s): MGT 210
  A cooperative work experience program employing students in a management position in order to gain some practical experience necessary for success in management. Supervision of this departmentally approved position is provided by the College through on-the-job visits and individual progress review sessions. Students are required to describe their objectives and attain specific job skills. Students attend a biweekly, two-hour seminar on campus and work a minimum of 180 hours a semester. Individuals must be recommended by the faculty of the department and register with the Department of Cooperative Education.

MKT 209

- **MARKETING FIELD EXPERIENCE**
  Credits: 3 (1-12)
  Prerequisite(s): MKT 201
  A cooperative work experience program employing students in a marketing position in order to gain practical experience necessary for success in marketing. Supervision of this departmentally approved position is provided by the College through on-the-job visits and individual progress review sessions. Students are required to describe their objectives and attain specific job skills. Students attend a biweekly, two-hour seminar on campus and work a minimum of 180 hours a semester. MKT 209 Marketing Field Experience is offered as an alternative to BUS 202. Students must register with the Department of Cooperative Education.

MGT 210

- **CONCEPTS OF BUSINESS MANAGEMENT**
  Credits: 3 (3-0)
  Prerequisite(s): BUS 101
  Theories, techniques, and insights from the behavioral sciences of the major areas of management including planning, organizing, directing, controlling and administration. Concepts relating to all levels of management are studied.

MGT 214

- **OPERATIONS MANAGEMENT**
  Credits: 3 (3-0)
  Prerequisite(s): MGT 210
  The development of an awareness of the tools a user/manager utilizes in the design modification and implementation of a manual or automated system. Students select a particular technique, apply it to a system, and develop cost justification for implementation of the technique. A combination of lecture and workshop oriented sessions are used in developing the various management techniques. The various tools and management techniques for evaluating the operations functions of a business are examined.

MGT 216

- **SEMINAR IN MANAGEMENT EXPERIENCES**
  Credits: 3 (3-0)
  Prerequisite(s): ACC 102, ECO 202, ENG 122, MGT 205, MGT 210, MGT 220
  Corequisites: MGT 214
  An interdisciplinary course which integrates and synthesizes concepts and information from preceding management courses. Emphasis is on establishing an environment to employ previously learned material, with the opportunity to practice decision-making and control techniques based on this material. Case studies are employed and supplemented with simulation techniques. Emphasis is given to subordinate-supervisor interaction, with students participating individually and in teams.

MGT 220

- **HUMAN RESOURCES MANAGEMENT**
  Credits: 3 (3-0)
  An analysis of the principles of organization for effective human resources management. Selection of personnel, delegation of responsibilities, the psychology of motivating and directing people, dealing with unions and other organized groups, training and maintaining morale.

MARKETING

MKT 143

- **SALESMANSHIP**
  Credits: 3 (3-0)
  The fundamentals of selling with particular stress on preparation, approach, demonstration, overcoming objections, and closing sales. Developed through discussions and participation in sales situations.

MKT 201

- **MARKETING I**
  Credits: 3 (3-0)
  Prerequisite(s): BUS 101
  An overview of the field of marketing and the marketing concept. Students develop an understanding of the growing importance of the consumer, differences between industrial and consumer marketing, the impact of government and environment on marketing, and the basic marketing functions of product planning, marketing channels, physical distribution, promotion, pricing, and marketing research.

MKT 202

- **MARKETING II**

Credits: 3 (3-0)

Prerequisite(s): MKT 201

An advanced and interdisciplinary analysis of marketing planning, using the concept of strategic management, through the case history approach.

MKT 203

- **PRINCIPLES OF ADVERTISING**

Credits: 3 (3-0)

Prerequisite(s): BUS 101

The principles of advertising and the role of advertising in the field of business. The course traces advertising through its various steps from the initial need to its implementation in the marketplace.

MKT 206

- **MARKETING MANAGEMENT SEMINAR**

Credits: 3 (3-0)

Prerequisites or Corequisites: ACC 102, BUS 201, ECO 201, ENG 122, MKT 202, MKT 203.

Students integrate their knowledge of the major areas of marketing and management and test their theoretical concepts through marketing planning projects. Students' analyses of the class projects are directed at the managerial level.

MKT 209

- **MARKETING FIELD EXPERIENCE**

Credits: 3 (1-12)

Prerequisite(s): MKT 201

A cooperative work experience program employing students in a marketing position in order to gain practical experience necessary for success in marketing. Supervision of this departmentally approved position is provided by the College through on-the-job visits and individual progress review sessions. Students are required to describe their objectives and attain specific job skills. Students attend a weekly, one-hour seminar on campus and work a minimum of 180 hours a semester. MKT 209 Marketing Field Experience is offered as an alternative to BUS 202. Students must register with the Department of Cooperative Education.

MATHEMATICS

MAT 009

- **BASIC MATHEMATICS ALTERNATIVE**

Credit equivalent: 1 (1-0)

Prerequisite(s): Permission of Mathematics Department

This course is a fast-paced, condensed, one-week version of Basic Mathematics (MAT 010), focusing on computational skills and problem-solving skills. Topics include addition, subtraction, multiplication, and division of whole numbers, fractions and decimals, ratio and proportion, percent, measurement, areas and perimeters of geometric figures, and basic descriptive statistics. Applications are included as well.

Note: A minimum of "C" is required for movement from one remedial course to another and for completion of the remedial requirements to qualify for credit courses.

MAT 010

- **BASIC MATHEMATICS**

Credit equivalents: 3 (3-0)

Prerequisite(s): None

This course focuses on computational skills and problem-solving skills. Topics include addition, subtraction, multiplication, and division of whole numbers, fractions and decimals, ratio and proportion, percent, measurement, areas and perimeters of geometric figures, and basic descriptive statistics. Applications are included as well. This course is taught in two different formats. One is a traditional lecture and the other is a computer-assisted approach.

Note: A minimum grade of "C" is required for movement from one remedial course to another and for completion of the remedial requirements to qualify for credit courses.

MAT 010A

- **BASIC MATHEMATICS (PART A)**

Credit equivalents: 3 (3-0)

Prerequisite(s): None

The first half of a two-semester course which focuses on computational skills and problem-solving. Topics include addition, subtraction, multiplication, and division of whole numbers, fractions and decimals. Applications are included as well. Students who successfully complete this course must pass MAT 010B in order to fulfill the MAT 010 requirement.

Note: A minimum grade of "C" is required for movement from one remedial course to another and for completion of the remedial requirements to qualify for credit courses.

MAT 010B

- **BASIC MATHEMATICS (PART B)**

Credit equivalents: 3 (3-0)

Prerequisite(s): MAT 010A

The second half of a two-semester course which focuses on computational skills and problem-solving. Topics include ratio and proportion, percent, measurement, area and perimeter of geometric figures, and basic descriptive statistics. Applications are included as well. Students who successfully complete MAT 010A and MAT 010B will have fulfilled the MAT 010 requirement.

Note: A minimum grade of 'C' is required for movement from one remedial course to another and for completion of the remedial requirements to qualify for credit courses.

MAT 013

- **ALGEBRA I**

Credit equivalents: 4 (4-0)

Prerequisite(s): Grade of "C" or better in MAT 010, MAT 010A/MAT 010B, or appropriate score on College Placement Test.

This course is designed to introduce and develop elementary algebraic concepts. Topics include: Properties of real numbers, operations on real numbers, simplifying and evaluating algebraic expressions, solving linear equations, solving literal equations, verbal problems and polynomials, techniques of graphing, solving linear systems, polynomials and their operations, special products and factoring, rational expressions and equations, and solving quadratic equations by factoring. This course is taught in two different formats. One is a traditional lecture and the other is a computer-assisted approach.

Note: A minimum grade of "C" is required for movement from one remedial course to another and for completion of the remedial requirements to qualify for credit courses.

MAT 013A

- **ALGEBRA I (PART A)**

Credit equivalents: 4 (4-0)

Prerequisite(s): Grade of "C" or better in MAT 010, MAT 010A/MAT 010B, or appropriate score on the College Placement Test

This is the first half of a two-semester course in algebra designed to introduce and develop elementary algebra concepts. Topics include: Properties of real numbers, operations on real numbers, simplifying and evaluating algebraic expressions, solving linear equations, solving literal equations, verbal problems and polynomials. Students must complete this course and MAT 013B to fulfill the MAT 013 requirement.

Note: A minimum grade of 'C' is required for movement from one remedial course to another and for completion of the remedial requirements to qualify for credit courses.

MAT 013B

- **ALGEBRA I (PART B)**

Credit equivalents: 4 (4-0)

Prerequisite(s): Grade of "C" or better in MAT 013A or permission of Mathematics Department Chair

This is the second semester of a two-semester course in Algebra I designed to introduce and develop elementary algebraic concepts. Topics include: techniques of graphing, solving linear systems, polynomials and their operations, special products and factoring, rational expressions and equations, and solving quadratic equations by factoring.

Note: A minimum grade of 'C' is required for movement from one remedial course to another and for completion of the remedial requirements to qualify for credit courses.

MAT 014

- **ALGEBRA II**

Credit equivalents: 4 (4-0)

Prerequisite(s): Grade of "C" or better in MAT 013, MAT 013A/MAT 013B, or appropriate score on College Placement Test.

This course is designed to polish skills developed in Algebra I and elevate them to a higher level of mathematical sophistication through the use of lecture, group work, and the calculator. Topics include: A review of elementary algebra, the coordinate plane and graphs of functions, functional notation, linear equations and inequalities, properties of lines, systems of linear equations, polynomials, rational exponents, radical expressions, radical equations, quadratic equations, rational expressions, rational equations and complex fractions. The use of a graphing calculator is essential. TI 83 plus calculator required. This course is taught in two different formats. One is a traditional lecture and the other is a computer assisted approach.

Note: A minimum grade of 'C' is required for movement from one remedial course to another and for completion of the remedial requirements to qualify for credit courses.

MAT 014A

- **ALGEBRA II (PART A)**

Credit equivalents: 4 (4-0)

Prerequisite(s): Grade of "C" or better in MAT 013, MAT 013A/MAT 013B, or appropriate score on the College Placement Test

This, the first part of a two-semester course in Algebra II, is designed to polish skills developed in Algebra I and elevate them to a higher level of mathematical sophistication through the use of lecture, group work and the calculator. Topics include: A review of elementary algebra, the coordinate plane and graphs of functions, functional notation, linear equations and inequalities, properties of lines, systems of linear equations, and polynomials. The use of a graphing calculator is essential. TI 83 plus calculator required. Students must complete this course and MAT 014B to fulfill the MAT 014 requirement.

Note: A minimum grade of "C" is required for movement from one remedial course to another and/or completion of the remedial requirements to qualify for credit courses.

MAT 014B

- **ALGEBRA II (PART B)**

Credit equivalents: 4 (4-0)

Prerequisite(s): Grade of "C" or better in MAT 014A

This, the second part of a two-semester course in Algebra II, is designed to polish skills developed in Algebra I and elevate them to a higher level of mathematical sophistication through the use of lecture, group work, and the calculator. Topics include: rational exponents, radical expressions, radical equations, quadratic equations, rational expressions, rational equations and complex fractions. The use of a graphing calculator is essential. TI 83 plus calculator required.

Note: A minimum grade of "C" is required for movement from one remedial course to another and for completion of the remedial requirements to qualify for credit courses.

MAT 020

- **GEOMETRY**

Credit equivalents: 4 (4-0)

Prerequisite(s): MAT 013 or MAT 013A/MAT 013B or Departmental approval

A traditional high school geometry course for students who have successfully completed one year of high school algebra or the equivalent. The course includes topics from Euclidean geometry including basic proofs, congruent triangles, parallel and perpendicular lines, lines and planes in space, polygons, circles, and the Pythagorean Theorem. Optional topics include logic and construction.

Note: A minimum grade of "C" is required for movement from one remedial course to another and or completion of the remedial requirements to qualify for credit courses.

MAT 080

- **ALGEBRA I ALTERNATIVE**

Credit equivalent: 1 (1-0)

Prerequisite(s): Grade of "C" or better in MAT 010, MAT 010A/MAT 010B, appropriate score on the College Placement Test or departmental approval.

This is an intensive one-week course in algebra I designed to introduce and develop elementary algebraic concepts. Topics include: properties of real numbers, operations on real numbers, simplifying and evaluating algebraic expressions, solving linear equations, solving literal equations, verbal problems and polynomials, techniques of graphing, solving linear systems, polynomials and their operations, special products and factoring, rational expressions and equations, and solving quadratic equations by factoring. Successful completion of this course fulfills the MAT 013 requirement.

Note: A minimum grade of "C" is required for movement from one remedial course to another and for completion of the remedial requirements to qualify for credit courses.

MAT 101 GE MAT

- **FRESHMAN MATHEMATICS I**

Credits: 3 (3-0)

Prerequisite(s): Appropriate score on the College Placement Test and two years of high school mathematics, MAT 013, MAT 013A/MAT 013B, or departmental approval.

This is the first of a two-semester survey course designed primarily for liberal arts students planning a one-year study of college mathematics. Topics include: problem solving, number concepts and applications, graphs and modeling, functions, consumer math, and exponential models.

MAT 102 GE MAT

- **FRESHMAN MATHEMATICS II**

Credits: 3 (3-0)

Prerequisite(s): MAT 101

The second half of a course designed for liberal arts students. Topics include inductive and deductive reasoning, logic, counting methods, probability and statistics, geometry, and topics from discrete math.

MAT 104 GE MAT

- **MATHEMATICS IN THE ELEMENTARY SCHOOL**

Credits: 3 (3-0)

Prerequisite(s): Appropriate score on the College Placement Test or successful completion of MAT 013 or MAT 013A/MAT 013B

An introduction to basic mathematics for paraprofessionals. Includes the teaching of arithmetic operations in those number systems appropriate for the elementary school, problem-solving techniques for the development of mathematical concepts, and the use of instructional aids.

MAT 107 GE MAT

- **MATHEMATICS I**

Credits: 3 (3-0)

Prerequisite(s): Appropriate score on the College Placement Test, MAT 013, MAT 013A/MAT 013B, or departmental approval.

Basic Mathematics with an emphasis on the applications of mathematics required in a technological society. Students will develop the manipulative skills required to obtain solutions, and understanding of the mathematical concepts in each of the many application-oriented problems. Topics include arithmetic operations, algebra, graphing, solving equations, ratio and proportion, systems of linear equations. TI 83 plus calculator required.

MAT 108 GE MAT

- **MATHEMATICS II**

Credits: 3 (3-0)

Prerequisite(s): MAT 107

A continuation of MAT 107 stressing applications in mathematics and reinforcing the technical math skills needed to solve problems. Topics include exponential and logarithmic functions and applications. Course also includes topics from statistics: sampling, frequency distributions, presentation of statistical data (graphs, charts, tables), measures of central tendency, measures of dispersion, normal distribution and binomial distribution. TI 83 plus calculator required.

MAT 109 GE MAT

- **COLLEGE ALGEBRA AND TRIGONOMETRY I**

Credits: 3 (3-0)

Prerequisite(s): Satisfactory score on the College Placement Test, MAT 014, MAT 014A/MAT 014B or departmental approval.

Prepares students for calculus. Its purpose is to make students aware of the concepts and skills needed in a technological society. Some essential topics include linear, quadratic and trigonometric functions, vectors, solutions of triangles, and use of the calculator. Additional topics include use of determinants. TI 86 plus calculator required.

MAT 110 GE MAT

- **COLLEGE ALGEBRA AND TRIGONOMETRY II**

Credits: 2 (2-0)

Prerequisite(s): MAT 109 or equivalent.

Some essential topics include quadratic, trigonometric, exponential, and logarithmic functions and their graphs, and use of the calculator. An additional topic includes complex numbers. TI 83 plus calculator required.

MAT 112 GE MAT

- **UNIFIED CALCULUS I**

Credits: 3 (3-0)

Prerequisite(s): MAT 110 or equivalent

An introduction to calculus with topics from analytic geometry, with a special emphasis on technical applications. Essential topics include equations of lines and circles, development of the derivative of polynomial and transcendental functions, derivative applications such as curve sketching, maxima-minima problems, related rates, development of the integrals of polynomials, and integral applications such as area under curves.

MAT 123 GE MAT

- **STATISTICS I**

Credits: 3 (3-0)

Prerequisite(s): MAT 014, MAT 014A/014B, or satisfactory score on the College Placement Test

Familiarizes students with mathematical models that occur in more advanced courses and in professions through the use of exploratory data analysis and statistical methods. Topics include descriptive statistics, probability, regression, confidence intervals, and an introduction to hypothesis testing. TI 83 plus calculator required.

MAT 124 GE MAT

- **STATISTICS II**

Credits: 3 (3-0)

Prerequisite(s): MAT 123

Continues the study of hypothesis testing and confidence intervals, introduces chi-square analysis, analysis of variance, linear regression and correlation, and non-parametric statistics. Familiarizes students with models and methods used in data analysis. Students will plan an experiment and make inferences about a population based upon sample data collected. TI 83 plus calculator required.

MAT 125 GE MAT

- **MATH FOR DECISION SCIENCES I**

Credits: 3 (3-0)

Prerequisite(s): MAT 014, or at least two years of high school algebra and satisfactory score on placement examination, or departmental approval.

This course is designed to introduce students to methods of mathematical thinking, to prepare them for more advanced courses, and to introduce them to mathematical concepts that occur in programming and algorithm development. Topics introduced in the first semester are logic, truth tables, number systems, linear equations, systems of equations, matrix operations, mathematics of finance, exponentials, logarithms, relations and functions. Topics stress discrete mathematics. This is the first semester of a two-semester sequence designed for students in computer science.
TI 83 plus calculator required.

MAT 126 GE MAT

- **MATH FOR DECISION SCIENCES II**

Credits: 3 (3-0)

Prerequisite(s): MAT 125

A continuation of MAT 125. Familiarizes students with mathematical methods and applications used in programming applications and in algorithm development. Topics introduced in the second semester are sets and counting, probability, statistics, difference equations, graph theory and trees. Topics stress discrete mathematics. TI 83 plus calculator required.

MAT 129 GE MAT

- **PRECALCULUS**

Credits: 4 (4-0)

Prerequisite(s): Appropriate score on the College Placement Test and/or satisfactory score on the Diagnostic Examination, "B" or better in MAT 014, or departmental approval.

Emphasis on those topics from algebra and trigonometry that best prepare the student for the first course in calculus. The areas of study are algebraic and transcendental functions and their graphs. Of special interest are polynomials, rational, exponential, logarithmic, and trigonometric functions. Additional topics may include vectors, polar coordinate systems, matrices, and determinants. TI 83 plus calculator required.

MAT 129A GE MAT

- **PRECALCULUS (Part A)**
  Credits: 2 (3-0)
  Prerequisite(s): Appropriate score on the College Placement Test and/or satisfactory score on the Diagnostic Examination, "C" or better in MAT 014 or MAT 014A and MAT 014B, or departmental approval.
  The first half of a two-semester precalculus course designed to give students extended enrichment to prepare for a first course in calculus. Emphasis is on algebra topics to develop skills and a thorough understanding of the concepts needed to go on to calculus. Topics include the study of algebraic functions and their graphs. Of special interest are polynomials and rational functions. TI 83 plus calculator required.

MAT 129B GE MAT

- **PRECALCULUS (Part B)**
  Credits: 2 (3-0)
  Prerequisite(s): MAT 129A or equivalent courses.
  The second half of a two-semester Precalculus course designed to give students extended enrichment to prepare for a first course in calculus. Emphasis is on exponential, logarithmic and trigonometric functions and their properties to develop skills for a thorough understanding of the concepts needed to go on to calculus. TI 83 plus calculator required.

MAT 131 GE MAT

- **ANALYTIC GEOMETRY & CALCULUS I**
  Credits: 4 (4-0)
  Prerequisite(s): MAT 129, or MAT 129A/129B, or appropriate score on the College Placement Test and/or satisfactory score on the Diagnostic Examination, or departmental approval.
  Presents fundamental ideas of calculus including the derivative, integral, and their applications. Topics include fundamentals of analytic geometry and transcendental functions. The first course in a sequence of calculus courses intended for the student interested in mathematics, engineering, and the natural, physical and social sciences. TI 83 plus calculator required.

MAT 131A GE MAT

- **ANALYTIC GEOMETRY & CALCULUS I (PART A)**
  Credits: 2 (2-1)
  Prerequisite(s): MAT 129 or MAT 129A/129B or appropriate score on the College Placement Test and/or satisfactory score on the Diagnostic Examination, or departmental approval.
  Presents such fundamental ideas of calculus as the derivative and its applications. Topics include fundamentals of analytic geometry and the trigonometric functions. The first in a sequence of calculus courses intended for the student interested in mathematics, engineering, and the natural, physical and social sciences. TI 83 plus calculator required

MAT 131B GE MAT

- **ANALYTIC GEOMETRY & CALCULUS I (PART B)**
  Credits: 2 (2-1)
  Prerequisite(s): MAT 131A
  The second half of the two-semester sequence of Analytic Geometry and Calculus I. Presented are such fundamental ideas of calculus as techniques and applications of integration. Topics include analytic geometry, exponential and logarithmic functions. This completes the first in a sequence of calculus courses intended for the student interested in mathematics, engineering, and the natural, physical and social sciences. TI 83 plus calculator required.

MAT 132 GE MAT

- **ANALYTIC GEOMETRY AND CALCULUS II**
  Credits: 4 (4-0)
  Prerequisite(s): MAT 131, MAT 131A/131B, or equivalent
  Topics include inverse trigonometric and hyperbolic functions, surface area, volumes, techniques of integration, parametric curves, indeterminate forms, Taylor's formula, infinite series and topics in analytic geometry. Recommended for students majoring in engineering, mathematics, computer science, and the science-related areas of chemistry and physics.

MAT 206

- **INTRODUCTION TO DISCRETE MATH**
  Credits: 4 (4-0)
  Prerequisite(s): MAT 132 or approval of Department Chair
  This is a first course in discrete mathematics. Topics include number theory, sets, functions and sequences, relations, recurrence relations, counting techniques, logic and techniques of proof, graphs, and algorithms. This course prepares a student for further study in mathematics and computer science.

MAT 210

- **LINEAR ALGEBRA**
  Credits: 4 (4-0)
  Prerequisite(s): MAT 132
  A general course covering geometric vectors, vector spaces, systems of linear equations, determinants, linear transformations, matrix algebra, eigenvalues and eigenvectors, and applications of matrices. Additional topics include inner product spaces and systems of linear differential equations.

MAT 233 GE MAT

- **ANALYTIC GEOMETRY & CALCULUS III**
  Credits: 4 (4-0)
  Prerequisite(s): MAT 132 or equivalent
  Emphasis is on the study of analytic geometry and calculus in three dimensions. Topics include solid analytic geometry, vector-valued functions, partial derivatives, multiple integrals, and special topics in vector analysis such as Green's theorem, the divergence theorem, surface integrals and Stokes' theorem. Recommended for students majoring in engineering, mathematics, computer science and the science-related areas of chemistry and physics.

MAT 234

- **DIFFERENTIAL EQUATIONS**
  Credits: 4 (4-0)
  Prerequisite(s): MAT 233 or approval of Department Chair of Mathematics
  An introduction to differential equations for students interested in mathematics and sciences - both physical and social sciences. Covers first and second order ordinary differential equations and systems of first order equations, both linear and non linear. Qualitative and numerical analysis are emphasized along with analytic techniques such as Laplace transforms and matrix methods. Applications and modeling of real phenomena are discussed throughout the course.

MAT 257

- **SELECTED TOPICS IN MATHEMATICS**
  Credits: 3 (3-0)
  Prerequisite(s): MAT 132 or Departmental Approval
  Introduces students to a branch of mathematics selected from one or more of the following areas: Chaos and Fractals, Combinatorics, Complex Variables, Graph Theory, History of Mathematics, Logic, Number Theory, Probability, and Topology. The course is recommended for students interested in learning more about theoretical mathematics.

MAT 285

- **BASIC STATISTICS FOR BUSINESS**
  Credits: 4 (4-0)
  Prerequisite(s): MAT 131 or equivalent calculus course
  An in-depth study of descriptive statistics, probability theory, sampling distributions, principles of hypothesis testing and regression analysis. The material is designed to give students the knowledge and skills for gathering, organizing, and interpreting statistical data as relevant to business. This course will also provide a sound foundation for the study of more advanced topics.

MECHANICAL ENGINEERING TECHNOLOGY

(For related courses see also Mecomtronics, MCT 101: Introduction to Engineering Technology and MCT 220 : Introduction to Robotics and Control Systems; see also Civil/Construction and Engineering Technology, CMT 124: Applied Technical Graphics/CAD II)

MEC 119

- **GRAPHIC SCIENCE**

Credits: 2 (1-3)

A study of the graphical language specifically designed for the engineering science student. Emphasizes the interpretation of engineering drawings used to communicate ideas in the major engineering disciplines. Topics include: techniques of drafting and sketching and interpretation of chemical, civil, electrical, electronic, mechanical and welding engineering drawings. Laboratory time is divided between using CAD, computer-aided drafting, and sketching techniques to complete required drawings.

MEC 123

- **TECHNICAL GRAPHICS/CAD I**

Credits: 3 (0-0-6)

A study of the graphic language of engineering and technology to include line work, lettering, scale use, geometric construction, orthographic projection, pictorial, sectional and auxiliary views, dimensioning techniques and the use of library symbols to generate electronic schematic diagrams. Laboratory time is divided between technical sketching and drawings produced using AutoCAD software.

MEC 130

- **MANUFACTURING PROCESSES AND MATERIALS**

Credits: 4 (3-3)

A study of materials (metallic and non-metallic), their engineering properties and the methods used in manufacturing to process these materials into useful products. Concurrent laboratory projects provide hands-on experiences in the areas of testing, modifying properties and the processes used in manufacturing to convert these materials into useful products.

MEC 204

- **FLUID MECHANICS**

Credits: 4 (3-3)

Prerequisite(s): CIT 105, MAT 129B

A study of the basic principles of conservation of energy, continuity of flow, and fluid mechanics as related to fluid systems at rest and in motion. Laboratory experiments provide hands-on experience in the set-up, operation, analysis, and design of fluid systems.

MEC 221

- **ENGINEERING MECHANICS I**

Credits: 3 (3-3)

Prerequisite(s): MAT 131

Basic concepts for the study of force systems and Newtonian mechanics, trusses, frames, torsion, bending, friction, centroids and moments of inertia. Engineering examples are stressed to develop understanding and application skills.

MEC 222

- **ENGINEERING MECHANICS II**

Credits: 3 (3-0)

Prerequisite(s): MEC 221

A continuation of MEC 221. Deals with the displacements, velocities, accelerations of bodies and the forces which cause the motion. Topics include kinematic and kinetic analysis of rectilinear, curvilinear, rotational and plane motion of bodies. Stresses engineering applications.

MEC 228

- **KINEMATICS DESIGN**

Credits: 4 (3-3)

Prerequisite(s): MEC 123 and MAT 129B

A study of the displacements, velocities and accelerations associated with the motion of four bar linkages, cams, gears and the dynamic forces generated by these mechanisms. Analytical techniques using a programmable calculator and computer software are used to solve kinematics problems.

MEC 250

- **SOLID MODELING**

Credits: 3 (0-6)

Prerequisite(s) MEC 123

An introductory course to familiarize students with feature-based parametric part modeling. Students will be involved with outline sketching and sketching profiling, constraining, dimensioning and viewing different viewpoints. Techniques such as profile extrusion, revolving and sweeping, feature editing, creating work axis, making active sketch planes, and creating work planes and points. Students will also master controlling objects visibility; cutting, joining, and intersecting operations; fillets, chamfers, holes and arrays; dimension display and equations; and assigned design variables.

MECOMTRONICS

MCT 101

- **INTRODUCTION TO ENGINEERING TECHNOLOGY**

Credits: 2 (1-2)

Prerequisite(s): MAT 013 or passing score on the College's Placement Test
Corequisites: MAT 014

Introduction to engineering practices through an integration of computer applications with civil, construction, electrical and mechanical components and systems. Activity based learning is accomplished through a variety of hands-on projects.

MCT 102

- **SUPPORT AND MAINTENANCE OF COMPUTER SYSTEMS**

Credits: 2 (1-2)

Prerequisite(s): MCT 101, MCT 103
Corequisites: MCT 104, MCT 106, PHY 146, MAT 146, ENG 132

Learn how to support, maintain, upgrade and troubleshoot the hardware and software of personal computers. Learn about software licensing requirements, and install and upgrade applications and operating system software; use the Internet and manufacturer's computer bulletin boards to download software updates and technical specifications; install and replace internal computer devices such as drives, cards and memory and learn about compatibility between hardware devices. Students troubleshoot hardware and software malfunctions. For Mecomtronics Engineering Technology majors.

MCT 103

- **FOUNDATION OF MECOMTRONICS**

Credits: 4 (3-3)

A project-oriented course that provides a foundation for technical studies within the Mecomtronics program. Topics in Computer Aided Drafting cover mechanical, electrical, and assembly drawings. Electrical and mechanical principles are introduced through various product development activities. Product characteristics and specifications are explored through the use of measuring instruments, manufacturers' data and study of properties of materials. For Mecomtronics Engineering Technology majors.

MCT 104

- **ELECTRICAL AND MECHANICAL POWER SYSTEMS**
  Credits: 4 (3-3)
  Prerequisite(s): MCT 101, MCT 103
  Corequisites: MCT 102, MCT 106, MAT 146, PHY 146, ENG 132
  A study of electrical and mechanical power components and systems used in the transmission of mechanical power and the distribution of electrical power. Topics include analysis of electric circuits; electromagnetic devices and the use in systems; discrete semiconductor switching devices; hydraulic and pneumatic power devices; types and uses of electric motors and generators as well as power distribution systems. Trouble- shooting and repair of hydraulic, pneumatic control equipment and electrical/electronic systems will be studied through a number of industry-based projects. For Mecomtronics Engineering Technology majors.

MCT 106

- **AUTOMATED SYSTEMS**
  Credits: 4 (3-3)
  Prerequisite(s): MCT 101, MCT 103
  Corequisites: MCT 102, MCT 104, MAT 146, PHY 146, ENG 132
  A study of theory, performance and applications of automated systems presented through a number of industry-based projects. Topics include open and closed loop control systems and their electrical and mechanical control components, electronic controllers, numerical control and robotics equipment, PLC controlled operation and material handling systems. For Mecomtronics Engineering Technology majors.

MCT 201

- **TELECOMMUNICATIONS WITH INDUSTRIAL APPLICATIONS**
  Credits: 3 (2-3)
  Prerequisite(s): MCT 102, MCT 104, MCT 106
  Corequisites: MCT 203, MCT 205, ENG 133, MAT 245, PHY 245
  Provides a background in the theory of telecommunications and hands-on experience installing and administering a network. Learn technical characteristics of telecommunications, such as protocols, transmission characteristics, data representation, carrier techniques and multiplexing. Evaluate and select network components, install network hardware, software and cabling, troubleshoot network malfunctions and perform network administration tasks. For Mecomtronics Engineering Technology majors.

MCT 202

- **SPECIAL TOPICS IN ENGINEERING TECHNOLOGY**
  Credits: 3 (3-3)
  Prerequisite(s): MCT 201, MCT 203, MCT 205
  Corequisites: MAT 246, PHY 246
  An introduction to current topics in computer and engineering technology. Topics are one or more of the following areas: Microelectronics and Semiconductor Manufacturing, Electrical Power Generation and Distribution, Electronic Communications, Computer Engineering, Biomedical Equipment, Instrumentation and Transportation Technology. For Mecomtronics Engineering Technology majors.

MCT 203

- **CONTROL AND AUTOMATION OF MANUFACTURING SYSTEMS**
  Credits: 3 (2-3)
  Prerequisite(s): MCT 104, MCT 106
  Corequisites: ENG 133, MAT 245, MCT 201, MCT 205, PHY 245
  A study of the theory, performance and application of Automated Manufacturing Systems, Programmable Logic Controls (PLC), Manufacturing Work Cells, Transportation of Materials during the Manufacturing Process and Automated Inspection Techniques. Topics include components and operation of hydraulic, pneumatic, electric drives and automated inspection techniques and their control. Industry-based projects are used to set-up, operate, analyze and control various automated manufacturing systems. For Mecomtronics Engineering Technology majors.

MCT 205

- **MANUFACTURING PROCESSES AND QUALITY MANAGEMENT**
  Credits: 4 (3-3)
  Prerequisite(s): MCT 106
  Corequisites: MCT 203, ENG 133, MAT 245, PHY 245
  A study of the theory, performance and application of manufacturing processes, prototyping and assembly along with methods of statistical process control. Topics include Product Realization, Computer Aided Manufacturing, Prototyping and Principles of Electronic Product Manufacturing and Assembling, Reliability and Quality Decisions Based on Cost. Industry-based projects are used to manufacture and produce quality products using ISO 9000 quality standards. For Mecomtronics Engineering Technology majors.

MCT 206

- **CAPSTONE PROJECT**
  Credits: 3 (2-3)
  Prerequisite(s): MCT 201, MCT 203, MCT 205
  Corequisites: MAT 246, PHY 246
  A culmination of studies through a comprehensive project which validates knowledge and skills acquired through Mecomtronics Engineering Technology program. Students will design, develop and produce a product or a process using methods and techniques consistent with industrial practices requiring a formal written report and oral presentation. For Mecomtronics Engineering Technology majors.

MCT 208

- **MECOMTRONICS AND TELEMEDIA TECHNOLOGY FIELD EXPERIENCE**
  Credits: 3 (1-12)
  Prerequisite(s): Mecomtronics Technology Field Experience (MCT 102, MCT 104, MCT 106), Telecommunications Networking Technology Field Experience (TCT 104, TCT 122)
  A cooperative work experience program employing students in a Mecomtronics or a Telemedia position in order to gain practical experience necessary for success in these technical fields. Supervision of the departmentally approved position is provided by the College through on-the-job visits and individual progress review sessions. Students are required to describe their objectives and attain specific job skills. Students attend a biweekly, two-hour seminar on campus and work a minimum of 180 hours a semester. For Mecomtronics Engineering Technology majors.

MCT 220

- **INTRODUCTION TO ROBOTICS AND CONTROL SYSTEMS**
  Credits: 4 (3-3)
  Prerequisite(s): ELT 105, MEC 123, MAT 129B and PHY 121
  A study of the pneumatic, electrical, and mechanical components and drives utilized in robotic and control systems. Topics include kinematics of robotic systems, analog and digital controllers, operations and applications of pneumatic, electrical and mechanical components. Students are required to complete a comprehensive robotic project which includes an oral presentation and a technical report.

MEDIA ARTS & DESIGN

(For related courses see also Advertising Graphics Design, Digital Media Arts & Photography)

MAD 102 GE HUM

- **ART IN INDUSTRY AND COMMERCE**
  Credits: 3 (2-3)
  A study of the historical and current interrelationships of the visual arts with science and technology; and of both of their influence on, and their being influenced by, the historical development of business, commerce, and industry. Areas of mutual interaction covered include: Architecture, Industrial Design, Packaging, Corporate Identity, Advertising and Marketing, Fine Arts, Photography, Computers, and Film and Video.

MAD 107

- **PHOTOGRAPHY I**

Credits: 3 (2-3)

A basic course in the theory, technique and technology of black & white still photography. Students learn about the use of the camera, composition, lighting, exposure control, use of filters, film and paper processing, and printing. Students have access to extensive darkroom facilities. Students are required to have their own manually-settable 35 mm SLR camera.

MAD 108

- **PHOTOGRAPHY II**

Credits: 3 (2-3)

Prerequisite(s): MAD 107

Emphasizes creative visual communication. Students will utilize various types of black & white and color transparency film. Through projects, they will explore the challenges of lighting in different locations and conditions, including the effective use of available light, and electronic and studio flash lighting. The use of Darkroom equipment and fiber-based printing methods will be practiced. Students will be introduced to digital photographic practices, computer photomanipulation, and digital printouts.

MAD 113

- **TWO-DIMENSIONAL DESIGN**

Credits: 3 (2-3)

Introduction to principles and characteristics of light, color, and design. The interaction of colors is stressed using student projects and computer interactivity. Two-dimensional surfaces and their compositional possibilities are studied and related to increasingly complex graphic concepts. Computer graphic design applications are introduced.

MAD 114

- **THREE-DIMENSIONAL DESIGN**

Credits: 3 (2-3)

Prerequisite(s): MAD 113 and MAD 117

Students acquire an understanding of planes, volume, mass, and space, as they apply to three-dimensional forms. Original structural concepts are developed from sketches to completion. Issues of color, decoration, and texture are addressed through experimentation with a variety of materials. Hand skills such as measuring, cutting, folding, and assembling are stressed throughout the semester.

MAD 117

- **FREEHAND DRAWING**

Credits: 3 (2-3)

In this course students develop a firm foundation in the fundamentals of drawing for design. Visual awareness is developed through study of composition, line, form, and value. Drawing is learned through careful observation when working from life and secondary sources such as photographs. Techniques for illustration are learned through the use of various media, and discussed in terms of their application in the field of advertising. Materials studied include pencil, charcoal, markers, and water media.

MAD 118

- **GRAPHIC DESIGN SKILLS**

Credits: 3 (2-3)

Prerequisite(s): MAD 113 and MAD 117

A general introduction to graphic design studio skills, this course lays the foundation for advanced design classes. Topics include the design ideation process, basic graphic design principles, and use of professional design software. Students will be introduced to Illustrator, Photoshop, InDesign and QuarkXpress as they learn drawing, scanning, image editing, and layout for print production. Correct set-up of digital mechanicals and presentation skills are stressed.

MAD 121

- **GRAPHICS FOR COMPUTER AUTHORS AND PRESENTERS**

Credits: 3 (2-2)

Corequisites: BUS 107 or CSC 105 or MCT 101 or equivalent

An introductory layout, color, design, and graphic course, not part of the Media Arts & Design Department curriculum, for students interested in producing graphics solely for electronic media and presentation. Particular attention is paid to the peculiarities of designing for the web, creation of presentations in PowerPoint, the use of PhotoShop and ImageReady for creation of graphics. Access is provided to both MAC-OS and Windows platforms. Students learn by hands-on development of finished graphic projects.

MEDICAL LABORATORY TECHNOLOGY

MED 101

- **INTRODUCTION TO THE MEDICAL LABORATORY I**

Credits: 2 (1-2)

Prerequisite(s): Admission to the Medical Laboratory Technology program required or departmental approval.

Basic understanding of medical laboratory terminology, safety, specimen collection, and manual procedures in hematology, hemostasis, body fluids, immunohematology and serology. Lectures are combined with laboratory experiences. Stresses medical ethics.

MED 102

- **INTRODUCTION TO THE MEDICAL LABORATORY II**

Credits: 3 (2-3)

Prerequisite(s): BIO 119, CHM 117, ENG 121, MAT 107, MED 101

Continuation of MED 101. Emphasis on clinical chemistry, clinical microbiology and safety in the laboratory. Provides hands-on experience with those concepts and techniques essential to medical laboratory technology students. Laboratory experiences include manual methods with principles of techniques and accuracy being stressed.

MED 210

- **MEDICAL LABORATORY TECHNOLOGY I**

Credits: 6 (3-12)

Prerequisite(s): BIO 120, CHM 118, ENG 122, MAT 108, MED 102 and permission of the Health Technologies Division

Basic medical terminology, organization of hospital laboratories, and rules of ethical behavior. Stresses the practical side of basic laboratory work in the areas of specimen collection, hematology, urinalysis, blood banking, serology, clinical chemistry, microbiology, quality control, etc. Includes on-the- job education in laboratory work. Students supervised by medical technologists and specialists. May not be audited. An eight-week, 40-hours-a-week, Summer clinical experience.

MED 211

- **MEDICAL LABORATORY TECHNOLOGY II**

Credits: 8 (4-16)

Prerequisite(s): MED 210

A study of the theoretical and practical aspects of hematology, coagulation, urinalysis, serology, and blood banking. Clinical instruction and technique are obtained in affiliated hospitals under the supervision of medical technologists and specialists. May not be audited. Requires 16 hours a week in a hospital laboratory.

MED 212

- **MEDICAL TECHNOLOGY III**

Credits: 8 (4-16)

Prerequisite(s): MED 211, BIO 211

Continuation of MED 211. Includes microbiology and parasitology, and clinical chemistry. Clinical instruction and technique are obtained in affiliated hospitals. May not be audited. Requires 16 hours a week in a hospital laboratory.

MUSIC

MUS 103
- **CHORUS I**
  Credits: 1 (0-2)
  A working approach to the understanding of music through singing. Proper vocal production and elementary music reading. Participation in the college chorus is required.

MUS 104
- **CHORUS II**
  Credits: 1 (0-2)
  Prerequisite(s): MUS 103 or permission of the instructor
  Continuation of MUS 103 with a more advanced choral experience in small groups. Participation in the college chorus is required.

MUS 107 GE HUM
- **INTRODUCTION TO MUSIC**
  Credits: 3 (3-0)
  Contemporary and classical music will be dealt with as integral parts of today's musical scene. Students listen, discuss, analyze, and evaluate music in order to increase appreciation and understanding. Attendance at a minimum of two professional college performances required

MUS 109
- **CHORUS III**
  Credits: 1 (0-2)
  Prerequisite(s): MUS 104 or permission of the instructor
  Small ensemble singing and solo performance. Advanced sight-singing and rhythmic dictation. Participation in the college chorus is required.

MUS 110
- **CHORUS IV**
  Credits: 1 (0-2)
  Prerequisite(s): MUS 109 or permission of the instructor after audition
  Continuation of MUS 109 with a more advanced choral experience in small ensembles and solo performance. Participation in the college chorus is required.

MUS 123 GE HUM
- **MUSIC HISTORY: TRADITIONAL**
  Credits: 3 (3-0)
  Understanding and appreciation of music from the historical point of view. Major periods studied include the classical, the baroque, and the romantic. Course fee and field trip are required. Required of music majors.

MUS 124 GE HUM
- **MUSIC HISTORY: CONTEMPORARY**
  Credits: 3 (3-0)
  Understanding and appreciation of music from the historical point of view. Special emphasis on the music of Tchaikovsky, Debussy, Stravinsky, and twentieth-century American music. Course fee and field trip are required. Required of music majors.

MUS 130 GE HUM
- **GUITAR I**
  Credits: 3 (3-0)
  Guitar for the beginning student. Enables the beginner to read fundamental music notation and play guitar. Basics of technique, sight-reading and elementary literature. Students must supply their own instruments. Listening to great music. Attendance is required at two professional concerts. Written concert reviews must be submitted. Students are responsible for concert fees.

MUS 131 GE HUM
- **KEYBOARD STUDIES I**
  Credits: 3 (3-0)
  Students develop an appreciation and understanding of great keyboard composers, performers and literature by giving them the ability to read and play keyboard music. Fundamentals of technique, keyboard harmony and sight-reading. Attendance at two professional concerts required. Written concert reviews must be submitted. Students are responsible for concert fees. Required for music majors. Open to non-music majors.

MUS 132 GE HUM
- **KEYBOARD STUDIES II**
  Credits: 3 (3-0)
  Prerequisite(s): MUS 131
  A continuation of MUS 131 with further emphasis on great keyboard literature. Students are introduced to more difficult keyboard harmony, sight-reading, and more advanced techniques. Listening to great keyboard literature. Attendance is required at two professional keyboard concerts. Written concert reviews must be submitted. Required for music majors. Open to non-music majors.

MUS 133
- **APPLIED MUSIC STUDIO I**
  Credits: 2 (1-2)
  One-hour private instruction weekly in piano, organ, voice, or orchestral instruments. Credit to be determined through recital. To be arranged with the music faculty and the department chair. Students must have studied formally for a minimum of two years, or play on a two-year level. Fee: approximately $25.00 per lesson.

MUS 134
- **APPLIED MUSIC STUDIO II**
  Credits: 2 (1-2)
  For course description and fee, see MUS 133.

MUS 136 GE HUM
- **GUITAR II**
  Credits: 3 (3-0)
  Prerequisite(s): MUS 130 or permission of the instructor
  Intermediate guitar technique, including choral accompaniment and solos. Use of standard notation. Students must supply their own instrument. Listening to great music. Attendance at two professional concerts. Written reports must be submitted. Students are responsible for concert fees.

MUS 140
- **MUSIC FUNDAMENTALS**
  Credits: 3 (3-0)
  An introduction to the study of music theory. The course concentrates on the basic elements of pitch, rhythm, scales, intervals and triads. Notational skills will be developed and aural recognition of musical elements will be introduced. A working knowledge of the piano will be developed as theoretical concepts are related to the keyboard. No prior musical training required.

MUS 145 GE HUM GE DIV
- **MUSIC APPRECIATION: JAZZ HISTORY**
  Credits: 3 (3-0)
  Provides an understanding and appreciation of jazz history, performers and styles. The social, historical and multicultural forces that influenced the work of the jazz musician will be included. Improvisation will be studied while listening to representative selections of jazz compositions. Attendance at two professional concerts is required. Written concert reviews must be submitted. Course fee required.

MUS 201

- **MUSIC NOTATION AND COMPOSITION I**
  Credits: 3 (3-0)
  Prerequisite(s): MUS 140 or passing score on Music Theory Placement Test
  A practical approach to music encompassing analysis, basic harmonic writing, and ear training. Designed for students with some previous musical background. Required of music majors.

MUS 202

- **MUSIC NOTATION AND COMPOSITION II**
  Credits: 3 (3-0)
  Prerequisite(s): MUS 201
  Continuation of MUS 201. Students build musical skills in analysis, harmonic writing, and ear training. Required of music majors.

MUS 207

- **APPLIED MUSIC STUDIO III**
  Credits: 2 (1-2)
  For course description, see MUS 133.

MUS 208

- **APPLIED MUSIC STUDIO IV**
  Credits: 2 (1-2)
  For course description, see MUS 133.

NURSING

NRS 111

- **FOUNDATIONS OF NURSING**
  Credits: 6 (3-3-6)
  Prerequisite(s): American Heart CPR Certificate
  Corequisites: BIO 111, NRS 112, ENG 121 and PSY 123
  Provides students with the foundation of basic nursing principles necessary to identify human-environmental interactions as they relate to nursing practice. Classroom lectures, seminars and symposiums provide students with opportunities to explore the concepts of basic nursing including: Roger's Theory of Unitary Humans, nursing process, normal nutrition, epidemiology, ethical and legal concepts and critical thinking. Faculty supervised learning laboratory practice provides students with opportunities to develop cognitive and psychomotor skills related to nursing, physical assessment and medication administration skills. Faculty led clinical practicum enable students to apply newly gained cognitive and psychomotor skills in a variety of clinical settings. Practicum experiences will be provided in a variety of acute, sub-acute, long-term and community settings.

NRS 112

- **PRINCIPLES AND PRACTICE OF HEALTH PROMOTION**
  Credits: 3 (2-3)
  Prerequisite(s): Acceptance into a health technologies curriculum or permission of the Dean of Health Technologies and the nursing faculty administrator
  Corequisites: NRS 111 for nursing students, BIO 111, ENG 121 and PSY 123
  This hybrid on-line course enables students to recognize how various life-style patterns influence health. Webbased instruction and discussion groups provide opportunities to explore measures that are designed to protect and promote health. Health promotion practices related to the psychosocial, protective, fluid/gas exchange, comfort/rest/activity/mobility (CRAM), nutrition, elimination, and growth and development patterns will be introduced. The nursing process provides a framework for students to critically think when learning and teaching the concepts of health promotion and maintenance in the community.

NRS 115

- **FAMILY HEALTH ACROSS THE LIFE SPAN**
  Credits: 8 (4-3-9)
  Prerequisite(s): NRS 111, NRS 112, BIO 111, PSY 123
  Corequisites: BIO 112
  Enables students to recognize patterns of human development and patterns of health from conception through older adulthood. Classroom lectures and seminars provide opportunities to explore the family as a unified whole and discuss its patterns through conception, childbearing, childcaring, middle adult and older adult years. Faculty-supervised learning laboratory practice and clinical practicum experiences provide students with opportunities to develop cognitive and psychomotor skills in assessing, planning, implementing and evaluating nursing care for individuals and families.

NRS 211

- **NURSING OF ADULTS I**
  Credits: 8 (4-3-9)
  Prerequisite(s): NRS 111, NRS 112, NRS 115, BIO 112
  Corequisites: BIO 211
  Classroom lectures and seminars will provide students with opportunities to explore altered patterns as they relate to fluid/gas exchange, protection, nutrition, and elimination. The learning lab experience enables students to gain proficiency in those psychomotor skills that are essential to holistic nursing practice. In the clinical practicum faculty will guide the students in the utilization of the nursing process to help clients mobilize their unique energy patterns.

NRS 212

- **NURSING OF ADULTS II**
  Credits: 8 (4-0-12)
  Prerequisite(s): NRS 211, BIO 211
  Corequisites: HRI 212
  The knowledge obtained in this course enables the student to recognize the importance of changes in health and health care patterns related to the adult client. Students in this course will utilize the nursing process to provide care for clients experiencing increasing diversity in lifelong health patterns. Emphasis will be placed on application of theory to clinical practice as students begin to operationalize the role of the associate degree nurse graduate during the later part of the course. Students will also be provided with opportunities to explore current trends and issues which can impact the provision of healthcare.

OFFICE ADMINISTRATION

OAD 101

- **DOCUMENT PROCESSING I**
  Credits: 3 (3-0)
  Corequisite: OAD 122
  Covers methods and details of processing a full range of business documents using word processing software. Emphasis is placed on current terminology and workflow in a variety of business settings. Students are expected to have keyboarding experience.

OAD 102

- **DOCUMENT PROCESSING II**
  Credits: 3 (2-2)
  Prerequisite(s): OAD 101 and OAD 122 or permission of Department Chair
  Corequisites: OAD 123 and OAD 107
  Continues the preparation of business documents through concepts and more advanced word processing (Microsoft Word) applications, such as page numbering, creating tables and columns, sorting, and importing graphics into documents.

OAD 106

- **KEYBOARDING/BASIC WORD PROCESSING FOR THE SECOND LANGUAGE LEARNER**
  Credits: 2 (1-2)
  Introduces the second language learner to the computer keyboard and fundamentals of word processing concepts and applications. Students will learn the touch typewriting method to input text. Basic word processing applications will include creating and editing a variety of documents allowing students to expand their vocabulary, increase their writing proficiency, and reinforce grammar usage. Word processing and computer terminology as well as instruction will be adapted for the second language learner. (ESL STUDENTS ONLY-recommended for students at the minimum level ESL 080 courses and above.) Not for Office Administration students.

OAD 107

- **TRANSCRIPTION FOR BUSINESS**
  Credits: 3 (2-2)
  Prerequisite(s): OAD 101 and OAD 122
  Corequisites: OAD 102, OAD 123 or permission of Department Chair
  Integrates machine transcription and word processing skills to produce mailable documents. Machine transcription incorporates the skills of transcribing, proofreading, and editing. Students apply punctuation, spelling, vocabulary building, formatting, proofreading, and grammar to the transcription process.

OAD 110

- **PRINCIPLES AND APPLICATIONS OF MICROSOFT ACCESS**
  Credits: 2 (1-1)
  Prerequisite(s): Keyboarding experience or Permission of Department Chair
  Introduction to Microsoft Access, a database software program. A short (28 hour) hands-on course focusing on how to create and customize tables; edit, copy, restructure, and delete tables, forms, and reports.

OAD 113

- **PRINCIPLES AND APPLICATIONS OF MICROSOFT EXCEL**
  Credits: 2 (1-1)
  Prerequisite(s): Keyboarding experience or Permission of Department Chair
  Introduction to Microsoft Excel, a spreadsheet software package. A short (28 hour) hands-on course focusing on how to create a worksheet, use formulas, enhance a worksheet, save and print worksheets and create graphs.

OAD 114

- **PRINCIPLES AND APPLICATIONS OF MICROSOFT WORD**
  Credits: 2 (1-1)
  Prerequisite(s): Keyboarding experience or Permission of Department Chair
  Introduction to Microsoft Word, a word processing software package. A short (28 hour) hands-on course focusing on how to create and edit documents; insert graphics, symbols, and special characters; merge form letters; and print documents.

OAD 116

- **PRINCIPLES AND APPLICATIONS OF MICROSOFT POWERPOINT**
  Credits: 2 (1-1)
  Prerequisite(s): Keyboarding experience or Permission of Department Chair
  Introduction to concepts and terminology of PowerPoint, a presentation software program. A short (28 hour) hands-on course focusing on creating presentations using the features of PowerPoint. A slide show will be produced and presented to the class.

OAD 122

- **INFORMATION PROCESSING I**
  Credits: 3 (2-2)
  Corequisites: OAD 101 or permission of Department Chair
  Introduction to Microsoft Excel and PowerPoint through concepts and applications. Topics include planning, creating, formatting and printing worksheets; developing formulas using cell references; creating and editing charts; sorting. Topics in PowerPoint include developing a slide show presentation by creating and modifying slides and printing speaker notes and handouts. Also includes introduction to file management.

OAD 123

- **INFORMATION PROCESSING II**
  Credits: 3 (2-2)
  Prerequisite(s): OAD 101 and OAD 122 or permission of Department Chair
  Corequisite: OAD 102 & OAD 107
  Further develops proficiency in Microsoft Word, Excel, and PowerPoint through the use of advanced applications. Topics in Word include formatting with special features; merging documents; working with multiple documents, creating a table of contents and index; creating fill-in forms; creating, running, and editing macros. Topics in Excel include formatting worksheets using advanced techniques; working with lists; using analysis tools. Topics in PowerPoint include applying animation effects, creating a custom background, setting automatic slide timings, adding sound and video, working with charts and tables. Also includes introduction to Microsoft Access.

OAD 207

- **ADVANCED TRANSCRIPTION FOR BUSINESS**
  Credits: 3 (2-2)
  Prerequisite(s): OAD 102, OAD 107, OAD 123 or permission of Department Chair
  Critical thinking and decision making skills will be used in the production of a variety of complex business documents.

OAD 208

- **OFFICE ADMINISTRATION COOPERATIVE WORK EXPERIENCE**
  Credits: 3 (1-12)
  Prerequisite(s): OAD 211 and GPA 2.0 in OAD courses or permission of Department Chair
  Provides students with the opportunity to gain some of the practical experience necessary for success in an office setting. Supervision of a departmentally approved position is provided by the College through on-the-job visits and individual progress review sessions. Students are required to establish learning objectives related to their position in order to effect the attainment of specific job competencies. Students attend a weekly, one hour seminar on campus and work a minimum of 180 hours a semester.

OAD 210

- **RECORDS MANAGEMENT**
  Credits: 3 (3-0)
  Prerequisite(s): OAD 101 & OAD 123 or permission of Department Chair
  Study of management of information from creation to disposition. Focuses on systems approach to paper management and electronic records. Covers practical application of manual and electronic filing systems.

OAD 211

- **CONTEMPORARY OFFICE PROCEDURES**

Credits: 3 (3-0)

Prerequisite(s): OAD 102, OAD 107, OAD 123 or permission of Department Chair

Focuses on administrative office procedures. Students develop competence in a variety of administrative office tasks. Decision-making skills are emphasized and career opportunities are explored.

OAD 213

- **ADMINISTRATIVE OFFICE MANAGEMENT**

Credits: 3 (3-0)

Prerequisite(s): OAD 211 or permission of Department Chair

Course covers the scope and responsibilities of administrative office managers. Emphasis is on administrative service responsibilities of the office and the management of administrative systems.

OAD 223

- **INTEGRATED SOFTWARE APPLICATIONS**

Credits: 3 (2-2)

Prerequisite(s): OAD 102 & OAD 123 or OAD 110 & OAD 113 & OAD 114 & OAD 116 or permission of Department Chair

Integration of Microsoft Office software applications to complete business tasks. Students will be presented with various business situations that will require using more than one application or feature to complete the task. Introduction to the Internet and web page design for business.

OAD 224

- **OFFICE PROJECTS**

Credits: 3 (2-2)

Prerequisite(s): OAD 223 or permission of Department Chair

Introduction to the concepts and applications of Microsoft Outlook and Publisher. Simulation projects are used to further develop mastery of information processing applications.

PARALEGAL STUDIES

PLS 100

- **INTRODUCTION TO THE PARALEGAL PROFESSION**

Credits: 2 (2-0)

An introduction to the functions and duties of the paralegal. Students explore the regulation of paralegals, rules of ethics, privilege and ABA considerations. Students are introduced to the court system and law office routines.

PLS 101

- **LEGAL RESEARCH**

Credits: 3 (3-0)

Prerequisites or Corequisites: ENG 121, PLS 100

An introduction to the American legal system and the New Jersey court system. Students use the law library including encyclopedias, reporter systems, digests, and administrative codes including updating sources. Students are introduced to the use of computer assisted research by use of WESTLAW.

PLS 104

- **PROPERTY TRANSACTIONS**

Credits: 4 (4-0)

Prerequisite(s): PLS 100, PLS 101, PLS 113

Prerequisite or Corequisite: PLS 121

Forms and procedures used in real and personal property transactions including Real Estate Settlement Procedures Act.

PLS 105

- **FAMILY LAW**

Credits: 3 (3-0)

Prerequisite(s): PLS 100, PLS 101, PLS 113

Prerequisite or Corequisite: PLS 121

A study of the substantive and procedural aspects of family law in such areas as divorce, adoption, support and separation agreements, including domestic relations court procedures.

PLS 106

- **WILLS AND ESTATE ADMINISTRATION**

Credits: 3 (3-0)

Prerequisite(s): PLS 100, PLS 101, PLS 113

Prerequisite or Corequisite: PLS 121

A study of the substance and procedure of estate administration with respect to wills, estates, trusts, probate, life insurance, and federal and state taxes.

PLS 107

- **LAW OFFICE MANAGEMENT**

Credits: 3 (3-0)

Prerequisite(s): PLS 100, PLS 101, PLS 113

Prerequisite or Corequisite: PLS 121

A study of the basics of law office management including accounting procedures, scheduling, filing, and office systems.

PLS 108

- **TORTS**

Credits: 3 (3-0)

Prerequisite(s): PLS 100, PLS 101, PLS 113

Prerequisite or Corequisite: PLS 121

A study of the principles of tort law, their application in commonly faced situations in law practice, and the role of the paralegal in the preparation of a tort claim or defense.

PLS 109

- **CRIMINAL LAW AND PROCEDURE**

Credits: 3 (3-0)

Prerequisite(s): PLS 100, PLS 101, PLS 113

Prerequisite or Corequisite: PLS 121

A study of the elements of crime and the criminal procedure system including incidents before and after trial, and an analysis of the impact of the Constitution on crimes and criminal procedure.

PLS 110

- **LITIGATION PROCEDURE**

Credits: 4 (4-0)

Prerequisite(s): PLS 100 PLS 101, PLS 113

Prerequisite or Corequisite: PLS 121

A study of the rules governing courts and litigation procedures, including client interviews, complaints, motions, discovery and appeals.

PLS 111

- **CONTRACTS AND THE UNIFORM COMMERCIAL CODE**

Credits: 3 (3-0)

Prerequisite(s): PLS 100, PLS 101, PLS 113

Prerequisite or Corequisite: PLS 121

A study of the substantive law of contracts, sales, and commercial paper. In applicable areas, the Uniform Commercial Code is covered as well as common law principles.

PLS 112

- **BUSINESS ORGANIZATIONS AND GOVERNMENT REGULATIONS**

Credits: 3 (3-0)

Prerequisite(s): PLS 100, PLS 101, PLS 111, PLS 113, PLS 121

Detailed study of the substantive law of agency and employment, security devices, bankruptcy, partnerships and corporations. In applicable areas the Uniform Commercial Code is covered as well as common law principles.

PLS 113

- **LEGAL WRITING**

Credits: 2 (2-0)

Prerequisites or Corequisites: PLS 100, PLS 101

A writing course focusing on the tasks commonly encountered by paralegals. Topics covered include correspondence, opinion letters, briefs and memoranda. Emphasis will be placed on clarity and precision in the use of language.

PLS 121

- **ADVANCED LEGAL RESEARCH**

Credits: 2 (2-0)

Prerequisite(s): PLS 100, PLS 101, PLS 113

A continuation of the study of legal research using online resources, with an emphasis on Westlaw and the Internet.

PLS 208

- **PARALEGAL FIELD EXPERIENCE**

Credits: 3 (3-0)

Prerequisite(s): PLS 100, PLS 101, PLS 110, PLS 113, PLS 121, and PLS 104 or PLS 108 or PLS 109 and permission of the program director.

A cooperative work experience program whereby students are employed in law-related positions to gain some of the practical experience necessary for success as paralegals. The College, through on-the-job visits and individual progress review sessions, provides supervision of these departmentally approved positions. Students are required to establish learning objectives related to their positions to attain specific job competencies. Students attend a class on campus and work approximately 20 hours per week for a minimum of 180 hours during the semester. Individuals must be recommended by the chair or assistant chair of the department.

PLS 280

- **SENIOR SEMINAR FOR PARALEGALS**

Credits: 3 (3-0)

Prerequisite(s): PLS 100, PLS 101, PLS 104, PLS 108, PLS 110, PLS 111, PLS 112, PLS 113, PLS 121 (LT and LTT candidates should see program director)

Students integrate their knowledge of theoretical concepts and practical application of legal research, litigation, property, torts, and business law through case analysis and the completion of assigned projects.

PHARMACY

PHA 101

- **INTRODUCTION TO PHARMACY**

Credits: 4 (3-2)

Prerequisite(s): CHM 107 and appropriate score on the College Placement Test or MAT 013

An introduction to the field of Pharmacy dealing with the daily activities that occur in pharmacy settings such as hospitals, nursing homes, home health care and community pharmacies. The course will teach many aspects of pharmacy including medical terminology, prescriptions and medications, pharmaceutical calculations, aseptic techniques, pharmacy law and pharmaceutical repackaging.

PHILOSOPHY

PHI 121 GE HUM

- **PHILOSOPHY**

Credits: 3 (3-0)

Background, fundamental problems, and developing types of philosophy as expressed in selected writings of major classical and modern philosophers of the Western tradition.

PHI 122 GE HUM

- **LOGIC**

Credits: 3 (3-0)

Elementary presentation of the basic tools of logic. The nature and purpose of definition, concepts of truth, and the pitfalls of language. The modern methods of symbolic logic are employed throughout.

PHI 123 GE HUM

- **ETHICS**

Credits: 3 (3-0)

The philosophical foundations of Western moral/ethical theory, including natural law, social contract theory, Kantian duty, and utilitarianism. These approaches are employed to consider solutions to such moral dilemmas as abortion, nuclear weaponry, poverty and euthanasia.

PHOTOGRAPHY

(Professional Commercial Photography)
(See Media Arts & Design for prerequisite courses)

PCP 221

- **COLOR PRINTING METHODS AND PRACTICE**

Credits: 3 (2-3)

Prerequisite(s): All MAD courses except MAD 121

A study of color photography for traditional and digital darkroom processes: materials and techniques are explored. This will include: subtractive color printing, digital photography, scanning and printing of digital files, color management systems, production of QuickTime VR panoramics, alternative processes and archival mounting of color prints. Students will create a portfolio of color photography.

PCP 224

- **DIGITAL IMAGERY**

Credits: 3 (2-3)

Prerequisite(s): PCP 221 and PCP 225

Advanced study of Adobe Photoshop for RGB image modification, creation, and output. Included are subjects such as: photomanipulation and retouching, combining grabbed, canned and digital photographs. Animated giffs, panoramic digital imagery and digital photography. Image output for traditional as well as new media are examined.

PCP 225

- **PRODUCT AND STOCK PHOTOGRAPHY**

Credits: 3 (2-3)

Prerequisite(s): All MAD courses except MAD 121

Course focuses on professional studio and stock photography for print and electronic distribution. Students will have extensive hands-on experience with professional photographic equipment for the studio and location shooting. This includes the use of the view camera and accessories, studio lighting equipment, and digital cameras. Specific areas of photographic practice with regard to advertising, stock, packaging, and new media will be explored through assignments, lectures and demonstrations.

PCP 226

- **PROFESSIONAL/ STUDIO PHOTOGRAPHY**

Credits: 3 (2-3)

Prerequisite(s): All MAD courses except MAD 121

Studio and location portraiture and photojournalistic techniques are explored. Medium format cameras, Digital SLR cameras, and controlling color for digital output are stressed. Photography of special events, group and individual portraiture in studio settings and on location, are practiced. Printing, finishing and presentation of the final product is also performed. Professional photographic methods, ethics, and practices are examined and discussed. Students are expected to perform a minimum of two location shoots, on or off campus, during the day or evening class hours.

PCP 280

- **PORTFOLIO**

Credits: 3 (2-3)

Prerequisite(s): All MAD courses except MAD 121 and six credits of PCP courses. Corequisite(s): the remaining six PCP courses.

Students learn about job discovery and search, resume creation, both paper and electronic, employment letter writing, and interviewing techniques. This is in addition to the primary goal of producing a professional level portfolio, both on paper and in digital /electronic formats. They will also be guided in discovering their professional strengths and goals through an individual self-evaluation process. Field trips are undertaken. Purchase of portfolio materials will be required.

PHYSICAL EDUCATION

(For related courses, see Health, Recreation and Dance)

PED 108

- **MODERN DANCE**

Credits: 1 (0-2)

Includes practical experiences and technical applications of several modern dance techniques. Students discover dance and its raw elements of space, time and energy. Choreography and improvisation exercises are also included to foster the progress of technical ability. An original dance work will be performed as a final examination.

PED 112

- **TENNIS AND VOLLEYBALL**

Credits: 1 (0-2)

Students perform the basic skills of the activities, and apply the rules and playing procedures.

PED 120

- **GOLF**

Credits: 1 (0-2)

Basic instruction in the skills, rules and playing procedures. Students demonstrate appropriate shot-making abilities.

PED 122

- **VOLLEYBALL**

Credits: 1 (0-2)

Students will receive instruction in the skills, playing procedures and strategies of volleyball. Team play will be developed and stressed.

PED 127

- **TENNIS**

Credits: 1 (0-2)

Students receive instruction in the beginning skills, playing procedures, etiquette and strategies of tennis.

PED 132

- **BACKPACKING**

Credits: 1 (0-2)

The types of equipment, skills and procedures necessary to plan and undertake a safe backpacking experience. Trip planning and preparation, meeting basic needs and unexpected occurrences, and low impact use of the environment are examined. Six on-campus meetings and a weekend trip are required. Students are responsible for providing their own equipment, food, and transportation for the weekend activity.

PED 139

- **EXERCISE, FITNESS AND CONDITIONING**

Credits: 1 (0-2)

Develops an awareness and understanding of the necessity for planned physical activity as it pertains to the enhancement of one's physical, mental, and emotional well being. Students are required to participate in exercise programs defined by the instructor. Students are acquainted with proper nutrition. Cardiovascular disease and its causes are examined

PED 140

- **RACQUETBALL**

Credits: 1 (0-2)

The rules, basic strokes, shots and strategies of racquetball are examined. Experience is provided in singles and doubles play.

PED 143

- **BEGINNING SWIMMING**

Credits: 1 (0-2)

Basic water skills including adjustment to the water, overcoming fear, treading water, beginner stroke, crawl stroke, floating and swimming on the back, artificial respiration and basic rescue techniques. American Red Cross guidelines. For the non-swimmer and the beginner swimmer.

PED 144

- **INTERMEDIATE SWIMMING**

Credits: 1 (0-2)

A second level course for students who successfully complete the beginning swimming course, PED 143, or demonstrate the ability to swim the crawl with their head in the water using rhythmic breathing for at least 50 meters. A variety of strokes and skills including elementary backstroke, basic diving, sidestroke, breast stroke, underwater swimming, various kicks, and personal safety skills. American National Red Cross guidelines.

PED 146

- **STEP AEROBICS**

Credits: 1 (0-2)

Designed to acquaint the student with a lifetime (recreational) fitness activity that combines basic principles and techniques involved in step training. It is executed to music and provides enjoyment through progression in both aerobic capacity and motor skill level.

PED 148

- **BALLET**

Credits: 1 (0-2)

Classical ballet as an art form with emphasis on the technical movement, vocabulary, body alignment and aesthetics. Students will explore academic aspects of ballet as a profession, pertinent historical topics and artistic characteristics. A required full ballet movement study is part of the final examination.

PED 210

- **SCIENTIFIC PRINCIPLES OF FITNESS GE PED**

Credits: 3 (3-0)

The physiological basis of fitness. Students explore the areas of strength, muscular and cardiovascular endurance, flexibility and nutrition. Students demonstrate, design and implement correct programs in these areas.

PED 225

- **FIRST AID, CPR AND SAFETY EDUCATION**

Credits: 3 (3-0)

The theory and practice of professional rescuer CPR and basic first aid skills. Topics covered include accident and disease prevention, body systems, respiratory and cardiac emergencies and sudden illnesses. The ability to recognize serious medical emergencies and the course of action are the basic components of this course. American Red Cross certification(s) will be presented to qualified students.

PED 245 GE PED

- **ARC LIFEGUARD TRAINING, CARDIOPULMONARY RESUSCITATION AND STANDARD FIRST AID**
  Credits: 3 (3-0)
  Prerequisite(s): Students must be 15 years of age at the beginning of the course.
  Swim 500 yards continuously, using these strokes in the following order: - 200 yards of frontal crawl using rhythmic breathing and stabilizing propelling kick. Rhythmic breathing can be performed either by breathing to the side or to the front. - 100 yards of breaststroke. - 200 yards of either front crawl using rhythmic breathing or breaststroke.
  Swim 500 yards continuously, using each of the following strokes for at least 100 yards each: crawl stroke, breaststroke, and sidestroke. Submerge to a minimum depth of 7 feet, retrieve a 10-pound object, and return with it to the surface. There is no time requirement for this skill. Tread water for 2 minutes using legs only. Participants cross their arms across their chest and place their hands under their armpits. Provides the lifeguard candidates with the skills and knowledge necessary to keep patrons of aquatic facilities safe in and around the water. Upon successful completion of all course requirements students will receive the American Red Cross Lifeguarding/First-Aid Certificate and CPR for the Professional Rescuer Certificate. Students may take the course for college credit without becoming a certified lifeguard.

PHYSICS

PHY 010

- **BASIC PHYSICS**
  Credit equivalents: 4 (2-4)
  Corequisite(s): MAT 014 or equivalent
  A one-semester non-credit introductory physic course designed to give students sufficient background to enter into non-calculus physics courses.

PHY 101 GE SCI

- **PRINCIPLES OF PHYSICS**
  Credits: 4 (3-2)
  Prerequisite(s): MAT 107 or equivalent
  Includes an introduction to Newtonian mechanics with application of the conservation laws to physical systems. Electromagnetism and geometrical optics are introduced at an elementary level. Topics in wave propagation, thermodynamics, atomic and nuclear physics.

PHY 115 GE SCI

- **COLLEGE PHYSICS I**
  Credits: 4 (2-4)
  Emphasizes problem-solving methods for a technological environment. Students will use computers in the laboratory for developing programming skills and for the analysis of experimental data. Topics include kinematics and dynamics, conversation of energy and momentum, waves, temperature and heat, and thermodynamics. The first course in a two-course trigonometry-based physics sequence.

PHY 116 GE SCI

- **COLLEGE PHYSICS II**
  Credits: 4 (2-4)
  Prerequisite(s): PHY 115
  Emphasizes problem-solving methods for a technological environment. Students will use computers in the laboratory for developing programming skills and for the analysis of experimental data. Topics include electrostatics, direct current circuits, electromagnetism, alternating currents, electromagnetic waves, geometrical and physical optics, quantum theory, atomic physics, and nuclear physics. The second course in a two course trigonometry-based physics sequence.

PHY 118

- **TOPICS IN RADIOGRAPHIC PHYSICS**
  Credits: 4 (4-2)
  Prerequisite(s): MAT 013 or equivalent
  An introduction and review of the units of measurements, basic quantities in physics and scientific calculations. Topics include work and energy, basic electricity, electromagnetism, alternating currents and X-ray machine circuitry. The material will focus on the physical principles necessary for an understanding of X-ray equipment operation for Radiography Education students. Laboratory experience is provided.

PHY 121 GE SCI

- **GENERAL PHYSICS I**
  Credits: 4 (4-2)
  Prerequisite(s): MAT 129
  Emphasizes theoretical models and basic physical principles. The course is precalculus-based and uses some basic calculus in the development and applications of physical principles in a scientific environment. Students will use computers in the laboratory for developing programming skills for the analysis of experimental data. Topics include kinematics, dynamics, conservation of energy and momentum, waves, temperature and heat, and thermodynamics. The first semester of a two-semester College-parallel sequence for liberal arts science and pre-professional students.

PHY 122 GE SCI

- **GENERAL PHYSICS II**
  Credits: 4 (4-2)
  Prerequisite(s): PHY 121
  Emphasizes theoretical models and basic physical principles. The course is precalculus based and uses some basic calculus in the development and applications of physical principles in a scientific environment. Students will use computers in the laboratory for developing programming skills and for the analysis of experimental data. Topics include electro-statics, direct current circuits, electromagnetism, alternating currents, electromagnetic waves, geometrical and physical optics, quantum theory, atomic physics, and nuclear physics. The second semester of two-semester college-parallel sequence for liberal arts science and pre-professional students.

PHY 131 GE SCI

- **ANALYTICAL PHYSICS I**
  Credits: 4 (4-2)
  Prerequisite(s): One year of high school laboratory physics
  Corequisites: MAT 131 or equivalent
  A calculus-based general physics course. Topics include statics, kinematics, dynamics, and the conservation of energy and momenta. Appropriate computer and laboratory experiences are included. The first course in a three-course series consisting of Phy 131, 132, and 231.

PHY 132 GE SCI

- **ANALYTICAL PHYSICS II**
  Credits: 4 (4-2)
  Prerequisite(s): PHY 131
  Corequisites: MAT 132 or equivalent
  A continuation of PHY 131. Topics include wave motion, special relativity, thermodynamics, electrostatics and DC circuits. Appropriate computer and laboratory experiences included. The second course in a three-course series consisting of PHY 131, 132 and 231.

PHY 231 GE SCI

- **ANALYTICAL PHYSICS III**
  Credits: 4 (4-2)
  Prerequisite(s): PHY 132, MAT 132
  Continuation of Phy 132. Topics include magnetism, AC circuits, electromagnetic waves, optics and atomic and nuclear physics. Appropriate computer and laboratory experiences included. The third course in a three course series consisting of Phy 131, 132, and 231.

POLICE SCIENCE

(For related courses, see Criminal Justice)

POL 201

- **POLICE ADMINISTRATION**
  Credits: 3 (3-0)
  The administrative and organizational structures and major functions of representative law enforcement agencies. Allocating responsibility, support functions, command coordination, recruitment, and career advancement.

POL 202

- **POLICE OPERATIONS**
  Credits: 3 (3-0)
  Administration of police line operations, including patrol as the basic police function, investigation, juvenile, traffic, and special operational units. Liaison between units, enforcement policy, manpower distribution, and analysis of operations.

POL 204

- **LAW ENFORCEMENT AND THE COMMUNITY**
  Credits: 3 (3-0)
  The relationship between professional police officers and the community they serve with emphasis on ethical standards, human relations, civil rights, and community service. The attitudes and actions of the police and the public that lead to both positive and negative relationships between them.

POLITICAL SCIENCE

POS 121 GE SS

- **INTRODUCTORY GOVERNMENT AND POLITICS**
  Credits: 3 (3-0)
  Surveys the field of political science including an analysis of the discipline as an academic pursuit and a profession. Themes are theory, behavior and public opinion, parties and interest groups, public administration, law, comparative government and international relations. Includes a case study of the most recent U.S. presidential election.

POS 201 GE SS

- **UNITED STATES STATE AND LOCAL GOVERNMENT**
  Credits: 3 (3-0)
  A comparative analysis of the state, county, and municipal levels of government in the United States is offered. Particular attention is given to New Jersey government and politics, state party organizations, interest groups, and electorate behavior, as well as the formal governmental structure.

POS 220 GE SS

- **UNITED STATES NATIONAL GOVERNMENT**
  Credits: 3 (3-0)
  The organization, powers, and procedures of the United States national government are presented along with such topics as the role of political parties, electorate behavior, and interest groups as a continuing process of United State politics.

POS 222 GE SS GE DIV

- **COMPARATIVE GOVERNMENT**
  Credits: 3 (3-0)
  The political systems of the major western powers and the developing nations compared. Political institutions are viewed against their economic, social, and cultural backgrounds.

POS 231 GE SS

- **CONSTITUTIONAL LAW**
  Credits: 3 (3-0)
  Prerequisite(s): POS 121 or POS 201 or POS 220
  Examines the principal methods by which United States Supreme Court Justices give meaning to Constitutional provisions in the context of individual cases. Particular attention paid to the fundamental importance of a full and coherent understanding of the principles, precedents and problems of America's democratic system.

PSYCHOSOCIAL REHABILITATION

PSR 101

- **INTRODUCTION TO THE PRINCIPLES OF PSYCHOLOGICAL REHABILITATION**
  Credits: 3 (3-0)
  Enables students to identify the methods by which individuals with severe mental illness are helped in psychosocial rehabilitation and treatment settings. Classroom lectures and seminars provide students with opportunities to explore concepts unique to psychosocial rehabilitation, including history, philosophy and values of psychosocial rehabilitation.

PSR 102

- **COMMUNICATION TECHNIQUES IN INTERVIEWING AND COUNSELING**
  Credits: 3 (2-2)
  Prerequisites or Corequisites: PSR 101 or permission of Department Chair
  Introduces students to the principles, and skills necessary for the effective use of therapeutic communication. The student will learn about values, and attitudes impacting on professional interpersonal relationships. Classroom lectures and practice sessions expose students to interviewing and counseling skills through active participation in faculty supervised exercises.

PSR 103

- **INTRODUCTION TO GROUP DYNAMICS**
  Credits: 3 (2-2)
  Prerequisites or Corequisites: PSR 101 or permission of Department Chair
  Introduces students to the principles and skills necessary for the effective use of groups to engage people and achieve goals. Classroom lectures and practice sessions to explore and demonstrate group dynamics and group process. Includes participation in a faculty supervised group experience.

PSR 104

- **CLINICAL PRINCIPLES IN PSYCHOLOGICAL REHABILITATION AND TREATMENT**
  Credits: 3 (3-0)
  Prerequisite(s): PSR 101
  Introduces students to an understanding of psychopathology as it is addressed through psychosocial rehabilitation intervention efforts. Students will be able to define and differentiate between psychiatric disorders. The use of common psychotropic drugs and their side effects will also be covered. Current psychiatric practices will be discussed.

PSR 105

- **REHABILITATION AND THE INDIVIDUAL WITH SEVERE MENTAL ILLNESS I**
  Credits: 5 (3-0-12)
  Prerequisite(s): PSR 101, PSR 102, PSR 103, PSR 104
  Students will observe, identify and begin to apply common interventions for working with the individual with severe mental illness. Clinical experiences (semester total of 168 hours) will emphasize participation under supervision in group activities, program tasks, skills training and supportive counseling. Classroom lectures and seminars will provide students with opportunities to integrate theory with practical experience.

PSR 206

- **REHABILITATION AND THE INDIVIDUAL WITH SEVERE MENTAL ILLNESS II**

Credits: 5 (3-0-12)

Prerequisite(s): PSR 105

Enables students to continue to develop intervention skills and strategies. Faculty supervised field practice (semester total of 168 hours) provide students with opportunities to develop appropriate clinical judgment, as well as initial participation in service planning and choice of interventions. Students will begin to lead activities under supervision and be introduced to documentation requirements.

PSR 207

- **COMMUNITY RESOURCE MANAGEMENT AND THE INDIVIDUAL WITH SEVERE MENTAL ILLNESS**

Credits: 3 (3-0)

Prerequisite(s): PSR 105

Introduces students to the principles and practices of systems utilization for the improved functioning of people with severe mental illness. Needs evaluation and goal formulation will be the basis of case coordination and resource linking within a systems framework. Web based lectures and discussions provide students with opportunities to explore the components of community support systems.

PSR 208

- **REHABILITATION AND THE INDIVIDUAL WITH SEVERE MENTAL ILLNESS III**

Credits: 5 (3-0-12)

Prerequisite(s): PSR 206

Corequisites: PSR 209

Builds upon students' previous knowledge obtained in prerequisite courses and enables students to implement effectively the psychosocial rehabilitative role in a faculty supervised clinical practicum (semester total of 168 hours). These experiences are designed to expand the student's skills and clinical judgment as part of a multi-disciplinary team providing service to people with severe mental illness.

PSR 209

- **EMERGING TOPICS IN PHYCHOSOCIAL REHABILITATION AND TREATMENT**

Credits: 3 (3-0)

Acquaints students with emerging issues in the field of psychosocial rehabilitation and treatment, focusing on current developments in employment, education and residential services for people with mental illness. Evidence-based practices are also explored.

PSYCHOLOGY

PSY 123 GE SS

- **INTRODUCTORY PSYCHOLOGY**

Credits: 3 (3-0)

Provides a psychological basis for the understanding of human behavior. A survey of fundamentals that are necessary for subsequent psychology courses. Topics include but are not limited to: learning, motivation, cognition, personality, abnormal behavior, development and social psychology.

PSY 163 GE SS GE DIV

- **PSYCHOLOGY OF THE AFRICAN-AMERICAN EXPERIENCE**

Credits: 3 (3-0)

Exploration of Black Psychology - its principles, theories and assessment techniques in relation to the personality and behavioral development of African-Americans.

PSY 217 GE SS GE DIV

- **PSYCHOLOGY OF WOMEN**

Credits: 3 (3-0)

The issues raised by the new female self-awareness. Topics include personality and biological differences between the sexes; the role of women in the family, society, and sexual relationships; and the influence of the women's liberation movement.

PSY 219 GE SS

- **THEORIES OF PERSONALITY**

Credits: 3 (3-0)

Prerequisite(s): PSY 123

An introduction to and evaluation of modern personality theories. A study of representative theories from different schools, including psychoanalysis.

PSY 222 GE SS

- **SOCIAL PSYCHOLOGY**

Credits: 3 (3-0)

Prerequisite(s): SOC 121 or PSY 123

The behavior and development of the individual in society, the functions of social attitudes, and the emergence of social awareness. Also, the character of group conflict and group solidarity.

PSY 223 GE SS

- **CHILD PSYCHOLOGY**

Credits: 3 (3-0)

Prerequisite(s): PSY 123

Human behavior from prenatal development to maturity. The study of physical, intellectual, and emotional behavior. Behavior characteristics of different age levels, individual differences, and methods of adjustment.

PSY 226 GE SS GE DIV

- **EDUCATIONAL PSYCHOLOGY: CLASSROOM APPLICATIONS**

Credits: 3 (3-0)

Prerequisite(s): PSY 123 or permission of Department Chair

Designed to acquaint students with the concepts related to the teaching and learning process. Connections are made between contemporary education research findings and actual classroom practices. Stress is placed upon activities that motivate learning and their assessment. The course explores various learner exceptionalities and differences (intelligence, socioeconomic status, culture/ethnic gender, and at-risk students). Practical instruction procedures, both traditional and innovative, in a variety of subject areas are explored, demonstrated and analyzed. Students are required to complete a 25-hour volunteer assignment working in a teaching/learning setting.

PSY 227 GE SS GE DIV

- **PSYCHOLOGY OF THE HANDICAPPED**

Credits: 3 (3-0)

Examines the psychological development and problems of children with handicaps and learning disabilities.

PSY 234 GE SS

- **PSYCHOLOGY OF DEATH AND DYING**

Credits: 3 (3-0)

The attitudes and feelings toward death and loss. An examination of the facts about death and dying in our society.

PSY 235 GE SS

- **ABNORMAL PSYCHOLOGY**

Credits: 3 (3-0)

Prerequisite(s): PSY 123 or permission of Department Chair

A multidisciplinary approach to the problems of mental health and illness stressing the role of physical, psychological, and sociological forces as causative factors in personality disturbances.

PSY 244 GE SS

- **BUSINESS AND INDUSTRIAL PSYCHOLOGY**
  Credits: 3 (3-0)
  The methods and techniques of psychology are applied to such problems as personnel selection, performance measurement, employee development, job satisfaction, and decision making. Organization and leadership are explored within the framework of psychological and social principles.

PSY 255 GE SS

- **ADOLESCENT PSYCHOLOGY**
  Credits: 3 (3-0)
  Prerequisite(s): PSY 123
  An in-depth exploration of the transition period from childhood to adulthood. Biological, social and psychological processes involved in this transition are examined.

PSY 260

- **PSYCHOLOGY FIELD EXPERIENCE**
  Credits: 3 (1-12)
  Prerequisite(s): PSY 123 with a grade of "C" or better or permission of Department Chair
  A cooperative work experience program whereby students are employed in a departmentally approved position in order to gain the practical competency necessary for success in Applied Psychology. The College provides supervision through on-the-job visits and individual progress review sessions. Students must be approved by the department and are required to describe their learning objectives. Day students attend a weekly seminar and work for a total of 180 field experience hours during the semester. Part-time students' hours are adjusted to fit the different semester lengths, yet reflect the same total hours.

PSY 270 GE SS

- **ADULT DEVELOPMENT AND AGING**
  Credits: 3 (3-0)
  Prerequisite(s): PSY 123
  Examines the psychological processes of development from young adulthood through the middle years and later life. Specific attention will be paid to psychological adjustments relating to changes in physical health, cognitive functioning, emotional outlook and social interactions of both men and women.

RADIOGRAPHY EDUCATION

(These courses may not be audited)

RAD 128

- **BASIC MEDICAL PRINCIPLES**
  Credits: 4 (4-0)
  This course introduces the student to the basic principles necessary for clinical practice. Course content includes general concepts in patient care, medical terminology, medical-legal aspects, vital signs, infection control, medication administration, pharmacology, patient communication and ethical considerations.

RAD 139

- **RADIATION PROTECTION AND BIOLOGY**
  Credits: 2 (2-0)
  Prerequisite(s): RAD 128, RAD 141, RAD 142, RAD 171, RAD 190
  Corequisites: RAD 143, RAD 144, RAD 172, RAD 210
  This course provides students with an understanding of and respect for the recommendations relating to the safe use of ionizing radiation. Students are provided with comprehensive coverage of the physical principles and technical aspects of radiation protection and their relationship to radiobiology.

RAD 141

- **RADIOGRAPHIC POSITIONING, ANATOMY AND PATHOLOGY I**
  Credits: 2 (2-0)
  A presentation of anatomy, positioning and pathology of the Upper Extremity, Shoulder Girdle, Sternum, Sterno Clavicular & Acromio Clavicular Joints, Thoracic Cavity, Rib Cage, Chest, Lungs and Abdomen.

RAD 142

- **RADIOGRAPHIC POSITIONING LABORATORY I**
  Credits: 1 (0-3)
  Practical experience and competency evaluation covering positioning of the Upper extremity, Shoulder Girdle, Sternum, Rib Cage, Sterno Clavicular & Acromio Clavicular Joints, Abdomen, Thoracic Cavity, Chest and Lungs.

RAD 143

- **RADIOGRAPHIC POSITIONING, ANATOMY AND PATHOLOGY II**
  Credits: 2 (2-0)
  Prerequisite(s): RAD 128, RAD 141, RAD 142, RAD 171, RAD 190
  Corequisites: RAD 139, RAD 144, RAD 172, RAD 210
  A presentation of anatomy, positioning and pathology of the lower extremities, hips, pelvis, sacrum, coccyx, sacroiliac joints, and vertebral column including scoliosis studies.

RAD 144

- **RADIOGRAPHIC POSITIONING LABORATORY II**
  Credits: 1 (0-3)
  Prerequisite(s): RAD 128, RAD 141, RAD 142, RAD 171, RAD 190
  Corequisites: RAD 139, RAD 144, RAD 172, RAD 210
  Practical experience and competency evaluation covering positioning of the lower extremities, pelvis and vertebral column.

RAD 145

- **RADIOGRAPHIC POSITIONING, ANATOMY AND PATHOLOGY III**
  Credits: 3 (3-0)
  Prerequisite(s): RAD 139, RAD 143, RAD 144, RAD 172, RAD 210
  Corequisites: RAD 146
  A study of the specific anatomy of the digestive, urinary and biliary systems with the appropriate positioning techniques. A discussion of the pharmacological concepts of contrast media and their use in these procedures as well as the theoretical principles of venipuncture are presented. The principles and equipment used for body section radiography are discussed.

RAD 146

- **RADIOGRAPHIC POSITIONING LABORATORY III**
  Credits: 1 (0-3)
  Prerequisite(s): RAD 139, RAD 143, RAD 144, RAD 172, RAD 210
  Corequisites: RAD 145
  Radiographic demonstration of the digestive, urinary and biliary system with the appropriate positioning techniques. Practical application of various contrast media is demonstrated. Venipuncture techniques are demonstrated using the phantom injectable arm. Discussion of the principles and equipment used for body section radiography using the energized radiographic laboratory and the phantom patient. Practical competency must be demonstrated.

RAD 171

- **RADIOGRAPHIC IMAGING AND SCIENCE I**
  Credits: 4 (4-0)
  This course is designed to introduce the student to the basic concepts and practices in radiation protection, equipment operation and maintenance as well as image production and evaluation. Content includes X-ray production, the X-ray tube, filtration, the prime factors, interactions of X-ray with matter, beam restriction, grids, radiographic film, processing and intensifying screens. In addition, an introduction to radiation protection for the patient and radiographer is presented in order to prepare the student for clinical practice.

RAD 172

- **RADIOGRAPHIC IMAGING AND SCIENCE II**

Credits: 2 (2-0)

Prerequisite(s): RAD 128, RAD 141, RAD 142, RAD 171, RAD 190

Corequisites: RAD 139, RAD 143, RAD 144, RAD 210

A continuation of Radiographic Imaging and Science I designed to build upon previous objectives and introduce additional concepts and practices in equipment operation and maintenance as well as image production and evaluation. Film/screen combinations, sensitometry, exposure systems, automatic exposure control devices, mobile radiography and fluoroscopy are discussed and analyzed. Students learn to analyze the radiograph image with focus upon the interaction of various radiographic factors such as density, contrast, detail and distortion.

RAD 190

- **CLINICAL ORIENTATION**

Credits: 1 (3-0)

Prerequisite(s): CPR certification for health care professionals

A hands-on clinical experience, introducing the student to the clinical setting. The student will demonstrate basic medical skills by assisting the staff technologists during radiographic examinations.

RAD 210

- **CLINICAL PRACTICUM I**

Credits: 2 (0-16)

Prerequisite(s): RAD 128, RAD 141, RAD 142, RAD 171, RAD 190

Corequisites: RAD 139, RAD 143, RAD 144, RAD 172

An introduction to the functioning of a radiology department. Under direct supervision, students assist with, and perform radiographic examinations of, the appendicular skeleton, bony thorax, lungs and abdomen on patients at an assigned clinical agency. Stresses competency in performance and in the development of a professional work ethic. Practical competencies must be demonstrated in specific radiographic examinations.

RAD 220

- **CLINICAL PRACTICUM II**

Credits: 2 (0-16)

Prerequisite(s): RAD 145, RAD 146

Provides experiences toward mastery of competency in examinations of the digestive, biliary and urinary systems at an assigned clinical agency. Continued development of the student's professional work ethic and practical competency will be demonstrated on examinations of the appendicular skeleton, bony thorax, lungs and abdomen.

RAD 230

- **CLINICAL PRACTICUM III**

Credits: 2 (0-16)

Prerequisite(s): RAD 220

Corequisites: RAD 247, RAD 248, RAD 273

Provides experiences toward mastery of competencies in the skull and sinuses. Continued practical competency will be demonstrated in examinations of the appendicular skeleton, thorax, lungs, abdomen, digestive system, biliary system and urinary system. Continued development of the student's professional work ethic is expected.

RAD 247

- **RADIOGRAPHIC POSITIONING, ANATOMY AND PATHOLOGY IV**

Credits: 2 (2-0)

Prerequisite(s): RAD 145, RAD 146, RAD 220

Corequisites: RAD 230, RAD 248, RAD 273

A presentation of anatomy, positioning and pathology of the cranium, sella turcica, facial bones (nasal bones, zygomatic arch, mandible and temporomandibular joints), paranasal and mastoid sinuses, orbits, optic foramina and mammary gland.

RAD 248

- **RADIOGRAPHIC POSITIONING LABORATORY IV**

Credits: 1 (0-2)

Prerequisite(s): RAD 145, RAD 146, RAD 220

Corequisites: RAD 230, RAD 247, RAD 273

Practical experience and competency evaluation covering positioning of the cranium, sella turcica , facial bones (nasal bones, zygomatic arch, mandible, and temperomandibular joints), paranasal and mastoid sinuses, orbits, optic foramina and mammography.

RAD 250

- **CLINICAL PRACTICUM IV**

Credits: 3 (0-24)

Prerequisite(s): RAD 230, RAD 247, RAD 248, RAD 273

Corequisites: RAD 256, RAD 285

Emphasizes competency relating to examinations of the skull and sinuses and in the area of special radiographic procedures. Continued practical competencies will be demonstrated in the areas of the appendicular skeleton, thorax, lungs, abdomen, digestive system, biliary system and urinary system. Continued development of the student's professional work ethic is expected.

RAD 256

- **RADIOGRAPHIC SEMINAR I**

Credits: 2 (1-2)

Prerequisite(s): RAD 230, RAD 247, RAD 248, RAD 273

Corequisites: RAD 250, RAD 285

Review of the five major areas of radiography required for the National Board examination, utilizing testing, computerized review and problem solving. Simulated board examinations are administered throughout the course. A grade of 70% on the final simulated Board Exam is required to pass the course.

RAD 257

- **RADIOGRAPHIC SEMINAR II**

Credits: 2 (1-2)

Prerequisite(s): RAD 256, RAD 260

Continued review of the five major areas of radiography required for the National Board examination, utilizing testing, computerized review and problem solving. Simulated board examinations are administered throughout the course. A grade of 80% on the final simulated Board Exam is required to pass the course.

RAD 260

- **CLINICAL PRACTICUM V**

Credits: 3 (0-24)

Prerequisite(s): RAD 250, RAD 256, RAD 285

A completion of the competency requirements as specified by the Radiological Technology Board of X-ray Examiners and the Joint Review Committee on Education in Radiological Technology. Emphasizes the assessment of performance competency and the student's mastery of the clinical objectives. Seven terminal competencies are to be completed prior to completion of the course.

RAD 171

- **RADIOGRAPHIC IMAGING AND SCIENCE I**

Credits: 4 (4-0)

Corequisites: RAD 128, RAD 141, RAD 142, RAD 190

This course is designed to introduce the student to the basic concepts and practices in radiation protection, equipment operation and maintenance as well as image production and evaluation. Content includes X-ray production, the X-ray tube, filtration, the prime factors, interactions of X-ray with matter, beam restriction, grids, radiographic film, processing and intensifying screens. In addition, an introduction to radiation protection for the patient and radiographer is presented in order to prepare the student for clinical practice.

RAD 275

- **RADIOGRAPHIC PHYSICS AND EQUIPMENT MAINTENANCE**
  Credits: 3 (3-1)
  Prerequisite(s): RAD 145, RAD 146, RAD 172, RAD 220
  Corequisites: RAD 230, RAD 247, RAD 248
  Radiographic Physics and Equipment Maintenance is designed to build upon previous objectives in Radiographic Imaging and Science I & II and introduce additional concepts and practices in the physics of equipment operation and maintenance as well as image production evaluation. Topics include; basic physical principles, physics of radiographic equipment, advanced circuit theory, radiographic quality control, bone densitometry, digital X-ray imaging and physics of mammography.

RAD 285

- **ADVANCED RADIOGRAPHIC IMAGING**
  Credits: 2 (2-0)
  Prerequisite(s): RAD 230, RAD 247, RAD 248, RAD 273
  Corequisites: RAD 250, RAD 256
  A presentation of advanced imaging concepts and specialized equipment. A comprehensive discussion of special procedure examinations, radiographic anatomy, cross-sectional anatomy and imaging techniques as applied to central nervous system radiography, digital subtraction angiography, interventional procedures, computer tomography, magnetic resonance imaging and advanced contrast media studies.

READING

RDG 009

- **READING SKILLS FOR COLLEGE I**
  Credit equivalents: 4 (3-1)
  Provides intensive instruction to help students develop basic reading comprehension, vocabulary, communication and study skills. "C" is the minimum acceptable grade for movement from one remedial/developmental level to another and for completion of remediation/developmental requirements to include all credit equivalent courses.

RDG 011

- **READING SKILLS FOR COLLEGE II**
  Credit equivalents: 3 (3-0)
  Prerequisite(s): Appropriate score on the College Placement Test or a grade of "C" or better in RDG 009
  Designed to help students improve their comprehension and speed, to develop a college-level vocabulary, and to learn academic study skills. Mastery of the behavioral objectives will enable students to comprehend collegiate texts. "C" is the minimum acceptable grade for movement from one remedial/developmental level to another and for completion of remediation/developmental requirements to include all credit equivalent courses.

RESPIRATORY CARE

RST 100

- **CORE CONCEPTS IN RESPIRATORY CARE**
  Credits: 1 (0-2-1)
  Prerequisite(s): Acceptance into Respiratory Care Program and BIO 111
  Corequisites: RST 102
  Provides foundation theory and laboratory practice in methods of infection control, bedside patient assessment, and cardiopulmonary resuscitation. Also covered are key aspects of health care delivery, including manual and computerized medical record-keeping and protocol-based respiratory care.

RST 101

- **FUNDAMENTALS OF RESPIRATORY CARE**
  Credits: 4 (3-3-4)
  Prerequisite(s): Acceptance into Respiratory Care Program
  Corequisites: RST 100, RST 102
  An introduction to basic therapeutic modalities employed in contemporary respiratory care, including medical gas therapy, humidity and aerosol therapy, airway pharmacology, chest physical therapy and lung expansion therapy (Lecture Hours: 45; laboratory hours: 45).

RST 102

- **CLINICAL PRACTICE I**
  Credits: 1 (0-6-1)
  Prerequisite(s): Acceptance into Respiratory Care Program
  Corequisites: RST 100, RST 101
  An orientation to the hospital environment and to the basic respiratory care procedures covered in Fundamentals of Respiratory Care. Clinical instruction and supervised practice are provided in the areas of medical charting, infection control, basic patient assessment, and basic therapeutics (Clinical hours: 90).

RST 103

- **APPLIED CARDIOPULMONARY PATHOPHYSIOLOGY I**
  Credits: 2 (2-0-2)
  A study of the anatomy and physiology of the cardiopulmonary system as it relates to respiratory care. Includes basic anatomy of the pulmonary and cardiac systems; physiology of circulation; ventilation; gas exchange and transport, acid-base balance and the control of respiration; and an overview of the pathophysiology and treatment of common disorders of the cardiopulmonary system (Lecture hours: 30).

RST 201

- **PATIENT MANAGEMENT - CRITICAL CARE**
  Credits: 3 (2-3-3)
  Prerequisite(s): RST 208, RST 211
  An in-depth study of the clinical management of the cardiopulmonary patient in the critical care setting, emphasizing specialized respiratory assessment, advanced ventilatory management, basic interpretation of the chest film, hemodynamic monitoring, ECG interpretation, and the effects of cardiopulmonary disorders on other major body systems (Lecture hours: 30; laboratory hours: 45).

RST 203

- **APPLIED CARDIOPULMONARY PATHOPHYSIOLOGY II**
  Credits: 2 (2-0-2)
  Prerequisite(s): RST 103
  A study of the pathophysiology of disorders of ventilation, perfusion and oxygenation which result in cardiopulmonary failure, with an emphasis on diagnosis and treatment in the clinical setting (Lecture hours: 30).

RST 207

- **CARDIOPULMONARY PHARMACOLOGY**
  Credits: 2 (1-0-1)
  Prerequisite(s): RST 103
  An overview of systemic drugs affecting the cardiopulmonary system, including steroids, antibiotics, skeletal muscle relaxants, central nervous system, depressants, respiratory stimulants, diuretics and cardiovascular agents (Lecture hours: 15).

RST 208

- **PRINCIPLES OF VENTILATORY SUPPORT**

Credits: 4 (3-3-4)

Prerequisite(s): RST 101

Corequisites: RST 209

An introduction to the physiologic principles and techniques of artificial ventilatory support, including airway management, indications for and application of mechanical ventilation, functional operation of mechanical ventilators, and basic monitoring and management of the patient in respiratory failure (Lecture hours: 30: laboratory hours: 45).

RST 209

- **CLINICAL PRACTICE II**

Credits: 2 (0-12-0)

Prerequisite(s): RST 101, RST 102

Corequisites: RST 208

Further practice and mastery of basic respiratory care procedures introduced in Clinical Practice I. Also introduced are airway management skills and principles of intensive respiratory care, including patient assessment and basic ventilator monitoring (Clinical hours: 180).

RST 210

- **CARDIOPULMONARY EVALUATION**

Credits: 2 (2-2)

Prerequisite(s): RST 103

Invasive and non-invasive diagnostic and monitoring procedures including roentgenography, electrocardiography, pulmonary function testing, hemodynamic monitoring, arterial blood gas analysis, patient interviewing and physical assessment.

RST 211

- **PEDIATRIC/NEONATAL RESPIRATORY CARE**

Credits: 2 (2-3-3)

Prerequisite(s): RST 208

Corequisites: RST 215

An emphasis of the special respiratory care needs of neonatal and pediatric patients, including physiologic development of the cardiopulmonary system, diagnosis and management of cardiopulmonary disease, oxygen and aerosol therapy, and mechanical ventilation (Lecture hours: 30; laboratory hours: 45).

RST 212

- **LONG-TERM, HOME AND REHABILITATIVE CARE**

Credits: 2 (2-2)

An analysis on the goals and methods underlying the provision of respiratory care in non-acute settings. Includes standards and regulations governing non-acute respiratory care, team planning, patient selection, program design and provision and documentation of various clinical services in the home and in long-term care and rehabilitation facilities. Includes cost, reimbursement and ethical issues.

RST 215

- **CLINICAL PRACTICE III**

Credits: 2 (0-12-0)

Prerequisite(s): RST 208, RST 209

Corequisites: RST 107

Supervised experience in critical care, with an emphasis on developing the skills necessary to function independently in a critical care setting. Observational experience in pulmonary function testing and pediatricneonatal respiratory care is also provided (Clinical hours: 180).

SCIENCE

SCI 103

- **SAFETY AND FDA REGULATIONS FOR LAB TECHNICIANS**

Credits: 1 (0-0-2)

This course is designed to introduce students to working in a regulated laboratory environment. Occupational Safety and Health Administration (OSHA), Environmental Protection Agency (EPA), Department of Transportation (DOT), and Food and Drug Administration (FDA) regulations are presented and emphasis is on understanding the intent and practical application of these regulations.

SCI 104

- **TECHNICAL COMMUNICATION**

Credits: 1 (0-0-2)

Corequisite: ENG 121

Students will learn effective communication skills needed in a technical workplace by completing written assignments, giving oral presentations and developing team building skills.

SCI 108 GE SCI

- **NATURAL HISTORY OF NEW JERSEY**

Credits: 3 (2-2)

Emphasis is on exposing students to the diversity of natural habitats found within New Jersey. Bogs, freshwater marshes, salt marshes, swamps, hardwood forests, the Pine Barrens, and seashore environments are explored on field trips. Students observe and study species of animals and plants which are characteristic of each ecosystem type and develop an awareness of the impact of human activities on the natural environment. Recommended for non-science majors.

SCI 121

- **PHYSICAL SCIENCE**

Credits: 4 (2-2-2)

Prerequisite(s): One year of high school chemistry or CHM 010

An introduction to concepts of chemistry and physics. The physics topics include: mechanics, energy, heat and temperature, properties of liquids and gases, and basic electricity. The chemistry topics include: atoms and elements, radioactivity, ionic and covalent bonding, acids, bases, and salts, solutions, colloids, and emulsions, important organic chemicals and important biochemicals such as carbohydrates, proteins, and lipids. This fulfills the science requirement for the A.S. Degree in Nursing.

SCI 155 GE SCI

- **INTRODUCTION TO GEOLOGY**

Credits: 4 (3-2)

Prerequisite(s): MAT 014 or appropriate score on the College Placement Test

A one-semester course dealing predominately with Geology and with the physical aspects of the ocean. Topics include a discussion and identification of rocks and minerals, volcanism, the geologic time scale, earthquakes, and their origin. Introduces important topics in Physical Oceanography and the Geology of New Jersey and environs. Students are required to go on an all-day field trip. Provides appropriate laboratory exercises.

SCI 155 GE SCI

- **INTRODUCTION TO GEOLOGY**

Credits: 4 (3-2)

Prerequisite(s): MAT 013 or appropriate score on the College Placement Test

A one-semester course dealing predominately with Geology and with the physical aspects of the ocean. Topics include a discussion and identification of rocks and minerals, volcanism, the geologic time scale, earthquakes, and their origin. Introduces important topics in Physical Oceanography and the Geology of New Jersey and environs. Students are required to go on an all-day field trip. Provides appropriate laboratory exercises.

SCI 156 GE SCI

- **INTRODUCTION TO ASTRONOMY**
  Credits: 4 (3-2)
  Prerequisite(s): One year of high school laboratory science, MAT 014 or appropriate score on the College Placement Test
  An introduction to descriptive space science covering the historical development of astronomy and planetology. Basic physical laws are introduced to help explain the tools used in the investigation of the solar system and the galaxy. Topics include stellar and solar systems, evolution and cosmology. The possibility of extraterrestrial life and communication with it is included as a necessary part of the subject. Laboratory experience included.

SCI 157 GE SCI

- **INTRODUCTION TO METEOROLOGY**
  Credits: 4 (3-2)
  Prerequisite(s): Prerequisite(s): MAT 013 or appropriate score on the College Placement Test.
  An introduction to meteorology, providing an overview of the atmosphere, temperature, measurements and energy balance, as it pertains to air gasses, clouds, precipitation, wind, storms, and fronts. Weather predictions and forecasting instrumentation are integral parts of this course, including Internet sources and weather satellite transmissions. How human actions, whether intentional or unintentional, may influence the atmosphere will be discussed. Appropriate laboratory experience is provided.

SCI 204 GE SCI

- **CONCEPTS OF PHYSICAL SCIENCE**
  Credits: 3 (2-2)
  Direct scientific experiences through an investigation of natural laws. A one semester laboratory science course for non-science majors.

SCI 206 GE SCI

- **INTRODUCTION TO FORENSIC SCIENCE**
  Credits: 3 (2-2)
  Prerequisite(s): Mat 013 or appropriate score on the College Placement Test
  This course is a basic introduction to the science of forensics. It is intended to be an introductory course in which basic scientific principles will be applied to the methods used to investigate and solve crimes. The course will focus on the principles and methods utilized in the traditional sciences of biology, chemistry, and physics. The laboratory component of the course will cover many types of evidence that require chemical and physical analysis using microscopy, gas chromatography, atomic absorption as well as drug and toxicological analysis. A discussion of blood, DNA and laboratory techniques for analysis will also be examined.

SCI 215

- **CURRENT GOOD MANUFACTURING PRACTICE AND QUALITY CONTROL FOR BIOTECHNOLOGY**
  Credits: 1 (0-0-2)
  Students will learn FDA (Food and Drug Administration) regulations specific to the biotechnology industry. Topics will include the historical perspectives of the regulations, quality control concepts, case studies and examples of FDA enforcement.

SCI 216

- **CURRENT ISSUES AND OPPORTUNITIES IN LAB TECHNOLOGY**
  Credits: 1 (0-0-2)
  Students will explore recent advances in technology which impact job opportunities. An overview of the lab technology field is given through site visits and guest speakers. Students will gain insight on how to write a resume and search and interview for a job.

SCI 220 GE SCI

- **FORENSIC SCIENCE**
  Credits: 4 (3-2)
  Prerequisite(s): MAT 013 or appropriate score on the College Placement Test and one year of high school laboratory science.
  Students should not register for both SCI 206 and SCI 220
  An overview of the fundamental principles of the physical and biological sciences as they relate to the field of forensic science. The role of the forensic scientist in criminal and civil investigations will also be examined. Evidence identification, collection, and analysis will be included. Students will per form a number of analytical procedures used in a typical forensic laboratory to detect, identify, and quantify drugs and other contaminants.

SMALL BUSINESS MANAGEMENT

SBM 110

- **ACCOUNTING FOR SMALL BUSINESS**
  Credits: 4 (4-0)
  Focuses on accounting as applied in the small business setting. Emphasizes small business record keeping from basic journalizing to year end closing and financial statement preparation. Use of computerized general ledger and other software will be employed to accomplish the above mentioned tasks. Also covers managerial issues and demonstrates use of basic analytical tools for problem solving at the small business level.

SBM 120

- **SMALL BUSINESS MANAGEMENT**
  Credits: 3 (3-0)
  Introduces the student to the principles of small business management and the functions of planning, organizing, directing, controlling, financing and staffing a small business enterprise.

SBM 130

- **MARKETING AND SALES FOR SMALL BUSINESS**
  Credits: 3 (3-0)
  For the small business owners/entrepreneurs looking to improve their marketing skills in today's domestic, global and international business environments. Through a case study format with additional emphasis on other relevant functional areas of business, the student will come to fully understand all activities and processes involved in the flow of goods, services, ideas and events from producer and/or manufacturer to consumers. Through this type of analysis the small business owner/entrepreneur will be able to incorporate a systems approach, to fully understand the marketing and sales conditions being affected and to analyze the problems as well as the strategies used in solving these problems.

SBM 210

- **ADVERTISING AND PROMOTION FOR SMALL BUSINESS**
  Credits: 3 (3-0)
  Techniques of advertising and sales promotion to increase sales. Topics include: policies and procedures used in planning and preparing advertisements, evaluation and selection of media, planning and coordinating advertising, sales promotion and facility layout for small business.

SBM 220

- **LEADERSHIP AND SUPERVISION**

Credits: 3 (3-0)

Learn about leadership and supervision in modern organizations. Introduces a variety of behavioral and managerial leadership theories and research findings such as the Ohio Studies, participative leadership. Case studies, experimental exercises and the media are used to stimulate classroom discussion.

SBM 230

- **RISK AND FINANCIAL MANAGEMENT**

Credits: 3 (3-0)

Introduces the fundamental principles of risk and financial management. Content focuses on insurance, consumer and trade credit, budgeting, banking, investing, loans and other financial considerations facing owners of small business.

SBM 240

- **COOPERATIVE EDUCATION/INTERNSHIP IN SMALL BUSINESS**

Credits: 3 (1-12)

Prerequisite(s): Senior status in Small Business Management curricula or written permission of Department Chair

Integration of classroom study with specific planned periods of learning through work experience. Co-op or internship based. The course utilizes a seminar approach with performance-based human relations activities and individual student objectives that are job related and employer evaluated.

SBM 250

- **SEMINAR IN ENTREPRENEURIAL STUDIES**

Credits: 3 (3-0)

Prerequisite(s): BUS 101, SBM 110, SBM 120, SBM 130, SBM 210 or permission of Department Chair

Enhances the working knowledge required to manage a small business, considering both domestic and global implications. Learn the differences between business ownership and entrepreneurship. Emphasizes the real world financing of entrepreneurship, mergers and acquisitions as they apply to current business practices. Students will go beyond the rudiments of (discovering a good business concept) to analyzing and developing a comprehensive plan to test the profitability potential of the venture. Using the business plan approach, students will conduct the research and investigation required to determine the viability of starting, buying or selling an existing business. Case studies will include in-depth financial analyses of successful businesses.

SOCIOLOGY

SOC 121 GE SS GE DIV

- **INTRODUCTION TO SOCIOLOGY**

Credits: 3 (3-0)

This course examines human relationships in society, analyzes concepts of culture, socialization, values, norms, deviance, stratification, and causes and effects of inequalities.

SOC 122 GE SS GE DIV

- **SOCIAL INSTITUTIONS**

Credits: 3 (3-0)

Prerequisite(s): SOC 121

This course provides an intensive examination of the basic social institutions in America, such as religion, economy, family, law, health, government, military science and education, as well as collective behaviors, social movements, and social change.

SOC 123 GE SS GE DIV

- **INTRODUCTION TO ANTHROPOLOGY**

Credits: 3 (3-0)

This course combines physical and cultural anthropology by exploring the relationship between physical evolution and the corresponding development of human cultural life. A study of cultures and customs around the world. These customs includes language, magic, religion, marriage, sex roles, political structure and subsistence patterns such as hunting and gathering.

SOC 131 GE SS GE DIV

- **CONTEMPORARY SOCIAL PROBLEMS**

Credits: 3 (3-0)

Prerequisite(s): SOC 121

This course examines some major current social problems of American society; family problems, physical and mental emotional illness and disability, crime and delinquency, drug abuse, poverty, racial, and sexual and age discrimination. Analyzes causes, effects, policies and remedies.

SOC 140 GE SS

- **INTRODUCTION TO CRIMINOLOGY**

Credits: 3 (3-0)

The nature and sources of criminal law, incidences and trends of criminology, relationship of culture and social systems to criminology, biological, psychological and sociological theories of criminology.

SOC 141

- **INTRODUCTION TO SOCIAL WORK AND SOCIAL WELFARE POLICY**

Credits: 3 (3-0)

Introduces the evolution of the policies and practices of social welfare and social work. Historical developments, current provisions, social, attitudinal, economic and political trends in the United States affecting institutionalized responses to perceived health and welfare needs are analyzed.

SOC 205 GE SS GE DIV

- **DIVERSITY AND MULTICULTURALISM IN U.S. SOCIETY**

Credits: 3 (3-0)

Introduces students to both the historical and the contemporary experiences, diverse cultural values, life styles. Considers the contributions of a cross-section of racial and ethnic groups, and other minority groups such as women and the elderly.

SOC 210

- **METHODS OF SOCIAL CASEWORK AND COUNSELING**

Credits: 3 (3-0)

An introductory study of social work methods: interviewing, diagnostic assessment, casework, counseling, problem solving, service coordination, placement and others used in social service agencies, institutions, programs and organizations.

SOC 222 GE SS

- **POLITICAL SOCIOLOGY**

Credits: 3 (3-0)

Analyzes the social conditions that affect government, politics and law. Some topics discussed: democracy in theory and in practice, political socialization, and the nature of mass movements.

SOC 223 GE SS GE DIV

- **POWER, PRIVILEGE, AND CLASS**

Credits: 3 (3-0)

This course describes and explains the social, cultural, and historical processes which give rise to the differential distributions of power, privilege and wealth in the United States and to the emerging framework of the global community. The social, political and lifestyle consequences of those distributions are explored.

SOC 224 GE SS

- **MARRIAGE AND THE FAMILY**
  Credits: 3 (3-0)
  Analyzes the nature and role of the family by focusing on the institution of marriage and such related matters as separation, divorce, and the rearing of children.

SOC 225 GE SS

- **JUVENILE DELINQUENCY**
  Credits: 3 (3-0)
  Examines the nature and extent of juvenile crime, juvenile delinquency as a social and cultural problem, social and cultural factors in the explanation of delinquent behavior, types of offenders, theories of delinquency, and treatment and prevention of delinquency.

SOC 231 GE SS GE DIV

- **INDIANS OF THE AMERICAS**
  Credits: 3 (3-0)
  A comparative analysis of native Indian cultures of the Americas. Native American traditions are explored from an archeological and anthropological
  perspective. Topics discussed are origin of the Indians, culture areas and subsistence patterns, health, medicine and religion, social systems, architecture, art and music; initial contact with Europeans, Africans and Asians, and Native American relations with the larger society.

SOC 234 GE SS

- **SOCIOLOGY OF WORK AND ORGANIZATIONS**
  Credits: 3 (3-0)
  Provides students with the opportunity to examine the relationships between individuals and the economic sector of society, with emphasis upon the world of work. Special focus will be given to the sociology of industry, especially the topics of power, theories of human motivation and management, multinational corporations, social stratification, employment, organizations and bureaucracies and the possibilities of alternative workplace situations.

SOC 235 GE SS

- **LAND AND PEOPLE OF THE SOUTHWEST - ANTHROPOLOGICAL FIELD EXPERIENCE**
  Credits: 3 (3-0)
  Examines the culture of the Indians of the Southwest, focusing on the Pueblo tradition. Theoretical framework of cultural ecology will be utilized to explore the rich cultural history of the region. Anthropological field methodology will be stressed as students carry out closely supervised research projects while living in a Pueblo village and participating in village life. Offered during Summer Session only.

SOC 240 GE SS GE DIV

- **PERSPECTIVES ON SEXUAL IDENTITY**
  Credits: 3 (3-0)
  Prerequisite(s): PSY 123 or SOC 121 or SOC 123 or permission of Department Chair
  Examines the processes involved in the formation of sexual identity from an anthropological perspective, including contemporary, historical and cross-cultural viewpoints. Discusses the evolution of sex roles in species. Covers the influence of culture in sex role behaviors and gender identification in a variety of cultures around the world.

SOC 260 GE SS

- **MULTICULTURAL LONDON - THE ANTHROPOLOGY OF THE CITY**
  Credits: 3 (3-0)
  Focusing on London, urban patterns of social, economic and political activity are explored as well as emerging metropolitan structures. Theoretical perspectives on the evolution of cities and their cultural roles are examined. The methodological and theoretical contributions of anthropology to urban studies are discussed while dynamics of urban life are analyzed through ethnographies. Offered during Summer Session only.

SOC 261 GE SS

- **STEREOTYPES AND THE IRISH: ANTHROPOLOGY OF IRELAND**
  Credits: 3 (3-0)
  Examines the culture of Ireland, focusing on an analysis of common exogenous stereotypes of the Irish. These stereotypes are addressed within the theoretical framework of cultural anthropology applied to an exploration of social structure, economy, language and religion in contemporary Ireland. The dynamics of Irish culture are analyzed through ethnographies and supervised field experiences. Offered in Summer Session only.

SPANISH

SPA 121 GE HUM

- **ELEMENTARY SPANISH I**
  Credits: 3 (3-0)
  Use of integrated materials enables students to acquire and employ the fundamentals of reading, writing, and speaking the language. Laboratory work is required. For students with little or no background in Spanish.

SPA 122 GE HUM

- **ELEMENTARY SPANISH I**
  Credits: 3 (3-0)
  Prerequisite(s): SPA 121 or equivalent
  A continuation of SPA 121.

SPA 124 GE HUM

- **CONVERSATIONAL SPANISH**
  Credits: 3 (3-0)
  Fundamentals of speaking are introduced to provide students with basic conversational skills of the language. Laboratory work is required. This course does not satisfy the foreign language requirement for the Associate in Arts Degree.

SPA 210 GE HUM

- **SPANISH FOR HISPANICS**
  Credits: 3 (3-0)
  Designed to improve language skills in speakers of Spanish as the home language. Emphasis is placed on grammar needed to reach command of reading and writing skills. The course highlights some differences between English and Spanish language usage. Class work is entirely in Spanish.

SPA 221 GE HUM

- **INTERMEDIATE SPANISH I**
  Credits: 3 (3-0)
  Prerequisite(s): SPA 122 or equivalent (two years of high school Spanish)
  General review of grammar and fundamentals. Conversation is emphasized. Reading selections include works by typical Spanish authors and excerpts dealing with Hispanic civilization. Laboratory work is required.

SPA 222 GE HUM

- **INTERMEDIATE SPANISH I**
  Credits: 3 (3-0)
  Prerequisite(s): SPA 221 or equivalent
  A continuation of SPA 221.

SPA 223 GE HUM GE DIV

- **MAIN CURRENTS IN HISPANIC LITERATURE**
  Credits: 3 (3-0)
  Prerequisite(s): SPA 222 or SPA 210 or written permission of Department Chair
  Introduction to the fundamental concepts of the study of literature in Spanish; an intensive study of representative authors and masterpieces of Hispanic literature from the XI century to the onset of the Modernist period.

SPA 224 GE HUM GE DIV

- **CONTEMPORARY HISPANIC LITERATURE**
  Credits: 3 (3-0)
  Prerequisite(s): SPA 221 or SPA 210 or SPA 222 or SPA 226 or SPA 228 or permission of Department Chair
  Class work includes reading, analysis, and discussion of major Spanish and Latin American writers from the Generation of '98 and the Modernist Period to the present. Readings and discussions mainly in Spanish.

SPA 226 GE HUM GE DIV

- **HISPANIC CIVILIZATION (IBERO-AMERICAN)**
  Credits: 3 (3-0)
  Prerequisite(s): SPA 221 or SPA 210 or SPA 222 or SPA 226 or SPA 228 or permission of Department Chair
  Reading, analysis, and discussion of Hispanic-American civilization and culture from pre-Columbian times to the present. Spanish readings are discussed mainly in Spanish.

SPA 228 GE HUM GE DIV

- **SPANISH CIVILIZATION AND CULTURE (IBERIAN)**
  Credits: 3 (3-0)
  Prerequisite(s): SPA 221 or SPA 210 or SPA 222 or SPA 224 or SPA 226 or permission of Department Chair
  Political, economic, social and cultural development of Spain from prehistoric times to the present. Readings and discussions mainly in Spanish.

SPA 231 GE HUM

- **SPANISH CONVERSATION AND COMPOSITION I**
  Credits: 3 (3-0)
  Prerequisite(s): SPA 222 or equivalent (three or more years of high school Spanish)
  An intensive study of advanced Spanish grammar specializing in analysis of grammatical and syntactical structures of modern Spanish. Selections from contemporary Spanish and Latin American authors are analyzed according to new linguistic methods. Emphasis is also given to special problems of English-speaking students. Course is conducted mainly in Spanish.

SPA 232 GE HUM

- **SPANISH CONVERSATION AND COMPOSITION II**
  Credits: 3 (3-0)
  Prerequisite(s): SPA 231
  A continuation of SPA 231.

SPA 242 GE HUM GE DIV

- **MASTERPIECES OF HISPANIC LITERATURE IN TRANSLATION (20th CENTURY)**
  Credits: 3 (3-0)
  Prerequisite(s): ENG 122 or ENG 125
  Focuses on translated works of contemporary Hispanic Literature written in Spain, Latin America, and the Caribbean. Introduces students to the reading and interpretation of outstanding Hispanic writers from the Generation of '98 in Spain, and from Modernism in Spanish America to the present. Pursues various genres within prose, drama, and poetry. Major literary trends will be studied: modernism, criollismo, fantastic realism, magical realism, existentialism, neorealism, post-modernism, and feminist literature, among others. (Taught in English). This course does not fulfill the foreign language requirement.

SPEECH

SPE 121 GE HUM

- **FUNDAMENTALS OF PUBLIC SPEAKING**
  Credits: 3 (3-0)
  Introduction to the theory and practice of public address; the study of representative public addresses, and the preparation and delivery of short speeches.

SPE 123 GE HUM

- **DISCUSSION AND DEBATE**
  Credits: 3 (3-0)
  The development of clear, logical and effective speech communication is the goal of this basic discussion and debate course. The focus will be on reasoned decision making within the context of a free society. Topics will draw upon social values, personal responsibility and/or ethical behavior. Speech presentations will include large group discussions, panel discussions and debates that emphasize the ability to work in a team environment.

SPE 124 GE HUM

- **ORAL INTERPRETATION**
  Credits: 3 (3-0)
  The theory and practice of effective oral reading. Materials include selections in poetry, prose, and drama. The appreciation of literary forms through individual oral performance and choral readings. Development of effective voice and articulation.

STUDENT ENRICHMENT

SSD 101

- **STUDENT SUCCESS**
  Credits: 3 (3-0)
  Students learn and adapt methods for success in college and lifelong learning. Orientation to college, study skills, critical thinking skills, and learning styles are emphasized. Various methods of being successful in diverse learning and social environments are explored. Strategies for the development of academic and life-long success are stressed. Students are assisted in their college persistence by means of their development of an educational and career plan. In developing their plans, students utilize various college resources and departments. Students who have earned more than 24 college credits may only take this course with dean's approval.

SSH 010

- **FRESHMAN SEMINAR**
  Credit equivalents: 3 (3-0)
  Increases students' ability to think critically, abstractly and systematically. Students are required to paraphrase, analyze, outline and summarize various types of problems in order to expand the deductive thinking and problem-solving skills most demanded in an academic environment. Study skills and the development of a positive self-concept are also emphasized.

TELECOMMUNICATIONS NETWORKING TECHNOLOGY

TCT 103

- **PRODUCT MAINTENANCE I (DIGITAL)**
  Credits: 4 (3-3)
  Introduces a variety of digital circuits and how these circuits relate to computers and telecommunications. Topics include Boolean algebra, karnaugh mapping, combinatorial and sequential circuits, decoders, multiplexers, registers and counters, UARTS and modems. An introduction to RS232 and other serial inter-faces is given. Subjects specific to computers are covered and include the boot process, drivers, busses, interrupts, sound and video boards and an overview of windows, DOS and diagnostic programs. Extensive use of computer simulation software is an integral component of the course. Students are expected to complete individual as well as team projects.

TCT 104

- **PRODUCT MAINTENANCE II (ANALOG)**
  Credits: 4 (3-3)
  Prerequisite(s): TCT 103, MCT 101
  Corequisites: MAT 142, PHY 142, ENG 132
  An introduction to the basic understanding of electronic circuits and electronics. Includes AC/DC circuits, semiconductor devices, integrated mixed analog and digital circuits and active filters. Introduces communication topics such as modulation, multiplexing techniques and transmission mediums. Extensive use of computer simulation software is an integral component of the course. Students are expected to complete individual as well as team projects.

TCT 122

- **MULTIMEDIA PRESENTATIONS**
  Credits: 3 (2-3)
  Prerequisite(s): MAD 121
  Corequisites: ENG 132
  Discusses the use of multimedia technology and its inclusion in the production of marketing presentations. Hardware components needed to create a multimedia environment, with special consideration given to the MPC Specifications standards, are utilized in the creation of team projects. Hardware studied includes video cameras, digital cameras, video capture boards, microphones, monitors, speakers, audio and graphics boards, hard drives and related connectors and processors and CD-ROM drives. Environmental requirements for the design of model multimedia products are examined. This course is project-based and will culminate in the development of a multimedia marketing presentation by the students. These computer-based presentations will demonstrate the assimilation of the multimedia building blocks of text, graphics, video and sound into a multimedia production. Both the World Wide Web and interactive learning tools are utilized.

TCT 201

- **PC AND LAN HARDWARE**
  Credits: 4 (3-3)
  Prerequisite(s): TCT 104
  Corequisites: MAT 241, PHY 241
  Focuses on the hardware aspects of networking. Learn to upgrade, repair and trouble shoot workstation hardware through a series of hands-on objective coordinated projects. Learn the basics of networking and how to connect a workstation to a network. Concentrates on the hardware components and configurations of the personal computer. Topics include modems, their usage and set-up. Local area networking will expose the student to a variety of communication media as well as setting up print services.

TCT 221

- **WIDE-AREA NETWORKING I**
  Credits: 4 (3-3)
  Prerequisite(s): TCT 104, TCT 122
  Corequisites: MAT 241, PHY 241
  Introduces the fundamental concepts of data communications for wide-area networks. Video and teleconferencing are the applications through which the students develop an understanding of modern telecommunication concepts and necessary hardware. Network simulation is used by the students in the development of these concepts. Network access, types of service and protocols are covered. An understanding of the Public Switched Telephone Network and the Internet is developed.

TCT 222

- **WIDE-AREA NETWORKING II**
  Credits: 4 (3-3)
  Prerequisite(s): TCT 221, TCT 201
  Corequisites: MAT 242, PHY 242
  A hands-on hardware centered course continues the development of networking concepts begun in Wide-Area Networking I (TCT 221). Configure and troubleshoot TCP/IP networks and develop an understanding of network routing. Configure Cisco routers and establish a Videoconference over wide area networks. Simulation of routered networks and protocol analyzers will be used to troubleshoot TCP/IP networks.

THEATRE

THE 105 GE HUM

- **INTRODUCTION TO THEATRE**
  Credits: 3 (3-0)
  An investigation of the on-stage and backstage elements of contemporary theatre, film and television. Emphasis on the collaboration of performers, writers, directors, designers and technicians and the role of the audience. Attendance at professional and college productions is required.

THE 123 GE HUM

- **THEATRE HISTORY**
  Credits: 3 (3-0)
  A study of theatre as an art form with an emphasis on production practices in the Golden Ages of theatre: Greek, Roman, Medieval, Renaissance, and Restoration. Representative plays, theatres, acting, staging and design styles explored. Required of theatre majors, open to all students. Attendance at performances required.

THE 124 GE HUM

- **CONTEMPORARY THEATRE**
  Credits: 3 (3-0)
  A study of the development of twentieth century theatre art from Realism to New Theatre eclectic styles. The background and evolution of Realism, Expressionism, Theatre of the Absurd, and current theatre movements explored. Required of theatre majors, open to all students. Attendance at performances required.

THE 131

- **ACTING I**

Credits: 3 (3-0)

Basic techniques of theatrical communication. Pantomime and improvisational exercises for perception and self-awareness. Use of the voice and body to interpret emotion and project characterization. Practical application through learning to approach the performing of scenes. Attendance at performances required.

THE 132

- **ACTING II**

Credits: 3 (3-0)

Prerequisite(s): THE 131

Further development of the basic techniques of theatrical communication. Learning to externalize through stage movement. Scene study to utilize clues in the script to fulfill the author's or director's intent. Study of the director-actor-audience relationship. Practical application through rehearsal and performance of one-act plays. Attendance at performances required.

THE 145

- **STAGECRAFT**

Credits: 4 (3-2)

A theatre course in the basic physical elements of theatre stagecraft with particular emphasis on set construction. Practical application of theoretical knowledge in the theatre shop and college productions. Required of Theatre majors. Attendance at professional and college productions is required.

THE 146

- **PLAY PRODUCTION**

Credits: 4 (3-2)

A theatre course in the elements of play production including design concepts, two dimensional working drawings, and scale model building and lighting techniques. Practical application of theoretical knowledge in the theatre shop and college productions. Required of Theatre majors. Attendance at professional and college productions is required.

THE 152

- **AMERICAN MUSICAL THEATRE**

Credits: 3 (3-0)

All aspects of America's most popular art form. Includes many trips to see musicals on stage and backstage as well as lectures and classroom discussions of the American musical theatre. A laboratory fee covers the cost of tickets.

THE 208

- **THEATRE FIELD EXPERIENCE**

Credits: 3 (1-12)

Prerequisite(s): THE 145 or permission of Department Chair

A cooperative work experience program whereby students are employed in a performing arts position in order to gain some of the practical experience necessary for success in various aspects of theatre: artistic, technical and/or administrative. Supervision of this departmentally approved position is provided by the College through on-the-job visits and individual progress review sessions. Students are required to describe their objectives and attain specific job skills. Students attend a biweekly, two-hour seminar on campus and work a minimum of 13 hours a week. Individuals must be recommended by the faculty and the chair of the department. For additional details see the Department Chair.

Directories

FACULTY AND ADMINISTRATIVE STAFF

Jacquelyn Abromitis, *Associate Professor; English; B.A., Rutgers, The State University; M.Ed., East Stroudsburg University; Ed.D., Nova Southeastern University*

Lucille Alfieri, *Assistant Professor; English; B.S., M.S., Brooklyn College*

George Allen, *Assistant Professor; Biology; B.S., Albright College; Ph.D, Syracuse*

Simon Aloff, *Professor; Mathematics; B.A., New York University; M.A., Princeton University; Ph.D., Rutgers, The State University*

Janice Aloi, *Assistant Professor; Joint Nursing Program, UMDNJ; Diploma, Charles E. Gregory School of Nursing; B.A., Kean University; M.S., Rutgers, The State University*

Susan Altman, *Assistant Professor; Visual and Performing Arts; B.F.A., State University of Buffalo; M.F.A., Tyler School of Art of Temple University*

Elisabeth Altruda, *Professor; English; A.A., Staten Island Community College; B.A., College of Staten Island, City University of New York; M.A., Seton Hall University; D. Litt., Drew University*

N. Alex Arauz, *Financial Aid Officer; B.S., Universidad de Panama*

Carol Avelsgaard, *Associate Professor; Mathematics; B.A., M.A., University of Minnesota; M.S., New Jersey City University.*

Paul Bachmann, *Assistant Professor; Mathematics; B.S., Stevens Institute; M.S., Seton Hall University*

Nancy Bailey, *Associate Professor; Chair, Business Administration and Management; B.A., M.A., New York University*

Xenia Balabkins, *Associate Professor; Business Administration and Management; B.A., Douglass College; M.B.A., Rutgers, The State University*

Ronald Balint, *Associate Director, Buildings and Grounds; B.S., Delaware Valley College*

Michael Balogh, *Supervisor, Custodial Services*

Mark Banyacski, *Assistant to the Director of Finance; B.A., Rutgers, The State University*

Nora Barrett, *Associate Professor; Program Director, Joint Psychosocial Rehabilitation and Treatment Program, UMDNJ; L.C.S.W.; C.P.R.P.; B.S., Syracuse University; M.S.W., New York University*

Peter M. Basto, *Assistant Professor; UMDNJ; C.P.R.P.; B.A., William Paterson University; M.S., University of Medicine and Dentistry of New Jersey*

Raymond Battaglia, *Programmer Analyst; A.A.S., Middlesex County College; B.S., Cook College*

Gina Bedoya, *Assistant Professor; Counseling and Career Services; A.A., Middlesex County College; B.A., Ed.M., Rutgers, The State University*

Alison Bergeron, *Assistant Manager/Textbook Coordinator; RSC Bookstore; B.S., Cedar Crest College*

Elaine Berlin, *Assistant Director; Professional and Community Program; B.S. Rutgers, The State University*

James Bernarducci, *Associate Professor; English; B.A., Kean University; M.A., William Paterson University*

Jane C. Bevis, *Administrative Assistant to the President; B.A., St. Lawrence University*

Sudesh Bhatia, *Professor, Computer Science; B.A., J&K University, M.A. Delhi University*

Sudipta Biswas, *Associate Professor; English as a Second Language; B.Ed., St. Theresa's Institute of Education; B.A., Sophia College; M.A., Tennessee Technical University; M.A., Fairleigh Dickinson University*

Virginia Blackwell, *Financial Analyst; RSC Bookstore; B.S.D., Kean University*

Virgil H. Blanco, *Professor; Chair, Modern Languages and Director, Center for International Education; B.A., University of Miami; M.A.T., Fairleigh Dickinson University; Diploma, University of Salamanca (Spain); Doctorate, University of Madrid*

David Boelhower, *Network & Technical Services Supervisor*

Mary Ann Bogar, *Assistant Professor; Performing Arts; B.A., M.A., The College of New Jersey*

Barbara Bogner, *Associate Professor; Biology; B.S., State University of New York at Stony Brook; M.S., Villanova University*

Claudine Bowers, *Instructor; Admissions; B.A., Douglass College, Rutgers, The State University*

James Brackenridge, *Associate Professor; Business Administration and Management; B.S., Case Institute of Technology; M.S., Stanford University; M.B.A. Harvard University*

Harvey Braverman, *Associate Professor; Mathematics; B.S., M.A., Brooklyn College; Ph.D., City University of New York*

Marla Brinson, *Director, New Brunswick Center; B.A., Lincoln University; M.A., Kean University*

Desiree Brower, *Instructor; Admissions; B.A., Rutgers, The State University*

Francis Burke, *Associate Professor; Chair, Computer Science; B.S.M.E., General Motors Institute; M.S., Stevens Institute of Technology*

Rita Burton, *Assistant Professor; Counseling and Career Services; B.A., St. Joseph's College India; M.A., Montclair University*

Santi V. Buscemi, *Professor, English; B.A., Saint Bonaventure University*

Laura Cahill, *Administrative Assistant to Vice President for Finance and Administration; A.A.S., Middlesex County College*

Yolanda D.J. Calacat, *Administrative Assistant to Vice President for Academic and Student Affairs*

Zoraida Calvo-Scott, *Professor; Counseling and Career Services; B.A., Inca Garcilaso de la Vega University; M.A., Montclair State University; Ed.S., Seton Hall University; Ed.D., University of Sarasota*

Patricia Cardinale, *Director, Grant Accounting; A.A.S., Middlesex County College; B.S., Kean University*

Leslie A. Carter, *Assistant Professor; Counseling and Career Services; A.A., Brookdale Community College; B.A., Rutgers, The State University; M.Ed., The College of New Jersey*

Wilbert Casaine, *Associate Director, Financial Aid; B.A., Rutgers, The State University*

Brenda A. Cavanaugh, *Instructor; Modern Languages; B.A., Douglass College, Rutgers, The State University; M.A., University of Missouri*

Erin A. Christensen, *Associate Professor; Biology; B.S., Kean University, M.S., Wagner College*

Linda Christopher, *Assistant Professor; Chemistry and Physics; A.B., Barnard College; M.A., Clark University*

John Cielesz Jr., *Warehouse Supervisor*

Wilson Class, *Associate Professor; English; B.A., M.Ed., Rutgers, The State University*

Ana Class-Rivera, *Assistant Professor; Associate Dean for Developmental Education; B.S., Saint Peter's College; M.A., New Jersey City University*

Ricki J. Cohn, *Associate Professor; English; B.A., Drew University; M.A., University of Connecticut*

Robert W. Colburn, Jr., *Associate Professor; Biology; B.S., Monmouth University; M.S., Fairleigh Dickinson University*

Gertrude Coleman, *Associate Professor; English; B.A., State University of New York at Geneseo; M.S., Richmond College; M.A. College of Staten Island*

Richard A. Conley, *Associate Professor; Chemistry and Physics; B.S., Moravian College; M.S., University of Delaware; Ph.D., Lehigh University*

Mary Ann Conners, *Dean, Corporate and Community Education; B.A., St. Louis University; M.A.T., Monmouth University*

Kathleen Costanzo, *Instructor; Dental Auxiliaries Education; A.A.S., Middlesex County College; B.S., Rutgers the State University; M.Ed., The College of New Jersey*

David A. Crampton, *Assistant Professor; Library Services; B.A., M.A., Tufts University; M.L.S., Rutgers, The State University*

Patricia Daly, *Assistant Director, Student Activities and College Center; B.S., M.Ed., The College of New Jersey*

Loretta Daniel, *Assistant Professor; English; B.A., University of Rochester; M.S., Polytechnic University*

Michael J. David-Wilson, *Executive Director, Middlesex County College Foundation; B.A., St. Alphonsus College; M.T.S., Washington Theological Union; Graduate Certificate, Non-for-Profit Management, Seton Hall University*

Audrey Davis, *Assistant Director, Student Activities and College Center; B.A., State University of New York at Albany; M.A., Cornell University*

Louis A. Dell'Omo, *Assistant Professor; Visual and Performing Arts; B.A., M.A., Monmouth University; M.A., Montclair State University*

Maria DeLucia, *Chair; Professor, Mathematics; B.A., M.A., New Jersey City University; Ph.D., New York University*

Sallie DelVecchio, *Associate Professor; English; B.S.E., Southern Arkansas University; M.A., University of Arkansas*

Brian de Uriarte, *Assistant Professor; Business Administration and Management; B.A., University of Pennsylvania; M.A., Rutgers, The State University*

Timothy Dey, *Instructor; Accounting and Legal Studies; A.S., Middlesex County College; B.A. Rutgers, The State University; J.D. Rutgers University School of Law*

Naresh Dhanda, *Assistant Professor; Computer Science; B.A., B.S., B.Ed., Panjab University; M.S., University of London; M.S., Jackson State University*

Silvia Dias, *Buyer; Blue Colt Bookstore; A.A.S., Union County College*

Charles V. DiDomenico, *Assistant Professor; English; B.A., Villanova University; M.A., New York University*

Ellen Dikun, *Associate Professor; Radiography Education; A.A., Brookdale Community College; B.S., Kean University; R.T.(R), Monmouth Medical School of Radiologic Technology; M.B.A., Monmouth University*

Judy DiMaio, *Coordinator; Environmental Health and Safety; A.A.S.; A.S., Middlesex County College; B.S., Rutgers, The State University*

Emanuel diPasquale, *Assistant Professor; English; B.A., Adelphi University; M.A., New York University*

Ann Dobshinsky, *Assistant Professor; Mathematics; B.S., Boston University; M.A., Columbia University Teachers College*

Charles Dolan, *Assistant Professor; Learning Resources; B.A., M.L.S., Rutgers, The State University*

Patrick Donohue, *Assistant Professor; History and Social Behavior; B.A., Livingston College, Rutgers, The State University; M.A., Eagleton Institute of Politics and Government; Rutgers, The State University*

Robert Doughtery, *Supervisor; Custodial Services*

Thomas Drew, *Instructor; Mathematics; B.S., St. Peter's College; M.A., Jersey City State College*

Donald R. Drost, Jr., *Executive Director, Facilities Management; A.A.S., Middlesex County College; B.S., College of New Jersey; M.S., NJIT*

Keith Drumbore, *Assistant Professor; English; B.A., University of Iowa; M.A., Rutgers, The State University*

John Dunning, *Director, Minority Student Affairs; B.A., Montclair State University; M.A., Seton Hall University*

Andrew Dzurisin, *Instructor; History and Social Behavior; B.S., The Richard Stockton College of New Jersey; M.A., University of Massachusetts*

Jay Edelson, *Associate Professor; Mechanical and Civil/Construction Engineering Technology; B.E., M.S., New York University; P.E., New Jersey and New York*

Robert Edmonds III, *Assistant Director, Athletics/Athletic Trainer; B.S., East Stroudsburg University*

Melissa Edwards, *Instructor; English; B.A., University of North Texas; M.S., Northern Illinois University*

Richard A. Ellison, *Assistant Professor; Chair, Accounting and Legal Studies; B.A., Rutgers, The State University; M.B.A., Fairleigh Dickinson University*

Kathy A. Fedorko, *Professor; English; B.A., University of Redlands; M.A., Ph.D., Rutgers, The State University*

James Finne, *Assistant Professor; Electrical Engineering Technology; B.S.M.E., Lehigh University; M.S.E.E., Rutgers, The State University; P.E., New Jersey*

Phyllis Fleming, *Assistant Professor; Computer Science; B.B.A., Pace University; M.S., Stevens Institute of Technology*

Steven Foster, *Associate Professor; Electrical Engineering Technology; B.E.E., Cooper Union; M.S.E.E., Massachusetts Institute of Technology; P.E., New Jersey*

David Fricke, *Director, Purchasing and Inventory; B.A., Stockton State College, Certified Purchasing Manager; Registered Public Purchasing Official*

Daniel Fuchs, *Associate Director; Buildings and Systems*

Shunfu Gao, *Associate Professor; Chemistry and Physics; B.S., Soochow University, China; M.A., Ph.D., City University of New York*

John Gaspar, *Instructor; Mathematics; B.A., M.A., Montclair State College*

Trace Gerow, *Professor; Biology; B.S., University of Illinois; M.S., University of Massachusetts; Ed.D., Rutgers, The State University*

Leah A. Ghiradella, *Assistant Professor; English; B.A., M.Ed., Rutgers, The State University*

Angelina Gincel, *Associate Professor; Accounting and Legal Studies; B.B.A., University of the East; M.B.A., New York University*

Andre Gittens, *Assistant Professor; Library Services; B.A., Cook College; M.L.S. Rutgers, The State University*

Barry Glazer, *Assistant Professor; English; A.A., Middlesex County College; B.A., Rutgers, The State University; M.A., Montclair State University*

Ronald C. Goldfarb, *Professor; Vice President for Legal and External Affairs; B.A., City University of New York; J.D., New York Law School*

Fannie Gordon, *Professor; Director, Educational Opportunity Fund; B.A., University of Maryland; M.A., University of Connecticut; Ed.D., Rutgers, The State University*

Margaret Gorlin, *Associate Professor; Mathematics; B.A., Temple University; M.S., Drexel University*

Nanette Granuzzo, *Assistant Professor; Modern Languages; B.A., M.A.H., State University of New York at Buffalo*

Brenda C. Gray, *Associate Professor; History and Social Behavior; B.A., North Carolina Central University; M.A., Ph.D., University of Michigan*

Louis Green, *Programmer/Analyst; B.B.A., Pennsylvania State University*

Michele Greenfield, *Assistant Professor; Mathematics; B.A., Brooklyn College; M.A., New York University*

Michael L. Greenhouse, *Associate Professor; History and Social Behavior; A.B., Rutgers, The State University; M.A., New School for Social Research*

Daine A. Grey, *Assistant Professor; Psychology and Education; M.A., Ph.D., Princeton University*

Edwin C. Griffith, *Assistant Professor; Registrar; B.A., M.Ed., The College of New Jersey*

Barbara Gross, *Coordinator, Counseling and Career Services; B.S., State University of New York at Plattsburgh*

Basaveswara Rao Gudapati, *Learning Specialist, Project Connections; M.A., University of Saugar, India*

Lucy Gullo, *Assistant Professor; Mathematics; B.A., M.S.Ed., Queens College*

John J. Gutowski, *Professor; Chair, Psychology and Education; B.A., M.A., New Jersey City University; Ed.S., Nova Southeastern University*

Thomas M. Handler, *Professor; Electrical Engineering Technology; B.E.E., City College of New York; M.S.E.E., Drexel Institute of Technology; P.E., New Jersey*

Christine Harrington, *Assistant Professor; Counseling and Career Services; B.A., M.A., College of New Jersey; Ph.D., Lehigh University*

Selina Thompson, *Assistant Professor; Mathematics; B.A., Bernard M. Beruch College; M.A., New York University*

Trudi Harris-Johnson, *Assistant Professor; Educational Opportunity Fund; B.S., Bowie State University; M.Ed., The College of New Jersey; Ed.D., Nova Southeastern University*

Janet Hartman Baker, *Assistant Professor; Biology; B.A., Georgian Court College; M.S., Rutgers, The State University*

Karen L. Hays, *Vice President, Academic and Student Affairs; A.A., Miami-Dale Community College; B.A., University of Florida; M.A., Florida Atlantic University; Ph.D., The University of Texas at Austin*

John R. Herrling, *Professor; Director; Counseling and Career Services; B.A., M.Ed., Springfield College; Ed.D., Rutgers, The State University*

Robin Hetzko, *Assistant Manager; Printing and Communications Support*

Albert Heuer, *Assistant Professor; Program Director, Joint Respiratory Care Program, UMDNJ; R.R.T.; M.B.A., Fairleigh Dickinson University*

Hope-Claire Holbeck, *Instructor; Chair; Dental Auxiliaries Education; B.A. State University of New York; B.S., Columbia University; M.S., Columbia University*

Joyce Hollowell, *Director, Testing and Tutoring; B.S., M.S., State University of New York*

Theresa T. Holt, *Professor; Psychology and Education; B.A., Hampton University; M.A., University of Illinois; Ed.M., Rutgers, The State University; Ed.D., Rutgers, The State University*

Patrick Honey, *Assistant Professor; Health, Physical Education, Recreation and Dance; B.S., Seton Hall University; M.A., Montclair State University*

Hillary K. Hyman, *Assistant Professor; English as a Second Language; B.A., Washington College; M.A., Montclair State University; Ph.D., New York University*

Vincent Ianuale, *Assistant Professor; History and Social Behavior; B.A., M.A., New Jersey City University; M.A., Seton Hall University*

Li Jin, *Director, Student Records and Communication Management; B.A., Beijing University; M.S., The University of Dayton*

Lori Johnson, *MAPS Coordinator, Minority Student Affairs; A.A., Union County College, B.A., M.P.A., Kean University*

Vicki Kahn, *Assistant Professor; English as a Second Language; B.A., State University of New York at Stony Brook; M.A. Hunter College*

James A. Kahora, *Assistant Professor; Health, Physical Education, Recreation and Dance; B.S., West Chester State College; M.A., Seton Hall University*

Irwin H. Kantor, *Professor; History and Social Behavior; A.B., M.A., M. Phil., Ph.D., Rutgers, The State University*

Karen Katt, *Executive Director, Retail Services; B.S., Montclair State University*

Virender Kanwal, *Instructor; Biology; B.A., M.S., Ph.D., University of Delhi*

Deborah Keenan Lynch, *Associate Professor; Hotel, Restaurant and Institution Management; A.A., Suffolk County Community College; B.S., State University of New York at Oneonta; M.A., New York University*

Grace S. Kehrer, *Associate Professor; Dean, Social Sciences and Humanities; B.A., University of Central Florida; M.A., University of South Florida; Ed.S., Florida Atlantic University*

James Keller, *Assistant Professor; English; B.A., Rutgers, The State University; M.A., Montclair State University*

Eileen Kelly, *Instructor; Joint Nursing Program, UMDNJ; A.S., Middlesex County College; B.S.N., Monmouth University; M.S.N., Kean University*

Saul B. Kelton, *Associate Professor; Psychology and Education; B.A., Rutgers, The State University; M.A., New School for Social Research*

Renu Kinkhabwala, *Communications Management Specialist; B.A., Xavier's College, Bombay*

Richard Klein, *Associate Professor; Mathematics; B.E.E., Cornell University; M.S., California Institute of Technology; M.B.A., Rutgers, The State University*

William Kleinelp, *Associate Professor; Biology; B.A., M.S., Fairleigh Dickinson University*

Cheryl Kolber, *Learning Specialist, Project Connections; B.S., City College of New York, M.S., New York University*

Dawn A. Kozlowski, *Assistant Dean; Joint Nursing Program, UMDNJ; A.A.S. Middlesex County College; B.S.N. Kean College of New Jersey; M.A. New York University; Ph.D. Walden University*

Kimberley Krapels, *Instructor; Radiography Education; A.A.S., Middlesex County College; B.S., Rutgers, The State University; R.T.(R)*

Sandra Kregeloh, *Assistant Professor; Joint Nursing Program, UMDNJ; B.S., M.S., Rutgers, The State University*

Francine Krimsky, *Assistant Professor; Media Arts & Design; A.A.S., Kingsborough Community College; A.A.S., Middlesex County College; M.A., Kean University*

John F. Kruszewski, *Director, Academic Advising and Open College Program; B.A., Georgetown University; M.A., Fordham University*

Joann La Perla-Morales, *President; B.A., State University of New York, College at Oneonta; M.A. and Ed.D., Teachers College of Columbia University*

Mabel Lam, *Accounts Receivable Manager; Bursar; A.S., Los Angeles City College; B.S., California State University*

Josephine M. Lamela, *Associate Professor; Chemistry and Physics; B.A., Montclair State University; M.A.T., Harvard University; M.S., Iowa State University*

Michael Landers, *Assistant Professor; Accounting and Legal Studies; B.B.A., Niagara University; M.B.A., Pace College*

Janet Lansinger, *Instructor; Chemistry & Physics; B.A., Gettysburg College, M.A., State University of New York- Binghampton; Ph.D., Washington State University*

Randolph Larate, *Facilities Project Manager; B.S., New Jersey Institute of Technology*

Stephen P. Larkin III, *Associate Professor; Chair, Medical Laboratory Technology, Director, Health Technology Program; A.A.S., Middlesex County College; B.S., Fairleigh Dickinson University; Certificate, Medical Technology; Muhlenberg Hospital School of Medical Technology; M.H.S.A., St. Joseph's College*

Marilyn Laskowski-Sachnoff, *Professor; Acting Dean, Business, Computer Science and Engineering Technologies; B.S., College of Saint Elizabeth; M.A., New York University*

Jane Lasky-MacPherson, *Associate Professor; English; B.A., Northeastern University; M.A., Montclair State University*

Gregory LeBlanc, *Assistant Professor; Health, Physical Education, Recreation and Dance; A.A., A.A.S., Hudson Valley Community College; B.S.E., Cortland College; M.S., University of Wisconsin*

Lynn Lederer, *Director; Professional and Community Programs; B.S., State University of New York at Buffalo; Ed.M. Rutgers, The State University.*

Lynne Ng Lee, *Curriculum Management Specialist; B.A., Brooklyn College, City University of New York*

Diane Lemcoe, *Dean, Division of Enrollment Management; B.A., M.P.A., University of Missouri*

Juana Lewis, *Dean, Division of Student Development; B.A., M.Ed., The College of New Jersey*

Dennis Lick, *Associate Professor; Visual Arts; B.F.A., Miami University of Ohio; M.F.A., Rutgers, The State University*

Jane Liefert, *Professor; Computer Science; B.S., Kean University; M.S., Monmouth University; Ed.S., Nova Southeastern University*

Patricia Luck, *Clinical Education Coordinator, Radiography Education: AAS Middlesex County College RT[R]: BA Douglass College*

Angela Lugo, *Associate Professor; English; B.A., M.A., University of Puerto Rico*

Reginald K. Luke, *Professor; Dean, Science, Mathematics and Health Technologies; B.S., Gonzaga University; M.S., Ph.D., Rutgers, The State University*

Mary Lynch, *Associate Professor; Office Administration; A.A., Middlesex County College; B.A., Montclair State University; M.Ed., The College of New Jersey; M.A., Kean University*

JoAnn Lyons, *Director, Office and Systems Management; B.S., Kean University*

Dominic J. Macchia, *Professor; Chemistry and Physics; B.A., M.S., Adelphi University; Ph.D., Rutgers, The State University*

Mary-Pat Maciolek, *Assistant Professor; Director, Dietetic Technology; B.S., College Misericordia; M.B.A., Georgian Court College*

Michael Maloney, *Systems Engineer; Information Technology*

Louis Marius, Jr., *Associate Director; Educational Opportunity Fund; B.S., M.S. Northeastern University*

Patricia Marrero, *Director, Accounting; B.S., Rutgers, The State University*

Benjamin Marshall, *Associate Professor; English; B.A., Kean University; M.F.A., University of Massachusetts at Amherst*

Maria Marshall, *Instructor; Media Arts & Design; B.A., Indiana University; M.F.A., Brooklyn College, City University of New York*

Roslyn Mass, *Professor; Psychology and Education; A.B., Temple University; Sc.M., Brown University; Ph.D., Rutgers, The State University*

Anthony Matagrano, *Associate Professor; Mathematics; B.A., Rutgers, The State University; M.S., Ph.D., Stevens Institute of Technology*

Doris Mayner, *Associate Professor; Biology; B.S., M.S., Ohio State University*
Terry McGlincy, *Associate Professor; Director, Student Activities and the College Center; B.A., M.A., Montclair State University; M.S., Rutgers, The State University; J.D., Seton Hall University*
Ellen Measday, *Associate Professor; English as a Second Language; B.A., The George Washington University; M.A., University of Oregon*
Michele Menditto, *Financial Aid Officer; A.A., Staten Island Community College; B.A., College of Staten Island; M.S., Baruch College, the City University of New York; M.L.S., Rutgers, The State University*
Frank Mento, *Associate Chair; Mathematics; B.A., M.A., Montclair State University*
Leonard Mesonas, *Financial Aid Technician; B.A ., Rutgers, The State University*
Michael Miniere, *Associate Professor; Mathematics; A.A., Hagerstown Junior College; B.S., Montclair State University; M.S., Ph.D., Stevens Institute of Technology*
Joseph J. Misuraca, *Assistant Professor; Mechanical and Civil/Construction Engineering Technology; B.S.M.E., M.S., Rutgers, The State University; P.E., New Jersey*
Aimee Mitacchione, *Instructor; Health, Physical Education, Recreation and Dance; B.F.A., Barat College; M.A., New York University*
John Moetz, *Bursar; B.S., College of New Jersey*
Seham Mohamed, *Special Project Associate/Adaptive Lab Technician, Project Connections; B.Sc., Alexandria University, Egypt*
John Mondano, *Director, Facilities Maintenance*
Carey Monkowski, *Assistant Director; Athletic; B.A., Western New England College; M.A., Springfield College*
Frederick Montana, *Professor; Chemistry and Physics; B.A., Montclair State University; Ph.D., University of Utah*
Tracey Montani, *Director; Career Training Center; B.A., Rutgers, The State University; M.P.A., Kean University*
Maria Mora, *Director, Perth Amboy Center; B.S., University of Puerto Rico; M.S.W., Rutgers, The State University*
Patricia Moran, *Director, The Institute; B.S., Rider College; M.A., Kean University; Ph.D., Walden University*
Doris Morgan, *Associate Professor; Biology; B.S., M.S., Fairleigh Dickinson University*
RoseAnn Morgan, *Professor; English; B.A., University of California; M.A., Rutgers, The State University*
Jack Moskowitz, *Associate Professor; English; B.A. City College of New York; M.A., Brandeis University*
John J. Murray, *Professor; Chemistry and Physics; B.S., Manhattan College; Ph.D. Fordham University*
Karoly Nagy, *Professor; History and Social Behavior; B.A., Rutgers, The State University; M.A., Ph.D., New School for Social Research*
Denise Nash-Luckenbach, *Assistant Professor; Joint Nursing Program, UMDNJ; B.S., College of New Jersey; M.S., Rutgers, The State University*
George Neureuther, *Programmer/Analyst; A.A.S., Middlesex County College*
Millicent Nicholas, *Associate Professor; Radiography Education; B.S., Manhattan College; M.S.W., Rutgers, The State University*
Albert Nicolai, *Professor; English; A.B., Hope College; M.A., Temple University*
Elisabeth Oliu, *Assistant Professor; Library Services; B.A., William and Mary College; M.L.S., Rutgers, The State University*
Jerome Olson, *Assistant Professor; English; B.A., M.A., State University of New York at Fredonia*
Olubayi Olubayi, *Associate Professor; Biology; A.A.S., State University of New York; B.S. Florida Atlantic University; Ph.D., Rutgers, The State University*
Edwin R. Onyschak, *Associate Director, Networking and Technical Services; A.S., Middlesex County College; B.S., New Jersey Institute of Technology*
Theresa Orosz, *Manager, Counseling and Career Services; A.A.S., Middlesex County College; B.S., M.A., Kean University*
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Marvin Goldstein, *B.S., City College of New York; M.B.A., Fairleigh Dickinson; M.S., Ph.D., New York University*
Janet Gorman, *B.S., M.S., New Jersey City University*
Paul Norman Grant, *M.A., Kean University*
Cesar Grau, *B.A., Montemorelos University*
S. Donald Groninger, *B.A., Juniata College; M.A., Fairleigh Dickinson University; Ed.D., Nova Southeastern University*
Yuri Guberer, *B.S., U.S.S.R. Politechnic Institute; M.S., N.Y. Polytechnic Institute*
John Gugliotta, *M.E., M.S., Stevens Institute of Technology*
Usha Gulati, *B.A., B. Ed., Delhi University*
Guy Gundanna, *B.S., Karnataka University; M.S., Stevens Institute of Technology*
Jumana Hablawi, *B.S., MontoclairState University; M.S., Seton Hall University*
Gerhard Hagen, *B.A., Technical University; M.S., Ph.D., Stevens Institute of Technology*
Kenneth Hall, *B.S., Jackson State University; M.S., Howard University*
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Charles Halpern, *B.A., Queens College of New York; M. Eng., Cornell University*
Eugene Hannigan, *B.S., Rutgers, The State University; M.A., Seton Hall University*
Jenny Harko, *B.A., M.A., Babes-Bolyai University of Romania*
Tana Harvey, *B.S., Seton Hall University; M.A., Hunter College*
Kevin Hayes, *B.A., M.A., Rutgers, The State University*
Eric Hepburn, *B.A., Atlantic Union College; M.A. Professional Diploma, Columbia University*
Fred R. Hertrich, *B.S., M.P.A., Shippensburg State College*
Melvin Hinton, *B.S.E.E., M.S.E.M., New Jersey Institute of Technology*
Nika Hionis, *B.A., Rutgers, The State University; M.B.A., Fairleigh Dickinson University*
John Hostetter, *B.A., Hope College; M.A., Ph.D., Rutgers, The State University*
Karen Hunte, *B.A. Mercy College; M.B.A., Long Island University*
Roberta Hunter, *B.A., Trinity College*
Shamsul Huq, *B.A., M.A., Jahan Dirnadar University; M.A.S., M.S., John Hopkins University*
Louis Ianuale, *B.A., New Jersey City University; M.A., Seton Hall University*
Iman Ibrahim, *M.Sc., M.D., Cairo University*
James Jahnke, *A.A.S., Middlesex County College; B.S., New Jersey Institute of Technology*
Diane Jarvi, *B.A., University of Missouri*
Calvin Jenkins, *B.A., Curry College*
Dorothy Jennings, *A.A.S., Middlesex County College, B.S., Rutgers, The State University*
Michael Jeter, *B.A., The University of Alabama; M.A.E., The University of Alabama*
Kim Joho, *B.S., M.S., Wagner College; MT(ASCP)SM*
James Jones, *M.B.A., Pace University*
James Josselyn, *A.A. Brookdale Community College; B.M., Mason Gross School of the Arts at Rutgers; M.M., Queens College*
Martin A. Kaminker, *B.A., University of Pennsylvania; D.M.D., University of Pennsylvania*
David Kane, *B.S., Stevens Institute of Technology; B.A., M.A., The College of New Jersey*
Ronald Kanterman, *B.A., M.S., John Jay College of Criminal Justice*
Robert Kaplan, *B.S., New York University; M.A. Kean University*
Alida Karas, *B.S., M.S., Rutgers, The State University*
Rachel Karger, *B.A., Vanderbilt University; M.A., Rutgers, The State University*
Sunil Karnik, *M.B.A., Rutgers, The State University; B.E., University of Roorkee*
Fred Kellisch, *B.A., Newark State College; M.S., Florida International University*
Hui Kim, *M.Ed., Korea University; M.S., New York University; Ph.D., Pacific Western University*
Rita Kinkhabwala, *B.S., M.S., Gujarat University*
Frayda Kleiman, *A.A.S., Middlesex County College; B.S., Fairleigh Dickinson University; M.A., Kean University*
Donald Kluizenaar, *B.S., State University of New York; M.S.T., Rutgers, The State University*
Jennifer Kosztko, *B.A., Moravian College; Ed.M., Rutgers University*
Kristyn Kressler, *A.A., Middlesex County College; B.S., Montclair State University*
Ronald Kuboski, *B.A., King's College; M.A., Fairleigh Dickinson University*
William Kuhl, *B.M.E., State University of New York; M.B.A., Bernard M. Baruch College, the City University of New York*
Gary Kulhanjian, *B.S., East Tennessee State University; M.A., William Paterson University; Ed.S., Rutgers, The State University*
Henry Lam, *A.A.S., Middlesex County College; B.A., Western Washington University; B.S., New Jersey Institute of Technology*
Karen Langan, *A.A., Middlesex County College, B.S., Kean University, M.B.A., Fairleigh Dickinson University*
Jay Lander, *Professional Certificate; Newark School of Fine & Industrial Art*
Michelle LaPaglia, *B.M., Wheaton College; M.M., Temple University*
Nancy Lasek, *B.A., M.A., New Jersey City University*
Judith Lax, *B.A., Brooklyn College; M.A., University of Wisconsin; Ph.D., Syracuse University*

C. Merry LeBlond, *Assistant Professor; Chair, Dental Auxiliaries Education; B.S., Columbia University; M.S., Columbia University*
Susan Leckart, *B.A., Hunter College; M.S., Lehman College, the City University of New York*
Walter Leffler, *A.A.S., Johnson & Wales University*
Risa Levi, *B.S., Columbia University; M.S., Columbia University*
Barbara Leveene, *B.A., Brooklyn College; M.S., Long Island University*
John Liefert, *A.A.S., Middlesex County College; B.S., Monmouth University*
Marc Lipman, *B.S.E.E., Rutgers, The State University; M.S., Stevens Institute of Technology*
Stanley Lipper, *B.S., New York Institute of Technology; M.B.A., St. John's University*
Joan Litt, *B.A., Hofstra University*
Janet Loewenstein, *B.A., Adelphi University; M.A., Kean University*
Michael Lepore, *B.S., Montclair State*
Patricia Luck, *Clinical Education Coordinator; Radiography Education; A.A.S., Middlesex County College; B.A., Rutgers State University, Douglass College*
Harold Luithle, *A.A., Middlesex County College; A.S., Brookdale Community College; B.A., Kean University; M.S., Georgian Court College*
Nancy Luyando, *B.S., Fordham University*
Edward Lynskey, *B.A., William Paterson University; M.A., Seton Hall University*
John G. Lyssikatos, *A.A.S., Middlesex County College; B.S., M.S., New Jersey Institute of Technology*
Beatrice Mady, *B.F.A., University of Dayton; M.F.A., Pratt University*
Patricia Mahoney, *B.S.N., Boston College; M.S.N., Seton Hall University*
Robert Mahoney, *B.S., Kean University; M.S., Stevens Institute of Technology*
Evelyn Mamman, *B.A., Ahmader Bello University; M.A., New York University*
Paul Maioriello, *B.B.A., Pace University; M.S., City University of New York*
Caroline Marchitto, *B.A., Drew University; J.D., Seton Hall University*
Richard Marden, *B.S.E.E., M.S.E.E., Monmouth University*
George Marotta, *B.S., M.Ed., Ed.D., Rutgers, The State University*
Rouky Martin, *B.S., City College of New York*
Anton Massopust, *B.S., Villanova University; M.S., Monmouth University*
John Masters, *B.A., St. Peter's University; M.A., New Jersey City University*
Stephen F. McCarthy, *B.S., Drexel University; M.B.A., Monmouth University*
Joseph McCluskey, *B.A., City University of New York, College of Staten Island*
Carolyn McGarigle, *B.A., Georgian Court College*
Denise McSorley, *A.A.S., Middlesex County College; B.S., Rutgers, The State University*
Patricia McSorley, *A.A., Immaculata College of Washington; R.D.H., Temple University School of Dental Hygiene; B.S., College of New Jersey*
Ronald Messenger, *B.S., Kings College; M.A., Montclair State University*
Kenneth Miele, *B.A., Seton Hall University; M.A., St. John's University*
Barbara Migden, *B.A., Queens College; M.S.Ed., Lehman College, the City University of New York*
Peter Miglec, *B.A., New Jersey City University; M.Ed., The College of New Jersey*
James Mihopulos, *B.A., Stockton State College; M.A., Monmouth University*
David Miller, *B.S., City College of New York; M.S., State University of New York at Stony Brook*
Marilyn Miller, *B.A., Fairfield University; M.A., Kean University*
Johanna Minucci, *B.A, Lady Cliff College; M.A., College of Staten Island; M.S. Kean University*
Jon Murphy, *B.A., Queens College; B.S., New Jersey Institute of Technology; M.S. Ed., Lehman College, the City University of New York; Cert., North Jersey Industrial Drafting School*
Michael Musante, *B.A., Saint Frances College; M.A., New York University; M.S., Fordham University*
John Muth, *B.A., M.A., Rutgers, The State University*
Norman Nelson, *B.S., Cornell University; M.ENG., Cornell University*
Harold Neutuch, *B.S., New York University; M.B.A., Baruch College, the City University of New York*
Marisa Noe, *B.A., Hunter College*
Majid Noori, *A.S., Tehran Institute of Technology; B.S.C., Tehran University; Ph.D., University of Maine*
Christina Glacobbe-Nuzzolo, *B.S., St. John's University; M.S., Fordham University*
Susan O'Brien, *B.A., Princeton University*
Dermot O'Grady, *B.S., John Jay College; J.D., Brooklyn Law School*
Jane O'Rourke, *B.S.N., Hunter College; M.S.N., Hunter College*
Harriet Osview, *B.A., Douglass College*
Steven D. Owlett, *B.A., Kings College, M.S., Golden Gate University*
Patricia Palanker, *B.S., Biology Nazareth College*
Edmund Palmieri, *B.A., Rutgers, The State University; M.B.A., Wagner College*
Edward Palushock, *B.S., Bloomsburg University; Ed.M., Rutgers, The State University*
Annice R. Paolino, *B.S., Pace University; M.A., Wagner College*
Charles Paolino, *M.A., Pennsylvania State University; B.A. Seton Hall University*
Harry M. Parker, *B.S. College of New Jersey; ASE Master and L-1 Certified*
Christina Pastor, *D.C., New York Chiropractic College*
Laxman Phadke, *B.S., Wilson College; M.S., Institute of Science; M.S., Ph.D., University of Miami*
Anthony Pellicane, *B.A., Monmouth University; M.A., Rider University*
Guy Peluso, *M.A., J.D., Rutgers, The State University*
Gail Perdomo, *B.A., Fairleigh Dickinson University; M.A., Montclair University*
Raymond Perez, *B.S., M.Ed., The College of New Jersey*
Joseph Perry, *B.S., M.S., Fairleigh Dickinson University*
Arnold Peters, *B.A., Grinnell College; M.B.A., New York University*
Otto Picard, *B.S., Ed.M., Ed.Sp., Rutgers, The State University*
Richard Plant, *B.A., M.A., Montclair State University*
Dennis Pope, *B.A., M.A., Ph.D., Rutgers, The State University*
Darin Portnoy, *B.S., Rutgers, The State University; J.D., Thomas M. Cooley Law School*
Barry Prag, *B.A., Rutgers, The State University*
MaryAnn Puccio, *B.A., Rutgers, The State University*
Derrick Pugh, *B.S., Southern University; M.S., Stevens Institute of Technology*
Chintha Ranasinghe, *M.D., St.George's University Medical School*
Natalie Rapacki, *B.A., M.A., Kean University*
Himanshu Raval, *B.S., M.S., University of Baroda; M.S., University of North Carolina*
Alan Rebold, *B.S., Brooklyn College; M.A., New York University*
Edith S. Rehbein, *B.A., Carleton College; M.A., Washington University; M.A., New York*
John Reitmann, *B.A., Marist College; M.S., North Dakota State University*
Guy Reynolds, *B.S., Stanford University; M.A., New York University*
Susan Richman, *B.A., The College of New Jersey; M.Ed., Rutgers, The State University*
John Riordan, *B.E., Stevens Institute of Technology; M.S.E.E., Drexel University; M.B.A., Rutgers, The State University*
Barbara Rivera, *B.A., St. John's University; J.D., St. John's University School of Law*
Susan Rivera, *B.A., M.A., Kean University*
Richard Rizzo, *A.S., College of Staten Island; B.A., Saint Peter's College; M.A., Rutgers, The State University*
Allan Robinson, *B.M., Westminister Choir College; M.M., Rutgers University*
Robert Rodgers, *B.S., Clarion University; Ed.M., Rutgers, The State University*

Michelle Rosen, *B.S.I.E., New Jersey Institute of Technology; M.A., Monmouth University*
Roberta Rosen, *B.S., New York University; M.S., Brooklyn College*
Kathleen Rubin, *Joint Nursing Program, UMDNJ; B.S.N., Seton Hall University; M.S.N., Rutgers, The State University*
Stephen J. Rubino, *A.S.,Middlesex County College, B.S., Montclair State University*
Edward Ruhno, *B.S., Widener College*
Karen Ryan, *B.A., Monmouth University; M.Ed., Rutgers, The State University*
Reza Saba, *A.A.S., Middlesex County College*
Thomas D. Sabol, *A.A., Union County College; B.S., M.S., Rutgers, The State University*
John Sacchi, *B.S., Ithaca College; M.S., University of Montana*
Steven Safron, *B.A., Queens College; M.A., SUNY, The State University of New York*
Shah Samim, *B.S., Kabul University; M.S., University of Wyoming*
Denese Sanders, *B.A., Kean University; M.A., Rutgers, The State University*
Peter Santarpia, *B.S., Ph.D., State University of New York at Stony Brook*
Richard Santoro, *B.S.E.E., M.S.E.E., New Jersey Institute of Technology*
Mukund Satwalekar, *B.S., College of Engineering, India; M.S.I.E., West Virginia University*
Walter Sautter, *B.A., M.A., Montclair State University*
Kathryn Scarbrough, *B.A., University of Rochester, Ph.D., University of Maryland School of Medicine*
Andrew Schneier, *B.S., Long Island University, M.A., Jersey City State University*
Alvin Schneider, *B.M.E., City University of New York; M.S.E.M., Drexel University*
Carol Schwartz, *B.A., University of Pennsylvania; J.D., Rutgers University School of Law, Newark*
Sharon Seppi, *B.A., St. Joseph's University of Philadelphia; M.A., New York University*
Daniel Shaffer, *B.A., Brooklyn College; M.Ed., Rutgers, The State University*
Jean Shafranski, *B.A., The College of New Jersey*
Nadia Shenouda, *B.A., M.S., Ain Shams University*
Thomas Sherman, *B.S., St. John's University*
Norman Shiffman, *B.A., Wayne State; M.A., Michigan State University; M.F.A., Mason Gross School of Fine Arts, Rutgers, The State University*
Matthew Shoban, *B.A., M.A., Adams State College*
Ellen Shur, *B.A., Beaver College; M.A., New Jersey City University*
Robert A. Sicora, *B.S., The Pennsylvania State University, M.B.A., Temple University*
Mary Sillup, *B.A., William Paterson University; M.S., Wright State University; Ed.S., Seton Hall University*
Robert Silva, *B.A., Montclair State University; M.A., New Jersey City University*
Ellen Simonetti, *B.A., St. Francis College; M.S., St. John's University*
Irving Sinai, *B.S., City College of New York; D.D.S., New York University College of Dentistry*
Fredrick C. Skvara, *B.S., Rutgers The State University; M.D., Jefferson Medical College*
Amy Smith, *A.A., Middlesex County College; B.A., Rider College*
Vernon Spencer, *B.A., Seton Hall; M.B.A., Rutgers, The State University*
Prithvi Srivastava, *B.S., M.D., University of Lucknow*
John Stasi, *B.A., M.A., Kean University; Ed.D., University of Mississippi*
Linda Stefaniak, *B.S., M.S., The College of New Jersey*
Robert Stetler, *B.A., Lehman College, the City University of New York*
Frances Stevens, *B.A., Douglass College; M.A., Rutgers, The State University*
Venkataraman Subrahmanyam, *B.S., National College; M.S., Rensallear Polytechnic University*
Robert Sulley, *A.A.S., Middlesex County College; B.S.E.E., Purdue University; M.S.B.E., New Jersey Institute of Technology*
Maria Szalontay, *B.S., Seton Hall University; M.A., St. John's University*
Robert Terelle, *B.A., Catholic University of America; M.S., Richmond College; M.S., Hunter College*
Anne Topping, *B.S., M.S., Polytechnic Institute of New York*
Richard Trimarco, *B.A., Rutgers, The State University; M.A., New York University*
Claudia Tyska, *B.A., Douglass College; M.B.A., Rutgers, The State University; Ph.D., Rutgers, The State University*
Daniel Weeks, *B.A., Washington and Lee University; M.A., Monmouth University*
Barbara Weill, *A.A.S., Middlesex County College; B.A., City College of New York; M.A., Ph.D., New School for Social Research*
Alecia Wells, *A.B., University of California; M.S., Stevens Institute of Technology*
Timothy Wenzell, *B.A., Temple University; M.A., Rutgers, The State University Marc Williams, B.A., College of New Jersey*
Marchelle Wiley, *B.A., Howard University; J.D., Harvard Law School*
Jeffrey A. Wilson, *A.B., M.B.A., Rutgers, The State University*
John Wolf, *A.B., Vassar College; J.D., Emory University*
Thomas Wood, *B.A., New Jersey City University*
Harvey Yablonsky, *B.S., M.A., Brooklyn College; M.S., Ph.D. Stevens Institute of Technology*
Thomas Yip, *B.E.E., Manhattan College; M.S.E.E., M.B.A., New York University*
Steven Zale, *Ph.D., Nova Southeastern University*
Andrew Zangrillo, *B.B.A., Pace University; M.B.A., Baruch College, the City University of New York*
Josephine Zifchak, *B.A., Queens College of City University of New York*

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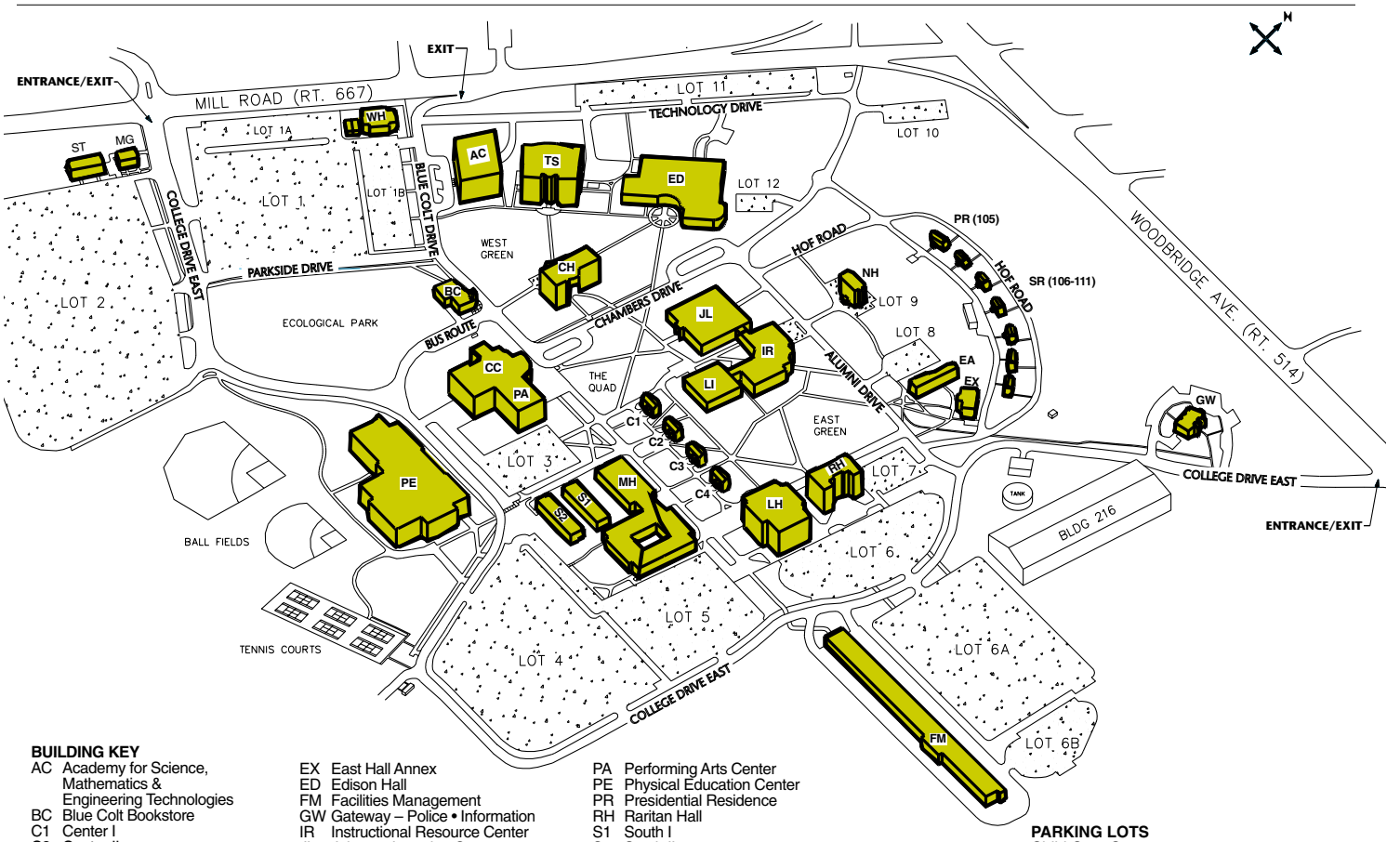
Campus Map and Directions



BUILDING KEY

AC Academy for Science, Mathematics & Engineering Technologies
BC Blue Colt Bookstore
C1 Center I
C2 Center II
C3 Center III
C4 Center IV
CH Chambers Hall
CC College Center
EA East Hall
EX East Hall Annex
ED Edison Hall
FM Facilities Management
GW Gateway – Police • Information
IR Instructional Resource Center
JL Johnson Learning Center
LH L'Hommedieu Hall
LI Library
MG Mill Gate
MH Main Hall
NH North Hall
PA Performing Arts Center
PE Physical Education Center
PR Presidential Residence
RH Raritan Hall
S1 South I
S2 South II
SR Staff Residence
ST Studio Theater
TS Technical Services Center
WH West Hall

PARKING LOTS

Child Care Center – 12
Disabled – All Lots
Faculty/Staff – 1B, 2, 5, 6B, 7, 8, 9, 10, 11
Students – 1, 1A, 2, 4, 6, 6A
Visitors – 1, 3

R2/06/03

EDISON/MAIN CAMPUS 2600 Woodbridge Avenue, Edison, N.J. 08818 Tel: 732.548.6000

U.S. Highway 1 (North)

Use the Fords exit for County Highway Route 514 East (first exit after Morris Goodkind Bridge). On Route 514 East (Woodbridge Avenue), proceed approximately two miles and turn right at 5th traffic light onto College Drive East: College main entrance.

U.S. Highway 1 (South - Edison)

Take Bonhamtown exit for County Highway Route 531 South. Proceed to traffic light, turn right onto County Highway Route 514 West (Woodbridge Avenue). Proceed to 2nd traffic light and turn left onto College Drive East: College main entrance.

Garden State Parkway (North)

Use Exit 127 and follow signs for Interstate 287 North. Proceed for approximately one half mile on 287 (stay on right side), follow signs to turn onto County Highway Route 514 West (Woodbridge Avenue.) Proceed approximately two and one-half miles to the 5th traffic light and turn left onto College Drive East: College main entrance.

Garden State Parkway (South)

Take Exit 130 to U.S. Highway 1 South. Follow directions for No. 2 above.

N.J. Turnpike (North/South)

Take Exit 10. Follow signs to Highland Park to County Highway Route 514 West (Woodbridge Avenue). Follow Woodbridge Avenue to 5th traffic light and turn left onto College Drive East: College main entrance.

Interstate Highway 287 (North)

Exit at County Highway Route 514 West (Woodbridge Avenue) and follow directions for No. 3 above.

Interstate Highway 287 (South)

Exit at 1-B onto County Highway Route 531 and follow directions for No. 2 above.

State Highway 35 (North/South - Woodbridge Township)

From State Highway 35 North, turn left or from South turn right onto Main Street which becomes Woodbridge Avenue in Edison. Proceed to the 10th traffic light and turn left onto College Drive East: College main entrance.

New Brunswick Center Directions

NEW BRUNSWICK CENTER 140 New Street, New Brunswick, NJ 08901 Tel: 732.745.8866

U.S. Highway 1 (North)
Exit Route 1 at New Brunswick sign. Follow Route 18 North through 2 lights. Take first exit on right onto New Street. Follow off ramp around and through 3 lights.

Route 27 (North)
Follow Route 27 towards New Brunswick. Turn right onto Joyce Kilmer Avenue. After 3 lights, turn left onto New Street.

Route 27 (south from Highland Park)
Follow Route 27 south (Albany Street). Turn left at light onto Neilson Street. Turn right at light onto New Street. Continue through 2 lights, Center is on the left.

N.J. Turnpike (South)
Take Exit 9 of the New Jersey Turnpike – New Brunswick. Take Route 18 after New Jersey Turnpike exit through 2 lights. Take first exit on right onto New Street. Follow off ramp around and through 3 lights.

Route 18 (from south of New Brunswick):
Take Route 18 north past the New Jersey Turnpike entrance and Route 1 interchange. Continue north continue past 3 lights. Exit right to New Street.

Route 18 (from north of New Brunswick):
Take Route 18 South to New Brunswick exit. Follow exit signs to George Street. After 6 lights, turn left onto New Street.

Interstate Highway 287 (South - Easton Avenue)
Take Easton Avenue/New Brunswick Exit off Route 287. Follow Easton Avenue past St. Peter's Hospital. Turn right at intersection onto Albany Street (at the train station). Turn left onto Joyce Kilmer Avenue. Proceed 3 blocks to New Street.

Perth Amboy Center Directions

PERTH AMBOY CENTER **60 Washington Street,Perth Amboy, NJ 08862 Tel: 732.324.0700**

Garden State Parkway (South)

Take exit 129. Follow signs to Perth Amboy and take New Brunswick Avenue exit. At stop sign turn left. After 3 traffic lights, bear left at fork onto Washington Street. Continue on Washington St. and go through 2 traffic lights. The Center is at the end of the second block to your left.

Garden State Parkway (North)

Take exit 125. Make a right at end of exit ramp. Make a left onto circle following Rt.35 North signs. Go across Victory Bridge/Rt.35 North. At traffic light make a right onto Smith Street. At the 7th traffic light, turn left onto High Street. Go through 1 traffic light. The Center is on the fifth block to your left.

N.J. Turnpike (North/South)

Take exit 10. Follow signs to 440 North/287 South/Perth Amboy. Then follow directions under Route 1 & I-287.

U.S. Highway 1/Interstate Highway 287

Take 440 North/287 South. Turn right into ramp at State Street exit (last exit in New Jersey). Take ramp left onto CR-611/State Street and merge onto State Street. At the 4th traffic light, make a left onto Washington Street. The Center is at the end of the second block to your left.

State Highway 35

At Raritan Bay Medical Center, turn East onto New Brunswick Ave. (toward Hospital). After 2 traffic lights, bear left at fork onto Washington Street. Continue on Washington St. and go through 2 traffic lights. The Center is at the end of the second block to your left.

Telephone Directory of MCC Offices

Department Name	Ext.
Acad. Adv. Ctr./Open College	732-906-2596
Academic and Student Affairs	732-906-2515
Accounting and Legal Studies	732-906-2576
Accounts Payable	732-906-4682
Adjunct Faculty Center	732-906-7772
Admissions	732-906-4243 x3510
Alumni Affairs	732-906-7732
Biology	732-906-2592
Bookstore	732-906-2539
Bursar/Cashier	732-906-2572
Business Admin. & Mngmt.	732-906-2594
Bus., Computer Sci. & Eng'g.	732-906-2502
Career Training	732-906-4231
Chemistry & Physics	732-906-2587
Child Care	732-906-2542
College Assembly	732-906-4239
Computer Science	732-906-2526
Construction	732-548-6000 x3868
Cooperative Education	732-906-2595
Corporate & Community Edu.	732-906-2556
Counseling & Career Srvs.	732-906-2546
Custodial	732-548-6000 x3868
Dental Auxiliaries	732-906-2536
Edu. Opportunity Fund	732-906-2544
Electrical Engineering Tech.	732-906-2584
English	732-906-2591
English as Second Language	732-906-2597
Enrollment Management	732-906-2509
Facilities Engineering	732-906-2611
Facilities Management	732-906-2568
Finance	732-906-2621
Financial Aid	732-548-6000 x3520
Food Service	732-906-2541
Foundation	732-906-2564
Grounds	732-548-6000 x3868
Health & Safety	732-906-2530
History & Social Behavior	732-906-2503
Hlth, Phys Ed/Rec & Dance	732-906-2558
Holocaust	732-906-4663
Hotel, Rest. & Institution Mgt.	732-906-2538
Human Resources	732-906-2522
Information Technology	732-906-2525
Institute	732-906-4681
IT Ctr., WKFC Excellence	732-906-2588
Library	732-906-2561

Department Name	Ext.
Main College No.	732-548-6000
Maintenance	732-906-2567
Marketing and Public Info	732-906-2566
Mathematics	732-906-2585
Mechanics and Electricians	732-548-6000 x3868
Mech-Civil/Const Eng'g. Tech.	732-906-2586
Media Arts & Design	732-906-2577
Media Services	732-906-2527
Medical Lab	732-906-2581
Minority Student Affairs	732-906-2532
Modern Languages	732-906-2529
New Brunswick Center	732-745-8866
NJCATE	732-906-4178
Nurse	732-906-2530
Nursing Department	732-906-4660
Office Administration Dept.	732-906-2578
Payroll	732-548-6000 x3120
Perth Amboy Center	732-324-0700
Planning and Development	732-906-2602
Police	732-906-2500 x3500
President's Office	732-906-2517
Printing & Communications	732-906-2537 x4255
Prof'l. & Community Programs	732-906-7740
Project Connections	732-906-2507
Project SPAN	732-906-2553
Psycho/Social Rehab	732-906-4177
Psychology/Education	732-906-2590
Purchasing	732-548-6000 x3518
Quo Vadis	732-548-6000 x3443
Radiography	732-906-2583
Receiving	732-548-6000 x3868
Registrar	732-548-6000 x3523
Research, Office of	732-906-2622
Respiratory Care	973-972-5503
Retail Services Corp.	732-906-2539
School Relations, Office of	732-906-2554
Sci, Math & Health Tech.	732-906-2533
Social Sciences & Humanities	732-906-2528
Student Activities	732-906-2569
Student Development	732-906-7713
Telecommunications	732-906-4666
Testing	732-906-2508
Tutoring	732-906-2631
Visual, Performing, and Media Arts	732-906-2589
Warehouse	732-906-2534

Middlesex County College
puts learning first and
measures its success only
by the success of its students.

All members of the College community
contribute to student success.

MIDDLESEX
COUNTY COLLEGE

2600 Woodbridge Avenue

P.O. Box 3050

Edison, New Jersey 08818-3050

732-548-6000

www.middlesexcc.edu