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### Calendar & General Information

#### FALL 2003

<table>
<thead>
<tr>
<th>Date</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>August</td>
<td></td>
</tr>
<tr>
<td>25</td>
<td>Faculty Orientation &amp; Meetings; First Day of Faculty Obligation</td>
</tr>
<tr>
<td>26</td>
<td>Faculty Development; Mandatory Day for Faculty</td>
</tr>
<tr>
<td>27 &amp; 28</td>
<td>Final Registration Days: New Student Orientation &amp; Advisement by Faculty</td>
</tr>
<tr>
<td>September</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Labor Day – College Closed</td>
</tr>
<tr>
<td>2</td>
<td>Classes Begin - Fall Semester</td>
</tr>
<tr>
<td>October</td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>Columbus Day – College Closed</td>
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<tr>
<td>November</td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>Veterans Day – College Closed</td>
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<tr>
<td>27, 28, 29 &amp; 30</td>
<td>Thanksgiving – College Closed</td>
</tr>
<tr>
<td>December</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>Last Day of Classes</td>
</tr>
<tr>
<td>15, 16 &amp; 17</td>
<td>Specially Scheduled Final Examinations</td>
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<tr>
<td>18</td>
<td>Winter Recess</td>
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</table>

#### SPRING 2004

<table>
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<tbody>
<tr>
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<tr>
<td>14</td>
<td>Faculty Orientation &amp; Meetings; First Day of Faculty Obligation</td>
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<tr>
<td>15 &amp; 16</td>
<td>Spring Semester</td>
</tr>
<tr>
<td>February</td>
<td></td>
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<tr>
<td>16</td>
<td>Final Registration Days: New Student Orientation &amp; Advisement by Faculty</td>
</tr>
<tr>
<td>19</td>
<td>Martin Luther King, Jr. Day – College Closed</td>
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<tr>
<td>20</td>
<td>Classes Begin – Spring Semester</td>
</tr>
<tr>
<td>March</td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>Presidents’ Day – College Closed</td>
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<tr>
<td>20</td>
<td>Spring Recess Begins – No classes</td>
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<tr>
<td>22</td>
<td>Regular Classes Resume</td>
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<tr>
<td>April</td>
<td></td>
</tr>
<tr>
<td>9, 10 &amp; 11</td>
<td>Good Friday/Easter - College Closed</td>
</tr>
<tr>
<td>May</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Last Day of Classes</td>
</tr>
<tr>
<td>6</td>
<td>Reading Day</td>
</tr>
<tr>
<td>7, 10 &amp; 11</td>
<td>Specially Scheduled Final Examinations</td>
</tr>
<tr>
<td>12</td>
<td>Last day of Faculty Obligation</td>
</tr>
<tr>
<td>20</td>
<td>Graduation</td>
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</tbody>
</table>

Subject to change

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### FOREWORD

This catalog provides information for students, faculty, and administrators regarding the College's academic programs, policies, and services. Naturally, some of the information will change, and new information will be introduced before the next catalog is printed. The most current information can be found on our website at [www.middlesexcc.edu](http://www.middlesexcc.edu). Because this is a two-year catalog, a supplement may be issued in July 2004. It will include updated information on academic programs, calendars, tuition and fees, policies and services. The supplement will be distributed to students, faculty and the administration. The Office of the Registrar prepares the catalog. Any questions about its contents should be directed to the Registrar in Chambers Hall.

### VISITORS

Directions are available at the Campus Police Headquarters at the Gateway entrance to the College on Woodbridge Avenue. All visitors may obtain a visitor’s pass at the headquarters, entitling them to park in designated parking lots.

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### 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  
215.662.5606

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, Joint Review Committee on Education in Radiology Technology, American Medical Association Committee on Allied Health Education and Accreditation, and National League for Nursing. In addition, the Dietetic Technology Program is granted accreditation by the Commission on Accreditation for Dietetics Education of the American Dietetic Association, and our Paralegal Studies Program is approved by the American Bar Association.
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.

ADDRESS

Middlesex County College
2600 Woodbridge Avenue
P.O. Box 3050
Edison, New Jersey 08818-3050
http://www.middlesexcc.edu

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.

DIRECTORY INFORMATION

<table>
<thead>
<tr>
<th>Office</th>
<th>Building</th>
<th>Telephone</th>
</tr>
</thead>
<tbody>
<tr>
<td>Academic Advising Center</td>
<td>Johnson Learning Center</td>
<td>732.906.2596</td>
</tr>
<tr>
<td>Admissions and Recruitment Office</td>
<td>Chambers Hall</td>
<td>732.906.2510</td>
</tr>
<tr>
<td>Bursar</td>
<td>Chambers Hall</td>
<td>732.906.2572</td>
</tr>
<tr>
<td>Corporate and Community Education</td>
<td>West Hall</td>
<td>732.906.2556</td>
</tr>
<tr>
<td>Counseling and Career Services</td>
<td>Edison Hall</td>
<td>732.906.2546</td>
</tr>
<tr>
<td>Financial Aid Office</td>
<td>South I</td>
<td>732.906.2520</td>
</tr>
<tr>
<td>Health Services</td>
<td>South II</td>
<td>732.906.2530</td>
</tr>
<tr>
<td>The Institute</td>
<td>Instructional Resources Center</td>
<td>732.906.4681</td>
</tr>
<tr>
<td>Physical Education Center</td>
<td>Physical Education Center</td>
<td>732.906.2558</td>
</tr>
<tr>
<td>Office of the Registrar</td>
<td>Chambers Hall</td>
<td>732.906.2523</td>
</tr>
<tr>
<td>Testing Center</td>
<td>Johnson Learning Center</td>
<td>732.906.2508</td>
</tr>
</tbody>
</table>
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 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.
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, chairpersons/directors and faculty members of the Assembly are nominated and elected through the Divisional Councils and appointed by the chairperson of the Assembly. Students interested in participating in the Assembly should contact the Assembly chairperson (through the office of the Assembly, Raritan Hall Room 122, 732.906.4239, or X4239 from a campus phone), the chairperson 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 chairperson of their Divisional Council or their Division Dean. Student elections for these governance positions are held annually in February by the respective divisions.

COLLEGE AND DIVISION HOURS

College Hour
The College Hour is the time 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.

Division Hour
The Division Hour is the time when departments and divisions meet for co-curricular programs. Generally, no formal classes are scheduled at this time, 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. Over the years, the Foundation has helped thousands of students reach their personal and academic goals by providing financial aid and scholarships. In 1984, the Foundation began an ambitious $10 million Endowment Campaign called Funding for the Future. Currently, the campaign has raised nearly $5 million. Interest earned on these contributions is used for need-based and merit-based scholarships, seed money for new and innovative student programs and services and Alumni Association support.

Each year, the Foundation allocates more than $250,000 to the College for financial aid and special programs. The Foundation depends on the strong support of a dedicated Board of Directors made up of nearly 100 directors and trustees. The Foundation also holds three fund-raising events annually: the Scholarship Ball, the Night at the Races, and the Golf Outing, which generate income that contributes to the financial aid of more than 400 students.
Expenses and Financial Aid

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. 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.

Requests for transcripts and graduation applications will be processed only after all financial obligations to the College have been satisfied.

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
### Tuition and Fees
The College reserves the right to change these rates for subsequent semesters.

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<th>Category</th>
<th>Fee</th>
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<tbody>
<tr>
<td>Tuition</td>
<td>Middlesex County Residents : $73.50 per credit or credit equivalent</td>
</tr>
<tr>
<td></td>
<td>Out of County Residents : $147.00 per credit or credit equivalent</td>
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<tr>
<td>Fees</td>
<td>General Service</td>
</tr>
<tr>
<td></td>
<td>Middlesex County Residents : $9.00 per credit or credit equivalent</td>
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<td></td>
<td>Out of County Residents : $18.00 per credit or credit equivalent</td>
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<tr>
<td></td>
<td>Student Service</td>
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<tr>
<td></td>
<td>Middlesex County Residents : $3.50 per credit or credit equivalent</td>
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<td></td>
<td>Out of County Residents : $7.00 per credit or credit equivalent</td>
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<td></td>
<td>Technology</td>
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<tr>
<td></td>
<td>Middlesex County Residents : $5.00 per credit or credit equivalent</td>
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<td></td>
<td>Out of County Residents : $10.00 per credit or credit equivalent</td>
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### General Expenses

<table>
<thead>
<tr>
<th>Category</th>
<th>Fee</th>
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<tr>
<td>Course Fees</td>
<td>$30 to $250 per course with clinical, laboratory, computer, or other appropriate non-replaceable materials including energy uses. Refer to the schedule bulletin for specific information.</td>
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<tr>
<td>Parking Decal</td>
<td>$25.00 Valid September-August Parking decals are refundable only upon return of the decal.</td>
</tr>
<tr>
<td>Insurance</td>
<td>$17.00 Malpractice Insurance</td>
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<tr>
<td>Admission</td>
<td>$260.00 Middlesex County College Students (full and part time)</td>
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<tr>
<td></td>
<td>Individual Fall or Spring Semester : $25.00</td>
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<td>Summer Session : $15.00</td>
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<td></td>
<td>Winter Session : $10.00</td>
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<td></td>
<td>Family Fall or Spring Semester : $70.00</td>
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<td>Summer Session : $45.00</td>
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<td></td>
<td>Winter Session : $25.00</td>
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<td>Adjuncts, Retirees &amp; Grant</td>
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<td>Individual Annual : $100.00</td>
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<td></td>
<td>Family Annual : $260.00</td>
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<td></td>
<td>Full-Time Faculty, Administrators, Confidential, Police, Staff, Teamsters, Trustees and HS Academy Instructors</td>
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<tr>
<td></td>
<td>Individual Annual : $100.00</td>
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<tr>
<td></td>
<td>Family Annual : $260.00</td>
</tr>
<tr>
<td></td>
<td>Middlesex County College Alumni</td>
</tr>
<tr>
<td></td>
<td>Individual Annual : $130.00</td>
</tr>
<tr>
<td></td>
<td>Family Annual : $330.00</td>
</tr>
<tr>
<td></td>
<td>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.</td>
</tr>
</tbody>
</table>

### Miscellaneous Fees

#### These miscellaneous fees are non-refundable.

<table>
<thead>
<tr>
<th>Category</th>
<th>Fee</th>
</tr>
</thead>
<tbody>
<tr>
<td>Application Fee</td>
<td>$25.00</td>
</tr>
<tr>
<td>Curriculum Change Fee</td>
<td>$10.00</td>
</tr>
<tr>
<td>Late Registration Fee</td>
<td>$40.00</td>
</tr>
<tr>
<td>Graduation Application Fee</td>
<td>$40.00</td>
</tr>
<tr>
<td>Parking Decal</td>
<td>$25.00 Valid September-August Parking decals are refundable only upon return of the decal.</td>
</tr>
<tr>
<td>Official Transcript</td>
<td>$5.00 each</td>
</tr>
<tr>
<td>Reinstatement Penalty</td>
<td>$75.50 per credit Students who attend class without being properly registered may be subject to a $75.50 per credit late registration penalty.</td>
</tr>
</tbody>
</table>

### Special Fees

<table>
<thead>
<tr>
<th>Category</th>
<th>Fee</th>
</tr>
</thead>
<tbody>
<tr>
<td>International Student Fee</td>
<td>$300.00 per semester Fall and Spring semester only</td>
</tr>
<tr>
<td>Dental Hygiene Senior Students Licensing Examination Fees</td>
<td>$140.00 (approximately)</td>
</tr>
<tr>
<td>North East Regional Board</td>
<td>$550.00 (approximately)</td>
</tr>
<tr>
<td>New Jersey License</td>
<td>$75.00</td>
</tr>
<tr>
<td>Advanced Placement-Nursing Phase I</td>
<td>$65.00</td>
</tr>
<tr>
<td>Phase II and III</td>
<td>$135.00</td>
</tr>
</tbody>
</table>

### Books and Supplies

#### These charges are approximate and subject to change.

<table>
<thead>
<tr>
<th>Category</th>
<th>Fee</th>
</tr>
</thead>
<tbody>
<tr>
<td>Automotive Technology Tools</td>
<td>$1,800.00</td>
</tr>
<tr>
<td>Dental Hygiene Instrument Kit</td>
<td>$1,700.00 (approximately)</td>
</tr>
<tr>
<td>Uniform</td>
<td>$200.00 (approximately)</td>
</tr>
<tr>
<td>Dietetic Technology Knives</td>
<td>$20.00 (approximately)</td>
</tr>
<tr>
<td>Engineering Program Drawing Kits</td>
<td>$50.00</td>
</tr>
<tr>
<td>Hotel, Restaurant, and Institution Management</td>
<td></td>
</tr>
<tr>
<td>Knives</td>
<td>$20.00 (approximately)</td>
</tr>
<tr>
<td>Uniform</td>
<td>$70.00</td>
</tr>
<tr>
<td>Media Arts &amp; Design</td>
<td>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</td>
</tr>
<tr>
<td>Medical Laboratory Technology Uniform</td>
<td>$45.00</td>
</tr>
<tr>
<td>Nursing-Joint Program with UMDNJ Uniform</td>
<td>$100.00</td>
</tr>
<tr>
<td>Radiography Education Uniform</td>
<td>$200.00 (approximately)</td>
</tr>
<tr>
<td>Respiratory Care Uniform</td>
<td>$100.00</td>
</tr>
</tbody>
</table>

### Middlesex County College Fitness Club Rates

<table>
<thead>
<tr>
<th>Category</th>
<th>Fee</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fall or Spring Semester</td>
<td>Individual : $25.00 Family : $70.00</td>
</tr>
<tr>
<td>Summer Session</td>
<td>Individual : $15.00 Family : $45.00</td>
</tr>
<tr>
<td>Winter Session</td>
<td>Individual : $25.00 Family : $10.00</td>
</tr>
<tr>
<td>Adjuncts, Retirees &amp; Grant</td>
<td>Individual Annual : $100.00 Family Annual : $260.00</td>
</tr>
<tr>
<td>Middlesex County College Alumni</td>
<td>Individual Annual : $130.00 Family Annual : $330.00</td>
</tr>
<tr>
<td>Swimming Pool</td>
<td>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.</td>
</tr>
<tr>
<td>Racquetball Courts</td>
<td>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</td>
</tr>
</tbody>
</table>
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.

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 Winter session 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.

The recalculation will determine how much of the aid received must be returned to federal and state programs. 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 undischarged 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.

All applicants for federal, state, and college aid must complete the Free Application for Federal Student Aid (FAFSA). This form is available from high schools and the College’s Office of Financial Aid.

Apply electronically through the Internet at http://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 $1,822.
- 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.
Students in most majors may have the opportunity to gain work experience in
Cooperative Education. Call 732.906.2595. The College Career Services Office
assists in locating part-time jobs. Many students work part-time in the
surrounding area. Part-Time Jobs

**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
t heir fields while earning money to help finance their college costs. Contact the College’s Career Services Office for further information 732.906.2595.

**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.

**MIDDLESEX COUNTY COLLEGE GRANTS**

**Middlesex County College Foundation Grants**
- Awards range from $200 to $900.
- The College uses Middlesex County College Foundation guidelines to determine eligibility.
- The student is notified via an award notice from the College.

**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.

**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
- HEAA (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.
**Enrollment Services, 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 in JLC 243 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 JLC Room 243 on a drop-in basis.

**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.

**ADMISSIONS**

**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 have been 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**

CampusCruiser™ is a new online portal available to all students, faculty and staff at Middlesex County College. Using the power of CampusCruiser™, students now have the ability to access both general and personalized college-related information from the WebAdvisor tab. The WebAdvisor contains personalized student information such as schedules, grades, transcripts and financial aid information. New services will be added to the WebAdvisor tab. It is anticipated that students will be able to pay bills and register for classes through this tab.

If you need more information about CampusCruiser™, please e-mail Students_Cruiser@portal.middlesexcc.edu or visit www.middlesexcc.edu/campuscruiser.

**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

Your community service skills will be put to good use in the Community Scholars Corps. Middlesex is a participating member of AmeriCorps, the national volunteer service program that strives to address the unmet needs of local communities. As a Corps member, you may tutor youngsters, organize educational programs, operate a children’s community garden, or participate in other community-oriented activities. In addition, you will take part in a special course that links your community service to a deeper understanding of the democratic process. You may be eligible for a stipend, scholarship, or additional credits depending on your level of commitment. For more information, contact Professor Patrick Donohue, Department of History and Social Behavior; at 732.906.3107.

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 E. 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.

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.

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

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

If you are currently enrolled in a degree or certificate program, Open College or Intensive English as a Second Language, you are eligible to register in April for the fall semester and November for the spring semester. You are encouraged to meet with a faculty advisor to select classes each semester. The advisor assists you with course selections and approves your schedule.

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

As a new student, you are given a registration appointment once you are admitted to the College and have taken the College Placement Test. Faculty advisors assist you at registration by answering questions about the College and helping you choose appropriate classes.

New and Returning Non-Matriculated Part-Time Students

New part-time students, and those currently enrolled who have not been admitted to a degree or certificate program (non-matriculated), may register by mail, fax, telephone and in-person beginning two weeks after current students in April for the fall semester and November for the spring semester.

The master class schedules are also available on the Middlesex website.

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. 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 and fees 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 Office of the Registrar certifies enrollment to outside agencies such as the Social Security Administration. If you need to have your enrollment certified, fill out a Request for Certification of Enrollment form and submit it to the Office. The Office also reports unsatisfactory progress to the Veterans Administration.
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
At midterm, you will be notified of your progress in your classes. At the end of each semester, a student copy of your academic transcript will be mailed to your home. 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. You may also access your grades via T-REG by calling 732.767.1723 or 732.906.4247.

WITHDRAWAL FROM A COURSE
If you decide to withdraw from a 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 by using the T-REG (telephone registration) system, or by completing an ADD/DROP Change form and submitting it to the Office of the Registrar, or by using Web Advisor. 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 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 chairperson, 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.

Eleventh day through the end of the withdrawal period:
You may drop a course 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 chairperson, 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 need to withdraw from all of your courses, you must go to the Department of Counseling and Career Services in Edison Hall, Room 100, complete the proper withdrawal form and confer with one of the counselors. 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 10.

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 8.

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
The College offers one of the largest summer programs in the State. The program offers more than 350 classes in eight different major sessions: three 4-week day sessions, two 6-week day sessions, one 5-week evening session, one 7-week evening session covering various parts of the summer months and a full-length 13-week evening session. Students from more than 100 different colleges and universities enroll in summer classes at Middlesex.

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 áreas 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 at Middlesex University, London, The Complutense University in Madrid, The University of Bourgogne in Dijon, France, The University of Urbino in Italy, and LaSerena University in LaSerena, Chile.

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. 732.906.2531. 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. Students enrolled in Open College-Open Plans of Study are not eligible to receive veterans benefits.

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 appgarb@rci.rutgers.edu. For more information, visit us on the web at www.armyrotc.rutgers.edu/home.html

WEB ADVISOR

Web Advisor gives students, staff, and the community access to Middlesex County College databases.

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. 732.906.4188.
Community Outreach

Career Training Center
The Career Training Center provides adults with opportunities to enhance their present career or prepare for a new career through computer-based programs. Designed to meet the needs of businesses, these programs vary from 11 weeks to 22 weeks in duration, and are available in both day and evening sessions.

The Center offers:

Business Technology Programs
- Computerized Medical Office Program
- Computerized Accounting (PeachTree, QuickBooks)
- Software Technology Specialist (Web Page Design)

Information Technology Programs
- Microsoft Networking Engineer (MCP/MCSE)
- Help Desk Support Technician (A+/MOUS)

All students are offered career development seminars which review resume preparation, interviewing, and job search skills. These interactive sessions enhance employability 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 was opened in April 1980. It 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 Center provides career assessment, admissions, registration, financial aid counseling, computer training, tutoring services, English as a second language placement and college placement testing.

The Center is the site for a wide range both of credit and non-credit course offerings as well as programs of the Career Training Center. The courses are scheduled at convenient times, days, evenings and Saturdays. Community and business input is always welcome and is used to develop future course offerings.

The program is an example of the Center's motto "Educate to Elevate," which is manifested through the varied services and programs available at the Center. The Center is located at 140 New Street, New Brunswick, NJ 08901. 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, registration, financial aid counseling, computer training, tutoring services, English as a second language placement and college placement testing.

The Center is the site for a wide range both of credit and non-credit course offerings as well as programs of the Career Training Center. The courses are scheduled at convenient times, days, evenings and Saturdays. Community and business input is always welcome and is used to develop future course offerings.

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The Perth Amboy Center provides academic offerings which include a full range of Engli...
■ **Community**

Our Community Programs offer a wealth of enrichment in the areas of Health and Fitness, Management, Dance, Cultural Arts, Finance and Law, Parenting, and Home Improvement. There are no prerequisites and adults of all ages are welcome to participate.

■ **Summer Camp**

*Camp Middlesex*, for children ages 6-18, offers over 50 different specialty camps that are designed to delight your children as they learn and develop new skills. Enrichment programs include theatre, computers, communications, magic, juggling, science, chess, modeling and the arts. A comprehensive sports program is offered that features basketball, tennis, soccer, golf and karate. Both full- and half-day programs are available, as well as an extended day option, for the convenience of working parents. For information on Professional and Community Programs, call 732.906.2556.

**Job Search Program**

Job Search is designed to meet the job placement needs of Work First New Jersey participants. Employment opportunities are presented with the objective of finding a career, not just short-term employment. Students are provided with instruction in job search activities.

The program is only 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.

The Institute offers a comprehensive medical coding program for medical offices and health care organizations, including UMDNJ.

A partner with the New Jersey Department of Labor, The Institute provides its clients training assessments, program delivery and assistance with application for state funding.

For further information on The Institute's services, call 732.906.4681.
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 prioritize 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 relative 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
  - FRED
  - HIS
  - LNC
  - PHI
  - SOC
  - 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 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
  - FRED
  - 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 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 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.
Part-time students must satisfactorily complete all required remedial courses in the following areas:

- English or mathematics may be taken prior to successful completion of the College Placement Test.

Students are working to correct basic skills deficiencies in reading, writing, math computation and elementary algebra.

The following policies are designed to provide the best academic path for students:

- PAA scores will not be accepted as a basis for exempting prospective students from 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 instead of the College 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.

REMEDICATION POLICIES

Overall Policy

The following policies are designed to provide the best academic path for students who are working to correct basic skills deficiencies 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.

2. Part-time students must satisfactorily complete all required remedial 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
- Mecontronics
- 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

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 (CLEP) 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 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

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

College credit can be awarded for the College Level Examination Program (CLEP). For further information, call the Testing Center, 732.906.2508.

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 chairperson 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 chairperson 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 (USAIFI)/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 USAIFI/DANTES tests is as follows: The College will grant credit to students who achieve a rating of “S” (Satisfactory) or “D” (With Distinction) in USAIFI/DANTES courses where the measure of achievement is an end-of-course test or a subject examination. Where the measure of achievement is a USAIFI/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. All equivalent courses taken at another institution will be awarded and recorded regardless of applicability to your current major and degree requirements. Only letter grades of “C” and above are accepted.

Prerequisites

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

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 chairperson 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.
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 general college requirements.* 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 6 credits in the humanities.
3. A minimum of 6 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
- Frank M. Chambers Award for Academic Achievement
This award for academic excellence is presented each year at Commencement to those graduates who have achieved the highest 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 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 graduates 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
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

APELLATE COURT
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 charges which can result in suspension from the College.

**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, 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 chairperson. 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**

<table>
<thead>
<tr>
<th>Honor Points</th>
<th>Grade Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>A</td>
</tr>
<tr>
<td>3.5</td>
<td>B+</td>
</tr>
<tr>
<td>3</td>
<td>B</td>
</tr>
<tr>
<td>2.5</td>
<td>C+</td>
</tr>
<tr>
<td>2</td>
<td>C</td>
</tr>
<tr>
<td>1</td>
<td>D</td>
</tr>
<tr>
<td>0</td>
<td>E</td>
</tr>
<tr>
<td>0</td>
<td>F</td>
</tr>
<tr>
<td>0</td>
<td>I</td>
</tr>
<tr>
<td>0</td>
<td>N</td>
</tr>
<tr>
<td>0</td>
<td>S</td>
</tr>
<tr>
<td>0</td>
<td>T</td>
</tr>
<tr>
<td>0</td>
<td>W</td>
</tr>
<tr>
<td>0</td>
<td>X</td>
</tr>
</tbody>
</table>

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.
Repeateed 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 provided the repeat is due to a failure in the course.

Nursing students should refer to page 78 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:

\[
\text{GPT (Grade Point Total)} = \frac{\text{GHR (Graded Hours - Total credits for which grades were given)}}{	ext{Number of courses}}
\]

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:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Course</th>
<th>Credits</th>
<th>Honor points per credit</th>
<th>Course honor points</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>1</td>
<td>4</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>B</td>
<td>1</td>
<td>3</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>C</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>D</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>F</td>
<td>1/2</td>
<td>0</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>5</td>
<td>10</td>
<td>GPT</td>
<td>10</td>
<td></td>
</tr>
</tbody>
</table>

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.

\[
\text{Your GPA} = \frac{10}{5} = 2.00
\]

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

<table>
<thead>
<tr>
<th>Grade</th>
<th>Course</th>
<th>Credits</th>
<th>Honor points per credit</th>
<th>Course honor points</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>English I</td>
<td>3</td>
<td>1</td>
<td>12</td>
</tr>
<tr>
<td>B</td>
<td>Child Psy</td>
<td>3</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>C</td>
<td>Gen Chem I</td>
<td>4</td>
<td>1</td>
<td>8</td>
</tr>
<tr>
<td>W</td>
<td>Prin of Econ</td>
<td>0</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>D</td>
<td>Physical Ed</td>
<td>1/2</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>11 GHR</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>30 GPT</td>
</tr>
</tbody>
</table>

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 “T” (Incomplete), or “N” (Not evaluated) will disqualify students for an evaluation period. When an “T” 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, intersession, 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
- If a student has attempted between 24 and 39 credits, Below 1.60 = Academic Probation
- If a student has attempted between 40 or more credits, Below 1.80 = Academic Probation

Developmental Courses

A student whose schedule includes developmental (credit equivalent) courses is expected to earn at least a 2.00 term average in all 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 occurs when a student who has been readmitted following Academic Suspension or Dismissal receives a term GPA of less than 2.00 in any subsequent semester.

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 STATUSUES

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-admitment 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 chairperson, 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-admitment 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 chairperson, 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 Chairperson 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
Students who have been academically dismissed are prohibited from enrolling at the College for a minimum period of three 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 chairperson of the course. All approved grade changes must be submitted to the Office of the Registrar within one year of the original grade assignment.

Withdrawal

Administrative Withdrawal
Full-time students who receive “N” grades in all course work will be administratively withdrawn. They are responsible for tuition and fees charged and must reapply and be approved for admission before enrolling full-time in a subsequent semester.
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" (p.24). 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.

**Conduct**

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. Upon admission to the College, you accept an unqualified commitment to adhere to such standards and to conduct yourself in a manner that reflects pride in yourself and the College Academic dishonesty, abuse of property and possession of alcohol or illegal drugs are examples of actions that violate the College's standards and are causes for 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.
Currently enrolled students may withhold disclosure of any category of information under the Family Educational Rights and Privacy Act of 1974. To withhold disclosure, written notification must be received in the Office of the 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” indicated individual approval for disclosure. A new form for nondisclosure must be completed each academic year.

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 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.

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**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.**

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<td>47</td>
</tr>
<tr>
<td>Technical Graphics</td>
<td>Mechanical Engineering Technology</td>
<td>73</td>
</tr>
<tr>
<td>Telecommunications</td>
<td>Telecommunications Networking Technology</td>
<td>92</td>
</tr>
<tr>
<td>Theatre</td>
<td>Fine Arts - Theatre Option</td>
<td>56</td>
</tr>
<tr>
<td>Water/Wastewater Treatment</td>
<td>Environmental Technology</td>
<td>52</td>
</tr>
<tr>
<td>Web Design</td>
<td>Internet/Web Page Development</td>
<td>63</td>
</tr>
<tr>
<td>Dietetic Technology</td>
<td>Culinary Arts - Dietary Technology</td>
<td>45</td>
</tr>
<tr>
<td>Dietetic Technology</td>
<td>Culinary Arts - Culinary Arts Option</td>
<td>60</td>
</tr>
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<td>Dietetic Technology</td>
<td>Culinary Arts - Dietetic Technology</td>
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<tr>
<td>Food</td>
<td>Culinary Arts - Culinary Arts Option</td>
<td>60</td>
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<tr>
<td>Graphic Arts</td>
<td>Media Arts &amp; Design</td>
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</tr>
<tr>
<td>Graphic Design</td>
<td>Media Arts &amp; Design</td>
<td>75</td>
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<tr>
<td>Hazardous Waste</td>
<td>Media Arts &amp; Design</td>
<td>75</td>
</tr>
<tr>
<td>Hotel/Motel Management</td>
<td>Hotel, Restaurant and Institution Management - Hotel-Motel Management Option</td>
<td>61</td>
</tr>
<tr>
<td>Industrial Engineering</td>
<td>Mechanical Engineering Technology</td>
<td>74</td>
</tr>
<tr>
<td>Italian</td>
<td>Liberal Arts - Modern Language Option</td>
<td>67</td>
</tr>
<tr>
<td>Journalism</td>
<td>Liberal Arts - Journalism Option</td>
<td>67</td>
</tr>
<tr>
<td>Management</td>
<td>Biotechnology</td>
<td>30</td>
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<tr>
<td>Mechanical</td>
<td>Medical Laboratory Technology</td>
<td>77</td>
</tr>
<tr>
<td>Manufacture</td>
<td>Medical Laboratory Technology</td>
<td>77</td>
</tr>
<tr>
<td>Mathematical</td>
<td>Medical Laboratory Technology</td>
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</tr>
<tr>
<td>Mathematics</td>
<td>Liberal Arts - Modern Language Option</td>
<td>67</td>
</tr>
<tr>
<td>Music</td>
<td>Fine Arts - Music Option</td>
<td>56</td>
</tr>
<tr>
<td>Chemical Technology</td>
<td>Medical Laboratory Technology</td>
<td>77</td>
</tr>
<tr>
<td>Liberal Arts</td>
<td>Liberal Arts - Modern Language Option</td>
<td>67</td>
</tr>
<tr>
<td>Marketing</td>
<td>Liberal Arts - Modern Language Option</td>
<td>67</td>
</tr>
<tr>
<td>Physics</td>
<td>Physical Education</td>
<td>67</td>
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<tr>
<td>Political Science</td>
<td>Liberal Arts - Political Science Option</td>
<td>44</td>
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<tr>
<td>Pre-Medical</td>
<td>Pre-Professional Biology</td>
<td>31</td>
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<tr>
<td>Pre-Pharmacy</td>
<td>Pre-Professional Pharmacy</td>
<td>35</td>
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<tr>
<td>Pre-Veterinarian</td>
<td>Pre-Professional Veterinary</td>
<td>31</td>
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<tr>
<td>Psychology</td>
<td>Liberal Arts - Psychology</td>
<td>68</td>
</tr>
<tr>
<td>Physical Education</td>
<td>Liberal Arts - Physical Education/Recreation Degree Option</td>
<td>67</td>
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<tr>
<td>Radiography</td>
<td>Liberal Arts - Physical Education/Recreation Degree Option</td>
<td>67</td>
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<tr>
<td>Restaurant Care</td>
<td>Respiratory Care Joint Program with the University of Medicine and Dentistry of New Jersey, Respiratory Therapy Department</td>
<td>88</td>
</tr>
<tr>
<td>Retail</td>
<td>Restaurant and Institution Management - Restaurant Foodservice Management Option</td>
<td>62</td>
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<tr>
<td>Sanitary Inspector</td>
<td>Environmental Technology</td>
<td>52</td>
</tr>
<tr>
<td>Social Sciences</td>
<td>Social and Rehabilitation Services</td>
<td>89</td>
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<tr>
<td>Sociology</td>
<td>Liberal Arts - Social Sciences Option</td>
<td>68</td>
</tr>
<tr>
<td>Spanish</td>
<td>Liberal Arts - Modern Language Option</td>
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<tr>
<td>Special Education</td>
<td>Education Practitioner</td>
<td>47</td>
</tr>
<tr>
<td>Structural Design</td>
<td>Civil/Construction Engineering Technology - Land Surveying must accompany</td>
<td>37</td>
</tr>
<tr>
<td>Surveying</td>
<td>Education Practitioner</td>
<td>47</td>
</tr>
<tr>
<td>Teacher (Pre-K)</td>
<td>Liberal Arts - Education Option</td>
<td>47</td>
</tr>
<tr>
<td>Teacher (K-12)</td>
<td>Education Practitioner</td>
<td>47</td>
</tr>
<tr>
<td>Teacher Assistant</td>
<td>Education Practitioner</td>
<td>47</td>
</tr>
<tr>
<td>Technical Graphics</td>
<td>Mechanical Engineering Technology</td>
<td>73</td>
</tr>
<tr>
<td>Telecommunications</td>
<td>Telecommunications Networking Technology</td>
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<td>Theatre</td>
<td>Fine Arts - Theatre Option</td>
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<td>Environmental Technology</td>
<td>52</td>
</tr>
<tr>
<td>Web Design</td>
<td>Internet/Web Page Development</td>
<td>63</td>
</tr>
</tbody>
</table>
Accounting

ACCOUNTING & LEGAL STUDIES DEPARTMENT

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 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?
You must demonstrate proficiency in keyboarding or typing 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. 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 for program completion. Courses may have prerequisite and corequisite requirements. Check course descriptions for details.

<table>
<thead>
<tr>
<th>Courses</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACC 101 FINANCIAL ACCOUNTING</td>
<td>4</td>
</tr>
<tr>
<td>BUS 101 BUSINESS ORGANIZATION AND MANAGEMENT</td>
<td>3</td>
</tr>
<tr>
<td>BUS 107 COMPUTER APPLICATIONS FOR BUSINESS</td>
<td>3</td>
</tr>
<tr>
<td>ENG 121 ENGLISH COMPOSITION I</td>
<td>3</td>
</tr>
<tr>
<td>MAT - Mathematics Elective</td>
<td>3-4</td>
</tr>
<tr>
<td>ACC 102 MANAGERIAL ACCOUNTING</td>
<td>4</td>
</tr>
<tr>
<td>BUS 201 BUSINESS LAW I</td>
<td>3</td>
</tr>
<tr>
<td>ENG 122 ENGLISH COMPOSITION II</td>
<td>3</td>
</tr>
<tr>
<td>Humanities Elective</td>
<td>3</td>
</tr>
<tr>
<td>Social Science Elective</td>
<td>3</td>
</tr>
<tr>
<td>ACC 202 COST ACCOUNTING</td>
<td>3</td>
</tr>
<tr>
<td>ACC 211 INTERMEDIATE ACCOUNTING I</td>
<td>4</td>
</tr>
<tr>
<td>BUS 202 BUSINESS LAW II</td>
<td>3</td>
</tr>
<tr>
<td>ECO 201 PRINCIPLES OF ECONOMICS I</td>
<td>3</td>
</tr>
<tr>
<td>Physical/Health Ed Elective</td>
<td>1-3</td>
</tr>
<tr>
<td>Science Elective</td>
<td>3-4</td>
</tr>
</tbody>
</table>

Choose one course of the following (3 credits each):

| ACC 203 ACCOUNTING SYSTEMS AND PROCEDURES | 3       |
| ACC 206 TAX ACCOUNTING | 3       |
| ACC 208 ACCOUNTING FIELD EXPERIENCE | 3       |
| ACC 212 INTERMEDIATE ACCOUNTING II | 4       |
| ACC 280 SENIOR ACCOUNTING SEMINAR | 3       |
| ECO 202 PRINCIPLES OF ECONOMICS II | 3       |
| Humanities or Social Science Elective | 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.

<table>
<thead>
<tr>
<th>Courses</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACC 101 FINANCIAL ACCOUNTING</td>
<td>4</td>
</tr>
<tr>
<td>ACC 102 MANAGERIAL ACCOUNTING</td>
<td>4</td>
</tr>
<tr>
<td>ACC 202 COST ACCOUNTING</td>
<td>4</td>
</tr>
<tr>
<td>ACC 211 INTERMEDIATE ACCOUNTING I</td>
<td>4</td>
</tr>
<tr>
<td>Recommended Elective:</td>
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</tr>
<tr>
<td>ACC 212 INTERMEDIATE ACCOUNTING II</td>
<td>4</td>
</tr>
</tbody>
</table>

TOTAL CREDITS: 20

1 Prerequisite or Corequisite: OAD 010, OAD 106, BUS 010, keyboarding course with a grade of ‘C’ or higher or Department waiver.
2 BUS 115, Mathematics of Finance, will satisfy the math requirement. Students considering transfer to a baccalaureate program should consult an academic advisor as to other math choices.
3 You may choose a science course for which you have the appropriate academic background from Biology, Chemistry, Environmental Science, Physics and Science.
4 Requires permission of department chairperson.
5 Prerequisite or Corequisite: ACC 212.
### Automotive Technology

**DEGREE PROGRAM**

Below are required courses for program completion. Courses may have prerequisite and corequisite requirements. Check course descriptions for details.

<table>
<thead>
<tr>
<th>Courses</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>AUT 111 MINOR AUTOMOTIVE SERVICES</td>
<td>3</td>
</tr>
<tr>
<td>AUT 115 AUTOMOTIVE BRAKE SYSTEMS</td>
<td>2</td>
</tr>
<tr>
<td>AUT 117 AUTOMOTIVE ELECTRICAL SYSTEMS</td>
<td>3</td>
</tr>
<tr>
<td>ENG 121 ENGLISH COMPOSITION I</td>
<td>3</td>
</tr>
<tr>
<td>MAT 107 MATHEMATICS I</td>
<td>3</td>
</tr>
<tr>
<td>Physical/Health Ed Elective</td>
<td>1-3</td>
</tr>
<tr>
<td>AUT 108 AUTOMOTIVE TECHNOLOGY WORK EXPERIENCE I (A 15 week cooperative education course)</td>
<td>3</td>
</tr>
<tr>
<td>AUT 122 ANALYSIS AND TUNE UP</td>
<td>3</td>
</tr>
<tr>
<td>AUT 124 AUTOMOTIVE HVAC SYSTEMS</td>
<td>3</td>
</tr>
<tr>
<td>AUT 126 ALIGNMENT, SUSPENSION AND STEERING SYSTEMS</td>
<td>2</td>
</tr>
<tr>
<td>CSC 105 COMPUTER APPLICATIONS AND SYSTEMS</td>
<td>3</td>
</tr>
<tr>
<td>ENG 122 ENGLISH COMPOSITION II</td>
<td>3</td>
</tr>
<tr>
<td>AUT 208 AUTOMOTIVE TECHNOLOGY WORK EXPERIENCE II (A 15 week cooperative education course)</td>
<td>3</td>
</tr>
<tr>
<td>AUT 211 STANDARD TRANSMISSION &amp; DRIVE TRAIN</td>
<td>3</td>
</tr>
<tr>
<td>AUT 213 AUTOMATIC TRANSMISSION</td>
<td>3</td>
</tr>
<tr>
<td>AUT 216 FUEL AND EMISSION SYSTEMS</td>
<td>3</td>
</tr>
<tr>
<td>AUT 217 ENGINE DIAGNOSTICS &amp; REPAIR I</td>
<td>3</td>
</tr>
<tr>
<td>Humanities or Social Science Elective</td>
<td>3</td>
</tr>
<tr>
<td>AUT 226 AUTOMATIC TRASMISSION II</td>
<td>2</td>
</tr>
<tr>
<td>AUT 228 ENGINE DIAGNOSTICS &amp; REPAIR II</td>
<td>3</td>
</tr>
<tr>
<td>AUT 229 AUTOMOTIVE ELECTRICITY AND ELECTRONICS</td>
<td>3</td>
</tr>
<tr>
<td>PHY 101 PRINCIPLES OF PHYSICS</td>
<td>4</td>
</tr>
<tr>
<td>Social Science Elective</td>
<td>3</td>
</tr>
</tbody>
</table>

**TOTAL CREDITS : 64-66**

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*Students will participate in a three-week winter internship experience.*

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- **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.

- **If I major in Automotive Technology, what degree can I earn?**
  The Associate in Applied Science Degree prepares you to begin a job as an automotive technician.

- **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.
Biology Department

Degree Program
Below are required courses for program completion. Courses may have prerequisite and corequisite requirements. Check course descriptions for details.

<table>
<thead>
<tr>
<th>Courses</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>BIO 119 Biology for Technology I</td>
<td>4</td>
</tr>
<tr>
<td>CHM 117 Chemistry I</td>
<td>4</td>
</tr>
<tr>
<td>ENG 121 English Composition I</td>
<td>3</td>
</tr>
<tr>
<td>MAT 107 Mathematics I</td>
<td>3</td>
</tr>
<tr>
<td>SCI 103 Safety and FDA Regulations for Lab Technicians</td>
<td>1</td>
</tr>
<tr>
<td>Physical/Health Ed Elective</td>
<td>1-3</td>
</tr>
<tr>
<td>BIO 120 Biology for Technology II</td>
<td>4</td>
</tr>
<tr>
<td>CHM 118 Chemistry II</td>
<td>4</td>
</tr>
<tr>
<td>ENG 122 English Composition II</td>
<td>3</td>
</tr>
<tr>
<td>MAT 108 Mathematics II</td>
<td>3</td>
</tr>
<tr>
<td>SCI 104 Technical Communication</td>
<td>1</td>
</tr>
<tr>
<td>CSC 105 Computer Applications and Systems</td>
<td>3</td>
</tr>
<tr>
<td>BIO 221 Microbiology</td>
<td>4</td>
</tr>
<tr>
<td>CHM 203 Principles of Organic Chemistry</td>
<td>3</td>
</tr>
<tr>
<td>BIO 205 Methods in DNA Technology</td>
<td>3</td>
</tr>
<tr>
<td>SCI 215 Current Good Manufacturing Practices</td>
<td>1</td>
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<tr>
<td>and Quality Control for Biotechnology</td>
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</tr>
<tr>
<td>SPE 121 Fundamentals of Public Speaking</td>
<td>3</td>
</tr>
<tr>
<td>Social Science Elective</td>
<td>3</td>
</tr>
<tr>
<td>BIO 226 Biological Technology Cooperative Education</td>
<td>3</td>
</tr>
<tr>
<td>BIO 224 Applied Microbiology</td>
<td>4</td>
</tr>
<tr>
<td>CHM 220 Methods of Chromatographic Separation</td>
<td>4</td>
</tr>
<tr>
<td>BIO 206 Protein Purification &amp; Tissue Culture Techniques</td>
<td>3</td>
</tr>
<tr>
<td>SCI 216 Current Issues and Opportunities</td>
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</tr>
<tr>
<td>in Lab Technology</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>TOTAL CREDITS: 66-68</td>
<td></td>
</tr>
</tbody>
</table>

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 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.
BIOLOGY DEPARTMENT

BIOLOGY OPTION - SCIENCE TRANSFER DEGREE

Below are required courses for program completion. Courses may have prerequisite and corequisite requirements. Check course descriptions for details.

Courses Credits
BIO 123 GENERAL BIOLOGY I 4
CHM 123 GENERAL CHEMISTRY I 4
ENG 121 ENGLISH COMPOSITION I 3
MAT 129 PRECALCULUS I 4
  Physical/Health Ed Elective 1-3
BIO 124 GENERAL BIOLOGY II 4
CHM 124 GENERAL CHEMISTRY II 4
ENG 122 ENGLISH COMPOSITION II 3
MAT 131 ANALYTIC GEOMETRY AND CALCULUS I 4
BIO 221 MICROBIOLOGY 4
PHY 121 GENERAL PHYSICS I 4
  Social Science Elective 3
  Humanities Elective 3
CSC 105 COMPUTER APPLICATIONS AND SYSTEMS 3
BIO - Biology Elective 2 4
PHY 122 GENERAL PHYSICS II 4
  Social Science Elective 3
  Humanities Elective 3
  Science/Math Elective 3 3-4

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
BIO 123 GENERAL BIOLOGY I 4
CHM 123 GENERAL CHEMISTRY I 4
ENG 121 ENGLISH COMPOSITION I 3
MAT 129 PRECALCULUS I 4
  Physical/Health Ed Elective 1-3
BIO 124 GENERAL BIOLOGY II 4
CHM 124 GENERAL CHEMISTRY II 4
ENG 122 ENGLISH COMPOSITION II 3
MAT 131 ANALYTIC GEOMETRY AND CALCULUS I 4
BIO 111 HUMAN ANATOMY AND PHYSIOLOGY I 4
PHY 121 GENERAL PHYSICS I 4
  Social Science Elective 3
  Humanities Elective 3
CSC 105 COMPUTER APPLICATIONS AND SYSTEMS 3
BIO 112 HUMAN ANATOMY AND PHYSIOLOGY II 4
PHY 122 GENERAL PHYSICS II 4
  Social Science Elective 3
  Humanities Elective 3
  Science/Math Elective 4 3-4

TOTAL CREDITS: 66-68

1 MAT 131 ~ MAT 132 recommended.
2 You may select from BIO 224 or BIO 228. Please see course descriptions for appropriate prerequisites.
3 You may select from BIO 228, BIO 226, CHM 223 and MAT 132 or a course with permission of the Department Chairperson. Please see course descriptions for appropriate prerequisites.
4 You may select from BIO 221, BIO 228, CHM 223 and MAT 132 or a course with permission of the Department Chairperson.

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.

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 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?

Contact Professor Przygoda, Department Chair, at 732.906.2592.
Business Administration Degree

(DESIGNED FOR TRANSFER)
BUSINESS ADMINISTRATION & MANAGEMENT DEPARTMENT

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 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?
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. 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.

DEGREE PROGRAM
Below are required courses for program completion. Courses may have prerequisite and corequisite requirements. Check course descriptions for details.

<table>
<thead>
<tr>
<th>Courses</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 121</td>
<td>ENGLISH COMPOSITION I</td>
</tr>
<tr>
<td>MAT-</td>
<td>Mathematics Elective 1</td>
</tr>
<tr>
<td>ACC 101</td>
<td>FINANCIAL ACCOUNTING</td>
</tr>
<tr>
<td>BUS 101</td>
<td>BUSINESS ORGANIZATION AND MANAGEMENT</td>
</tr>
<tr>
<td>ENG 122</td>
<td>ENGLISH COMPOSITION II</td>
</tr>
<tr>
<td>MAT -</td>
<td>Mathematics Elective 1</td>
</tr>
<tr>
<td>ACC 101</td>
<td>MANAGERIAL ACCOUNTING</td>
</tr>
<tr>
<td>ECO 201</td>
<td>PRINCIPLES OF ECONOMICS I</td>
</tr>
<tr>
<td>ECO 202</td>
<td>PRINCIPLES OF ECONOMICS II</td>
</tr>
<tr>
<td>BUS 201</td>
<td>BUSINESS LAW I</td>
</tr>
<tr>
<td>BUS 107</td>
<td>COMPUTER APPLICATIONS FOR BUSINESS 3</td>
</tr>
<tr>
<td>Business Elective 4</td>
<td>3</td>
</tr>
<tr>
<td>Physical/Health Ed</td>
<td>1-3</td>
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<tr>
<td>Humanities Elective 2</td>
<td>3</td>
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<tr>
<td>Science Elective</td>
<td>3</td>
</tr>
<tr>
<td>Free Elective</td>
<td>3</td>
</tr>
<tr>
<td>Business Elective 4</td>
<td>3</td>
</tr>
<tr>
<td>Business Elective 4</td>
<td>3</td>
</tr>
</tbody>
</table>

TOTAL CREDITS : 64-66

1 Students must complete a minimum of 6 credits of Mathematics in one of the following sequences: MAT 123 and MAT 124 or MAT 129 and MAT 131 or MAT 131 and MAT 132 or MAT 131 and MAT 285.
2 Students must complete six credits of Humanities and six credits of Social Science.
3 Computer Applications for Business recommended, students may select an alternate Computer Science course for which they have appropriate academic advisement and preparation in Mathematics.
4 Recommended business electives are as follows: BUS 202, MGT 210, and MKT 201.
NOTE: Students are required to attain a passing grade in OAD 010 or must obtain an approved waiver demonstrating proficiency in keyboarding prior to enrolling in BUS 107. Students who have not satisfied the above must enroll in OAD 010 at the same time they enroll in BUS 107.
Business Software Applications

OFFICE ADMINISTRATION DEPARTMENT

CERTIFICATE PROGRAM

Below are required courses for program completion. Courses may have prerequisite and corequisite requirements. Check course descriptions for details.

<table>
<thead>
<tr>
<th>Courses</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>OAD 101 DOCUMENT PROCESSING I</td>
<td>3</td>
</tr>
<tr>
<td>OAD 102 DOCUMENT PROCESSING II</td>
<td>3</td>
</tr>
<tr>
<td>OAD 110 PRINCIPLES AND APPLICATIONS OF MICROSOFT ACCESS</td>
<td>2</td>
</tr>
<tr>
<td>OAD 113 PRINCIPLES AND APPLICATIONS OF MICROSOFT EXCEL</td>
<td>2</td>
</tr>
<tr>
<td>OAD 114 PRINCIPLES AND APPLICATIONS OF MICROSOFT WORD</td>
<td>2</td>
</tr>
<tr>
<td>OAD 116 PRINCIPLES AND APPLICATIONS OF MICROSOFT POWERPOINT</td>
<td>2</td>
</tr>
<tr>
<td>OAD 223 INTEGRATED SOFTWARE APPLICATIONS 3</td>
<td>3</td>
</tr>
<tr>
<td>Recommended Elective 4</td>
<td>3</td>
</tr>
</tbody>
</table>

TOTAL CREDITS : 20

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, you must show proficiency at the computer keyboard.

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.

Where should I direct specific questions about this program?
Contact Professor Pam, Department Chair, at 732.906.2578.

1 Recommended that this course be taken before the Principles & Application courses. Credit-By-Exam is available for this course. For additional information contact the Testing Center at 732-906-2508 or the Department Chairperson at 732-906-2578.
2 Credit-By-Exam is available for this course. For additional information, contact the Testing Center or the Department Chairperson.
3 Prerequisites are OAD 102 & OAD 110 & OAD 113 & OAD 114 & OAD 116 or OAD 102 & OAD 123.
4 OAD 210 Records Management, recommended.
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 analysts. 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 of 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 732.906.2587.

Degree Program
Below are required courses for program completion. Courses may have prerequisite and corequisite requirements. Check course descriptions for details.

Courses Credits
BIO 119 BIOLOGY I 1 4
CHM 117 CHEMISTRY I 2 4
ENG 121 ENGLISH COMPOSITION I 3
MAT 107 MATHEMATICS I 3 3
PHYSICAL/HEALTH ED ELECTIVE 1-3
BIO 120 BIOLOGY II 4
CHM 118 CHEMISTRY II 4
ENG 122 ENGLISH COMPOSITION II 3
MAT 108 MATHEMATICS II 3
PHY 101 PRINCIPLES OF PHYSICS 4
CHM 203 PRINCIPLES OF ORGANIC CHEMISTRY 3
CHM 219 CLASSICAL VOLUMETRIC & SPECTROPHOTOMETRIC ANALYSIS 5
CSC 105 COMPUTER APPLICATIONS AND SYSTEMS 4 3
SCI 103 SAFETY & FDA REGULATIONS FOR LAB TECHNICIANS 3
SOCIAL SCIENCE ELECTIVE 3
CHM 220 METHODS OF CHROMATOGRAPHIC SEPARATION 4
ENV 221 HAZARDOUS WASTE MANAGEMENT 3
HUMANITIES ELECTIVE 3
SCI 104 TECHNICAL COMMUNICATION 1
TECHNICAL ELECTIVE 3-4
Technical Elective Choices (select one):
CHM 202 BIOCHEMISTRY 5 4
CHM 226 CHEMICAL TECHNOLOGY COOPERATIVE EDUCATION 3
ENV 222 WATER AND WASTEWATER ANALYSIS 3

TOTAL CREDITS: 62-65

Certificate of Achievement

Courses Credits
CHM 117 CHEMISTRY I 4
CHM 118 CHEMISTRY II 2 4
CHM 203 PRINCIPLES OF ORGANIC CHEMISTRY 4
CHM 219 MODERN METHODS OF ANALYSIS I 5
ENG 121 ENGLISH COMPOSITION I 3
ENG 122 ENGLISH COMPOSITION II 3
MAT 107 MATHEMATICS I 3 3
MAT 108 MATHEMATICS II 3
CSC - Computer Science Elective 3

TOTAL CREDITS: 32

1 You must have high school Algebra I or MAT 013 and one year of high school laboratory science before taking this course. 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.
2 You may substitute CHM 123 - CHM 124 for CHM 117 - CHM 118 if you have completed a high school chemistry lab course.
3 You may substitute MAT 123 - MAT 124 or MAT 129 - MAT 131 for MAT 107 - MAT 108.
4 You may substitute CSC 109 or CSC 133 for CSC 105.
5 You may substitute CHM 223 for CHM 202.
### CHEMISTRY OPTION - SCIENCE TRANSFER DEGREE

Below are required courses for program completion. Courses may have prerequisite and corequisite requirements. Check course descriptions for details.

<table>
<thead>
<tr>
<th>Courses</th>
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<tbody>
<tr>
<td>BIO 123 GENERAL BIOLOGY I</td>
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</tr>
<tr>
<td>CHM 123 GENERAL CHEMISTRY I</td>
<td>4</td>
</tr>
<tr>
<td>ENG 121 ENGLISH COMPOSITION I</td>
<td>3</td>
</tr>
<tr>
<td>MAT 129 PRECALCULUS 2</td>
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<tr>
<td>Physical/Health Ed Elective</td>
<td>1-3</td>
</tr>
<tr>
<td>BIO 124 GENERAL BIOLOGY II</td>
<td>4</td>
</tr>
<tr>
<td>CHM 124 GENERAL CHEMISTRY II</td>
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<tr>
<td>ENG 122 ENGLISH COMPOSITION II</td>
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</tr>
<tr>
<td>MAT 131 ANALYTIC GEOMETRY AND CALCULUS I</td>
<td>4</td>
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<tr>
<td>CHM 223 ORGANIC CHEMISTRY I</td>
<td>4</td>
</tr>
<tr>
<td>PHY 121 GENERAL PHYSICS I</td>
<td>4</td>
</tr>
<tr>
<td>CSC - Computer Science Elective</td>
<td>3</td>
</tr>
<tr>
<td>Humanities Elective</td>
<td>3</td>
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<tr>
<td>Social Science Elective</td>
<td>3</td>
</tr>
<tr>
<td>CHM 224 ORGANIC CHEMISTRY II</td>
<td>4</td>
</tr>
<tr>
<td>PHY 122 GENERAL PHYSICS II</td>
<td>4</td>
</tr>
<tr>
<td>General Elective</td>
<td>3</td>
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<tr>
<td>Humanities Elective</td>
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</tr>
<tr>
<td>Social Science Elective</td>
<td>3</td>
</tr>
</tbody>
</table>

TOTAL CREDITS: 65-67

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1 You must have high school algebra I or MAT 013 and one year of high school laboratory biology and one year high school laboratory chemistry before taking this course.

2 You may substitute MAT 131 - MAT 132 for MAT 129 - MAT 131 if you have four years of college prep math.

3 Choose CSC 109 or higher.
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 for Engineering and Technology accredits this program.

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.

DEGREE PROGRAM
Below are required courses for program completion. Courses may have prerequisite and corequisite requirements. Check course descriptions for details.

<table>
<thead>
<tr>
<th>Courses</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MCT 101</td>
<td>INTRODUCTION TO ENGINEERING TECHNOLOGY</td>
</tr>
<tr>
<td>MEC 123</td>
<td>TECHNICAL GRAPHICS/CAD I</td>
</tr>
<tr>
<td>ENG 121</td>
<td>ENGLISH COMPOSITION I</td>
</tr>
<tr>
<td>MAT 129A</td>
<td>PRECALCULUS-A</td>
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<tr>
<td>CIT 125</td>
<td>CONSTRUCTION ESTIMATING</td>
</tr>
<tr>
<td></td>
<td>Physical/Health Education Elective</td>
</tr>
<tr>
<td>CIT 105</td>
<td>STATICS FOR TECHNICIANS</td>
</tr>
<tr>
<td>CMT 124</td>
<td>APPLIED TECHNICAL GRAPHICS/CAD II</td>
</tr>
<tr>
<td>ENG 122</td>
<td>ENGLISH COMPOSITION II</td>
</tr>
<tr>
<td>CIT 104</td>
<td>CONSTRUCTION SURVEYING I</td>
</tr>
<tr>
<td>MAT 129B</td>
<td>PRE-CALCULUS-B</td>
</tr>
<tr>
<td></td>
<td>Humanities Elective</td>
</tr>
<tr>
<td>CIT 203</td>
<td>STRENGTH OF MATERIALS</td>
</tr>
<tr>
<td>CIT 210</td>
<td>SOILS IN CONSTRUCTION</td>
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<tr>
<td>ELT 105</td>
<td>FOUNDATIONS OF ELECTRICAL &amp; ELECTRONICS TECHNOLOGY</td>
</tr>
<tr>
<td>PHY 121</td>
<td>GENERAL PHYSICS I</td>
</tr>
<tr>
<td>MAT 131A</td>
<td>ANALYTIC GEOMETRY &amp; CALCULUS-I (PART A)</td>
</tr>
<tr>
<td>CIT 205</td>
<td>CONSTRUCTION SURVEYING II</td>
</tr>
<tr>
<td>CIT 217</td>
<td>STRUCTURAL DESIGN</td>
</tr>
<tr>
<td>MAT 131B</td>
<td>ANALYTIC GEOMETRY &amp; CALCULUS-I (PART B)</td>
</tr>
<tr>
<td>CIT 212</td>
<td>WATER RESOURCES TECHNOLOGY</td>
</tr>
<tr>
<td>PHY 122</td>
<td>GENERAL PHYSICS II</td>
</tr>
<tr>
<td>CIT 260</td>
<td>CIVIL/CONSTRUCTION DESIGN PROJECT</td>
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<td>Social Science Elective</td>
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TOTAL CREDITS : 67-69

CERTIFICATE PROGRAM

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<tr>
<td>CIT 104</td>
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<tr>
<td>CMT 124</td>
<td>APPLIED TECHNICAL GRAPHICS/CAD II</td>
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<td>CIT 125</td>
<td>CONSTRUCTION ESTIMATING</td>
</tr>
<tr>
<td>MCT 101</td>
<td>INTRODUCTION TO ENGINEERING TECHNOLOGY</td>
</tr>
<tr>
<td>CIT 205</td>
<td>CONSTRUCTION SURVEYING II</td>
</tr>
<tr>
<td>CIT 105</td>
<td>STATICS FOR TECHNICIANS</td>
</tr>
<tr>
<td>CIT 203</td>
<td>STRENGTH OF MATERIALS</td>
</tr>
<tr>
<td>ENG 121</td>
<td>ENGLISH COMPOSITION I</td>
</tr>
<tr>
<td>MAT 129A</td>
<td>PRECALCULUS-A</td>
</tr>
<tr>
<td>MAT 129B</td>
<td>PRECALCULUS-B</td>
</tr>
<tr>
<td>MEC 123</td>
<td>TECHNICAL GRAPHICS/CAD I</td>
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TOTAL CREDITS : 31
### LAND SURVEYING DEGREE OPTION

<table>
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<tbody>
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<td>ENG 121 ENGLISH COMPOSITION I</td>
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<tr>
<td>MAT 129A PRECALCULUS-A</td>
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<tr>
<td>PED/HED PHYSICAL EDUCATION/ HEALTH ELECTIVE</td>
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<tr>
<td>MEC 123 TECHNICAL GRAPHICS/CAD I</td>
<td>3</td>
</tr>
<tr>
<td>MCT 101 INTRODUCTION TO ENGINEERING TECHNOLOGY</td>
<td>2</td>
</tr>
<tr>
<td>ENG 122 ENGLISH COMPOSITION II</td>
<td>3</td>
</tr>
<tr>
<td>MAT 129B PRECALCULUS-B</td>
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</tr>
<tr>
<td>CMT 124 APPLIED TECHNICAL GRAPHICS/CAD II</td>
<td>3</td>
</tr>
<tr>
<td>BUS 201 BUSINESS LAW I</td>
<td>3</td>
</tr>
<tr>
<td>PHY 121 GENERAL PHYSICS I</td>
<td>4</td>
</tr>
<tr>
<td>CSC 105 COMPUTER APPLICATIONS &amp; SYSTEMS</td>
<td>3</td>
</tr>
<tr>
<td>CIT 104 CONSTRUCTION SURVEYING I</td>
<td>3</td>
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<tr>
<td>MAT 131A ANALYTIC GEOMETRY &amp; CALCULUS (PART A)</td>
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</tr>
<tr>
<td>BUS 202 BUSINESS LAW II</td>
<td>3</td>
</tr>
<tr>
<td>CIT 151 URBAN AND SUBURBAN DEVELOPMENT</td>
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<tr>
<td>CIT 205 CONSTRUCTION SURVEYING II</td>
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</tr>
<tr>
<td>CIT 252 BOUNDARY LAW</td>
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<tr>
<td>CIT 212 WATER RESOURCES TECHNOLOGY</td>
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</tr>
<tr>
<td>PHY 122 GENERAL PHYSICS II</td>
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</tr>
<tr>
<td>Social Science Elective</td>
<td>3</td>
</tr>
<tr>
<td>MAT 131B ANALYTIC GEOMETRY &amp; CALCULUS-II (PART B)</td>
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</tbody>
</table>

Choose one of the following electives:

- CIT 125 CONSTRUCTION ESTIMATING;
- MGT 200 PRINCIPLES OF SUPERVISION;
- SBM 120 SMALL BUSINESS MANAGEMENT;
- SCI 108 NATURAL HISTORY OF NEW JERSEY;
- SCI 155 INTRODUCTION TO GEOLOGY & OCEANOGRAPHY;
- SCI 156 INTRODUCTION TO ASTRONOMY;
- SCI 157 INTRODUCTION TO METEOROLOGY | 3/4 |

**TOTAL: 64-67**

**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.
If I major in Computer Aided Drafting, what do I earn?
The Certificate of Achievement.

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 demonstrate competency in algebra II.

How long will it take for me to complete this certificate?
If you do not need developmental coursework, you can complete the certificate in two semesters. Provided you start in the fall semester and you are not required to take any remedial courses.

Where should I direct specific questions about this program?
Contact Professor Rubino, Department Chair, at 732.906.2586.

Certificate Program
Below are required courses for program completion. Courses may have prerequisite and corequisite requirements. Check course descriptions for details.

<table>
<thead>
<tr>
<th>Courses</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MCT 101 INTRODUCTION TO ENGINEERING TECHNOLOGY</td>
<td>2</td>
</tr>
<tr>
<td>MEC 130 MANUFACTURING PROCESSES AND MATERIALS</td>
<td>4</td>
</tr>
<tr>
<td>MEC 123 TECHNICAL GRAPHICS/CAD I</td>
<td>3</td>
</tr>
<tr>
<td>ENG 121 ENGLISH COMPOSITION I</td>
<td>3</td>
</tr>
<tr>
<td>MAT 129A PRECALCULUS-A</td>
<td>2</td>
</tr>
<tr>
<td>MAT 129B PRECALCULUS-B</td>
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<tr>
<td>ELT 105 FOUNDATIONS OF ELECTRICAL &amp; ELECTRONICS TECHNOLOGY</td>
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<td>CIT 125 CONSTRUCTION ESTIMATING</td>
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<td>CMT 124 APPLIED TECHNICAL GRAPHICS/CAD II</td>
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<tr>
<td>MEC 250 SOLID MODELING</td>
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</table>

TOTAL CREDITS : 29
## Computer and Information Systems General Degree Option

Below are required courses for program completion. Courses may have prerequisite and corequisite requirements. Check course descriptions for details.

<table>
<thead>
<tr>
<th>Courses</th>
<th>Credits</th>
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<tbody>
<tr>
<td>CSC 105 COMPUTER APPLICATIONS AND SYSTEMS</td>
<td>3</td>
</tr>
<tr>
<td>CSC 133 INTRODUCTION TO COMPUTER SCIENCE USING C++</td>
<td>4</td>
</tr>
<tr>
<td>ENG 121 ENGLISH COMPOSITION I</td>
<td>3</td>
</tr>
<tr>
<td>MAT 125 MATH FOR DECISION SCIENCES I</td>
<td>3</td>
</tr>
<tr>
<td>OR</td>
<td></td>
</tr>
<tr>
<td>MAT 129 PRECALCULUS</td>
<td>4</td>
</tr>
<tr>
<td>Social Science Elective</td>
<td>3</td>
</tr>
<tr>
<td>Physical/Health Ed Elective</td>
<td>1-3</td>
</tr>
<tr>
<td>CSC 110 MICROCOMPUTER OPERATING SYSTEMS AND ARCHITECTURE</td>
<td>3</td>
</tr>
<tr>
<td>CSC 134 OBJECT ORIENTED PROGRAMMING USING C++</td>
<td>4</td>
</tr>
<tr>
<td>CSC 208 VISUAL BASIC PROGRAMMING</td>
<td>4</td>
</tr>
<tr>
<td>ENG 122 ENGLISH COMPOSITION II</td>
<td>3</td>
</tr>
<tr>
<td>MAT 126 MATH FOR DECISION SCIENCES II</td>
<td>3</td>
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<tr>
<td>OR</td>
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<tr>
<td>MAT 131 ANALYTIC GEOMETRY AND CALCULUS I</td>
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<tr>
<td>CSC 225 SYSTEMS ANALYSIS</td>
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<tr>
<td>CSC 235 DATA SCTRUCTURES</td>
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<tr>
<td>CSC 241 INTERNET APPLICATIONS-HTML//cgi</td>
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</tr>
<tr>
<td>CSC 245 UNIX AND SHELL PROGRAMMING</td>
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</tr>
<tr>
<td>Free Elective 1,2</td>
<td>3</td>
</tr>
<tr>
<td>CSC 200 NETWORKING TECHNOLOGIES</td>
<td>3</td>
</tr>
<tr>
<td>CSC 239 DATABASE SYSTEM CONCEPTS</td>
<td>3</td>
</tr>
<tr>
<td>CSC 246 UNIX AND WEB SERVER ADMINISTRATION</td>
<td>3</td>
</tr>
<tr>
<td>Humanities Elective</td>
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</tr>
<tr>
<td>Free Elective 1,2</td>
<td>3</td>
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**TOTAL CREDITS:** 67-71

### Network Administration and Support Degree Option

<table>
<thead>
<tr>
<th>Courses</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSC 105 COMPUTER APPLICATIONS AND SYSTEMS</td>
<td>3</td>
</tr>
<tr>
<td>CSC 133 INTRODUCTION TO COMPUTER SCIENCE USING C++</td>
<td>4</td>
</tr>
<tr>
<td>ENG 121 ENGLISH COMPOSITION I</td>
<td>3</td>
</tr>
<tr>
<td>MAT 125 MATH FOR DECISION SCIENCES I</td>
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<td>OR</td>
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<td>MAT 129 PRECALCULUS</td>
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<tr>
<td>Social Science Elective</td>
<td>3</td>
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<tr>
<td>Physical/Health Ed Elective</td>
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<tr>
<td>CSC 110 MICROCOMPUTER OPERATING SYSTEMS AND ARCHITECTURE</td>
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<td>CSC 208 VISUAL BASIC PROGRAMMING</td>
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<tr>
<td>ENG 122 ENGLISH COMPOSITION II</td>
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<tr>
<td>MAT 126 MATH FOR DECISION SCIENCES II</td>
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<tr>
<td>OR</td>
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</tr>
<tr>
<td>MAT 131 ANALYTIC GEOMETRY AND CALCULUS I</td>
<td>4</td>
</tr>
</tbody>
</table>

**Continued in the next page**

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1. The following courses cannot be taken as electives: CSC 107, CSC 108, CSC 109, CSC 115, CSC 117, CSC 125, CSC 160, CSC 165 or BUS 107.

2. Recommended Computer Science electives are as follows: CSC 205, CSC 206, CSC 211, CSC 230, CSC 247 or CSC 248.

---

### 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 Network Administration and Support Option. You may also choose between two Certificate of Achievement programs: the certificate in Computer Programming or the certificate in Network Administration. (Technical Certificates on page 41)

### 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 I is a prerequisite for all majors. Algebra I and 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 geometry and must test out of algebra II. High school grades are not considered.
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 NT 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 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 wintersessions.

Where should I direct specific questions about this program?

Contact Professor Bhatia, Department Chair, at 732.906.2526.

Courses

<table>
<thead>
<tr>
<th>Courses</th>
<th>Credits</th>
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<tbody>
<tr>
<td>CSC 200</td>
<td>NETWORKING TECHNOLOGIES</td>
</tr>
<tr>
<td>CSC 245</td>
<td>UNIX AND SHELL PROGRAMMING</td>
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<tr>
<td>CSC 251</td>
<td>WINDOWS 2000 PROFESSIONAL ADMINISTRATION</td>
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<td>CSC 257</td>
<td>NETWARE ADVANCED ADMINISTRATION</td>
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<td>Technical Elective 3,5</td>
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<td>Free Elective 3,4</td>
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<tr>
<td>CSC 246</td>
<td>UNIX AND WEB SERVER ADMINISTRATION</td>
</tr>
<tr>
<td>CSC 248</td>
<td>NETWARE SERVICE AND SUPPORT</td>
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<tr>
<td>CSC 252</td>
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TOTAL CREDITS : 64-69

COMPUTER PROGRAMMING CERTIFICATE PROGRAM

Courses

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<thead>
<tr>
<th>Courses</th>
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</tr>
<tr>
<td>CSC 110</td>
<td>MICROCOMPUTER OPERATING SYSTEMS AND ARCHITECTURE</td>
</tr>
<tr>
<td>CSC 133</td>
<td>INTRODUCTION TO COMPUTER SCIENCE USING C++</td>
</tr>
<tr>
<td>CSC 134</td>
<td>OBJECT ORIENTED PROGRAMMING USING C++</td>
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<td>CSC 208</td>
<td>VISUAL BASIC PROGRAMMING</td>
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<td>Free Elective 6,7</td>
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<td>ENG 121</td>
<td>ENGLISH COMPOSITION I</td>
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<td>ENG 122</td>
<td>ENGLISH COMPOSITION II</td>
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</tr>
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<td></td>
<td>OR</td>
</tr>
<tr>
<td>MAT 129</td>
<td>PRECALCULUS</td>
</tr>
<tr>
<td>MAT 126</td>
<td>MATH FOR DECISION SCIENCES II</td>
</tr>
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<td></td>
<td>OR</td>
</tr>
<tr>
<td>MAT 131</td>
<td>ANALYTIC GEOMETRY AND CALCULUS I</td>
</tr>
</tbody>
</table>

TOTAL CREDITS : 33-36

1 The following courses cannot be taken as electives: CSC 107, CSC 108, CSC 109, CSC 125, CSC160, CSC 165 or BUS 107.
2 Recommended Computer Science electives are as follows: CSC 134, CSC 205, CSC 206, CSC 211, CSC 230, CSC 235, CSC239, CSC241
3 Choose the technical electives from the list below: CSC 134, CSC 225, CSC 230, CSC 239, CSC 241, PHY 121, MAT 132, ELT 111, ELT 226, ELT 239
4 The following courses cannot be taken as electives: CSC 107, CSC 108, CSC 109, CSC 115, CSC 117, CSC 125, CSC 165 or BUS 107.
5 The following courses cannot be taken as electives: CSC 160, CSC 211, CSC 230, CSC 235, CSC 241, CSC 247.
### NETWORK ADMINISTRATION CERTIFICATE PROGRAM

<table>
<thead>
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<th>Credits</th>
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<td>CSC 105 COMPUTER APPLICATIONS AND SYSTEMS</td>
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<tr>
<td>CSC 110 MICROCOMPUTER OPERATING SYSTEMS AND ARCHITECTURE</td>
<td>3</td>
</tr>
<tr>
<td>CSC 160 INTRODUCTION TO UNIX</td>
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<td>CSC 200 NETWORKING TECHNOLOGIES</td>
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</tr>
<tr>
<td>CSC 247 NETWARE SYSTEM ADMINISTRATION</td>
<td>3</td>
</tr>
<tr>
<td>CSC 251 WINDOWS 2000 PROFESSIONAL ADMINISTRATION</td>
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<td>CSC 252 WINDOWS 2000 SERVER ADMINISTRATION</td>
<td>3</td>
</tr>
<tr>
<td>CSC 248 NETWARE SERVICE AND SUPPORT</td>
<td>3</td>
</tr>
<tr>
<td>Free Elective</td>
<td>2-4</td>
</tr>
<tr>
<td>ENG 121 ENGLISH COMPOSITION I</td>
<td>3</td>
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<td>ENG 122 ENGLISH COMPOSITION II</td>
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<tr>
<td>MAT 125 MATH FOR DECISION SCIENCES I</td>
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</tr>
<tr>
<td>OR</td>
<td></td>
</tr>
<tr>
<td>MAT 129 PRECALCULUS</td>
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</table>

TOTAL CREDITS: 35-38

### TECHNICAL CERTIFICATE IN WINDOWS NT/NOVELL NETWARE

<table>
<thead>
<tr>
<th>Courses</th>
<th>Credits</th>
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</thead>
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<tr>
<td>CSC 110 MICROCOMPUTER OPERATING SYSTEMS AND ARCHITECTURE</td>
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</tr>
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<td>CSC 247 NETWARE SYSTEM ADMINISTRATION</td>
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<td>CSC 200 NETWORKING TECHNOLOGIES</td>
<td>3</td>
</tr>
<tr>
<td>CSC 251 WINDOWS 2000 PROFESSIONAL ADMINISTRATION</td>
<td>3</td>
</tr>
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<td>CSC 252 WINDOWS 2000 SERVER ADMINISTRATION</td>
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<td>CSC 248 NETWARE SERVICE AND SUPPORT</td>
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<tr>
<td>Free Elective</td>
<td>3</td>
</tr>
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</table>

TOTAL CREDITS: 21

**Notes:**
1. 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.
2. Students must complete CSC105 or demonstrate the equivalent proficiency prior to beginning this certificate program.
3. Successful completion of this Certificate helps prepare students to take the certification tests for: NOVELL CNA (Certified Novell Administrator) and MICROSOFT WINDOWS 2000

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*The following courses cannot be taken as electives: CSC 107, CSC 108, CSC 109, CSC 125, CSC 165, BUS 107.

Recommended electives: CSC 133, CSC 208, ELT 111, ELT 226, ELT 239.

Recommended elective: CSC 160.
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.

If I major in Computer Science Transfer, what degree can I earn?
The Associate in Computer Science Transfer Degree 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 Computer Science Transfer?
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.

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 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 wintersessions.

Where should I direct specific questions about this program?
Contact Professor Bhatia, Department Chair, at 732.906.2526.

Below are required courses for program completion. Courses may have prerequisite and corequisite requirements. Check course descriptions for details.

<table>
<thead>
<tr>
<th>Courses</th>
<th>Credits</th>
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<td>ENG 121 ENGLISH COMPOSITION I</td>
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<td>MAT 129 PRECALCULUS</td>
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<tr>
<td>MAT 131 ANALYTIC GEOMETRY AND CALCULUS I</td>
<td>4</td>
</tr>
<tr>
<td>MAT 131 OR</td>
<td></td>
</tr>
<tr>
<td>MAT 131 Physical/Health Ed Elective*</td>
<td>3</td>
</tr>
<tr>
<td>CSC 134 OBJECT ORIENTED PROGRAMMING USING C++</td>
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</tr>
<tr>
<td>ENG 122 ENGLISH COMPOSITION II</td>
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<td>MAT 131 ANALYTIC GEOMETRY AND CALCULUS I</td>
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<tr>
<td>MAT 131 OR</td>
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<tr>
<td>MAT 132 ANALYTIC GEOMETRY AND CALCULUS II</td>
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</tr>
<tr>
<td>MAT 132 Science Elective*</td>
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<tr>
<td>MAT 233 COMPUTER ARCHITECTURE AND ASSEMBLY LANGUAGE I</td>
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<td>MAT 235 DATA SCTRUCTURES</td>
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<td>MAT 132 OR</td>
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<tr>
<td>MAT 200 200 LEVEL MATHEMATICS ELECTIVE*</td>
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<td>MAT 206 INTRODUCTION TO DISCRETE MATHEMATICS</td>
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<td>MAT 206 Social Science Elective</td>
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<td>MAT 206 Humanities Elective</td>
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<tr>
<td>MAT 206 Humanities Elective</td>
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</tbody>
</table>

TOTAL CREDITS: 65-69

Notes*:
1. Students should carefully review the Computer Science, Mathematics, and Science course electives listed in Mathematics/Science Distribution Requirements of four-year public Colleges and universities for Computer Science Majors before selecting their electives. This listing is available in the Computer Science Department.
2. Students should take Science elective courses that end with the number 117 or higher.
3. Students should take Mathematics elective courses that end with the number 210 or higher.
4. Students can select their Computer Science Electives from any 200-level Computer Science courses.
5. Students can select their Mathematics Electives from the following list: MAT 210, MAT 233, MAT 234, or MAT 285.
6. Students can select their Science Electives from the following list: BIO 119 & BIO 120 or BIO 123 & BIO 124 or CHM 117 & CHM 118 or CHM 123 & CHM 124 or ENV 211 & ENV 212 or PHY 121 & PHY 122 or PHY 131 & PHY 132 & PHY 231.

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 at their first mathematics course.

Mathematics Electives:
Available in Computer Science Department.

Students can select their Mathematics Electives from the following list:
MAT 210, MAT 233, MAT 234, or MAT 285.

Science Electives:
Available in Computer Science Department.

Students can select their Science Electives from the following list:
BIO 119 & BIO 120 or BIO 123 & BIO 124 or CHM 117 & CHM 118 or CHM 123 & CHM 124 or ENV 211 & ENV 212 or PHY 121 & PHY 122 or PHY 131 & PHY 132 & PHY 231.
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.

Correction Administration Degree Option
Below are required courses for program completion. Courses may have prerequisite and corequisite requirements. Check course descriptions for details.

<table>
<thead>
<tr>
<th>Courses</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>ENG 121 ENGLISH COMPOSITION I</td>
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</tr>
<tr>
<td>CJU 123 CRIMINAL JUSTICE I</td>
<td>3</td>
</tr>
<tr>
<td>SOC 121 INTRODUCTION TO SOCIOLOGY</td>
<td>3</td>
</tr>
<tr>
<td>POS 201 UNITED STATES STATE AND LOCAL GOVERNMENT</td>
<td>3</td>
</tr>
<tr>
<td>Social Science Elective</td>
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</tr>
<tr>
<td>ENG 122 ENGLISH COMPOSITION II</td>
<td>3</td>
</tr>
<tr>
<td>CJU 124 CRIMINAL JUSTICE II</td>
<td>3</td>
</tr>
<tr>
<td>SOC 140 INTRODUCTION TO CRIMINOLOGY</td>
<td>3</td>
</tr>
<tr>
<td>POS 220 UNITED STATES NATIONAL GOVERNMENT</td>
<td>3</td>
</tr>
<tr>
<td>PSY 123 INTRODUCTORY PSYCHOLOGY</td>
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<td>Physical/Health Ed Elective</td>
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<tr>
<td>CSC 105 COMPUTER APPLICATIONS AND SYSTEMS</td>
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<tr>
<td>COR 207 CORRECTIONAL INSTITUTIONS</td>
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<td>PSY 222 SOCIAL PSYCHOLOGY</td>
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<tr>
<td>Mathematics or Lab Science Elective 1</td>
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<tr>
<td>SOC 225 JUVENILE DELINQUENCY</td>
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<td>OR</td>
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<td>POS 231 CONSTITUTIONAL LAW</td>
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<tr>
<td>COR 280 CORRECTIONS EXTERNSHIP</td>
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TOTAL CREDITS: 64-68

Correction Administration Certificate Program

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<td>CJU 124 CRIMINAL JUSTICE II</td>
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<td>COR 201 INTRODUCTION TO CORRECTION ADMINISTRATION</td>
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<td>COR 207 CORRECTIONAL INSTITUTIONS</td>
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<td>COR 280 CORRECTIONS EXTERNSHIP</td>
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<tr>
<td>OR</td>
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<tr>
<td>POL 204 LAW ENFORCEMENT AND THE COMMUNITY</td>
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<tr>
<td>ENG 121 ENGLISH COMPOSITION I</td>
<td>3</td>
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<tr>
<td>ENG 122 ENGLISH COMPOSITION II</td>
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<td>POS 201 UNITED STATES STATE AND LOCAL GOVERNMENT</td>
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<tr>
<td>POS 220 UNITED STATES NATIONAL GOVERNMENT</td>
<td>3</td>
</tr>
<tr>
<td>PSY 123 INTRODUCTORY PSYCHOLOGY</td>
<td>3</td>
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<tr>
<td>SOC 121 INTRODUCTION TO SOCIOLOGY</td>
<td>3</td>
</tr>
<tr>
<td>SOC 140 INTRODUCTION TO CRIMINOLOGY</td>
<td>3</td>
</tr>
</tbody>
</table>

TOTAL CREDITS: 36

\[1\] 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 MAT 013 and some require MAT 014. You should discuss your choice with your academic advisor.
POLICE SCIENCE DEGREE OPTION

Below are required courses for program completion. Courses may have prerequisite and corequisite requirements. Check course descriptions for details.

<table>
<thead>
<tr>
<th>Courses</th>
<th>Credits</th>
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<tbody>
<tr>
<td>ENG 121 ENGLISH COMPOSITION I</td>
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<td>CJU 123 CRIMINAL JUSTICE I</td>
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<tr>
<td>SOC 121 INTRODUCTION TO SOCIOLOGY</td>
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<tr>
<td>POS 201 UNITED STATES STATE AND LOCAL GOVERNMENT</td>
<td>3</td>
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<tr>
<td>Social Science Elective</td>
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</tr>
<tr>
<td>ENG 122 ENGLISH COMPOSITION II</td>
<td>3</td>
</tr>
<tr>
<td>CJU 124 CRIMINAL JUSTICE II</td>
<td>3</td>
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<tr>
<td>SOC 140 INTRODUCTION TO CRIMINOLOGY</td>
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<tr>
<td>POS 220 UNITED STATES NATIONAL GOVERNMENT</td>
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<tr>
<td>PSY 123 INTRODUCTORY PSYCHOLOGY</td>
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<tr>
<td>Humanities Elective</td>
<td>3</td>
</tr>
<tr>
<td>Mathematics or Lab Science Elective ¹</td>
<td>3-4</td>
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<tr>
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<tr>
<td>Physical/Health Ed Elective</td>
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<tr>
<td>CSC 105 COMPUTER APPLICATIONS AND SYSTEMS</td>
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<td>POL 202 POLICE OPERATIONS</td>
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<td>POL 204 LAW ENFORCEMENT AND THE COMMUNITY</td>
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<td>PSY 222 SOCIAL PSYCHOLOGY</td>
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<td>SOC 225 JUVENILE DELINQUENCY</td>
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</tr>
<tr>
<td>POS 231 CONSTITUTIONAL LAW</td>
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</table>

TOTAL CREDITS: 64-68

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 MAT 013 and some require MAT 014. You should discuss your choice with your academic advisor.
DENTAL AUXILIARIES EDUCATION DEPARTMENT

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

DEGREE PROGRAM
Below are required courses for program completion. Courses may have prerequisite and corequisite requirements. Check course descriptions for details.

<table>
<thead>
<tr>
<th>Courses</th>
<th>Credits</th>
</tr>
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<tbody>
<tr>
<td>BIO 111 HUMAN ANATOMY AND PHYSIOLOGY I</td>
<td>4</td>
</tr>
<tr>
<td>BIO 211 PRINCIPLES OF MICROBIOLOGY</td>
<td>4</td>
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<tr>
<td>DHY 102 RADIOLOGY</td>
<td>2</td>
</tr>
<tr>
<td>DHY 105 ORAL ANATOMY AND HISTOLOGY</td>
<td>4</td>
</tr>
<tr>
<td>DHY 107 PREVENTIVE ORAL HEALTH SERVICES I</td>
<td>3</td>
</tr>
<tr>
<td>BIO 112 HUMAN ANATOMY AND PHYSIOLOGY II</td>
<td>4</td>
</tr>
<tr>
<td>DHY 108 PREVENTIVE ORAL HEALTH SERVICES II</td>
<td>3</td>
</tr>
<tr>
<td>DHY 110 NUTRITION</td>
<td>3</td>
</tr>
<tr>
<td>DHY 204 DENTAL MATERIALS</td>
<td>2</td>
</tr>
<tr>
<td>DHY 205 PERIODONTOLOGY</td>
<td>2</td>
</tr>
<tr>
<td>ENG 121 ENGLISH COMPOSITION I</td>
<td>3</td>
</tr>
<tr>
<td>CHM 107 PRINCIPLES OF CHEMISTRY</td>
<td>4</td>
</tr>
<tr>
<td>DHY 203 GENERAL AND ORAL PATHOLOGY</td>
<td>2</td>
</tr>
<tr>
<td>DHY 207 DENTAL HEALTH EDUCATION</td>
<td>2</td>
</tr>
<tr>
<td>DHY 211 PREVENTIVE ORAL HEALTH SERVICES III</td>
<td>5</td>
</tr>
<tr>
<td>DHY 215 ADVANCED PERIODONTOLOGY</td>
<td>1</td>
</tr>
<tr>
<td>ENG 122 ENGLISH COMPOSITION II</td>
<td>3</td>
</tr>
<tr>
<td>PSY 123 INTRODUCTORY PSYCHOLOGY</td>
<td>3</td>
</tr>
<tr>
<td>DHY 208 PHARMACOLOGY</td>
<td>2</td>
</tr>
<tr>
<td>DHY 210 PUBLIC HEALTH</td>
<td>2</td>
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<tr>
<td>DHY 212 PREVENTIVE ORAL HEALTH SERVICES IV</td>
<td>5</td>
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<tr>
<td>SOC 121 INTRODUCTION TO SOCIOLOGY</td>
<td>3</td>
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<tr>
<td>Physical/Health Ed Elective</td>
<td>1-3</td>
</tr>
<tr>
<td>Humanities Elective</td>
<td></td>
</tr>
</tbody>
</table>

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.

1 You must have high school Algebra I or MAT 013 and one year high school laboratory biology and one year high school laboratory chemistry before taking this course.
2 Credit-by-examination available if you are licensed to take radiographs in New Jersey.
3 You must have current CPR certification.
Dietetic Technology

HOTEL, RESTAURANT AND INSTITUTION MANAGEMENT DEPARTMENT

Why major in Dietetic Technology?
The Dietetic Technology Program is accredited by the Commission on Accreditation for Dietetics Education of the American Dietetic Association. When you graduate you are eligible for active membership in the American Dietetic Association and to write the registration examination for dietetic technicians. You are also eligible for membership in the Dietary Managers Association and to sit for the credentialing examination.

If I major in Dietetic Technology, what degree can I earn?
The Associate in Applied Science Degree 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.

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 articulation agreements with NYU, the College of St. Elizabeth, and Montclair.

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. 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 732.906.2538.

DEGREE PROGRAM
Below are required courses for program completion. Courses may have prerequisite and corequisite requirements. Check course descriptions for details.

<table>
<thead>
<tr>
<th>Courses</th>
<th>Credits</th>
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<tbody>
<tr>
<td>BUS 107</td>
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<tr>
<td>DTC 101</td>
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<td>HRI 105</td>
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<tr>
<td>HRI 208</td>
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<tr>
<td>BIO 108</td>
<td>4</td>
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<td>DTC 102</td>
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<td>DTC 208</td>
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<td>ENG 122</td>
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<tr>
<td>HRI 108</td>
<td>3</td>
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<tr>
<td>HRI 210</td>
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<td>DTC 209</td>
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<td>HRI 213</td>
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<td>HRI 218</td>
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<td>PSY 123</td>
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<td>DTC 210</td>
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<td>DTC 220</td>
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<td>HRI 205</td>
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<tr>
<td>MAT 101</td>
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</tr>
<tr>
<td>SOC 121</td>
<td>3</td>
</tr>
</tbody>
</table>

| TOTAL CREDITS: 68-70 |

1 You must take OAD 010 at the same time you take BUS 107 or obtain an approved waiver demonstrating proficiency in keyboarding.
2 You must have an appropriate score on the College’s Placement Test or MAT 013 and one year high school laboratory biology or chemistry or BIO 010 or CHM 010.
3 You may enroll in a higher level mathematics course for which you have the appropriate academic background.
4 Sixty-eight credits are required for graduation.
5 See course descriptions for corequisites.
**Education Practitioner**

**PSYCHOLOGY AND EDUCATION DEPARTMENT**

Below are required courses for program completion. Courses may have prerequisite and corequisite requirements. Check course descriptions for details.

<table>
<thead>
<tr>
<th>Courses</th>
<th>Credits</th>
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<tbody>
<tr>
<td>ENG 121 ENGLISH COMPOSITION I</td>
<td>3</td>
</tr>
<tr>
<td>PSY 123 INTRODUCTORY PSYCHOLOGY</td>
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</tr>
<tr>
<td>Mathematics Requirement 1</td>
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</tr>
<tr>
<td>HED 150 CONTEMPORARY HEALTH ISSUES</td>
<td>3</td>
</tr>
<tr>
<td>SPE 121 FUNDAMENTALS OF PUBLIC SPEAKING</td>
<td>3</td>
</tr>
<tr>
<td>ENG 122 ENGLISH COMPOSITION II</td>
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</tr>
<tr>
<td>OR</td>
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</tr>
<tr>
<td>ENG 125 ENGLISH COMPOSITION II: WRITING ABOUT LITERATURE</td>
<td>3</td>
</tr>
<tr>
<td>PSY 223 CHILD PSYCHOLOGY</td>
<td>3</td>
</tr>
<tr>
<td>Mathematics Requirement II</td>
<td>3-4</td>
</tr>
<tr>
<td>PSY 226 EDUCATIONAL PSYCHOLOGY: CLASSROOM APPLICATIONS</td>
<td>3</td>
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<td>Humanities Elective</td>
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<tr>
<td>SOC 121 INTRODUCTION TO SOCIOLOGY</td>
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<td>EDU 280 EDUCATION FIELD EXPERIENCE</td>
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<td>Art Elective</td>
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<td>MUS 140 MUSIC FUNDAMENTALS</td>
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<td>ENG 212 CHILDREN’S LITERATURE</td>
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<tr>
<td>Approved Electives 2</td>
<td>12</td>
</tr>
</tbody>
</table>

**TOTAL CREDITS:** 63-66

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1. MAT 101 is recommended. You may substitute any one of the following courses for which have the appropriate academic background: MAT 123, MAT 129 or MAT 131.

2. Approved electives are free electives taken after consultation with a faculty advisor and might include an additional science course, liberal arts course or an education course. To earn the State of New Jersey’s Group Teacher Approval (which is good for certain private nursery schools and child care centers only), the students may choose to take approved EDU or HED courses. Students planning to earn a bachelor’s degree should meet with an advisor to select courses that will transfer to the college or university of their choice.
Electronic and Computer Engineering Technology

**DEGREE PROGRAM**

Below are required courses for program completion. Courses may have prerequisite and corequisite requirements. Check course descriptions for details.

<table>
<thead>
<tr>
<th>Courses</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 121</td>
<td>ENGLISH COMPOSITION I</td>
</tr>
<tr>
<td>MAT 129A</td>
<td>PRECALCULUS A</td>
</tr>
<tr>
<td>MCT 101</td>
<td>INTRODUCTION TO ENGINEERING TECHNOLOGY</td>
</tr>
<tr>
<td>MEC 123</td>
<td>TECHNICAL GRAPHICS/CAD I</td>
</tr>
<tr>
<td>ELT 105</td>
<td>FOUNDATIONS OF ELECTRICAL AND ELECTRONIC TECHNOLOGY</td>
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<td></td>
<td>Physical/Health Ed Elective</td>
</tr>
<tr>
<td>ELT 111</td>
<td>DIGITAL ELECTRONICS</td>
</tr>
<tr>
<td>ELT 110</td>
<td>ELECTRICAL/ELECTRONIC DEVICES AND CIRCUITS</td>
</tr>
<tr>
<td>ENG 122</td>
<td>ENGLISH COMPOSITION II</td>
</tr>
<tr>
<td>MAT 129B</td>
<td>PRECALCULUS B</td>
</tr>
<tr>
<td>CSC 166</td>
<td>C++ PROGRAMING</td>
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<td>Humanities Elective</td>
</tr>
<tr>
<td>MAT 131A</td>
<td>ANALYTIC GEOMETRY AND CALCULUS PART I</td>
</tr>
<tr>
<td>PHY 121</td>
<td>GENERAL PHYSICS I</td>
</tr>
<tr>
<td>ELT 210</td>
<td>ELECTRONIC CIRCUITS AND SYSTEMS</td>
</tr>
<tr>
<td>ELT 223</td>
<td>ELECTRONIC DESIGN AND MANUFACTURING</td>
</tr>
<tr>
<td>ELT 226</td>
<td>MICROCOMPUTERS</td>
</tr>
<tr>
<td>ELT 259</td>
<td>DIGITAL/DATA COMMUNICATIONS AND NETWORKING</td>
</tr>
<tr>
<td>PHY 122</td>
<td>GENERAL PHYSICS II</td>
</tr>
<tr>
<td>ELT 224</td>
<td>COMMUNICATION ELECTRONICS</td>
</tr>
<tr>
<td>MCT 220</td>
<td>INTRODUCTION TO ROBOTICS AND CONTROL SYSTEMS</td>
</tr>
<tr>
<td>MAT 131B</td>
<td>ANALYTIC GEOMETRY AND CALCULUS PART II</td>
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<td>Social Science Elective</td>
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</table>

**TOTAL CREDITS**: 67-69

**CERTIFICATE PROGRAM**

<table>
<thead>
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<th>Courses</th>
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<td>ELECTRICAL/ELECTRONIC DEVICES AND CIRCUITS</td>
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<td>ELT 210</td>
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<td>MAT 129A</td>
<td>PRECALCULUS I</td>
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<td>MAT 129B</td>
<td>PRECALCULUS II</td>
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<tr>
<td>MEC 123</td>
<td>TECHNICAL GRAPHICS/CAD I</td>
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</table>

**TOTAL CREDITS**: 32

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**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 prepares you for career opportunities in electronics.

**If I major in Electronic and Computer Engineering Technology, can I transfer to an upper division college or 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.
Engineering Science

Electrical Engineering Technology Department

Degree Program
Below are required courses for program completion. Courses may have prerequisite and corequisite requirements. Check course descriptions for details.

<table>
<thead>
<tr>
<th>Courses</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHM 123 GENERAL CHEMISTRY I</td>
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<tr>
<td>CSC 133 INTRODUCTION TO COMPUTER SCIENCE USING C++</td>
<td>4</td>
</tr>
<tr>
<td>ENG 121 ENGLISH COMPOSITION I</td>
<td>3</td>
</tr>
<tr>
<td>MAT 131 ANALYTIC GEOMETRY AND CALCULUS I</td>
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<tr>
<td>MEC 119 GRAPHIC SCIENCE</td>
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<td>Physical/Health Ed Elective</td>
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<td>CHM 124 GENERAL CHEMISTRY II</td>
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<td>ENG 122 ENGLISH COMPOSITION II</td>
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<td>MAT 132 ANALYTIC GEOMETRY AND CALCULUS II</td>
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<td>PHY 131 ANALYTICAL PHYSICS I</td>
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<td>Social Science Elective</td>
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<td>CHM 223 ORGANIC CHEMISTRY I</td>
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<tr>
<td>OR</td>
<td></td>
</tr>
<tr>
<td>ELT 221 ELECTRIC CIRCUITS I</td>
<td>4</td>
</tr>
<tr>
<td>MAT 233 ANALYTIC GEOMETRY AND CALCULUS III</td>
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<tr>
<td>MEC 221 ENGINEERING MECHANICS I</td>
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<td>PHY 132 ANALYTICAL PHYSICS II</td>
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<td>CHM 224 ORGANIC CHEMISTRY II</td>
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<td>OR</td>
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<td>ELT 222 ELECTRIC CIRCUITS II</td>
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<td>MEC 222 ENGINEERING MECHANICS II</td>
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<td>MAT 234 DIFFERENTIAL EQUATIONS</td>
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<td>PHY 231 ANALYTICAL PHYSICS III</td>
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<tr>
<td>Social Science Elective</td>
<td>3</td>
</tr>
</tbody>
</table>

TOTAL CREDITS: 71-74

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 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.

1 You must enroll in MAT 132 at the same time you enroll in ELT 221.
Below are required courses for program completion. Courses may have prerequisite and corequisite requirements. Check course descriptions for details.

**ESL LEVEL I - INTENSIVE**

<table>
<thead>
<tr>
<th>Courses</th>
<th>Credits</th>
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<tbody>
<tr>
<td>ESL 060 LISTENING-INTENSIVE LEVEL I</td>
<td>3</td>
</tr>
<tr>
<td>ESL 061 PHONOLOGY-INTENSIVE LEVEL I</td>
<td>3</td>
</tr>
<tr>
<td>ESL 062 DISCUSSION-INTENSIVE LEVEL I</td>
<td>3</td>
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<tr>
<td>ESL 063 STRUCTURE-INTENSIVE LEVEL I</td>
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<tr>
<td>ESL 064 WRITING-INTENSIVE LEVEL I</td>
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**ESL LEVEL II - INTENSIVE**

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<th>Courses</th>
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<tbody>
<tr>
<td>ESL 071 PHONOLOGY-INTENSIVE LEVEL II</td>
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</tr>
<tr>
<td>ESL 072 DISCUSSION/CULTURAL ORIENTATION-INTENSIVE LEVEL II</td>
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<td>ESL 073 STRUCTURE-INTENSIVE LEVEL II</td>
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<tr>
<td>ESL 074 WRITING-INTENSIVE LEVEL II</td>
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<tr>
<td>ESL 075 READING/VOCABULARY-INTENSIVE LEVEL II</td>
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**ESL LEVEL III - INTENSIVE**

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<td>ESL 084 WRITING-INTENSIVE LEVEL III</td>
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<tr>
<td>ESL 085 READING/VOCABULARY-INTENSIVE LEVEL III</td>
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<tr>
<td>ESL 086 DISCUSSION/PHONOLOGY-INTENSIVE LEVEL III</td>
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</table>

TOTAL CREDITS : 17

TOTAL CREDITS : 17

TOTAL CREDITS : 14

You may also take a mathematics course.
### ESL Level IV

<table>
<thead>
<tr>
<th>Courses</th>
<th>Credits</th>
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</thead>
<tbody>
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<td>ESL 091 Advanced Discussion and Phonology IV</td>
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</tr>
<tr>
<td>ESL 092 Advanced Structure IV</td>
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</tr>
<tr>
<td>ESL 093 ESL Structure/Writing IV</td>
<td>4</td>
</tr>
<tr>
<td>ESL 094 ESL Reading/Vocabulary IV</td>
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</tbody>
</table>

**TOTAL CREDITS: 14**

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

### ESL Level V

<table>
<thead>
<tr>
<th>Courses</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ESL 099 ESL Reading/Writing V</td>
<td>4</td>
</tr>
</tbody>
</table>

**TOTAL CREDITS: 4**

- **Who is required to take the test and can TOEFL scores be used for placement?**
  - Anyone whose first language is not English. Even if you are a transfer student or a graduate student who has attended a foreign university, you must take the test. The Test of English as a Foreign Language (TOEFL) scores may not be used for placement.

- **When can I take the test and is there a charge?**
  - You can take the test on Thursday evenings or during specially scheduled daytime hours. 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. You may begin taking ESL courses as part of your major program.

- **Where should I direct specific questions about this program?**
  - Contact Professor Santelli, Acting Chairperson, at 732.906.2597.

Information about the programs is available in Gujarati, Polish, Russian, and Spanish from the Office of Admissions and Recruitment.
## Environmental Technology

**DEGREE PROGRAM**

Below are required courses for program completion. Courses may have prerequisite and corequisite requirements. Check course descriptions for details.

<table>
<thead>
<tr>
<th>Courses</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIO 119 BIOLOGY I</td>
<td>4</td>
</tr>
<tr>
<td>CHM 117 CHEMISTRY I</td>
<td>4</td>
</tr>
<tr>
<td>ENG 121 ENGLISH COMPOSITION I</td>
<td>3</td>
</tr>
<tr>
<td>MAT 107 MATHEMATICS I</td>
<td>3</td>
</tr>
<tr>
<td>Physical/Health Ed Elective</td>
<td>1-3</td>
</tr>
<tr>
<td>BIO 120 BIOLOGY II</td>
<td>4</td>
</tr>
<tr>
<td>CHM 118 CHEMISTRY II</td>
<td>4</td>
</tr>
<tr>
<td>ENG 122 ENGLISH COMPOSITION II</td>
<td>3</td>
</tr>
<tr>
<td>ENV 208 ENVIRONMENTAL HEALTH HAZARDS</td>
<td>3</td>
</tr>
<tr>
<td>MAT 108 MATHEMATICS II</td>
<td>3</td>
</tr>
<tr>
<td>ENV 205 ATMOSPHERIC POLLUTION CONTROL</td>
<td>3</td>
</tr>
<tr>
<td>SCI 103 SAFETY AND FDA REGULATIONS FOR LAB TECHNICIANS</td>
<td>1</td>
</tr>
<tr>
<td>ENV 220 PRINCIPLES OF OCCUPATIONAL SAFETY AND HEALTH Technical Elective</td>
<td>3-4</td>
</tr>
<tr>
<td>Social Science Elective</td>
<td>3</td>
</tr>
<tr>
<td>ENV 221 HAZARDOUS WASTE MANAGEMENT</td>
<td>3</td>
</tr>
<tr>
<td>ENV 222 WATER AND WASTEWATER ANALYSIS</td>
<td>3</td>
</tr>
<tr>
<td>SCI 104 TECHNICAL COMMUNICATIONS</td>
<td>1</td>
</tr>
<tr>
<td>CHM 203 PRINCIPLES OF ORGANIC CHEMISTRY 5</td>
<td>3</td>
</tr>
<tr>
<td>Technical Elective</td>
<td>3-4</td>
</tr>
<tr>
<td>Technical Elective</td>
<td>3-4</td>
</tr>
<tr>
<td>Humanities Elective</td>
<td>3</td>
</tr>
<tr>
<td>Technical Elective Choices (select three)</td>
<td></td>
</tr>
<tr>
<td>BIO 211 PRINCIPLES OF MICROBIOLOGY 4 OR</td>
<td>4</td>
</tr>
<tr>
<td>BIO 221 MICROBIOLOGY</td>
<td>4</td>
</tr>
<tr>
<td>CSC 105 COMPUTER APPLICATIONS AND SYSTEMS</td>
<td>3</td>
</tr>
<tr>
<td>ENV 223 ENVIRONMENTAL REGULATIONS</td>
<td>3</td>
</tr>
<tr>
<td>ENV 226 ENVIRONMENTAL TECHNOLOGY</td>
<td></td>
</tr>
<tr>
<td>CO-OPERATIVE EDUCATION</td>
<td>3</td>
</tr>
<tr>
<td><strong>TOTAL:</strong></td>
<td><strong>64-68</strong></td>
</tr>
</tbody>
</table>

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1. You must have high school Algebra I or MAT 013 and one year of high school laboratory science before taking this course. You may substitute BIO 123 - BIO 124 for BIO 119 - BIO 120 if you have completed a high school biology lab course.

2. You may substitute MAT 123 - MAT 124 for MAT 107 - CHM 118 if you have completed a high school chemistry lab course.

3. You may substitute MAT 131 if you have completed two or more years of high school Algebra.

4. You must have high school Algebra I or MAT 013 and one year high school laboratory biology and one year high school laboratory chemistry before taking this course.

5. May substitute CHM 223 for CHM 203 if you have completed CHM 124 or equivalent.

---

### 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.
## CERTIFICATE PROGRAM

You must complete Introduction to Water Wastewater operations (150 hours) at the Middlesex County Vocational Technology High School before starting this program.

<table>
<thead>
<tr>
<th>Courses</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIO 211  PRINCIPLES OF MICROBIOLOGY</td>
<td>4</td>
</tr>
<tr>
<td>CHM 117  CHEMISTRY I</td>
<td>4</td>
</tr>
<tr>
<td>CSC 105  COMPUTER APPLICATIONS AND SYSTEMS</td>
<td>3</td>
</tr>
<tr>
<td>ENG 121  ENGLISH COMPOSITION I</td>
<td>3</td>
</tr>
<tr>
<td>ENG 122  ENGLISH COMPOSITION II</td>
<td>3</td>
</tr>
<tr>
<td>ENV 208  ENVIRONMENTAL HEALTH HAZARDS</td>
<td>3</td>
</tr>
<tr>
<td>MAT 107  MATHEMATICS I</td>
<td>3</td>
</tr>
</tbody>
</table>

Take one of the following sequences:

<table>
<thead>
<tr>
<th>Courses</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENV 201  ADVANCED WASTEWATER OPERATIONS I</td>
<td>3</td>
</tr>
<tr>
<td>ENV 202  ADVANCED WASTEWATER OPERATIONS II</td>
<td>3</td>
</tr>
<tr>
<td>OR</td>
<td></td>
</tr>
<tr>
<td>ENV 203  ADVANCED WATER OPERATIONS I</td>
<td>3</td>
</tr>
<tr>
<td>ENV 204  ADVANCED WATER OPERATIONS II</td>
<td>3</td>
</tr>
</tbody>
</table>

Optional:

<table>
<thead>
<tr>
<th>Courses</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENV 226  ENVIRONMENTAL TECHNOLOGY CO-OPERATIVE EDUCATION</td>
<td>3</td>
</tr>
</tbody>
</table>

**TOTAL:** 32

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- 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. Trainer, Department Chair, at 732.906.2587.

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* You must have high school Algebra I or MAT 013 and one year high school laboratory biology and one year high school laboratory chemistry before taking this course.
### Degree Program

Below are required courses for program completion. Courses may have prerequisite and corequisite requirements. Check course descriptions for details.

<table>
<thead>
<tr>
<th>Courses</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 121 English Composition I</td>
<td>3</td>
</tr>
<tr>
<td>BUS 101 Business Organization and Management</td>
<td>3</td>
</tr>
<tr>
<td>BUS 107 Computer Applications for Business</td>
<td>3</td>
</tr>
<tr>
<td>RET 201 Fashion Merchandise Information</td>
<td>4</td>
</tr>
<tr>
<td>Mathematics Elective</td>
<td>3-4</td>
</tr>
<tr>
<td>ENG 122 English Composition II</td>
<td>3</td>
</tr>
<tr>
<td>ACC 101 Financial Accounting</td>
<td>4</td>
</tr>
<tr>
<td>BUS 201 Business Law I</td>
<td>3</td>
</tr>
<tr>
<td>MKT 201 Marketing I</td>
<td>3</td>
</tr>
<tr>
<td>RET 207 Retail Advertising, Sales Promotion, and Display</td>
<td>3</td>
</tr>
<tr>
<td>ACC 102 Managerial Accounting</td>
<td>4</td>
</tr>
<tr>
<td>MKT 143 Salesmanship</td>
<td>3</td>
</tr>
<tr>
<td>RET 202 Retail Buying and Merchandising</td>
<td>3</td>
</tr>
<tr>
<td>RET 205 Store Field Experience I</td>
<td>3</td>
</tr>
<tr>
<td>Humanities Elective</td>
<td>3</td>
</tr>
<tr>
<td>Physical/Health Ed Elective</td>
<td>1-3</td>
</tr>
<tr>
<td>ECO 201 Principles of Economics I</td>
<td>3</td>
</tr>
<tr>
<td>RET 204 Retail Management</td>
<td>3</td>
</tr>
<tr>
<td>RET 206 Store Field Experience II</td>
<td>3</td>
</tr>
<tr>
<td>Humanities or Social Science Elective</td>
<td>3</td>
</tr>
<tr>
<td>Science Elective</td>
<td>3</td>
</tr>
<tr>
<td>General Education Elective</td>
<td>3</td>
</tr>
</tbody>
</table>

**TOTAL CREDITS : 67-69**

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1. You must take OAD 010 at the same time you take BUS 107 or obtain an approved waiver demonstrating proficiency in keyboarding.
2. BUS 115 is recommended. However, you may enroll in a higher-level mathematics course for which you have the appropriate academic background.
3. You may choose a science course for which you have the appropriate academic background from Biology, Chemistry, Environmental Science, Physics or Science.
### CORE DEGREE REQUIREMENTS
Below are required courses for program completion. Courses may have prerequisite and corequisite requirements. Check course descriptions for details.

<table>
<thead>
<tr>
<th>Courses</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 121 ENGLISH COMPOSITION I</td>
<td>3</td>
</tr>
<tr>
<td>HIS 121 HISTORY OF WESTERN CIVILIZATION I</td>
<td>3</td>
</tr>
<tr>
<td>Physical Education Elective</td>
<td>1</td>
</tr>
<tr>
<td>ENG 122 ENGLISH COMPOSITION II</td>
<td>3</td>
</tr>
<tr>
<td>OR</td>
<td></td>
</tr>
<tr>
<td>ENG 125 ENGLISH COMPOSITION II: WRITING ABOUT LITERATURE</td>
<td>3</td>
</tr>
<tr>
<td>HIS 122 HISTORY OF WESTERN CIVILIZATION II</td>
<td>3</td>
</tr>
<tr>
<td>CSC 105 COMPUTER APPLICATIONS AND SYSTEMS</td>
<td>3</td>
</tr>
<tr>
<td>OR</td>
<td></td>
</tr>
<tr>
<td>BUS 107 COMPUTER APPLICATIONS FOR BUSINESS</td>
<td>3</td>
</tr>
<tr>
<td>Language</td>
<td></td>
</tr>
<tr>
<td>Diversity Elective</td>
<td>3</td>
</tr>
<tr>
<td>Science/Math Elective</td>
<td>3-4</td>
</tr>
<tr>
<td>Social Science Elective</td>
<td>3</td>
</tr>
<tr>
<td>SPE 121 FUNDAMENTALS OF PUBLIC SPEAKING</td>
<td>3</td>
</tr>
<tr>
<td>Language</td>
<td></td>
</tr>
<tr>
<td>Science/Math Elective</td>
<td>3-4</td>
</tr>
<tr>
<td>Humanities Elective</td>
<td>3</td>
</tr>
<tr>
<td>Free Elective</td>
<td>3</td>
</tr>
</tbody>
</table>

**TOTAL CREDITS:** 40-47

### ART DEGREE OPTION
Below are required courses.

<table>
<thead>
<tr>
<th>Courses</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ART 109 DRAWING</td>
<td>3</td>
</tr>
<tr>
<td>OR</td>
<td></td>
</tr>
<tr>
<td>ART 110 FIGURE DRAWING</td>
<td>3</td>
</tr>
<tr>
<td>ART 123 ART HISTORY: ANCIENT TO RENAISSANCE</td>
<td>3</td>
</tr>
<tr>
<td>ART 124 ART HISTORY: RENAISSANCE TO MODERN</td>
<td>3</td>
</tr>
<tr>
<td>ART 145 ART FUNDAMENTALS: TWO DIMENSIONS</td>
<td>3</td>
</tr>
<tr>
<td>ART 146 ART FUNDAMENTALS: THREE DIMENSIONS</td>
<td>3</td>
</tr>
<tr>
<td>ART 148 ART PORTFOLIO</td>
<td>1</td>
</tr>
<tr>
<td>ART 149 ART STUDIO SEMINAR</td>
<td>1</td>
</tr>
<tr>
<td>Plus one of the following:</td>
<td></td>
</tr>
<tr>
<td>ART 221 PAINTING: TRADITIONAL</td>
<td>3</td>
</tr>
<tr>
<td>ART 222 PAINTING: CONTEMPORARY</td>
<td>3</td>
</tr>
<tr>
<td>ART 223 SCULPTURE IN RELIEF</td>
<td>3</td>
</tr>
<tr>
<td>ART 224 SCULPTURE IN ROUND</td>
<td>3</td>
</tr>
<tr>
<td>Plus one additional art course</td>
<td></td>
</tr>
</tbody>
</table>

**TOTAL CREDITS:** 63-66

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**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 the Professor Siegfried, Department Chair at 732.906.2589.
MUSIC DEGREE OPTION

Below are required courses.

<table>
<thead>
<tr>
<th>Courses</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MUS 123 MUSIC HISTORY: TRADITIONAL</td>
<td>3</td>
</tr>
<tr>
<td>OR</td>
<td></td>
</tr>
<tr>
<td>MUS 124 MUSIC HISTORY: CONTEMPORARY</td>
<td>3</td>
</tr>
<tr>
<td>MUS 131 KEYBOARD STUDIES I</td>
<td>3</td>
</tr>
<tr>
<td>MUS 132 KEYBOARD STUDIES II</td>
<td>3</td>
</tr>
<tr>
<td>MUS 140 MUSIC FUNDAMENTALS</td>
<td>3</td>
</tr>
<tr>
<td>MUS 201 MUSIC NOTATION AND COMPOSITION I</td>
<td>3</td>
</tr>
<tr>
<td>MUS 202 MUSIC NOTATION AND COMPOSITION II</td>
<td>3</td>
</tr>
</tbody>
</table>

Plus one additional music course

TOTAL CREDITS : 61-64

THEATRE DEGREE OPTION

Below are required courses.

<table>
<thead>
<tr>
<th>Courses</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>THE 123 THEATRE HISTORY</td>
<td>3</td>
</tr>
<tr>
<td>OR</td>
<td></td>
</tr>
<tr>
<td>THE 152 AMERICAN MUSICAL THEATRE</td>
<td>3</td>
</tr>
<tr>
<td>THE 124 CONTEMPORARY THEATRE</td>
<td>3</td>
</tr>
<tr>
<td>THE 131 ACTING I</td>
<td>3</td>
</tr>
<tr>
<td>THE 145 STAGECRAFT</td>
<td>4</td>
</tr>
<tr>
<td>THE 146 PLAY PRODUCTION</td>
<td>4</td>
</tr>
</tbody>
</table>

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

TOTAL CREDITS : 61-64
DEGREE PROGRAM
Below are required courses for program completion. Courses may have prerequisite and corequisite requirements. Check course descriptions for details.

Courses Credits
CHM 107 PRINCIPLES OF CHEMISTRY 4
CSC 105 COMPUTER APPLICATIONS AND SYSTEMS 3
FSC 103 INTRODUCTION TO FIRE PROTECTION 3
FSC 204 BUILDING CONSTRUCTION 3
FSC 206 FIRE STRATEGY AND TACTICS 3
FSC 207 HAZARDOUS MATERIALS FOR THE FIRE SERVICE 3
FSC 209 FIRE SUPPRESSION AND DETECTION SYSTEMS 3
FSC 210 FIRE AND ARSON INVESTIGATION 3
FSC 212 FIRE PREVENTION AND INSPECTION 3
ENG 121 ENGLISH COMPOSITION I 3
ENG 122 ENGLISH COMPOSITION II 3
MAT 107 MATHEMATICS I 1 3
MAT 108 MATHEMATICS II 1 3
MGT 200 PRINCIPLES OF SUPERVISION 3
PHY 101 PRINCIPLES OF PHYSICS 4
POS 201 UNITED STATES STATE AND LOCAL GOVERNMENT Physical/Health Ed Elective 1-3
Humanities Elective 3
Social Science Elective 3
Free Elective 3
TOTAL CREDITS : 60-62

BASIC FIRE SCIENCE CERTIFICATE PROGRAM

Courses Credits
CHM 107 PRINCIPLES OF CHEMISTRY 4
ENG 121 ENGLISH COMPOSITION I 3
FSC 103 INTRODUCTION TO FIRE PROTECTION 3
FSC 204 BUILDING CONSTRUCTION 3
FSC 206 FIRE STRATEGY AND TACTICS 3
FSC 207 HAZARDOUS MATERIALS FOR THE FIRE SERVICE 3
FSC 209 FIRE SUPPRESSION AND DETECTION SYSTEMS 3
FSC 210 FIRE AND ARSON INVESTIGATION 3
FSC 212 FIRE PREVENTION AND INSPECTION 3
MAT 107 MATHEMATICS I 3
TOTAL CREDITS : 31

1 With advisor approval students may select a higher level science or mathematics sequence.
**Graphics for Digital Media**

**MEDIA ARTS & DESIGN DEPARTMENT**

---

**TECHNICAL CERTIFICATE PROGRAM**

Below are required courses for program completion. Courses may have prerequisite and corequisite requirements. Check course descriptions for details.

<table>
<thead>
<tr>
<th>Courses</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSC 108 INTRODUCTION TO THE INTERNET</td>
<td>2</td>
</tr>
<tr>
<td>MAD 121 GRAPHICS FOR COMPUTER AUTHORS AND PRESENTERS</td>
<td>3</td>
</tr>
<tr>
<td>DMA 212 WEB ANIMATION AND MOTION GRAPHICS</td>
<td>3</td>
</tr>
<tr>
<td>DMA 210 WEB PAGE DESIGN AND LAYOUT</td>
<td>3</td>
</tr>
<tr>
<td>CSC 230 MULTIMEDIA PRODUCTION AND AUTHORING TOOLS</td>
<td>4</td>
</tr>
<tr>
<td>Free Elective 1</td>
<td>3</td>
</tr>
</tbody>
</table>

**TOTAL CREDITS : 18**

*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 who 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

---

1 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.
### Degree Program

**General Education Requirements.**

<table>
<thead>
<tr>
<th>Courses</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 121 ENGLISH COMPOSITION I</td>
<td>3</td>
</tr>
<tr>
<td>ENG 122 ENGLISH COMPOSITION II</td>
<td>3</td>
</tr>
<tr>
<td>PSY 123 INTRODUCTORY PSYCHOLOGY</td>
<td>3</td>
</tr>
<tr>
<td>PED - Physical Education</td>
<td>1-3</td>
</tr>
<tr>
<td>OR</td>
<td></td>
</tr>
<tr>
<td>HED 150 CONTEMPORARY HEALTH ISSUES</td>
<td>3</td>
</tr>
<tr>
<td>Humanities Elective</td>
<td>3</td>
</tr>
<tr>
<td>SPE 121 FUNDAMENTALS OF PUBLIC SPEAKING</td>
<td>3</td>
</tr>
<tr>
<td>General Education Credits</td>
<td>16-18</td>
</tr>
<tr>
<td>Science and Math Requirements:</td>
<td></td>
</tr>
<tr>
<td>CSC 107 COMPUTERS IN HEALTH TECHNOLOGIES</td>
<td>1</td>
</tr>
<tr>
<td>Laboratory Science ¹</td>
<td>8</td>
</tr>
<tr>
<td>BIO 211 PRINCIPLES OF MICROBIOLOGY</td>
<td>4</td>
</tr>
<tr>
<td>Mathematics ²</td>
<td>6</td>
</tr>
<tr>
<td>Science and Math Credits</td>
<td>18</td>
</tr>
<tr>
<td><strong>TOTAL CREDITS:</strong></td>
<td><strong>65-67</strong></td>
</tr>
</tbody>
</table>

**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.

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¹ Lab Science: 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).

² Mathematics: Mathematics I (MAT 107) & Mathematics II (MAT 108) or higher.

---

### 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; 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.
## 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 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 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.

### CULINARY ARTS - MANAGEMENT DEGREE OPTION
Below are required courses for program completion. Courses may have prerequisite and corequisite requirements. Check course descriptions for details.

<table>
<thead>
<tr>
<th>Courses</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUS 107 COMPUTER APPLICATIONS FOR BUSINESS¹</td>
<td>3</td>
</tr>
<tr>
<td>ENG 121 ENGLISH COMPOSITION I</td>
<td>3</td>
</tr>
<tr>
<td>HRI 103 PRINCIPLES OF FOOD SELECTION AND PREPARATION</td>
<td>3</td>
</tr>
<tr>
<td>HRI 208 FOODSERVICE SANITATION</td>
<td>3</td>
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<tr>
<td>Mathematics Elective ²</td>
<td></td>
</tr>
<tr>
<td>Physical/Health Ed Elective</td>
<td>1-3</td>
</tr>
<tr>
<td>ENG 122 ENGLISH COMPOSITION II</td>
<td>3</td>
</tr>
<tr>
<td>HRI 108 QUANTITY FOOD PRODUCTION</td>
<td>3</td>
</tr>
<tr>
<td>HRI 115 FOODSERVICE OPERATIONS</td>
<td>3</td>
</tr>
<tr>
<td>HRI 109 PROFESSIONAL CULINARY TECHNIQUES</td>
<td>3</td>
</tr>
<tr>
<td>PSY 123 INTRODUCTORY PSYCHOLOGY</td>
<td>3</td>
</tr>
<tr>
<td>HRI 107 BAKING FUNDAMENTALS</td>
<td>3</td>
</tr>
<tr>
<td>HRI 203 BANQUET AND DINING ROOM MANAGEMENT</td>
<td>4</td>
</tr>
<tr>
<td>HRI 215 BEVERAGE MANAGEMENT</td>
<td>3</td>
</tr>
<tr>
<td>Social Science Elective</td>
<td>3</td>
</tr>
<tr>
<td>Humanities Elective</td>
<td>3</td>
</tr>
<tr>
<td>HRI 114 GARDE MANAGER</td>
<td>3</td>
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<tr>
<td>HRI 205 FOOD AND BEVERAGE CONTROLS AND PURCHASING</td>
<td>3</td>
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<tr>
<td>HRI Elective</td>
<td>3</td>
</tr>
<tr>
<td>General Education Elective</td>
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<tr>
<td>Science Elective ³</td>
<td>3-4</td>
</tr>
<tr>
<td>Summer Session</td>
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</tr>
<tr>
<td>HRI 111 FOOD PREPARATION PRACTICUM</td>
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</tbody>
</table>

TOTAL CREDITS: 65-69

### CULINARY ARTS - CERTIFICATE OF ACHIEVEMENT

<table>
<thead>
<tr>
<th>Courses</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>ENG 121 ENGLISH COMPOSITION I</td>
<td>3</td>
</tr>
<tr>
<td>HRI 103 PRINCIPLES OF FOOD SELECTION AND PREPARATION</td>
<td>3</td>
</tr>
<tr>
<td>HRI 107 BAKING FUNDAMENTALS</td>
<td>3</td>
</tr>
<tr>
<td>HRI 108 QUANTITY FOOD PRODUCTION</td>
<td>3</td>
</tr>
<tr>
<td>HRI 114 GARDE MANAGER</td>
<td>3</td>
</tr>
<tr>
<td>HRI 115 FOODSERVICE OPERATIONS</td>
<td>3</td>
</tr>
<tr>
<td>HRI 203 BANQUET AND DINING ROOM MANAGEMENT</td>
<td>4</td>
</tr>
<tr>
<td>HRI 205 FOOD AND BEVERAGE CONTROLS AND PURCHASING</td>
<td>3</td>
</tr>
<tr>
<td>HRI 208 FOODSERVICE SANITATION</td>
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</tr>
<tr>
<td>General Education Elective</td>
<td>3</td>
</tr>
<tr>
<td>Summer Session</td>
<td></td>
</tr>
<tr>
<td>HRI 111 FOOD PREPARATION PRACTICUM</td>
<td>3</td>
</tr>
</tbody>
</table>

TOTAL CREDITS: 34

¹ You must take OAD 010 at the same time you take BUS 107 or obtain an approved waiver demonstrating proficiency in keyboarding.
² BUS 115 is recommended. However, you may enroll in a higher-level mathematics course for which you have the appropriate academic background.
³ You may choose a science course for which you have the appropriate academic background from Biology, Chemistry, Environmental Science, Physics or Science.
# Hotel-Motel Management Degree Option

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 121</td>
<td>English Composition I</td>
<td>3</td>
</tr>
<tr>
<td>HRI 101</td>
<td>Introduction to Hotel, Restaurant, and Institution Management</td>
<td>3</td>
</tr>
<tr>
<td>HRI 103</td>
<td>Principles of Food Selection and Preparation</td>
<td>3</td>
</tr>
<tr>
<td>HRI 208</td>
<td>Foodservice Sanitation</td>
<td>3</td>
</tr>
<tr>
<td>Mathematics Elective</td>
<td></td>
<td>3-4</td>
</tr>
<tr>
<td>Physical/Health Ed Elective</td>
<td></td>
<td>1-3</td>
</tr>
<tr>
<td>ACC 108</td>
<td>Accounting Practices for Hotels, Restaurants and Institutions</td>
<td>4</td>
</tr>
<tr>
<td>BUS 107</td>
<td>Computer Applications for Business 1</td>
<td>3</td>
</tr>
<tr>
<td>ENG 122</td>
<td>English Composition II</td>
<td>3</td>
</tr>
<tr>
<td>HRI 108</td>
<td>Quantity Food Production</td>
<td>3</td>
</tr>
<tr>
<td>HRI 110</td>
<td>Supervisory Development in the Lodging &amp; Foodservice Industry</td>
<td>3</td>
</tr>
<tr>
<td>HRI 201</td>
<td>Hotel-Motel Front Office Operations</td>
<td>3</td>
</tr>
<tr>
<td>HRI 206</td>
<td>Merchandising for the Hospitality Industry</td>
<td>3</td>
</tr>
<tr>
<td>HRI 217</td>
<td>Supervisory Housekeeping</td>
<td>3</td>
</tr>
<tr>
<td>PSY 123</td>
<td>Introductory Psychology</td>
<td>3</td>
</tr>
<tr>
<td>Humanities Elective</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Social Science Elective</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>HRI 203</td>
<td>Banquet and Dining Room Management</td>
<td>4</td>
</tr>
<tr>
<td>HRI 216</td>
<td>Hospitality Property Management</td>
<td>3</td>
</tr>
<tr>
<td>HRI Elective</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>General Education Elective</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Science Elective</td>
<td></td>
<td>3-4</td>
</tr>
<tr>
<td>TOTAL CREDITS:</td>
<td></td>
<td>66-70</td>
</tr>
</tbody>
</table>

# Technical Certificate in Hotel Operations

Below are required courses for program completion. Courses may have prerequisite and corequisite requirements. Check course descriptions for details.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUS 107</td>
<td>Computer Applications for Business 1</td>
<td>3</td>
</tr>
<tr>
<td>HRI 110</td>
<td>Supervisory Development in the Lodging &amp; Foodservice Industry</td>
<td>3</td>
</tr>
<tr>
<td>HRI 201</td>
<td>Hotel-Motel Front Office Operations</td>
<td>3</td>
</tr>
<tr>
<td>HRI 206</td>
<td>Merchandising for the Hospitality Industry</td>
<td>3</td>
</tr>
<tr>
<td>HRI 216</td>
<td>Hospitality Property Management</td>
<td>3</td>
</tr>
<tr>
<td>HRI 217</td>
<td>Supervisory Housekeeping</td>
<td>3</td>
</tr>
<tr>
<td>TOTAL CREDITS:</td>
<td></td>
<td>18</td>
</tr>
</tbody>
</table>

*HRI 215 is recommended. Students in consultation with their Academic Advisor should enroll in an elective for which they have the appropriate academic background.*

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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?

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. 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.

---

*HRI 110 is recommended. Students in consultation with their Academic Advisor should enroll in an elective for which they have the appropriate academic background.*

4 HRI 110 is recommended. Students in consultation with their Academic Advisor should enroll in an elective for which they have the appropriate academic background.
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.

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**RESTAURANT FOODSERVICE MANAGEMENT DEGREE OPTION**

<table>
<thead>
<tr>
<th>Courses</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 121 ENGLISH COMPOSITION I</td>
<td>3</td>
</tr>
<tr>
<td>HRI 101 INTRODUCTION TO HOTEL, RESTAURANT, AND INSTITUTION MANAGEMENT</td>
<td>3</td>
</tr>
<tr>
<td>HRI 103 PRINCIPLES OF FOOD SELECTION AND PREPARATION</td>
<td>3</td>
</tr>
<tr>
<td>HRI 208 FOODSERVICE SANITATION</td>
<td>3</td>
</tr>
<tr>
<td>Mathematics Elective</td>
<td>3-4</td>
</tr>
<tr>
<td>Physical/Health Ed Elective</td>
<td>1-3</td>
</tr>
<tr>
<td>ACC 108 ACCOUNTING PRACTICES FOR HOTELS, RESTAURANTS AND INSTITUTIONS</td>
<td>4</td>
</tr>
<tr>
<td>BUS 107 COMPUTER APPLICATIONS FOR BUSINESS</td>
<td>3</td>
</tr>
<tr>
<td>ENG 122 ENGLISH COMPOSITION II</td>
<td>3</td>
</tr>
<tr>
<td>HRI 203 BANQUET AND DINING ROOM MANAGEMENT</td>
<td>4</td>
</tr>
<tr>
<td>HRI 108 QUANTITY FOOD PRODUCTION</td>
<td>3</td>
</tr>
<tr>
<td>HRI 110 SUPERVISORY DEVELOPMENT IN THE LODGING &amp; FOODSERVICE INDUSTRY</td>
<td>3</td>
</tr>
<tr>
<td>HRI 206 MERCHANDISING FOR THE HOSPITALITY INDUSTRY</td>
<td>3</td>
</tr>
<tr>
<td>HRI 215 BEVERAGE MANAGEMENT</td>
<td>3</td>
</tr>
<tr>
<td>PSY 123 INTRODUCTORY PSYCHOLOGY</td>
<td>3</td>
</tr>
<tr>
<td>Humanities Elective</td>
<td>3</td>
</tr>
<tr>
<td>HRI 202 FACILITIES LAYOUT AND DESIGN</td>
<td>3</td>
</tr>
<tr>
<td>HRI 205 FOOD AND BEVERAGE CONTROLS AND PURCHASING</td>
<td>3</td>
</tr>
<tr>
<td>HRI Elective</td>
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<td>General Education Elective</td>
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<tr>
<td>Science Elective</td>
<td>3-4</td>
</tr>
<tr>
<td>Social Science Elective</td>
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</tr>
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</table>

**TOTAL CREDITS : 66-70**

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**TECHNICAL CERTIFICATE IN RESTAURANT OPERATIONS**

<table>
<thead>
<tr>
<th>Courses</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUS 107 COMPUTER APPLICATIONS FOR BUSINESS</td>
<td>3</td>
</tr>
<tr>
<td>HRI 103 PRINCIPLES OF FOOD SELECTION AND PREPARATION</td>
<td>3</td>
</tr>
<tr>
<td>HRI 205 FOOD AND BEVERAGE CONTROLS AND PURCHASING</td>
<td>3</td>
</tr>
<tr>
<td>HRI 206 MERCHANDISING FOR THE HOSPITALITY INDUSTRY</td>
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<tr>
<td>HRI 208 FOODSERVICE SANITATION</td>
<td>3</td>
</tr>
<tr>
<td>HRI 215 BEVERAGE MANAGEMENT</td>
<td>3</td>
</tr>
</tbody>
</table>

**TOTAL CREDITS : 18**

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1 You must take OAD 010 at the same time you take BUS 107 or obtain an approved waiver demonstrating proficiency in keyboarding.
2 BUS 115 is recommended. However, you may enroll in a higher-level mathematics course for which you have the appropriate academic background.
3 You may choose a science course for which you have the appropriate academic background from Biology, Chemistry, Environmental Science, Physics or Science.
4 HRI 110 is recommended. Students in consultation with their Academic Advisor should enroll in an elective for which they have the appropriate academic background.
5 HRI 215 is recommended. Students in consultation with their Academic Advisor should enroll in an elective for which they have the appropriate academic background.
Internet/Web Page Development

COMPUTER SCIENCE DEPARTMENT

CERTIFICATE PROGRAM
Below are required courses for program completion. Courses may have prerequisite and corequisite requirements. Check course descriptions for details.

<table>
<thead>
<tr>
<th>Courses</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>CSC 108 INTRODUCTION TO THE INTERNET</td>
<td>2</td>
</tr>
<tr>
<td>CSC 110 MICROCOMPUTER OPERATING SYSTEMS</td>
<td>3</td>
</tr>
<tr>
<td>CSC 125 WEB PAGE DESIGN AND DEVELOPMENT</td>
<td>3</td>
</tr>
<tr>
<td>CSC 230 MULTIMEDIA PRODUCTION AND AUTHORING TOOLS</td>
<td>4</td>
</tr>
<tr>
<td>MAD 121 GRAPHICS FOR COMPUTER AUTHORS AND PRESENTERS</td>
<td>3</td>
</tr>
</tbody>
</table>

Recommended Elective 1

TOTAL CREDITS: 18

Why major in 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 person 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?
If you do not need developmental coursework, 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 Bhatia, Department Chair, at 732.906.2526.

1 CSC 160 is recommended
Liberal Arts

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 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 DEGREE REQUIREMENTS
Below are required courses for program completion. Courses may have prerequisite and corequisite requirements. Check course descriptions for details.

<table>
<thead>
<tr>
<th>Courses</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 121 ENGLISH COMPOSITION I</td>
<td>3</td>
</tr>
<tr>
<td>HIS 121 HISTORY OF WESTERN CIVILIZATION I</td>
<td>3</td>
</tr>
<tr>
<td>Language</td>
<td>3</td>
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<tr>
<td>Computer Literacy</td>
<td>3</td>
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<tr>
<td>Social Science Elective</td>
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<tr>
<td>ENG 122 ENGLISH COMPOSITION II</td>
<td>3</td>
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<tr>
<td>OR</td>
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<tr>
<td>ENG 125 ENGLISH COMPOSITION II: WRITING ABOUT LITERATURE</td>
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<tr>
<td>Diversity Elective</td>
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<tr>
<td>HIS 122 HISTORY OF WESTERN CIVILIZATION II</td>
<td>3</td>
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<tr>
<td>Language</td>
<td>3</td>
</tr>
<tr>
<td>Social Science Elective</td>
<td>3</td>
</tr>
<tr>
<td>SPE 121 FUNDAMENTALS OF PUBLIC SPEAKING</td>
<td>3</td>
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<tr>
<td>OR</td>
<td></td>
</tr>
<tr>
<td>SPE 123 DISCUSSION AND DEBATE</td>
<td>3</td>
</tr>
<tr>
<td>Science</td>
<td>3-4</td>
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<tr>
<td>Mathematics</td>
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<td>Liberal Arts Electives</td>
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<tr>
<td>Physical/Health Ed Elective</td>
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<tr>
<td>Science</td>
<td>3-4</td>
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<tr>
<td>Mathematics Elective</td>
<td>3-4</td>
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<td>Divisional Elective</td>
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<td>Humanities</td>
<td>10</td>
</tr>
<tr>
<td>TOTAL CREDITS :</td>
<td>62-70</td>
</tr>
</tbody>
</table>

1. 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.
2. Choose three credits by taking either CSC 105 or BUS 107 (business Option only - LAB).
3. Choose six credits from courses designated in the course description as GE SS from the following: African-American Studies, Anthropology, Economics, Political Science, Psychology and Sociology.
4. Choose a minimum of three credits from courses 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.
5. Choose a minimum of seven credits by choosing two of the following courses: BIO 103, BIO 104, BIO 105, BIO 106, ENV 207, ENV 211, ENV 212, SCI 108, SCI 155, SCI 156, SCI 157, SCI 204 or choose eight credits 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 - 122.
6. 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 285.
7. For the business option choose one of the following sequences: MAT 123 & MAT 124 or MAT 129 & MAT 131 or MAT 131 & MAT 285 or by advisement.
8. Choose 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.
9. 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.
10. Choose three credits 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.
11. Choose three 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 Theater.
**BUSINESS DEGREE OPTION**

Below are required courses for program completion. Courses may have prerequisite and corequisite requirements. Check course descriptions for details.

<table>
<thead>
<tr>
<th>Courses</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACC 101 FINANCIAL ACCOUNTING</td>
<td>4</td>
</tr>
<tr>
<td>ACC 102 MANAGERIAL ACCOUNTING</td>
<td>4</td>
</tr>
<tr>
<td>ECO 201 PRINCIPLES OF ECONOMICS I</td>
<td>3</td>
</tr>
<tr>
<td>ECO 202 PRINCIPLES OF ECONOMICS II</td>
<td>3</td>
</tr>
<tr>
<td>Mathematics Elective Choices (select one sequence):</td>
<td>6-8</td>
</tr>
<tr>
<td>MAT 123 STATISTICS I</td>
<td>3</td>
</tr>
<tr>
<td>MAT 124 STATISTICS II</td>
<td>3</td>
</tr>
<tr>
<td>OR</td>
<td></td>
</tr>
<tr>
<td>MAT 129 PRECALCULUS</td>
<td>4</td>
</tr>
<tr>
<td>MAT 131 ANALYTIC GEOMETRY AND CALCULUS I</td>
<td>4</td>
</tr>
<tr>
<td>OR</td>
<td></td>
</tr>
<tr>
<td>MAT 131 ANALYTIC GEOMETRY AND CALCULUS I</td>
<td>4</td>
</tr>
<tr>
<td>MAT 132 ANALYTIC GEOMETRY AND CALCULUS II</td>
<td>4</td>
</tr>
<tr>
<td>OR</td>
<td></td>
</tr>
<tr>
<td>MAT 131 ANALYTIC GEOMETRY AND CALCULUS I</td>
<td>4</td>
</tr>
<tr>
<td>MAT 285 BASIC STATISTICS FOR BUSINESS</td>
<td>4</td>
</tr>
</tbody>
</table>

**TOTAL CREDITS:** 66-72

**COMMUNICATION DEGREE OPTION**

<table>
<thead>
<tr>
<th>Courses</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>COM 105 INTRODUCTION TO COMMUNICATION STUDY</td>
<td>3</td>
</tr>
<tr>
<td>COM 110 INTERPERSONAL COMMUNICATION</td>
<td>3</td>
</tr>
<tr>
<td>COM 121 MASS COMMUNICATION STUDY</td>
<td>3</td>
</tr>
<tr>
<td>Recommended Courses (select one):</td>
<td></td>
</tr>
<tr>
<td>COM 115 INTERCULTURAL COMMUNICATION</td>
<td>3</td>
</tr>
<tr>
<td>COM 131 INTRODUCTION TO BROADCASTING</td>
<td>3</td>
</tr>
<tr>
<td>COM 208 COMMUNICATION SEMINAR &amp; FIELD EXPERIENCE</td>
<td>3</td>
</tr>
<tr>
<td>COM 210 RADIO BROADCASTING PRODUCTION</td>
<td>3</td>
</tr>
<tr>
<td>ENG 205 INTRODUCTION TO JOURNALISM</td>
<td>3</td>
</tr>
<tr>
<td>LNC 123 INTRODUCTION TO THE STUDY OF HUMAN LANGUAGE</td>
<td>3</td>
</tr>
<tr>
<td>SPE 123 DISCUSSION AND DEBATE</td>
<td>3</td>
</tr>
</tbody>
</table>

**TOTAL CREDITS:** 62-70

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.

**DANCE DEGREE OPTION**

<table>
<thead>
<tr>
<th>Courses</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>DAN 131 ELEMENTS OF DANCE</td>
<td>3</td>
</tr>
<tr>
<td>DAN 132 DANCE APPRECIATION</td>
<td>3</td>
</tr>
<tr>
<td>DAN 201 METHODS AND MODERN TECHNIQUES IN DANCE</td>
<td>3</td>
</tr>
<tr>
<td>DAN 202 IMPROVISATION AND COMPOSITION</td>
<td>3</td>
</tr>
</tbody>
</table>

**TOTAL CREDITS:** 62-70
EDUCATION DEGREE OPTION

Courses | Credits
-------|--------
SOC 121 INTRODUCTION TO SOCIOLOGY and Three advised Liberal Arts Electives (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 Social Sciences requirement with:
PSY 123 INTRODUCTORY PSYCHOLOGY
PSY 223 CHILD PSYCHOLOGY

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. 47).

ENGLISH DEGREE OPTION

Courses | Credits
-------|--------
You may choose any English course numbered 200 or higher to satisfy the 12 credit requirement. All have a prerequisite of ENG 122 or 125. In addition, ENG 205 must be taken before ENG 206 or ENG 214.

TOTAL CREDITS: 62-70

GENERAL DEGREE OPTION

Courses | Credits
-------|--------
Choose 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.

TOTAL CREDITS: 62-70

HISTORY DEGREE OPTION

Courses | Credits
-------|--------
To satisfy the 12 credit requirement choose History courses that you have not taken to satisfy the core requirements for the degree.

TOTAL CREDITS: 62-70
**JOURNALISM DEGREE OPTION**

<table>
<thead>
<tr>
<th>Courses</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 205 INTRODUCTION TO JOURNALISM</td>
<td>3</td>
</tr>
<tr>
<td>ENG 206 JOURNALISM WORKSHOP</td>
<td>3</td>
</tr>
<tr>
<td>ENG 214 JOURNALISM/Writing Field Experience</td>
<td>3</td>
</tr>
<tr>
<td><strong>Recommended Courses (select one):</strong></td>
<td></td>
</tr>
<tr>
<td>ENG 235 CREATIVE WRITING I</td>
<td>3</td>
</tr>
<tr>
<td>ENG 225 WORLD LITERATURE I</td>
<td>3</td>
</tr>
<tr>
<td>ENG 226 WORLD LITERATURE II</td>
<td>3</td>
</tr>
<tr>
<td>POS 201 UNITED STATES STATE AND LOCAL GOVERNMENT</td>
<td>3</td>
</tr>
</tbody>
</table>

**TOTAL CREDITS: 62-70**

**MODERN LANGUAGE DEGREE OPTION**

<table>
<thead>
<tr>
<th>Courses</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>To satisfy the 12 credit requirement choose Modern Languages courses that you have not taken to satisfy the core requirements for the degree.</td>
<td>12</td>
</tr>
</tbody>
</table>

**TOTAL CREDITS: 62-70**

**MUSIC DEGREE OPTION**

<table>
<thead>
<tr>
<th>Courses</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MUS 131 KEYBOARD STUDIES I</td>
<td>3</td>
</tr>
<tr>
<td>MUS 132 KEYBOARD STUDIES II</td>
<td>3</td>
</tr>
<tr>
<td>MUS 140 MUSIC FUNDAMENTALS</td>
<td>3</td>
</tr>
<tr>
<td>MUS 201 MUSIC NOTATION AND COMPOSITION I <strong>1</strong></td>
<td>3</td>
</tr>
<tr>
<td>MUS 202 MUSIC NOTATION AND COMPOSITION II</td>
<td>3</td>
</tr>
</tbody>
</table>

**TOTAL CREDITS: 65-73**

**PHYSICAL EDUCATION/RECREATION DEGREE OPTION**

<table>
<thead>
<tr>
<th>Courses</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>HED 150 CONTEMPORARY HEALTH ISSUES</td>
<td>3</td>
</tr>
<tr>
<td>HED 200 HUMAN SEXUALITY AND FAMILY LIFE</td>
<td>3</td>
</tr>
<tr>
<td>PED 225 FIRST AID, CPR AND SAFETY EDUCATION</td>
<td>3</td>
</tr>
<tr>
<td>Three one credit activity classes offered by the Department.</td>
<td>3</td>
</tr>
</tbody>
</table>

**TOTAL CREDITS: 62-70**

**1** You may substitute the prerequisite of MUS 140 with a passing score on the music theory placement exam.
### Political Science Degree Option

<table>
<thead>
<tr>
<th>Courses</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>POS 121 INTRODUCTORY GOVERNMENT AND POLITICS</td>
<td>3</td>
</tr>
<tr>
<td>POS 220 UNITED STATES NATIONAL GOVERNMENT</td>
<td>3</td>
</tr>
<tr>
<td>POS 201 UNITED STATES STATE AND LOCAL GOVERNMENT</td>
<td>3</td>
</tr>
<tr>
<td>POS 222 FOREIGN GOVERNMENTS: A COMPARATIVE ANALYSIS</td>
<td>3</td>
</tr>
<tr>
<td>POS 231 CONSTITUTIONAL LAW</td>
<td>3</td>
</tr>
</tbody>
</table>

**Total Credits: 62-68**

### Psychology Degree Option

To satisfy the 12 credit requirement choose Psychology courses that you have not taken to satisfy the 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.

### Social and Rehabilitation Services Degree Option

<table>
<thead>
<tr>
<th>Courses</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSY 123 INTRODUCTORY PSYCHOLOGY</td>
<td>3</td>
</tr>
<tr>
<td>SOC 121 INTRODUCTION TO SOCIOLOGY</td>
<td>3</td>
</tr>
<tr>
<td>SOC 131 CONTEMPORARY SOCIAL PROBLEMS</td>
<td>3</td>
</tr>
<tr>
<td>SOC 141 INTRODUCTION TO SOCIAL WORK</td>
<td>3</td>
</tr>
<tr>
<td>AND SOCIAL WELFARE POLICY</td>
<td></td>
</tr>
<tr>
<td>SOC 205 MINORITY GROUPS IN U.S SOCIETY</td>
<td>3</td>
</tr>
<tr>
<td>SOC 210 METHODS OF SOCIAL CASEWORK AND COUNSELING</td>
<td>3</td>
</tr>
</tbody>
</table>

**Total Credits: 62-68**

### Social Sciences Degree Option

Choose Liberal Arts Electives from: POS, PSY or SOC.

(Courses that you have not taken to satisfy the core requirements for the degree)

**Total Credits: 62-68**

### Sociology Degree Option

To satisfy the 12 credit requirement choose Sociology courses that you have not taken to satisfy the core requirements for the degree.

**Total Credits: 62-68**

12 Should be taken for fulfillment of Social Science requirement.
### Theatre Degree Option

<table>
<thead>
<tr>
<th>Courses</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>THE 145 STAGECRAFT</td>
<td>4</td>
</tr>
<tr>
<td>THE 146 PLAY PRODUCTION</td>
<td>4</td>
</tr>
</tbody>
</table>

Choose two courses of the following:

<table>
<thead>
<tr>
<th>Courses</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>DAN 131 ELEMENTS OF DANCE</td>
<td>3</td>
</tr>
<tr>
<td>DAN 132 DANCE APPRECIATION</td>
<td>3</td>
</tr>
<tr>
<td>DAN 201 METHODS AND MODERN TECHNIQUES IN DANCE</td>
<td>3</td>
</tr>
<tr>
<td>DAN 202 IMPROVISATION AND COMPOSITION</td>
<td>3</td>
</tr>
<tr>
<td>SPE  124 ORAL INTERPRETATION</td>
<td>3</td>
</tr>
<tr>
<td>THE 105 INTRODUCTION TO THEATRE</td>
<td>3</td>
</tr>
<tr>
<td>THE 123 THEATRE HISTORY</td>
<td>3</td>
</tr>
<tr>
<td>THE 124 CONTEMPORARY THEATRE</td>
<td>3</td>
</tr>
<tr>
<td>THE 131 ACTING I</td>
<td>3</td>
</tr>
<tr>
<td>THE 132 ACTING II</td>
<td>3</td>
</tr>
<tr>
<td>THE 152 AMERICAN MUSICAL THEATRE</td>
<td>3</td>
</tr>
</tbody>
</table>

**Total Credits: 62-70**

### Visual Arts Degree Option

<table>
<thead>
<tr>
<th>Courses</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ART 145 ART FUNDAMENTALS: TWO DIMENSIONS</td>
<td>3</td>
</tr>
<tr>
<td>ART 146 ART FUNDAMENTALS: THREE DIMENSIONS</td>
<td>3</td>
</tr>
</tbody>
</table>

Choose two courses of the following:

<table>
<thead>
<tr>
<th>Courses</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ART 123 ART HISTORY: ANCIENT TO RENAISSANCE</td>
<td>3</td>
</tr>
<tr>
<td>ART 124 ART HISTORY: RENAISSANCE TO MODERN</td>
<td>3</td>
</tr>
<tr>
<td>ART 125 ART HISTORY: MODERN TO CONTEMPORARY</td>
<td>3</td>
</tr>
</tbody>
</table>

**Total Credits: 62-70**
Management

BUSINESS ADMINISTRATION & MANAGEMENT DEPARTMENT

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 current business experience, earning your degree in Management may open up employment and promotion opportunities.

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.

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. 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 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.

DEGREE PROGRAM
Below are required courses for program completion. Courses may have prerequisite and corequisite requirements. Check course descriptions for details.

<table>
<thead>
<tr>
<th>Courses</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUS 101 BUSINESS ORGANIZATION AND MANAGEMENT</td>
<td>3</td>
</tr>
<tr>
<td>BUS 107 COMPUTER APPLICATIONS FOR BUSINESS</td>
<td>3</td>
</tr>
<tr>
<td>ENG 121 ENGLISH COMPOSITION I</td>
<td>3</td>
</tr>
<tr>
<td>Mathematics Requirement</td>
<td>3-4</td>
</tr>
<tr>
<td>Social Science Elective</td>
<td>3</td>
</tr>
<tr>
<td>ACC 101 FINANCIAL ACCOUNTING</td>
<td>4</td>
</tr>
<tr>
<td>ECO 201 PRINCIPLES OF ECONOMICS I</td>
<td>3</td>
</tr>
<tr>
<td>ENG 122 ENGLISH COMPOSITION II</td>
<td>3</td>
</tr>
<tr>
<td>MGT 210 CONCEPTS OF BUSINESS MANAGEMENT</td>
<td>3</td>
</tr>
<tr>
<td>Humanities or Social Science Elective</td>
<td>3</td>
</tr>
<tr>
<td>ACC 102 MANAGERIAL ACCOUNTING</td>
<td>4</td>
</tr>
<tr>
<td>MGT 205 PRINCIPALS OF LABOR RELATIONS</td>
<td>3</td>
</tr>
<tr>
<td>ECO 202 PRINCIPLES OF ECONOMICS II</td>
<td>3</td>
</tr>
<tr>
<td>MGT 220 HUMAN RESOURCES MANAGEMENT</td>
<td>3</td>
</tr>
<tr>
<td>Humanities Elective</td>
<td>3</td>
</tr>
<tr>
<td>Physical/Health Ed Elective</td>
<td>1-3</td>
</tr>
<tr>
<td>BUS 201 BUSINESS LAW I</td>
<td>3</td>
</tr>
<tr>
<td>MGT 214 OPERATIONS MANAGEMENT</td>
<td>3</td>
</tr>
<tr>
<td>MGT 216 SEMINAR IN MANAGEMENT EXPERIENCES</td>
<td>3</td>
</tr>
<tr>
<td>Recommended Business Elective</td>
<td>3</td>
</tr>
<tr>
<td>Science Requirement</td>
<td>3</td>
</tr>
</tbody>
</table>

TOTAL CREDITS: 63-65

MANAGEMENT SUPPORT SERVICES CERTIFICATE PROGRAM

<table>
<thead>
<tr>
<th>Courses</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUS 101 BUSINESS ORGANIZATION AND MANAGEMENT</td>
<td>3</td>
</tr>
<tr>
<td>BUS 205 BUSINESS COMMUNICATIONS</td>
<td>3</td>
</tr>
<tr>
<td>MGT 210 CONCEPTS OF BUSINESS MANAGEMENT</td>
<td>3</td>
</tr>
<tr>
<td>MGT 220 HUMAN RESOURCES MANAGEMENT</td>
<td>3</td>
</tr>
<tr>
<td>ENG 121 ENGLISH COMPOSITION I</td>
<td>3</td>
</tr>
<tr>
<td>ENG 122 ENGLISH COMPOSITION II</td>
<td>3</td>
</tr>
<tr>
<td>MGT 205 PRINCIPALS OF LABOR RELATIONS</td>
<td>3</td>
</tr>
<tr>
<td>Social Science Elective</td>
<td>3</td>
</tr>
<tr>
<td>Business Elective</td>
<td>3</td>
</tr>
</tbody>
</table>

TOTAL CREDITS: 30

1 BUS 115 recommended. Students with the appropriate academic prerequisites, in consultation with their Academic Advisor, should elect the appropriate Mathematics course.
2 Final course for majors–the following courses are prerequisite for MGT 216: ACC 101, ACC 102, BUS 101, ECO 210, ECO 202, MGT 205, MGT 210 and MGT 220.
3 The following business electives are recommended for management majors: MGT 208 and MKT 201.
4 Students may elect courses with a code of BIO, CHM, ENV, PHY or SCI for which they have the appropriate academic preparation.
### Degree Program
Below are required courses for program completion. Courses may have prerequisite and corequisite requirements. Check course descriptions for details.

<table>
<thead>
<tr>
<th>Courses</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACC 101 FINANCIAL ACCOUNTING</td>
<td>4</td>
</tr>
<tr>
<td>BUS 101 BUSINESS ORGANIZATION AND MANAGEMENT</td>
<td>3</td>
</tr>
<tr>
<td>Mathematics Requirement ¹</td>
<td>3-4</td>
</tr>
<tr>
<td>BUS 107 COMPUTER APPLICATIONS FOR BUSINESS</td>
<td>3</td>
</tr>
<tr>
<td>ENG 121 ENGLISH COMPOSITION I</td>
<td>3</td>
</tr>
<tr>
<td>ACC 102 MANAGERIAL ACCOUNTING</td>
<td>4</td>
</tr>
<tr>
<td>BUS 201 BUSINESS LAW I</td>
<td>3</td>
</tr>
<tr>
<td>ENG 122 ENGLISH COMPOSITION II</td>
<td>3</td>
</tr>
<tr>
<td>MKT 201 MARKETING I</td>
<td>3</td>
</tr>
<tr>
<td>Social Science Elective</td>
<td>3</td>
</tr>
<tr>
<td>MKT 209 MARKETING FIELD EXPERIENCE</td>
<td>3</td>
</tr>
<tr>
<td>OR BUS 202 BUSINESS LAW II</td>
<td>3</td>
</tr>
<tr>
<td>ECO 201 PRINCIPLES OF ECONOMICS I</td>
<td>3</td>
</tr>
<tr>
<td>MKT 202 MARKETING II</td>
<td>3</td>
</tr>
<tr>
<td>MKT 203 PRINCIPLES OF ADVERTISING</td>
<td>3</td>
</tr>
<tr>
<td>Physical/Health Ed Elective</td>
<td>1-3</td>
</tr>
<tr>
<td>Humanities or Social Science Elective</td>
<td>3</td>
</tr>
<tr>
<td>ECO 202 PRINCIPLES OF ECONOMICS II</td>
<td>3</td>
</tr>
<tr>
<td>MKT 143 SALESMANSHIP</td>
<td>3</td>
</tr>
<tr>
<td>MKT 206 MARKETING MANAGEMENT SEMINAR</td>
<td>3</td>
</tr>
<tr>
<td>Science Requirement ²</td>
<td>3</td>
</tr>
<tr>
<td>Humanities Elective</td>
<td>3</td>
</tr>
</tbody>
</table>

**TOTAL CREDITS**: 63-65

---

¹ BUS 115 recommended. Students with the appropriate academic prerequisites, in consultation with their Academic Advisor, should elect the appropriate Mathematics course.

² Students may elect courses with a code of BIO, CHM, ENV, PHY or SCI for which they have the appropriate academic preparation.

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### 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, data processing, 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?
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. 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.

### Where should I direct specific questions about this program?
Contact Professor Bailey, Department Chair, at 732.906.2594.
Mathematics

MATHEMATICS DEPARTMENT

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 and intermediate algebra (MAT 013 or MAT 013A/013B) and MAT 014 or MAT 014A/014B), as well as precalculus. 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 for program completion. Courses may have prerequisite and corequisite requirements. Check course descriptions for details.

<table>
<thead>
<tr>
<th>Courses</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIO 123 GENERAL BIOLOGY I 1</td>
<td>4</td>
</tr>
<tr>
<td>OR</td>
<td></td>
</tr>
<tr>
<td>CHM 123 GENERAL CHEMISTRY I 1</td>
<td>4</td>
</tr>
<tr>
<td>ENG 121 ENGLISH COMPOSITION I</td>
<td>3</td>
</tr>
<tr>
<td>MAT 131 ANALYTIC GEOMETRY AND CALCULUS I</td>
<td>4</td>
</tr>
<tr>
<td>Social Science Elective</td>
<td>3</td>
</tr>
<tr>
<td>Physical/Health Ed Elective</td>
<td>1-3</td>
</tr>
<tr>
<td>BIO 124 GENERAL BIOLOGY II 1</td>
<td>4</td>
</tr>
<tr>
<td>OR</td>
<td></td>
</tr>
<tr>
<td>CHM 124 GENERAL CHEMISTRY II</td>
<td>4</td>
</tr>
<tr>
<td>ENG 122 ENGLISH COMPOSITION II</td>
<td>3</td>
</tr>
<tr>
<td>MAT 132 ANALYTIC GEOMETRY AND CALCULUS II</td>
<td>4</td>
</tr>
<tr>
<td>Computer Science Elective 2</td>
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</tr>
<tr>
<td>Social Science Elective</td>
<td>3</td>
</tr>
<tr>
<td>Humanities Elective</td>
<td>3</td>
</tr>
<tr>
<td>MAT 233 ANALYTIC GEOMETRY AND CALCULUS III</td>
<td>4</td>
</tr>
<tr>
<td>Mathematics Elective 3</td>
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<tr>
<td>PHY 121 GENERAL PHYSICS I 4</td>
<td>4</td>
</tr>
<tr>
<td>General Elective</td>
<td>3</td>
</tr>
<tr>
<td>Humanities Elective</td>
<td>3</td>
</tr>
<tr>
<td>MAT 234 DIFFERENTIAL EQUATIONS</td>
<td>4</td>
</tr>
<tr>
<td>Mathematics Elective 3</td>
<td>3-4</td>
</tr>
<tr>
<td>PHY 122 GENERAL PHYSICS II 4</td>
<td>4</td>
</tr>
</tbody>
</table>

TOTAL CREDITS: 65-69

1 Choose either BIO 123 - BIO 124 or CHM 123 - CHM 124.
2 Choose CSC 109 or higher.
3 Choose two courses from MAT 206, MAT 210, MAT 257, MAT 285.
4 You may substitute PHY 131 - PHY 132 for PHY 121 - PHY 122.
**Courses**

<table>
<thead>
<tr>
<th>Courses</th>
<th>Credits</th>
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<tbody>
<tr>
<td>ENG 121 ENGLISH COMPOSITION I</td>
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</tr>
<tr>
<td>MAT 129A PRECALCULUS A</td>
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<tr>
<td>ELT 105 FOUNDATIONS OF ELECTRICAL &amp; ELECTRONICS TECHNOLOGY</td>
<td>4</td>
</tr>
<tr>
<td>MEC 123 TECHNICAL GRAPHICS/CAD I</td>
<td>3</td>
</tr>
<tr>
<td>MCT 101 INTRODUCTION TO ENGINEERING TECHNOLOGY</td>
<td>2</td>
</tr>
<tr>
<td>PED/HED Physical/Health Ed Elective</td>
<td>1/3</td>
</tr>
<tr>
<td>ENG 122 ENGLISH COMPOSITION II</td>
<td>3</td>
</tr>
<tr>
<td>MAT 129B PRECALCULUS B</td>
<td>2</td>
</tr>
<tr>
<td>MEC 130 MANUFACTURING PROCESSES &amp; MATERIALS</td>
<td>4</td>
</tr>
<tr>
<td>CMT 124 APPLIED TECHNICAL GRAPHICS/CAD II</td>
<td>3</td>
</tr>
<tr>
<td>CIT 105 STATICS FOR TECHNICIANS</td>
<td>3</td>
</tr>
<tr>
<td>Humanities Elective</td>
<td>3</td>
</tr>
<tr>
<td>MAT 131A ANALYTIC GEOMETRY &amp; CALCULUS I (PART A)</td>
<td>2</td>
</tr>
<tr>
<td>MEC 228 KINEMATIC DESIGN</td>
<td>4</td>
</tr>
<tr>
<td>PHY 121 GENERAL PHYSICS I</td>
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<td>CIT 203 STRENGTH OF MATERIALS</td>
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</tr>
<tr>
<td>MEC 250 SOLID MODELING</td>
<td>3</td>
</tr>
<tr>
<td>MEC 204 FLUID MECHANICS</td>
<td>4</td>
</tr>
<tr>
<td>MCT 220 INTRODUCTION TO ROBOTICS AND CONTROL SYSTEMS</td>
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</tr>
<tr>
<td>MAT 131B ANALYTIC GEOMETRY &amp; CALCULUS II (PART B)</td>
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<tr>
<td>Social Science Elective</td>
<td>3</td>
</tr>
<tr>
<td>PHY 122 GENERAL PHYSICS II</td>
<td>4</td>
</tr>
</tbody>
</table>

**Total Credits:** 67-69

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**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 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.
Mecomtronics Engineering Technology

Electrical Engineering Technology Department

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 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 or 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 systems; 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 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 for program completion. Courses may have prerequisite and corequisite requirements. Check course descriptions for details.

<table>
<thead>
<tr>
<th>Courses</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 131</td>
<td>RESEARCH, COMPOSITION AND PRESENTATION I</td>
</tr>
<tr>
<td>MAT 145</td>
<td>INTEGRATED MATHEMATICS I</td>
</tr>
<tr>
<td>MCT 101</td>
<td>INTRODUCTION TO ENGINEERING TECHNOLOGY</td>
</tr>
<tr>
<td>MCT 103</td>
<td>FOUNDATION OF MECOMTRONICS</td>
</tr>
<tr>
<td>PHY 145</td>
<td>MECOMTRONICS PHYSICS I</td>
</tr>
<tr>
<td></td>
<td>Physical/Health Ed Elective</td>
</tr>
<tr>
<td></td>
<td>Humanities or Social Science Elective</td>
</tr>
<tr>
<td>ENG 132</td>
<td>RESEARCH, COMPOSITION AND PRESENTATION II</td>
</tr>
<tr>
<td>MAT 146</td>
<td>INTEGRATED MATHEMATICS II</td>
</tr>
<tr>
<td>MCT 102</td>
<td>SUPPORT AND MAINTENANCE OF COMPUTER SYSTEMS</td>
</tr>
<tr>
<td>MCT 104</td>
<td>ELECTRICAL AND MECHANICAL POWER SYSTEMS</td>
</tr>
<tr>
<td>MCT 106</td>
<td>AUTOMATED SYSTEMS</td>
</tr>
<tr>
<td>PHY 146</td>
<td>MECOMTRONICS PHYSICS II</td>
</tr>
<tr>
<td>ENG 133</td>
<td>RESEARCH, COMPOSITION AND PRESENTATION III</td>
</tr>
<tr>
<td>MAT 245</td>
<td>INTEGRATED MATHEMATICS III</td>
</tr>
<tr>
<td>MCT 201</td>
<td>TELECOMMUNICATIONS WITH INDUSTRIAL APPLICATIONS</td>
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<tr>
<td>MCT 203</td>
<td>CONTROL AND AUTOMATION OF MANUFACTURING SYSTEMS</td>
</tr>
<tr>
<td>MCT 205</td>
<td>MANUFACTURING PROCESSES AND QUALITY MANAGEMENT</td>
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<td>PHY 245</td>
<td>MECOMTRONICS PHYSICS III</td>
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<tr>
<td>MAT 246</td>
<td>INTEGRATED MATHEMATICS IV</td>
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<tr>
<td>MCT 202</td>
<td>SPECIAL TOPICS IN ENGINEERING TECHNOLOGY</td>
</tr>
<tr>
<td>MCT 206</td>
<td>CAPSTONE PROJECT</td>
</tr>
<tr>
<td>PHY 246</td>
<td>MECOMTRONICS PHYSICS IV</td>
</tr>
<tr>
<td></td>
<td>Humanities or Social Science Elective</td>
</tr>
<tr>
<td></td>
<td>Technical Elective or Co-Op *</td>
</tr>
<tr>
<td></td>
<td>Technical Elective Courses</td>
</tr>
</tbody>
</table>

Choose one course of the following:
- CSC 125 WEB PAGE DESIGN AND DEVELOPMENT | 3 |
- CSC 133 INTRODUCTION TO COMPUTER SCIENCE USING C++ | 4 |
- CSC 230 MULTIMEDIA PRODUCTION AND AUTHORING TOOLS | 4 |
- ELT 224 COMMUNICATION ELECTRONICS | 3 |
- MCT 208 MECOMTRONICS AND TELMEDI | 3 |
- MCT 220 INTRODUCTION TO ROBOTICS AND CONTROL SYSTEMS | 4 |

Total Credits: 64-66

* Requires fourth-semester status in Mecomtronics Engineering Technology and permission of the Department Chairperson.
### DEGREE PROGRAM

Below are required courses for program completion. Courses may have prerequisite and corequisite requirements. Check course descriptions for details.

<table>
<thead>
<tr>
<th>Courses</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>BUS 107 COMPUTER APPLICATIONS FOR BUSINESS ¹</td>
<td>3</td>
</tr>
<tr>
<td>ENG 121 ENGLISH COMPOSITION I</td>
<td>3</td>
</tr>
<tr>
<td>MAD 107 PHOTOGRAPHY I</td>
<td>3</td>
</tr>
<tr>
<td>MAD 111 COLOR AND DESIGN I</td>
<td>3</td>
</tr>
<tr>
<td>MAD 117 FREEHAND DRAWING</td>
<td>3</td>
</tr>
<tr>
<td>Physical/Health Ed Elective</td>
<td>1-3</td>
</tr>
<tr>
<td>ART 103 ART IN INDUSTRY AND COMMERCE</td>
<td>2</td>
</tr>
<tr>
<td>BUS 101 BUSINESS ORGANIZATION AND MANAGEMENT</td>
<td>3</td>
</tr>
<tr>
<td>ENG 122 ENGLISH COMPOSITION II</td>
<td>3</td>
</tr>
<tr>
<td>MAD 106 MECHANICAL AND COMPUTER STUDIO SKILLS</td>
<td>3</td>
</tr>
<tr>
<td>MAD 108 PHOTOGRAPHY II</td>
<td>3</td>
</tr>
<tr>
<td>MAD 112 COLOR AND DESIGN II</td>
<td>3</td>
</tr>
<tr>
<td>MKT 143 SALESMANSHIP</td>
<td>3</td>
</tr>
<tr>
<td>OR</td>
<td></td>
</tr>
<tr>
<td>MKT 203 PRINCIPLES OF ADVERTISING</td>
<td>3</td>
</tr>
<tr>
<td>Social Science Elective</td>
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</tr>
<tr>
<td>Mathematics Requirement ²</td>
<td>3-4</td>
</tr>
<tr>
<td>You must take a minimum of six credits from below:</td>
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<tr>
<td>AGD 205 LAYOUT DESIGN</td>
<td>2</td>
</tr>
<tr>
<td>AGD 211 ADVERTISING DESIGN I</td>
<td>2</td>
</tr>
<tr>
<td>AGD 217 MECHANICAL PRINT PRODUCTION</td>
<td>2</td>
</tr>
<tr>
<td>PCP 225 PRODUCT AND STOCK PHOTOGRAPHY</td>
<td>3</td>
</tr>
<tr>
<td>PCP 221 COLOR PRINTING METHODS AND PRACTICE</td>
<td>3</td>
</tr>
<tr>
<td>You must take a minimum of six credits from below:</td>
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</tr>
<tr>
<td>AGD 206 TYPOGRAPHY</td>
<td>2</td>
</tr>
<tr>
<td>AGD 212 ADVERTISING DESIGN II</td>
<td>2</td>
</tr>
<tr>
<td>AGD 218 COMPUTER PRE-PRESS</td>
<td>2</td>
</tr>
<tr>
<td>PCP 226 PROFESSIONAL/STUDIO PHOTOGRAPHY</td>
<td>3</td>
</tr>
<tr>
<td>PCP 224 COMPUTER IMAGERY</td>
<td>3</td>
</tr>
<tr>
<td>AGD 209 PORTFOLIO PROJECT (ADVERTISING GRAPHICS DESIGN) ⁴</td>
<td>2</td>
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<tr>
<td>OR</td>
<td></td>
</tr>
<tr>
<td>PCP 213 PORTFOLIO PROJECT (PROFESSIONAL COMMERCIAL PHOTOGRAPHY)</td>
<td>2</td>
</tr>
<tr>
<td>Humanities or Social Science Elective</td>
<td>3</td>
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<tr>
<td>Humanities Elective</td>
<td>3</td>
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<tr>
<td>Humanities or Social Science Elective</td>
<td>3</td>
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<tr>
<td>Science Elective ⁵</td>
<td>3-4</td>
</tr>
</tbody>
</table>

**TOTAL CREDITS : 63-65**

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1. Students are required to show proof of keyboarding skills, or obtain a waiver from the Office Administration Department, by passing a challenge test, or register in, and attain a passing grade in OAD 010. OAD 010 must be taken at the same time as, or before, BUS 107, if you are required to take it.

2. MAT 101 or with the approval of the Department Chairperson, a higher level mathematics course, meets this requirement.

3. Courses may, with the approval of the Department Chairperson, be chosen from both the AGD and the PCP concentrations.

4. Choice is dependent on the concentration that the student has chosen, and should be selected with the help of the student’s academic advisor.

5. Those students, who are planning to go on to a four-year school, should discuss this choice with their academic advisor. Courses may be elected from the Biology, Chemistry, or Physics Department, depending on the student’s academic background.
### ADVERTISING GRAPHICS DESIGN DEGREE OPTION

<table>
<thead>
<tr>
<th>Courses</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>AGD 205 LAYOUT DESIGN</td>
<td>2</td>
</tr>
<tr>
<td>AGD 206 TYPOGRAPHY</td>
<td>2</td>
</tr>
<tr>
<td>AGD 209 PORTFOLIO PROJECT (ADVERTISING GRAPHICS DESIGN)</td>
<td>2</td>
</tr>
<tr>
<td>AGD 211 ADVERTISING DESIGN I</td>
<td>2</td>
</tr>
<tr>
<td>AGD 212 ADVERTISING DESIGN II</td>
<td>2</td>
</tr>
<tr>
<td>AGD 217 MECHANICAL PRINT PRODUCTION</td>
<td>2</td>
</tr>
<tr>
<td>AGD 218 COMPUTER PRE-PRESS</td>
<td>2</td>
</tr>
</tbody>
</table>

### PROFESSIONAL COMMERCIAL PHOTOGRAPHY DEGREE OPTION

<table>
<thead>
<tr>
<th>Courses</th>
<th>Credits</th>
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<tbody>
<tr>
<td>PCP 213 PORTFOLIO PROJECT运营管理 (PROFESSIONAL COMMERCIAL PHOTOGRAPHY)</td>
<td>2</td>
</tr>
<tr>
<td>PCP 221 COLOR PRINTING METHODS AND PRACTICE</td>
<td>3</td>
</tr>
<tr>
<td>PCP 224 COMPUTER IMAGERY</td>
<td>3</td>
</tr>
<tr>
<td>PCP 225 PRODUCT AND STOCK PHOTOGRAPHY</td>
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<tr>
<td>PCP 226 PROFESSIONAL-STUDIO PHOTOGRAPHY</td>
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<tr>
<td>AGD 222 SEMINAR &amp; CO-OP AND PCP 222 SEMINAR CO-OP</td>
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</table>

The Media Arts & Design field experience electives are not required courses for graduation. Although they provide valuable experience (and money), and often lead to full-time employment, the credits cannot be applied to the A.A.S. Degree, but they will be figured into your GPA.
### DEGREE PROGRAM

Below are required courses for program completion. Courses may have prerequisite and corequisite requirements. Check course descriptions for details.

<table>
<thead>
<tr>
<th>Courses</th>
<th>Credits</th>
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<tbody>
<tr>
<td>BIO 119 BIOLOGY II 1</td>
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</tr>
<tr>
<td>CHM 117 CHEMISTRY II 1</td>
<td>4</td>
</tr>
<tr>
<td>ENG 121 ENGLISH COMPOSITION I</td>
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<tr>
<td>MAT 107 MATHEMATICS II 2</td>
<td>3</td>
</tr>
<tr>
<td>MED 101 INTRODUCTION TO THE MEDICAL LABORATORY I</td>
<td>2</td>
</tr>
<tr>
<td>BIO 120 BIOLOGY III 1</td>
<td>4</td>
</tr>
<tr>
<td>CHM 118 CHEMISTRY III 1</td>
<td>4</td>
</tr>
<tr>
<td>ENG 122 ENGLISH COMPOSITION II</td>
<td>3</td>
</tr>
<tr>
<td>MAT 108 MATHEMATICS II 2</td>
<td>3</td>
</tr>
<tr>
<td>MED 102 INTRODUCTION TO THE MEDICAL LABORATORY II</td>
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</tr>
<tr>
<td>PSY 123 INTRODUCTORY PSYCHOLOGY</td>
<td>3</td>
</tr>
</tbody>
</table>

**Summer Session**

| MED 210 MEDICAL LABORATORY TECHNOLOGY I 3   | 6       |
| **(MED 210 is only offered in summer session)** |        |
| BIO 211 PRINCIPLES OF MICROBIOLOGY 4        | 4       |
| CHM 203 PRINCIPLES OF ORGANIC CHEMISTRY    | 4       |
| MED 211 MEDICAL LABORATORY TECHNOLOGY II 5 | 8       |
| Physical/Health Ed Elective 1-3             |         |
| CHM 202 BIOCHEMISTRY                       | 4       |
| MED 212 MEDICAL LABORATORY TECHNOLOGY III 6| 8       |
| Humanities Elective                         | 3       |

**TOTAL CREDITS:** 74-76

### Standards of Progress:

1. Maintain a cumulative grade point average of 2.0.
2. Must achieve a “C” grade or better in all the Medical Laboratory and science courses.
   Those not attaining these levels of achievement will be dropped from the program.
3. May retake a science or Medical Laboratory course only once and obtain a passing grade.
   (i.e. “C” or better). Repeating a Medical Laboratory course is subject to the restrictions as outlined below in #6.
4. Any student achieving a grade less than a “C” in a clinical MED course may not continue in the program. The clinical course with the deficient grade must be repeated subject to the restrictions of the program as outlined below in #6. Any student failing the practicum portion of the course will fail the course.
5. Must be complete the MED sequence of 210, 211, 212 in consecutive sequential semesters as offered, i.e. MED 210 in summer, MED 211 in fall, and MED 212 in spring.
6. A break in the sequence of MED 210, 211, 212 for any reason will require the student to reapply. Readmission to the MED course(s) will be determined by seat availability.
7. Formal sanctions for cheating in any course will result in dismissal from the program.
8. The goals of the program are consistent with the College’s mission of developing competencies for employment and continuing education.

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1. BIO 123 - BIO 124 and CHM 123 - CHM 124 may be substituted for BIO 119 - BIO 120, CHM 117 - CHM 118 for students who meet those course prerequisites and with the Chairperson’s written approval.
2. MAT 123 - MAT 124 or MAT 129 - MAT 131 may be substituted for MAT 107 - MAT 108 for students who have completed two or more years of high school Algebra, with the Chairperson’s written approval.
3. This is an eight week, 40 hour/week summer clinical practicum.
4. BIO 221 may be substituted for BIO 211.
5. This includes a 16 hour/week clinical practicum.
Nursing

JOINT PROGRAM WITH THE UNIVERSITY OF MEDICINE AND DENTISTRY OF NEW JERSEY SCHOOL OF NURSING DEPARTMENT

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.

If I major in Nursing, what degree can I earn?
The Associate in Science Degree prepares you for entry-level positions in nursing and to take the National League for Nursing RN Examination for Registered Nurses (NCLEX-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 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 Pre-entrance 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.

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.

Where should I direct specific questions about this program?
Contact Professor Mahoney, Department Chair at 732.906.4660 or email Patricia_Mahoney@middlesexcc.edu

DEGREE PROGRAM
Below are required courses for program completion. Courses may have prerequisite and corequisite requirements. Check course descriptions for details.

<table>
<thead>
<tr>
<th>Courses</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIO 111 HUMAN ANATOMY AND PHYSIOLOGY I ¹</td>
<td>4</td>
</tr>
<tr>
<td>ENG 121 ENGLISH COMPOSITION I</td>
<td>3</td>
</tr>
<tr>
<td>NRS 111 FOUNDATIONS OF NURSING²</td>
<td>6</td>
</tr>
<tr>
<td>NRS 112 PRINCIPLES AND PRACTICE OF HEALTH PROMOTION ²</td>
<td>3</td>
</tr>
<tr>
<td>PSY 123 INTRODUCTORY PSYCHOLOGY</td>
<td>3</td>
</tr>
<tr>
<td>BIO 112 HUMAN ANATOMY AND PHYSIOLOGY II</td>
<td>4</td>
</tr>
<tr>
<td>CSC 107 COMPUTERS IN HEALTH TECHNOLOGIES</td>
<td>1</td>
</tr>
<tr>
<td>ENG 122 ENGLISH COMPOSITION II</td>
<td>3</td>
</tr>
<tr>
<td>NRS 115 FAMILY HEALTH ACROSS THE LIFE SPAN ²</td>
<td>8</td>
</tr>
<tr>
<td>BIO 211 PRINCIPLES OF MICROBIOLOGY ¹</td>
<td>4</td>
</tr>
<tr>
<td>NRS 211 NURSING OF ADULTS I ²</td>
<td>8</td>
</tr>
<tr>
<td>Humanities Elective</td>
<td>3</td>
</tr>
<tr>
<td>Sociology Elective</td>
<td>3</td>
</tr>
<tr>
<td>NRS 212 NURSING OF ADULTS II ²</td>
<td>8</td>
</tr>
<tr>
<td>Humanities Elective</td>
<td>3</td>
</tr>
<tr>
<td>Physical/Health Ed Elective</td>
<td>1-3</td>
</tr>
</tbody>
</table>

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 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. Adherence to the policies of UMDNJ and MCC and their affiliating health care agencies.
6. Students who do not successfully complete the major nursing sequence under these conditions may not continue in the program.

Students who do not successfully complete the major nursing sequence under these conditions may not continue in the program.
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.

Are there additional requirements after graduating 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-vuit 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 may also 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 and any other concerns should be cleared with the New Jersey Board of Nursing before applying for admission to the Joint Nursing Program.

¹ You must have a high school Algebra I or MAT 013 and one year of high school laboratory biology and one year high school laboratory chemistry before taking this course.
² See course descriptions for corequisites.


### DEGREE PROGRAM

Below are required courses for program completion. Courses may have prerequisite and corequisite requirements. Check course descriptions for details.

<table>
<thead>
<tr>
<th>Courses</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUS 101 BUSINESS ORGANIZATION AND MANAGEMENT</td>
<td>3</td>
</tr>
<tr>
<td>ENG 121 ENGLISH COMPOSITION I</td>
<td>3</td>
</tr>
<tr>
<td>OAD 101 DOCUMENT PROCESSING I 1</td>
<td>3</td>
</tr>
<tr>
<td>OAD 122 INFORMATION PROCESSING I</td>
<td>3</td>
</tr>
<tr>
<td>Physical/Health Ed Elective</td>
<td>1-3</td>
</tr>
<tr>
<td>Mathematics Requirement 2</td>
<td>3</td>
</tr>
<tr>
<td>ACC 101 FINANCIAL ACCOUNTING</td>
<td>4</td>
</tr>
<tr>
<td>ENG 122 ENGLISH COMPOSITION II</td>
<td>3</td>
</tr>
<tr>
<td>OAD 102 DOCUMENT PROCESSING II 3</td>
<td>3</td>
</tr>
<tr>
<td>OAD 107 TRANSCRIPTION FOR BUSINESS</td>
<td>3</td>
</tr>
<tr>
<td>OAD 123 INFORMATION PROCESSING II</td>
<td>3</td>
</tr>
<tr>
<td>Humanities Elective</td>
<td>3</td>
</tr>
<tr>
<td>OAD 207 ADVANCED TRANSCRIPTION FOR BUSINESS</td>
<td>3</td>
</tr>
<tr>
<td>OAD 210 RECORDS MANAGEMENT</td>
<td>3</td>
</tr>
<tr>
<td>OAD 211 CONTEMPORARY OFFICE PROCEDURES</td>
<td>3</td>
</tr>
<tr>
<td>Science Elective 4</td>
<td>3</td>
</tr>
<tr>
<td>OAD 223 INTEGRATED SOFTWARE APPLICATIONS</td>
<td>3</td>
</tr>
<tr>
<td>OAD 213 ADMINISTRATIVE OFFICE MANAGEMENT</td>
<td>3</td>
</tr>
<tr>
<td>OAD 224 OFFICE PROJECTS</td>
<td>3</td>
</tr>
<tr>
<td>OAD 208 OFFICE ADMINISTRATION</td>
<td>3</td>
</tr>
<tr>
<td>AND COOPERATIVE WORK EXPERIENCE</td>
<td>3</td>
</tr>
<tr>
<td>General Education Elective</td>
<td>3</td>
</tr>
<tr>
<td>Social Science Elective</td>
<td>3</td>
</tr>
<tr>
<td><strong>TOTAL CREDITS:</strong></td>
<td><strong>65-67</strong></td>
</tr>
</tbody>
</table>

### CERTIFICATE OF ACHIEVEMENT

<table>
<thead>
<tr>
<th>Courses</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUS 205 BUSINESS COMMUNICATIONS</td>
<td>3</td>
</tr>
<tr>
<td>ENG 121 ENGLISH COMPOSITION I</td>
<td>3</td>
</tr>
<tr>
<td>OAD 101 DOCUMENT PROCESSING I 1</td>
<td>3</td>
</tr>
<tr>
<td>OAD 102 DOCUMENT PROCESSING II 3</td>
<td>3</td>
</tr>
<tr>
<td>OAD 107 TRANSCRIPTION FOR BUSINESS</td>
<td>3</td>
</tr>
<tr>
<td>OAD 122 INFORMATION PROCESSING I</td>
<td>3</td>
</tr>
<tr>
<td>OAD 123 INFORMATION PROCESSING II</td>
<td>3</td>
</tr>
<tr>
<td>OAD 211 CONTEMPORARY OFFICE PROCEDURES</td>
<td>3</td>
</tr>
<tr>
<td>OAD 223 INTEGRATED SOFTWARE APPLICATIONS</td>
<td>3</td>
</tr>
<tr>
<td>Mathematics Elective 2</td>
<td>3</td>
</tr>
<tr>
<td>General Education Elective</td>
<td>3</td>
</tr>
<tr>
<td><strong>TOTAL CREDITS:</strong></td>
<td><strong>33</strong></td>
</tr>
</tbody>
</table>

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1 Prerequisite: OAD 010 or BUS 010 or OAD 106 or permission of Department Chairperson. Credit-by-Exam available for OAD 101 and OAD 102. For additional information, contact the Testing Center at 732.906.2508 or the Department Chairperson at 732.906.2578.

2 Students must choose a GE Math course.

3 Credit-by-Exam is available for this course. For additional information contact the Testing Center or the Department Chairperson.

4 Students must choose a GE Science course.

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### 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. 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.

### 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.

### 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. If you demonstrate proficiency in touch typewriting, the keyboarding course may be waived with the permission of the Office Administration Chairperson.

### 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. If you have been working as an Office Professional, you may have acquired some of the skills needed for the degree. By passing the Certified Professional Secretaries Examination, you can earn as many as 23 college credits that will be applied to your degree. If interested in CBE or the CPS Exam, contact the Department Chair. The College awards credit for successful completion of the examination(s).

### Where should I direct specific questions about this program?

Contact Professor Pam, Department Chair, at 732.906.2578.
Paralegal Studies

ACCOUNTING & LEGAL STUDIES DEPARTMENT
Approved by the American Bar Association/Member of the American Association for Paralegal Education

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 degree 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 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.

Degree Program
Below are required courses 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.

<table>
<thead>
<tr>
<th>Courses</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUS 107 COMPUTER APPLICATIONS FOR BUSINESS</td>
<td>3</td>
</tr>
<tr>
<td>ENG 121 ENGLISH COMPOSITION I</td>
<td>3</td>
</tr>
<tr>
<td>PLS 100 INTRO TO THE PARALEGAL PROFESSION</td>
<td>2</td>
</tr>
<tr>
<td>PLS 101 LEGAL RESEARCH</td>
<td>3</td>
</tr>
<tr>
<td>PLS 113 LEGAL WRITING</td>
<td>2</td>
</tr>
<tr>
<td>Social Science Elective</td>
<td>3</td>
</tr>
<tr>
<td>PLS 121 ADVANCED LEGAL RESEARCH</td>
<td>2</td>
</tr>
<tr>
<td>ENG 122 ENGLISH COMPOSITION II</td>
<td>3</td>
</tr>
<tr>
<td>PLS 104 PROPERTY TRANSACTIONS</td>
<td>4</td>
</tr>
<tr>
<td>PLS 110 LITIGATION PROCEDURE</td>
<td>4</td>
</tr>
<tr>
<td>PLS 111 CONTRACTS AND THE UNIFORM COMMERCIAL</td>
<td>3</td>
</tr>
<tr>
<td>CODE</td>
<td></td>
</tr>
<tr>
<td>PLS 108 TORTS</td>
<td>3</td>
</tr>
<tr>
<td>PLS 112 BUSINESS ORGANIZATIONS</td>
<td>3</td>
</tr>
<tr>
<td>AND GOVERNMENT REGULATIONS</td>
<td></td>
</tr>
<tr>
<td>Paralegal Elective</td>
<td>3</td>
</tr>
<tr>
<td>Humanities Elective</td>
<td>3</td>
</tr>
<tr>
<td>Physical/Health Ed Elective</td>
<td>1-3</td>
</tr>
<tr>
<td>Mathematics Elective</td>
<td>3-4</td>
</tr>
<tr>
<td>MAT -</td>
<td></td>
</tr>
<tr>
<td>ECO 201 PRINCIPLES OF ECONOMICS I</td>
<td>3</td>
</tr>
<tr>
<td>PLS 280 SENIOR SEMINAR FOR PARALEGALS</td>
<td>3</td>
</tr>
<tr>
<td>Paralegal Elective</td>
<td>3</td>
</tr>
<tr>
<td>Humanities or Social Science Elective</td>
<td>3</td>
</tr>
<tr>
<td>Science Elective</td>
<td>3-4</td>
</tr>
</tbody>
</table>

TOTAL CREDITS: 63-67

1 Prerequisite or Corequisite - OAD 010, BUS 010, OAD 106, keyboarding course with a grade of ‘C’ or higher or department waiver.
2 Prerequisites or Corequisites - ENG 121 and PLS 100.
3 Prerequisites or Corequisites - ENG 121, PLS 100 and PLS 101.
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.
5 See department chairperson for acceptable courses.
6 Prerequisites - PLS 100, PLS 101, and PLS 113.
7 Prerequisites - PLS 100, PLS 101, PLS 111, PLS 113, and PLS 121.
8 Paralegal Electives: PLS 105, Family Law; PLS 106, Will and Estate Administration; PLS 107, Law Office Management; PLS 109, Criminal Law and Procedure; PLS 208, Paralegal Field Experience.
9 Prerequisites - PLS 100, PLS 101, PLS 113, and BUS 107.
10 Prerequisites - PLS 100, PLS 101, PLS 104, PLS 108, PLS 110, PLS 111, PLS 112, PLS 113 and PLS 121.
11 Prerequisite or Corequisite - PLS 121.

Note: Not all PLS courses are offered every semester both day and evening. Please call the department chairperson at 732.906.2576 to discuss course offerings for future semesters.

Middlesex County College
CERTIFICATE OF ACHIEVEMENT
The Certificate Program in Paralegal Studies is designed for the person who already has a college degree - Associate’s, Bachelor’s or higher. The Program is approved by the American Bar Association and the College is a member of the American Association for Paralegal Education.

<table>
<thead>
<tr>
<th>Courses</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 121 ENGLISH COMPOSITION I</td>
<td>3</td>
</tr>
<tr>
<td>ENG 122 ENGLISH COMPOSITION II</td>
<td>3</td>
</tr>
<tr>
<td>PLS 100 INTRO TO THE PARALEGAL PROFESSION</td>
<td>2</td>
</tr>
<tr>
<td>PLS 101 LEGAL RESEARCH 2</td>
<td>3</td>
</tr>
<tr>
<td>PLS 113 LEGAL WRITING 3</td>
<td>2</td>
</tr>
<tr>
<td>PLS 104 PROPERTY TRANSACTIONS 4,6</td>
<td>4</td>
</tr>
<tr>
<td>PLS 108 TORTS 4,6</td>
<td>3</td>
</tr>
<tr>
<td>PLS 110 LITIGATION PROCEDURE 4,6</td>
<td>4</td>
</tr>
<tr>
<td>PLS 111 CONTRACTS AND THE UNIFORM COMMERCIAL CODE 4,6</td>
<td>3</td>
</tr>
<tr>
<td>PLS 112 BUSINESS ORGANIZATIONS AND GOVERNMENT REGULATIONS 4,5,6</td>
<td>3</td>
</tr>
<tr>
<td>PLS 121 ADVANCED LEGAL RESEARCH 4</td>
<td>2</td>
</tr>
<tr>
<td>PLS 280 SENIOR SEMINAR FOR PARALEGALS 7</td>
<td>3</td>
</tr>
</tbody>
</table>

TOTAL CREDITS: 35**

Electives: You may, but are not required to, select one or more of the following electives:

<table>
<thead>
<tr>
<th>Courses</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PLS 105 FAMILY LAW 4,6</td>
<td>3</td>
</tr>
<tr>
<td>PLS 106 WILLS AND ESTATE ADMINISTRATION 4,6</td>
<td>3</td>
</tr>
<tr>
<td>PLS 107 LAW OFFICE MANAGEMENT 4,6</td>
<td>3</td>
</tr>
<tr>
<td>PLS 109 CRIMINAL LAW AND PROCEDURE 4,6</td>
<td>3</td>
</tr>
<tr>
<td>PLS 208 PARALEGAL FIELD EXPERIENCE 8</td>
<td>3</td>
</tr>
</tbody>
</table>

* Holders of A.S. and A.A.S. degrees must show that they have taken 18 credits of general education courses. Holders of A.A. degrees are presumed to have satisfied the general education requirement.

** For students who are granted transfer credits, this total will be reduced.

1 This course may be satisfied by acceptable transfer credits or by Credit by Examination or CLEP credits.
2 Prerequisites or Corequisites - ENG 121 (or waiver) and PLS 100.
3 Prerequisites or Corequisites - ENG 121 (or waiver), PLS 100 and PLS 101.
4 Prerequisites - PLS 100, PLS 101 and PLS 113.
5 Prerequisite - PLS 111.
6 Prerequisite or Corequisite - PLS 121.
7 Prerequisites - PLS 100, PLS 101, PLS 104, PLS 108, PLS 110, PLS 111 and PLS 112, PLS 113, and PLS 121.
8 Prerequisites - PLS 100, PLS 101, PLS 113, PLS 121, and PLS 110 plus PLS 104 or PLS 108 or PLS 109 plus permission of the department chairperson.

NOTE: Not all PLS courses are offered every semester, both day and evening. Please call the department chairperson at 732-906-2576 to discuss course offerings for future semesters.

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.

Continued on next page.
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 or Professor Volk, Assistant Chair, at 732.906.2576

<table>
<thead>
<tr>
<th>Courses</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PLS 100 INTRO TO THE PARALEGAL PROFESSION</td>
<td>2</td>
</tr>
<tr>
<td>PLS 101 LEGAL RESEARCH</td>
<td>3</td>
</tr>
<tr>
<td>PLS 113 LEGAL WRITING</td>
<td>2</td>
</tr>
<tr>
<td>PLS 121 ADVANCED LEGAL RESEARCH</td>
<td>2</td>
</tr>
<tr>
<td>PLS 111 CONTRACTS AND THE UNIFORM COMMERCIAL CODE</td>
<td>3</td>
</tr>
<tr>
<td>PLS 280 SENIOR SEMINAR FOR PARALEGALS</td>
<td>3</td>
</tr>
<tr>
<td>Electives: Choose one of the following electives:</td>
<td></td>
</tr>
<tr>
<td>PLS 104 PROPERTY TRANSACTIONS</td>
<td>4</td>
</tr>
<tr>
<td>PLS 105 FAMILY LAW</td>
<td>3</td>
</tr>
<tr>
<td>PLS 106 WILLS AND ESTATE ADMINISTRATION</td>
<td>3</td>
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<tr>
<td>PLS 107 LAW OFFICE MANAGEMENT</td>
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<td>PLS 108 TORTS</td>
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</tr>
<tr>
<td>PLS 109 CRIMINAL LAW AND PROCEDURE</td>
<td>3</td>
</tr>
<tr>
<td>PLS 110 LITIGATION PROCEDURE</td>
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<tr>
<td>PLS 112 BUSINESS ORGANIZATIONS AND GOVERNMENT REGULATIONS</td>
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</tbody>
</table>

TOTAL CREDITS: 18-19

*Holders of A.S. and A.A.S. degrees must show that they have taken 18 credits of general education courses. Holders of A.A. degrees are presumed to have satisfied the general education requirement. All students must have completed (or take) 6 credits of English composition.

1 Prerequisite or Corequisite - PLS 100.
2 Prerequisites or Corequisites - PLS 100 and PLS 101.
3 Prerequisites - PLS 100, PLS 101 and PLS 113.
4 Prerequisites - PLS 100, PLS 101, PLS 111, PLS 113, PLS 121 and Elective.
5 Prerequisite - PLS 111.
6 Prerequisite or Corequisite - PLS 121.

NOTE: Not all PLS courses are offered every semester, both day and evening. Please call the department chairperson at 732.906.2576 to discuss course offerings for future semesters.
# Pharmacy Assistant

## BIOLOGY DEPARTMENT

**CERTIFICATE PROGRAM**

Below are required courses for program completion. Courses may have prerequisite and corequisite requirements. Check course descriptions for details.

<table>
<thead>
<tr>
<th>Courses</th>
<th>Credits</th>
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<tbody>
<tr>
<td>BIO 106</td>
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<tr>
<td>CHM 107</td>
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<td>CSC 107</td>
<td>1</td>
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<td>ENG 121</td>
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<td>MAT 107</td>
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<td>ENG 122</td>
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<tr>
<td>HED 150</td>
<td>3</td>
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<tr>
<td>HIS 130</td>
<td>3</td>
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<tr>
<td>MAT 108</td>
<td>3</td>
</tr>
<tr>
<td>PHA 101</td>
<td>4</td>
</tr>
<tr>
<td>PSY 123</td>
<td>3</td>
</tr>
</tbody>
</table>

**TOTAL CREDITS : 35**

---

1. You must have high school Algebra I or MAT 013 and one year of high school laboratory science before taking this course.

2. You may substitute CHM 117 or CHM 123 for CHM 107.

3. You may substitute a higher-level computer science course.

4. You may substitute MAT 129 - MAT 131 for MAT 107 - MAT 108.
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 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 for program completion. Courses may have prerequisite and corequisite requirements. Check course descriptions for details.

<table>
<thead>
<tr>
<th>Courses</th>
<th>Credits</th>
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<tr>
<td>CHM 123 GENERAL CHEMISTRY I</td>
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<td>ENG 121 ENGLISH COMPOSITION I</td>
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<tr>
<td>MAT 131 ANALYTIC GEOMETRY AND CALCULUS I</td>
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<td></td>
<td>Social Science Elective</td>
</tr>
<tr>
<td></td>
<td>Physical/Health Ed Elective</td>
</tr>
<tr>
<td>CHM 124 GENERAL CHEMISTRY II</td>
<td>4</td>
</tr>
<tr>
<td>MAT 132 ANALYTIC GEOMETRY AND CALCULUS II</td>
<td>4</td>
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<tr>
<td>PHY 131 ANALYTICAL PHYSICS I</td>
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<tr>
<td>ENG 122 ENGLISH COMPOSITION II</td>
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<tr>
<td>MAT 210 LINEAR ALGEBRA</td>
<td>4</td>
</tr>
<tr>
<td>MAT 233 ANALYTIC GEOMETRY AND CALCULUS III</td>
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<tr>
<td>PHY 132 ANALYTICAL PHYSICS II</td>
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<tr>
<td>MAT 234 DIFFERENTIAL EQUATIONS</td>
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<td>PHY 231 ANALYTICAL PHYSICS III</td>
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TOTAL CREDITS: 62-65

1 Choose CSC 109 or higher.
# Degree Program

Below are required courses for program completion. Courses may have prerequisite and corequisite requirements. Check course descriptions for details.

## Courses

### Credits

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<thead>
<tr>
<th>Fall</th>
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<tbody>
<tr>
<td>CSC 107</td>
<td>COMPUTERS IN HEALTH TECHNOLOGIES</td>
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<td>ENG 121</td>
<td>ENGLISH COMPOSITION I</td>
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<tr>
<td>PSR 101</td>
<td>INTRODUCTION TO THE PRINCIPLES OF PSYCHOSOCIAL REHABILITATION</td>
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<td>PSR 102</td>
<td>COMMUNICATION TECHNIQUES IN INTERVIEWING AND COUNSELING</td>
</tr>
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<td>INTRODUCTORY PSYCHOLOGY</td>
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### Spring

<p>| |</p>
<table>
<thead>
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<tbody>
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<td>BIO 105</td>
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<tr>
<td>PSR 104</td>
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<tr>
<td>ENG 122</td>
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<td>SOC 121</td>
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### Summer Session

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<table>
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<tbody>
<tr>
<td>PSR 105</td>
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### Fall

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<tbody>
<tr>
<td>BIO 106</td>
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<td>PSR 206</td>
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<tr>
<td>PSR 207</td>
</tr>
<tr>
<td>PSY 235</td>
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<td>PHI 123</td>
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### Spring

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<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td>PSR 208</td>
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<tr>
<td>PSR 209</td>
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<tr>
<td>PSY 235</td>
</tr>
</tbody>
</table>

| Humanities Elective | 3 |
| Physical/Health Ed Elective | 1-3 |

**TOTAL CREDITS**: 64-66

## Standards of Progress:

1. Achieve a grade of ‘C’ or better in all major clinical courses.
2. Complete designated prerequisites before enrolling in clinical courses. Bio 105 is NOT a pre-requisite to BIO 106.

---

1. You must have high school Algebra I or MAT 013 and one year of high school laboratory science before taking this course.
Radiography Education

RADIOGRAHNY EDUCATION DEPARTMENT
The Program in Radiography is fully accredited by the Joint Review Commission 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.

Degree Program - Transfer Track
Below are required courses for program completion. Courses may have prerequisite and corequisite requirements. Check course descriptions for details.

<table>
<thead>
<tr>
<th>Courses</th>
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<tr>
<td>Fall</td>
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<tr>
<td>RAD 128 BASIC MEDICAL PRINCIPLES</td>
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<td>RAD 141 RADIOGRAPHIC POSITIONING, ANATOMY AND PATHOLOGY I</td>
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<tr>
<td>RAD 142 RADIOGRAPHIC POSITIONING LABORATORY I</td>
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</tr>
<tr>
<td>RAD 171 RADIOGRAPHIC IMAGING AND SCIENCE I</td>
<td>4</td>
</tr>
<tr>
<td>RAD 190 CLINICAL ORIENTATION</td>
<td>1</td>
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<tr>
<td>BIO 111 HUMAN ANATOMY AND PHYSIOLOGY I</td>
<td>4</td>
</tr>
<tr>
<td>Spring</td>
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<tr>
<td>RAD 139 RADIATION PROTECTION AND BIOLOGY</td>
<td>2</td>
</tr>
<tr>
<td>RAD 143 RADIOGRAPHIC POSITIONING, ANATOMY AND PATHOLOGY II</td>
<td>2</td>
</tr>
<tr>
<td>RAD 144 RADIOGRAPHIC POSITIONING LABORATORY II</td>
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<tr>
<td>RAD 172 RADIOGRAPHIC IMAGING AND SCIENCE II</td>
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<tr>
<td>RAD 210 CLINICAL PRACTICUM I</td>
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</tr>
<tr>
<td>BIO 112 HUMAN ANATOMY AND PHYSIOLOGY II</td>
<td>4</td>
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<td>PHY 118 TOPICS IN RADIOGRAPHIC PHYSICS</td>
<td>4</td>
</tr>
<tr>
<td>Summer Session</td>
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</tr>
<tr>
<td>RAD 145 RADIOGRAPHIC POSITIONING, ANATOMY AND PATHOLOGY III</td>
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<tr>
<td>RAD 146 RADIOGRAPHIC POSITIONING LABORATORY III</td>
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</tr>
<tr>
<td>RAD 220 CLINICAL PRACTICUM II</td>
<td>2</td>
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<tr>
<td>Fall</td>
<td></td>
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<tr>
<td>RAD 247 RADIOGRAPHIC POSITIONING, ANATOMY AND PATHOLOGY IV</td>
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<td>RAD 248 RADIOGRAPHIC POSITIONING LABORATORY IV</td>
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<tr>
<td>RAD 274 RADIOGRAPHIC IMAGING AND SCIENCE III</td>
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<td>RAD 230 CLINICAL PRACTICUM III</td>
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<td>ENG 121 ENGLISH COMPOSITION I</td>
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<td>Humanities Elective</td>
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<td>Spring</td>
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<tr>
<td>RAD 250 CLINICAL PRACTICUM IV</td>
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<tr>
<td>RAD 256 RADIOGRAPHIC SEMINAR I</td>
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<tr>
<td>RAD 285 ADVANCED RADIOGRAPHIC IMAGING</td>
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<td>CSC 107 COMPUTERS IN HEALTH TECHNOLOGIES</td>
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<td>ENG 122 ENGLISH COMPOSITION II</td>
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<td>PSY 123 INTRODUCTORY PSYCHOLOGY</td>
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<td>Physical Education/Health</td>
<td>1-3</td>
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<tr>
<td>Summer Session</td>
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<td>RAD 260 CLINICAL PRACTICUM V</td>
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<tr>
<td>RAD 257 RADIOGRAPHIC SEMINAR II</td>
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</tbody>
</table>

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.
# Radiography - Career Track

<table>
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<tr>
<th>Term</th>
<th>Course Code</th>
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<tr>
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<td>RAD 128</td>
<td>Basic Medical Principles</td>
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<td>RAD 141</td>
<td>Radiographic Positioning, Anatomy and Pathology I</td>
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<td></td>
<td>RAD 142</td>
<td>Radiographic Positioning Laboratory I</td>
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<tr>
<td></td>
<td>RAD 171</td>
<td>Radiographic Imaging and Science I</td>
<td>4</td>
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<tr>
<td></td>
<td>RAD 190</td>
<td>Clinical Orientation</td>
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<td>Humanities Electives</td>
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<td>General Elective Course</td>
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<td>Spring</td>
<td>RAD 139</td>
<td>Radiation Protection and Biology</td>
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<td>RAD 143</td>
<td>Radiographic Positioning, Anatomy and Pathology II</td>
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<td>RAD 144</td>
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<td></td>
<td>RAD 172</td>
<td>Radiographic Imaging and Science II</td>
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<td>RAD 210</td>
<td>Clinical Practicum I</td>
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<td>PHY 118</td>
<td>Topics in Radiographic Physics</td>
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<tr>
<td>Summer</td>
<td>RAD 145</td>
<td>Radiographic Positioning, Anatomy and Pathology III</td>
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<td>RAD 146</td>
<td>Radiographic Positioning Laboratory III</td>
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<td>RAD 220</td>
<td>Clinical Practicum II</td>
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<td>Fall</td>
<td>RAD 247</td>
<td>Radiographic Positioning, Anatomy and Pathology IV</td>
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<td>RAD 274</td>
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<td>English Composition I</td>
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<td></td>
<td>CSC 107</td>
<td>Computers in Health Technologies</td>
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<td></td>
<td>BIO 131</td>
<td>Human Structure and Function</td>
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<td>Spring</td>
<td>RAD 250</td>
<td>Clinical Practicum IV</td>
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<td></td>
<td>RAD 256</td>
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<td>RAD 285</td>
<td>Advanced Radiographic Imaging</td>
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<tr>
<td></td>
<td>ENG 122</td>
<td>English Composition II</td>
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<td>RAD 260</td>
<td>Clinical Practicum V</td>
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<td>RAD 257</td>
<td>Radiographic Seminar II</td>
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</tbody>
</table>

**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.

---

**How long will it take 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 at left 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.

**What is the difference between the transfer and career tracks?**
The major course work in both tracks is the same and follows the same sequence. The difference between the two tracks lies in the additional course work required for the A.A.S. degree. In some cases individuals come to the program with advanced degrees. In those cases the career track is a better choice since it provides a greater opportunity to transfer in more of the general education component. Those individuals who anticipate pursuing an advanced degree should consider the transfer track.

**Where should I direct specific questions about this program?**
Contact Professor Snopek, Department Chair, at 732.906.2583 or Albert_Snopek@middlesexcc.edu
If I major in Respiratory Care, what degree can I earn?
The Associate in Science Degree 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 and algebra II 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 for program completion. Courses may have prerequisite and corequisite requirements. Check course descriptions for details.

<table>
<thead>
<tr>
<th>Courses</th>
<th>Credits</th>
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<tbody>
<tr>
<td>BIO 111 HUMAN ANATOMY AND PHYSIOLOGY I ¹</td>
<td>4</td>
</tr>
<tr>
<td>CHM 119 GENERAL, ORGANIC AND BIOCHEMISTRY I</td>
<td>4</td>
</tr>
<tr>
<td>CSC 107 COMPUTERS IN HEALTH TECHNOLOGIES</td>
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<tr>
<td>ENG 121 ENGLISH COMPOSITION I</td>
<td>3</td>
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<tr>
<td>MAT 107 MATHEMATICS I</td>
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<tr>
<td>Humanities Elective</td>
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<tr>
<td>BIO 112 HUMAN ANATOMY AND PHYSIOLOGY II</td>
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</tr>
<tr>
<td>BIO 211 PRINCIPLES OF MICROBIOLOGY ¹</td>
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<td>ENG 122 ENGLISH COMPOSITION II</td>
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<td>PSY 123 INTRODUCTORY PSYCHOLOGY</td>
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<td>Humanities Elective</td>
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</tr>
<tr>
<td>Physical/Health Ed Elective</td>
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</tr>
<tr>
<td>Social Science Elective</td>
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</tr>
<tr>
<td>RST 101 FUNDAMENTALS OF RESPIRATORY CARE</td>
<td>4</td>
</tr>
<tr>
<td>RST 102 CLINICAL PRACTICE I</td>
<td>1</td>
</tr>
<tr>
<td>RST 103 APPLIED CARDIOPULMONARY PATHOPHYSIOLOGY I</td>
<td>2</td>
</tr>
<tr>
<td>RST 203 APPLIED CARDIOPULMONARY PATHOPHYSIOLOGY II</td>
<td>2</td>
</tr>
<tr>
<td>RST 207 CARDIOPULMONARY PHARMACOLOGY</td>
<td>2</td>
</tr>
<tr>
<td>RST 208 PRINCIPLES OF VENTILATORY SUPPORT</td>
<td>4</td>
</tr>
<tr>
<td>RST 209 CLINICAL PRACTICE II</td>
<td>2</td>
</tr>
<tr>
<td>RST 210 CARDIOPULMONARY EVALUATION</td>
<td>2</td>
</tr>
<tr>
<td>RST 201 PATIENT MANAGEMENT - CRITICAL CARE</td>
<td>3</td>
</tr>
<tr>
<td>RST 211 PEDIATRIC/NEONATAL RESPIRATORY CARE</td>
<td>2</td>
</tr>
<tr>
<td>RST 212 LONG-TERM, HOME AND REHABILITATIVE CARE</td>
<td>2</td>
</tr>
<tr>
<td>RST 215 CLINICAL PRACTICE III</td>
<td>2</td>
</tr>
<tr>
<td>Social Science Elective</td>
<td>3</td>
</tr>
</tbody>
</table>

TOTAL CREDITS: 72-73

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.

¹ You must have high school Algebra I or MAT 013 and one year of high school laboratory biology and one year high school laboratory chemistry before taking this course.
### Small Business Management/Entrepreneurial Studies

**BUSINESS ADMINISTRATION & MANAGEMENT DEPARTMENT**

Below are required courses for program completion. Courses may have prerequisite and corequisite requirements. Check course descriptions for details.

<table>
<thead>
<tr>
<th>Courses</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 121 English Composition I</td>
<td>3</td>
</tr>
<tr>
<td>BUS 101 Business Organization and Management</td>
<td>3</td>
</tr>
<tr>
<td>BUS 115 Mathematics of Finance</td>
<td>3</td>
</tr>
<tr>
<td>BUS 107 Computer Applications for Business</td>
<td>3</td>
</tr>
<tr>
<td>Social Science Elective</td>
<td>3</td>
</tr>
<tr>
<td>ENG 122 English Composition II</td>
<td>3</td>
</tr>
<tr>
<td>SBM 110 Accounting for Small Business</td>
<td>4</td>
</tr>
<tr>
<td>SBM 120 Small Business Management</td>
<td>3</td>
</tr>
<tr>
<td>SBM 130 Marketing and Sales for Small Business</td>
<td>3</td>
</tr>
<tr>
<td>Humanities Elective</td>
<td>3</td>
</tr>
<tr>
<td>BUS 201 Business Law I</td>
<td>3</td>
</tr>
<tr>
<td>SBM 210 Advertising and Promotion for Small Business</td>
<td>3</td>
</tr>
<tr>
<td>SBM 220 Leadership and Supervision</td>
<td>3</td>
</tr>
<tr>
<td>Business Elective</td>
<td>3</td>
</tr>
<tr>
<td>Social Science Elective</td>
<td>3</td>
</tr>
<tr>
<td>Physical/Health Ed Elective</td>
<td>1-3</td>
</tr>
<tr>
<td>SBM 230 Risk and Financial Management</td>
<td>3</td>
</tr>
<tr>
<td>SBM 240 Cooperative Education/Internship</td>
<td>3</td>
</tr>
<tr>
<td>In Small Business</td>
<td></td>
</tr>
<tr>
<td>SBM 250 Seminar in Entrepreneurial Studies</td>
<td>3</td>
</tr>
<tr>
<td>General Education Science Elective ¹</td>
<td>3</td>
</tr>
<tr>
<td>General Education Elective</td>
<td>3</td>
</tr>
</tbody>
</table>

Continued on next page

**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.

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¹ General Education Science Elective: Students may elect courses with a code of BIO, CHM, ENV, PHY or SCI for which they have the appropriate academic preparation.
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.

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

You must demonstrate proficiency in keyboarding or typing 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.

Where should I direct specific questions about this program?

Contact Professor Bailey, Department Chair, at 732.906.2594.

### 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.

<table>
<thead>
<tr>
<th>Courses</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUS 101 BUSINESS ORGANIZATION AND MANAGEMENT</td>
<td>3</td>
</tr>
<tr>
<td>SBM 110 ACCOUNTING FOR SMALL BUSINESS</td>
<td>4</td>
</tr>
<tr>
<td>SBM 120 SMALL BUSINESS MANAGEMENT</td>
<td>3</td>
</tr>
<tr>
<td>SBM 130 MARKETING AND SALES FOR SMALL BUSINESS</td>
<td>3</td>
</tr>
<tr>
<td>SBM 210 ADVERTISING AND PROMOTION FOR SMALL BUSINESS</td>
<td>3</td>
</tr>
<tr>
<td>OR</td>
<td></td>
</tr>
<tr>
<td>SBM 230 RISK AND FINANCIAL MANAGEMENT</td>
<td>3</td>
</tr>
<tr>
<td>SBM 250 SEMINAR IN ENTREPRENEURIAL STUDIES</td>
<td>3</td>
</tr>
</tbody>
</table>

TOTAL CREDITS: 19

### CERTIFICATE OF ACHIEVEMENT

<table>
<thead>
<tr>
<th>Courses</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUS 101 BUSINESS ORGANIZATION AND MANAGEMENT</td>
<td>3</td>
</tr>
<tr>
<td>BUS 107 COMPUTER APPLICATIONS FOR BUSINESS</td>
<td>3</td>
</tr>
<tr>
<td>ENG 121 ENGLISH COMPOSITION I</td>
<td>3</td>
</tr>
<tr>
<td>ENG 122 ENGLISH COMPOSITION II</td>
<td>3</td>
</tr>
<tr>
<td>SBM 110 ACCOUNTING FOR SMALL BUSINESS</td>
<td>4</td>
</tr>
<tr>
<td>SBM 120 SMALL BUSINESS MANAGEMENT</td>
<td>3</td>
</tr>
<tr>
<td>SBM 130 MARKETING AND SALES FOR SMALL BUSINESS</td>
<td>3</td>
</tr>
<tr>
<td>SBM 210 ADVERTISING AND PROMOTION FOR SMALL BUSINESS</td>
<td>3</td>
</tr>
<tr>
<td>SBM 230 RISK AND FINANCIAL MANAGEMENT</td>
<td>3</td>
</tr>
<tr>
<td>SBM 250 SEMINAR IN ENTREPRENEURIAL STUDIES</td>
<td>3</td>
</tr>
</tbody>
</table>

TOTAL CREDITS: 31

2 Recommended Elective: Choose one.
### Certificate Program

<table>
<thead>
<tr>
<th>Courses</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 121 ENGLISH COMPOSITION I</td>
<td>3</td>
</tr>
<tr>
<td>PSY 123 INTRODUCTORY PSYCHOLOGY</td>
<td>3</td>
</tr>
<tr>
<td>SOC 121 INTRODUCTION TO SOCIOLOGY</td>
<td>3</td>
</tr>
<tr>
<td>EDU 208 CREATIVE ACTIVITIES FOR YOUNG CHILDREN</td>
<td>3 GTA 1</td>
</tr>
<tr>
<td>MAT- Math Elective</td>
<td>3 OR 4</td>
</tr>
<tr>
<td>PSY 226 EDUCATIONAL PSYCHOLOGY: CLASSROOM APPLICATIONS</td>
<td>3 GTA 2</td>
</tr>
<tr>
<td>PSY 223 CHILD PSYCHOLOGY 1,2</td>
<td>3*GTA 1,2</td>
</tr>
<tr>
<td>ENG 212 CHILDREN'S LITERATURE 1,2</td>
<td>3*GTA 1,2</td>
</tr>
<tr>
<td>EDU 280 EDUCATION FIELD EXPERIENCE</td>
<td>3*</td>
</tr>
<tr>
<td>EDU/HED Education or Health Ed Elective</td>
<td>3</td>
</tr>
</tbody>
</table>

(Choose one EDU or HED from list provided after Total credits or consult advisor)

**TOTAL CREDITS**: 30 or 31

*Education /Health Electives Choices (select 1):*
- EDU 121 INTRODUCTION TO EDUCATION               | 3       |
- EDU 123 FUNDAMENTALS OF READING INSTRUCTION    | 3       |
- EDU 207 INTRODUCTION TO EARLY CHILDHOOD EDUCATION | 3       |
- EDU 210 EDUCATION FOR EXCEPTIONAL CHILDREN      | 3       |
- HED 209 CHILD HEALTH AND NUTRITION 1           | 3       |

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1. The courses Marked “GTA” are the 5 courses that the State of New Jersey, Department of Human Services, Division of Youth and Family Services, Bureau of Licensing has regularly accepted towards its “Group Teacher Approval.” Many child-care centers prefer that their employees have this approval or, at the very least, prefer that the employees are working towards obtaining this approval. The DYFS Bureau of Licensing also requires experience in assisting with the education of young children, so our Education Field Experience course is often accepted as partial or total fulfillment of the work experience requirement for the GTA.

2. This course requires a prerequisite course to be taken. In the case of the math course, placement into the credit-bearing course is determined by the prerequisite requirements for the course. The desired math course and the student’s preparation determine the prerequisites. The following prerequisites are from our catalog: An appropriate score on the placement test, previous high school math, and/or any required additional developmental coursework.

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If I major in Teacher Aide, what certification can I earn?

The Certificate of Achievement 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. 47)

What will I learn if I study Teacher Aide?

Your program combines general education courses with practical experience 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 Professor Gutowski, Department Chair, at 732.906.2590.
### Telecommunication Networking Technology

#### 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 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 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.

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#### Degree Program
Below are required courses for program completion. Courses may have prerequisite and corequisite requirements. Check course descriptions for details.

<table>
<thead>
<tr>
<th>Courses</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 131 RESEARCH, COMPOSITION AND PRESENTATION I</td>
<td>2</td>
</tr>
<tr>
<td>MAD 121 GRAPHICS FOR COMPUTER AUTHORS AND PRESENTERS</td>
<td>3</td>
</tr>
<tr>
<td>MAT 141 MATHEMATICS FOR TELECOMMUNICATIONS I</td>
<td>2</td>
</tr>
<tr>
<td>MCT 101 INTRODUCTION TO ENGINEERING TECHNOLOGY</td>
<td>2</td>
</tr>
<tr>
<td>PHY 141 FOUNDATIONS OF PHYSICS I</td>
<td>2</td>
</tr>
<tr>
<td>TCT 103 PRODUCT MAINTENANCE I (DIGITAL)</td>
<td>4</td>
</tr>
<tr>
<td>ENG 132 RESEARCH, COMPOSITION AND PRESENTATION II</td>
<td>2</td>
</tr>
<tr>
<td>MAT 142 MATHEMATICS FOR TELECOMMUNICATIONS II</td>
<td>2</td>
</tr>
<tr>
<td>PHY 142 FOUNDATIONS OF PHYSICS II</td>
<td>2</td>
</tr>
<tr>
<td>TCT 104 PRODUCT MAINTENANCE II (ANALOG)</td>
<td>4</td>
</tr>
<tr>
<td>CSC 230 MULTIMEDIA PRODUCTION AND AUTHORIZING TOOLS</td>
<td>4</td>
</tr>
<tr>
<td>(Recommended - MAD 121) Humanities Elective</td>
<td>3</td>
</tr>
<tr>
<td>ENG 133 RESEARCH, COMPOSITION AND PRESENTATION III</td>
<td>2</td>
</tr>
<tr>
<td>MAT 241 MATHEMATICS FOR TELECOMMUNICATIONS III</td>
<td>2</td>
</tr>
<tr>
<td>PHY 241 FOUNDATIONS OF PHYSICS III</td>
<td>2</td>
</tr>
<tr>
<td>TCT 201 PC AND LAN HARDWARE</td>
<td>4</td>
</tr>
<tr>
<td>TCT 221 WIDE-AREA NETWORKING I</td>
<td>4</td>
</tr>
<tr>
<td>Social Science Elective</td>
<td>3</td>
</tr>
<tr>
<td>PHY 242 FOUNDATIONS OF PHYSICS IV</td>
<td>2</td>
</tr>
<tr>
<td>MAT 242 MATHEMATICS FOR TELECOMMUNICATIONS IV</td>
<td>2</td>
</tr>
<tr>
<td>CSC 251 WINDOWS 2000 PROFESSIONAL ADMINISTRATION</td>
<td>3</td>
</tr>
<tr>
<td>TCT 222 WIDE-AREA NETWORKING II</td>
<td>4</td>
</tr>
<tr>
<td>Physical/Health Ed Elective</td>
<td>1-3</td>
</tr>
<tr>
<td>Technical Elective or Co-Op</td>
<td>3-4</td>
</tr>
</tbody>
</table>

#### 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 133 INTRODUCTION TO COMPUTER SCIENCE USING C++ | 4 |
- CSC 160 INTRODUCTION TO UNIX                 | 3 |
- CSC 166 C++ PROGRAMMING                     | 3 |
- MCT 208 MECHATRONICS AND TELEMEDIA TECHNOLOGY | FIELD EXPERIENCE | 3 |

**TOTAL CREDITS**: 63-66
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.

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 Chairperson
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 Chairperson 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 weekly one-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
Corequisite: 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 205
■ LAYOUT DESIGN
Credits: 2 (1-2)
Prerequisite(s): All MAD courses & ART 103
Covers principles and applications of page layout for advertising including: type identification, measurements (point system), and specifications related to copy fitting. Computer graphics, especially page layout applications such as PageMaker and QuarkXPress, are stressed within the projects.

AGD 206
■ TYPOGRAPHY
Credits: 2 (1-2)
Prerequisite(s): All MAD courses & ART 103
Explores the identification of typefaces, both traditional and computer generated, their suitability for various uses and the relationship and integration of typography into layout design and composition. Both hand skills and computers are used in interdisciplinary learning. Further competence is developed with both PC and MAC-based typography.

AGD 209
■ PORTFOLIO PROJECT (ADVERTISING GRAPHICS DESIGN)
Credits: 2 (1-3)
Prerequisite(s): All MAD courses, ART 103, and minimum of six credits of AGD/PCP courses
Corequisite: Any number of credits of AGD and PCP courses so that 12, in addition to this course, will have been completed by semester’s end.
Guides students in job search, including resume writing and interviewing techniques, in addition to the major concentration on the methods and techniques for best presenting their creative work. Includes considerable research and some additional design project work. Students must purchase a suitable portfolio case.

AGD 211
■ ADVERTISING DESIGN I
Credits: 2 (1-2)
Prerequisite(s): All MAD courses & ART 103
Applications of design fundamentals to practical layout and advertising design problems such as: brochures, posters, books, magazine ads, and audiovisual materials. Stresses individual projects. Covers the use of various commercial art techniques and computer applications relevant to print media advertising.

AGD 212
■ ADVERTISING DESIGN II
Credits: 2 (1-2)
Prerequisite(s): AGD 211 or permission of Department Chairperson
Advanced study of specialized advertising graphic design problems, including packaging, trademarks, and logotypes. Interdisciplinary teams will participate in producing a comprehensive advertising campaign. Emphasizes professional presentation of thumbnail sketches, roughs and layouts, and of comprehensives made using relevant computer software.

AGD 217
■ MECHANICAL PRINT PRODUCTION
Credits: 2 (1-2)
Prerequisite(s): All MAD courses & ART 103
Covers the mechanical aspects of the graphic arts process, emphasizing the need to prepare artwork, type, and photographs in the form needed by the particular method of reproduction. Comparison of commercial methods of color separation, reproduction, plate engraving, and printing. Field trips to printing or platemaking facilities may be undertaken.

AGD 218
■ COMPUTER PRE-PRESS
Credits: 2 (1-2)
Prerequisite(s): AGD 217 or permission of Department Chairperson
Study of the contemporary processes and procedures of graphics reproduction for print. Includes studio work or demonstrations covering both traditional process camera photography, stripping, platemaking, and computer generated master art and platemaking, as related to modern types of printing. Also covers quantity, and quality control, trade vocabulary, and business procedures in the graphic arts.

AFRICAN-AMERICAN STUDIES

AFS 121 GE SS
■ INTRODUCTION TO AFRICAN-AMERICAN STUDIES
Credits: 3 (3-0)

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 103  GE HUM
- ART IN INDUSTRY AND COMMERCE
  Credits: 2 (2-0)
  The relationship of visual arts to modern business and industry, covering industrial design, packaging design, advertising, and sales promotion, as well as the influences of fine arts on the development of commercial art and 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 from 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 Chairperson  
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 weekly one-hour seminar on campus and work a minimum of 180 hours throughout the semester. Individuals must be recommended by the chairperson 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)  
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)  
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 IN RELIEF  
Credits: 3 (3-0)  
Explores the language and materials of sculpture in relief. Develops skill and understanding of the basic elements of sculptural form through the modeling, carving and casting in relief. Examines the work 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 IN ROUND  
Credits: 3 (3-0)  
Explores the language and materials of sculpture. Develops skill and understanding of the basic elements of sculptural form through guided projects using the traditional tools and techniques for sculpture in the round. Examines previous 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 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
Credits equivalent: 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 part of the course. A research paper is required. Recommended for non-science 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
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
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): BIO 111
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
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 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
A general study of the physical and chemical properties of living material, cell organs, transport cell division, energy transformations in photosynthesis and cellular respiration, plant and animal tissues, the classification of organisms and genetics.
**BIO 106**  
**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 216**  
**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 121**  
**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**  
**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**  
**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 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 Chairperson  
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 weekly, one 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 (3-0)
  Prerequisite(s): BIO 124, CHM 124 or Permission of the Department Chairperson
  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.

BUSINESS

BUS 010
- FRESHMAN SEMINAR IN BUSINESS
  Credit equivalents: 3 (3-0)
  Provides students with the tools to succeed in their 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)
  Prerequisite(s): OAD 010, OAD 106, BUS 010, keyboarding course with a grade of "C" or higher or department waiver
  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.

CHEMICAL PROCESS TECHNOLOGY

CPT 100
- INTRODUCTION TO CHEMICAL PROCESS TECHNOLOGY
  Credits: 4 (4-0)
  Prerequisite(s): CHM 117
  Corequisites: MAT 108
  This course is an introduction to the fundamentals of chemical processing which are encountered in various industries and in the chemical laboratory. General topics include thermodynamics, fluid dynamics, mass and heat transfer, chemical property chemical reactions, equipment, handling procedures analytical instruments, control loops, SQC control charts, economics, and safety and environmental matters applicable to the chemical processing industry. This course is appropriate for chemical technicians, chemical operators and related workers.

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-reductions 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 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 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. 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.
**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.

**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.

**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. Introduction to basic techniques of chromatography (GC, HPLC) are also included.

**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 weekly, one 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.

**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.

**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 (1-0-2)

*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.

COM 105

**INTERCULTURAL COMMUNICATION**

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.
COMMUNICATION 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 weekly, two-hour seminar on campus and work a minimum of 90 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
Defines computers and computer programs and their application in business, industry, institutions, and government. Topics include the history of computers, hardware devices, software programs, information technology ideas and terminology, privacy of information, ethical issues, and the influence of computers on people and society. Hands-on experience includes: data entry through electronic spreadsheets, word processing, creation and use of a data base to support transaction processing. Recommended for anyone wishing to attain basic computer literacy.

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 125

WEB PAGE DESIGN AND DEVELOPMENT
Credits: 3 (2-2)
Prerequisite(s): CSC 108 or permission of Department Chairperson

Introduces the process necessary to design and develop Web Pages. Provides students with hands-on experience in the creation of Web Pages that includes text, images, audio, and video. Emphasizes appearance and functionality of the Web Page. Utilizes HTML, editors, and templates.

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 1101

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 CSC133 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
Credits: 3 (3-0)
Prerequisite(s): Two years of high school Algebra and Geometry or MAT 014

Introduces the UNIX operating system and its many capabilities and applications. Presents text editing, word processing, electronic mail and terminal-to-terminal communications. A hierarchical file system and a command level programming language are introduced and applied in programming assignments.

CSC 166

C++ PROGRAMMING

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 weekly, one-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 chairperson 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 Chairperson
  Corequisite(s): CSC 134 or permission of Chairperson
  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 246
■ UNIX AND WEB SERVER ADMINISTRATION  
Credits: 3 (2-3)  
Prerequisite(s): CSC 245  
Provides a detailed 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  
Corequisite: 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 2000 PROFESSIONAL ADMINISTRATION  
Credits: 3 (2-2)  
Prerequisite(s): CSC 110 or TCT 103  
Corequisite: CSC 200 or TCT 201  
Provides students with the knowledge and skills necessary to perform day-to-day administration in a Windows 2000 Professional-based network. Topics include creating and administering user and group accounts, profiles, managing resources, auditing, and setting up and maintaining the printing environment. Hands-on exercises will enable the students to implement the tasks necessary to become a Windows 2000 administrator. Successful completion of this course will prepare the student to take the associated Windows 2000 certification test.

CSC 252
■ WINDOWS 2000 SERVER ADMINISTRATION  
Credits: 3 (2-2)  
Prerequisite(s): CSC 251  
Provides a foundation for the administration of servers in a Windows 2000-based network. Topics include the server architecture, installation and configuration, as well as managing security, active directory, domains, resources, replication, and synchronization. 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 Windows 2000 Server Certification Exam #70-215.

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.
D A N C E
(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 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 semester (informal showing; individuals or group). Class sessions will include lectures, films, discussion, selected readings on theory, philosophy, current trends of dance, and experimental dance/movements.

D E N T A L    H Y G I E N E

DHY 102
■ 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: 3 (1-6)
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 110
■ NUTRITION
Credits: 3 (3-0)
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
■ GENEAL 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 legal 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 certification  
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 PERIODONTAL DISORDER**  
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.

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 (0-12)  
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 218. Both 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 or relevant experience
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 or relevant experience
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 post-production 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 Chairperson
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 121, 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.

ELECTRICAL AND COMPUTER ENGINEERING TECHNOLOGY
(For related courses see also Mecontronics, 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 electrical 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 weekly, one-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, Laplace 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.

Corequisite: 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 GE COM

**ENGLISH COMPOSITION I**

Credits: 3 (3-0)

Prerequisite(s): A passing score on 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.

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 Mecontronics 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 Mecontronics 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 Mecontronics 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 Chairperson.

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 perform their jobs.

ENG 206 GE HUM

**JOURNALISM WORKSHOP**

Credits: 3 (3-0)

Prerequisite(s): ENG 205 or permission of Department Chairperson.

An advanced course in journalism emphasizing the development of editorial skills and actual newspaper production. Membership on the school newspaper is required.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite(s)</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 212</td>
<td>GE HUM</td>
<td>3 (3-0)</td>
<td>ENG 121</td>
<td>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.</td>
</tr>
<tr>
<td>ENG 214</td>
<td>GE HUM</td>
<td>3 (2-0)</td>
<td>ENG 205 or ENG 235 or BUS 205 and permission of Department Chairperson</td>
<td>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 weekly one-hour seminar on campus and work a minimum of 180 hours during the semester.</td>
</tr>
<tr>
<td>ENG 215</td>
<td>GE HUM</td>
<td>3 (3-0)</td>
<td>ENG 212 or ENG 215 or permission of Department Chairperson</td>
<td>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, McIlvan, Christie, Ibarenguigorta, Sayers, P.D. James, Robert Parker, Simeon, Sjowall &amp; Wahlso, Rendell, Stiriting, Togawa, and Van der Wetering.</td>
</tr>
<tr>
<td>ENG 220</td>
<td>GE HUM</td>
<td>3 (3-0)</td>
<td>ENG 122 or ENG 125 or permission of Department Chairperson</td>
<td>A study of the Elizabethan theater. Works are analyzed in terms of genre, point of view, structure, characterization and theme. Students read, discuss, and write about selected histories, comedies, and tragedies. Included is a discussion of the Elizabethan theater.</td>
</tr>
<tr>
<td>ENG 221</td>
<td>GE HUM</td>
<td>3 (3-0)</td>
<td>ENG 122 or ENG 125 or permission of Department Chairperson</td>
<td>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, and Continental Europe. Students complete reading, writing, and research assignments designed to develop the skills of literary interpretation and analysis.</td>
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<tr>
<td>ENG 222</td>
<td>GE HUM</td>
<td>3 (3-0)</td>
<td>ENG 122 or ENG 125 or permission of Department Chairperson</td>
<td>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, Continental Europe and Latin America. Students complete reading, writing, and research assignments designed to develop the skills of literary interpretation and analysis.</td>
</tr>
<tr>
<td>ENG 225</td>
<td>GE HUM GE DIV</td>
<td>3 (3-0)</td>
<td>ENG 122 or ENG 125 or permission of Department Chairperson</td>
<td>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, Continental Europe and Latin America. Students complete reading, writing, and research assignments designed to develop the skills of literary interpretation and analysis.</td>
</tr>
<tr>
<td>ENG 228</td>
<td>GE HUM</td>
<td>3 (3-0)</td>
<td>ENG 122 or ENG 125 or permission of Department Chairperson</td>
<td>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.</td>
</tr>
<tr>
<td>ENG 233</td>
<td>GE HUM</td>
<td>3 (3-0)</td>
<td>ENG 122 or ENG 125 or permission of Department Chairperson</td>
<td>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.</td>
</tr>
<tr>
<td>ENG 234</td>
<td>GE HUM</td>
<td>3 (3-0)</td>
<td>ENG 122 or ENG 125 or permission of Department Chairperson</td>
<td>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, and Continental Europe. Students complete reading, writing, and research assignments designed to develop the skills of literary interpretation and analysis.</td>
</tr>
<tr>
<td>ENG 235</td>
<td>GE HUM</td>
<td>3 (3-0)</td>
<td>ENG 122 or ENG 125 or permission of Department Chairperson</td>
<td>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, Continental Europe and Latin America. Students complete reading, writing, and research assignments designed to develop the skills of literary interpretation and analysis.</td>
</tr>
<tr>
<td>ENG 236</td>
<td>GE HUM</td>
<td>3 (3-0)</td>
<td>ENG 122 or ENG 125 or permission of Department Chairperson</td>
<td>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, and Continental Europe. Students complete reading, writing, and research assignments designed to develop the skills of literary interpretation and analysis.</td>
</tr>
<tr>
<td>ENG 237</td>
<td>GE HUM</td>
<td>3 (3-0)</td>
<td>ENG 122 or ENG 125 or permission of Department Chairperson</td>
<td>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, Continental Europe and Latin America. Students complete reading, writing, and research assignments designed to develop the skills of literary interpretation and analysis.</td>
</tr>
</tbody>
</table>
ENG 236 GE HUM
■ CREATIVE WRITING II
Credits: 3 (3-0)
Prerequisite(s): ENG 122 or ENG 125 or permission of Department Chairperson
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 Chairperson
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 Chairperson
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 Chairperson
Writers who have shaped woman as a literary image and spoken with a woman’s voice in novels, short stories and poems.

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 Chairperson
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 Chairperson
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 Chairperson
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 Chairperson
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 Chairperson
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 Chairperson
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 Chairperson
Reads 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 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 Chairperson
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
Credit: 3 (3-0)
Prerequisite(s): ENG 122 or ENG 125 or permission of Department Chairperson
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 257  GE HUM
■ THE LITERATURE OF EVIL
Credit: 3 (3-0)
Prerequisite(s): ENG 122 or ENG 125 or permission of Department Chairperson
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
Credit: 3 (3-0)
Prerequisite(s): ENG 122 or ENG 125 or permission of Department Chairperson
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.

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 Chairperson
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 Chairperson
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 Chairperson
Corquisites: 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
Corquisites: ESL 071, ESL 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
Corquisites: 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 Chairperson
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 Chairperson
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 Chairperson
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 Chairperson
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 Chairperson
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 Chairperson
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.
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
■ 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
■ 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 Chairperson
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 weekly, one-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 Chairperson
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 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 206

STORE FIELD EXPERIENCE II
Credits: 3 (1-12)
Prerequisite(s): Senior status in Fashion Merchandising and Retail Management or permission of Department Chairperson
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 Chairperson
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 Chairperson
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 Chairperson
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 Chairperson
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 Chairperson
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 Chairperson
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 Chairperson
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 Chairperson
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 Chairperson
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 221 or higher or permission of Department Chairperson
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 Chairperson  
Continuation of GER 221.

**GER 224 GE HUM GE DIV**  
*MODERN GERMAN LITERATURE*  
Credits: 3 (3-0)  
Prerequisite(s): GER 224 or two years of secondary school German  
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 or permission of Department Chairperson  
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, 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 health and nutrition of young children in group settings. Sensitivity to mental and physical health; planning nutrition programs and optimal physical care in child care centers.

**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 Psychrometrics analysis. Laboratory design projects included.
HIS 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

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 MANAGER
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 Chairperson
  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. One lecture hour a week on campus and minimum of 180 hours a semester on 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, BIO112
  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): IND 104
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.

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 weekly, one-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.

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  
Corequisite: 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 Chairperson
  - This is the second semester of a two-semester course in Algebra I designed to introduce and develop elementary algebra 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 equivalencies: 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 for completion of the remedial requirements to qualify for credit courses.

MAT 014B

■ ALGEBRA II (PART B)
Credit equivalencies: 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 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 equivalencies: 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 for 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 120  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 the 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 GE MAT
  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 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 Chairperson
  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 Chairperson 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 Graphical/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): 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 (3-0)
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 axes, 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.

MECTRONICS

MCT 101

■ INTRODUCTION TO ENGINEERING TECHNOLOGY
Credits: 2 (1-2)
Prerequisite(s): MAT 013 or passing score on the College’s Placement Test
Corequisite: MAT 014
Introduction to engineering practices through an integration of computer applications with 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 setup, 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 weekly, one-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.

M E D I A A R T S & D E S I G N
(For related courses see also Advertising Graphics Design, ART 103, Digital Media Arts & Photography)

MAD 106
- **MECHANICAL AND COMPUTER STUDIO SKILLS**
  
  Credits: 3 (1-5)
  
  Introduction to the basic tools and techniques of line work, geometric construction, and mechanical art, both by hand and by use of computer draw and paint programs. Covers thumbnails, roughs, layouts, lettering, typography and mechanicals. Stress is on practical exercises to develop accuracy and neatness in preparing artwork. Practical problems in the preparation of basic master art for printers demonstrate how to meet print reproduction needs.

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 expose and process 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, electronic and studio flash lighting. The use of darkroom equipment and film-based printing methods will be utilized. Students will be introduced to digital photographic practices and computerized printouts.
MAD 111
- COLOR AND DESIGN I
  Credits: 3 (1-5)
  Introduction to principles and characteristics of light, color, and design. The interaction of colors is stressed using student projects and computer demonstrations. Two-dimensional surfaces and their compositional possibilities are studied and related to increasingly complex graphic concepts. Applicable computer paint and draw programs are introduced.

MAD 112
- COLOR AND DESIGN II
  Credits: 3 (1-5)
  Prerequisite(s): MAD 111
  Explores three-dimensional form along with the possibilities of new shapes and structures. Color experiments are carried out in various three-dimensional media, including projects in the application of color and design to subjects from architecture to packaging.

MAD 117
- FREEHAND DRAWING
  Credits: 3 (1-5)
  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 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.

M E D I C A L  L A B O R A T O R Y  T E C H N O L O G Y

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 hematologic, 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.

M U S I C

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
- INTRODUCTION TO MUSIC
  Credits: 3 (3-0)
  (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 chairperson. 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.
NURSING

NRS 111
- FOUNDATIONS OF NURSING
  Credits: 6 (3-3-6)
  Prerequisite(s): CPR Certificate
  Corequisites: BIO 111, NRS 112, ENG 121
  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 supervised clinical experiences 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
  This on-line course enables students to recognize how various life-style patterns influence health. On-line discussions, group projects, and seminars 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 problems 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 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 critical thinking symposiums provide students with opportunities to explore selected aspects of altered fluid/gas exchange, protection, nutrition, sensory perceptual elimination, and psychosocial patterns. The learning lab experience enables students to gain proficiency in those psychomotor skills that are essential to holistic nursing practice. The faculty guide the students in the utilization of the nursing process which will help clients mobilize their unique energy patterns in varied health care settings.

NRS 212
- NURSING OF ADULTS II
  Credits: 8 (4-0-12)
  Prerequisite(s): NRS 211, BIO 211
  Corequisites: HRI 212
  Through faculty-supervised lectures, seminars, symposia and clinical lab/practicum, students further develop their cognitive, psychomotor and management skills as they utilize the nursing process to develop plans of care for diverse groups of clients. Students utilize these skills within multifaceted settings to assist in the repatterning of humans and their environmental fields. The varied teaching modalities provide students with opportunities to explore selected CRAM patterns as well as psychosocial, gerontological, community and rehabilitative aspects of nursing care. Students will be provided with opportunities to explore current health care trends/issues as they relate to our ever-changing health care arena. A close relationship between the students and the clinical site fosters growth in nursing practice and support students as they prepare for their new role as graduate nurses.

OFFICE ADMINISTRATION

OAD 010
- KEYBOARDING FOR COMPUTERS
  Credits equivalent: 1 (0-2)
  Keyboarding computer skills are developed through hands-on applications. The course teaches the touch operation of the alphabetic, numeric, and command/function keys. Students learn to keyboard rapidly and accurately. Vocabulary and concepts used in keyboarding operations are also incorporated.

OAD 101
- DOCUMENT PROCESSING I
  Credits: 3 (3-0)
  Prerequisite(s): OAD 010 or OAD 106 or BUS 010 or permission of Department Chairperson
  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.

OAD 102
- DOCUMENT PROCESSING II
  Credits: 3 (2-2)
  Prerequisite(s): OAD 101 or permission of Department Chairperson
  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
  Corequisites: OAD 102, OAD 122 or permission of Department Chairperson
  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 110
- PRINCIPLES AND APPLICATIONS OF MICROSOFT ACCESS
  Credits: 2 (1-1)
  Prerequisite(s): Keyboarding experience
  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 111
- PRINCIPLES AND APPLICATIONS OF MICROSOFT EXCEL
  Credits: 2 (1-1)
  Prerequisite(s): Keyboarding experience
  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
  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
  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)
  Prerequisite(s): OAD 010 or BUS 010, or OAD 106 or permission of Department Chairperson
  Corequisites: OAD 101 or permission of Department Chairperson
  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 Chairperson
  Corequisite: OAD 102
  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 101, OAD 102, OAD 107, OAD 122 or permission of Department Chairperson
  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 Chairperson
  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 Chairperson
  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 Chairperson
  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 Chairperson
  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 or OAD 123 or OAD 110 or OAD 113 or OAD 114 or OAD 116 or permission of Department Chairperson
  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 Chairperson
  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)
  Prerequisite(s) or Corequisite(s): 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.
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 213
■ PORTFOLIO PROJECT (PROFESSIONAL COMMERCIAL PHOTOGRAPHY)
Credits: 2 (1-3)
Prerequisite(s): All MAD courses & ART 103, and a minimum of six credits from AGD/PCP
Corequisite: Any number of AGD/PCP credits so that 12, in addition to this course, will have been completed by the semester’s end.
Guides students in job search, including resume writing and interviewing techniques, in addition to the major concentration on the methods and techniques for best presenting their creative work. Considerable research and some additional design project work is to be expected. Students are expected to purchase a suitable portfolio case.

PCP 221
■ COLOR PRINTING METHODS AND PRACTICE
Credits: 3 (2-0-2)
Prerequisite(s): All MAD courses & ART 103
Study of traditional and digital photographic color printing materials and techniques: subtractive color printing, visual and digital color balance, digital photography, scanning and printing of digital files, production of QuickTime VR panoramic, and archival mounting of color prints.

PCP 224
■ COMPUTER IMAGERY
Credits: 3 (1-0-4)
Prerequisite(s): All MAD courses & ART 103
Introduction to the use of Adobe Photoshop for image manipulation, creation and output. Included are subjects such as: photomaniuplation and retouching, combining grabbed, scanned and digital photographs, animated Gifffs, 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 (1-0-4)
Prerequisite(s): All MAD courses & ART 103
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 (2-0-2)
  Prerequisite(s): All MAD courses & ART 103
  Studio and location portraiture and photojournalistic techniques are explored. Practical use of the medium format camera and the digital SLR camera are stressed. Photography of special events and group and individual studio settings, for a variety of subjects, is practiced. Printing, finishing and presentation of the final product are also performed. Professional photographic methods and practices are examined and discussed.

PHYSICAL EDUCATION
(For related courses, see Health, Recreation and Dance)

PED 108
- MODERN DANCE
  Credits: 1 (0-2)
  Will include 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. Six on-campus meetings and a weekend trip are required. Students are responsible for providing their own equipment, food, and transportation for the weekend.

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. Acquaints the student with proper nutrition. Briefly examines cardiovascular disease and its causes.

PED 140
- RACQUETBALL
  Credits: 1 (0-2)
  The rules, basic strokes, shots and strategies of racquetball. Experience is provided in singles and doubles play.

PED 141
- AEROBIC DANCE
  Credits: 1 (0-2)
  Principles of dance, calisthenics and aerobics with specific exercises geared to strengthen the cardiovascular system. Aerobic dance to improve physical fitness as well as motor performance. A study of rhythmic dance-like movements executed to music.

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
  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.
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  ■ PRINCIPLES OF PHYSICS
Credit: 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  ■ COLLEGE PHYSICS I
Credit: 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  ■ COLLEGE PHYSICS II
Credit: 4 (2-4)
Prerequisites: 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
Credit: 4 (2-4)
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  ■ GENERAL PHYSICS I
Credit: 4 (2-4)
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  ■ GENERAL PHYSICS II
Credit: 4 (2-4)
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 electrostatics, 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.

PED 225  ■ FIRST AID, CPR AND SAFETY EDUCATION
Credit: 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  ■ ARC LIFEGUARD TRAINING, CARDIOPULMONARY RESUSCITATION AND STANDARD FIRST AID
Credit: 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.

PED 270  ■ PHYSICAL EDUCATION FIELD EXPERIENCE
Credit: 3 (1-13)
A cooperative work experience program employing students in a physical education related position in order to gain practical experience necessary for success in that 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. Students attend a weekly, one-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 faculty of the department.
POLITICAL 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.

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 Chairperson
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 Chairperson
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 explore and demonstrate group dynamics and group process. Includes participation in a faculty supervised group experience.

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.

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.

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.

UNITED STATES STATE AND LOCAL GOVERNMENT
Credits: 3 (3-0)
A continuation of Phy 131. Topics include magnetism, AC circuits, electromagnetic waves, optics and atomic and nuclear physics. Appropriate computer and laboratory experiences included. The second course in a three-course series consisting of Phy 131, 132 and 231.

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.

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.

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.
PSR 104
- **CLINICAL PRINCIPLES IN PSYCHOLOGICAL REHABILITATION AND TREATMENT**
  - Credits: 3 (3-0)
  - **Prerequisite:** 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)
  - **Prerequisites:** 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:** 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:** 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)
  - **Prerequisites:** PSR 206, 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 PSYCHOSOCIAL 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.

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:** 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:** 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:** 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 Chairperson
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 Chairperson
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 Chairperson
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)
RAD 142

**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, clavicular & acromio-clavicular joints, abdomen, thoracic cavity, chest and lungs.

RAD 143

**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

**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

**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

**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

**RAD 171**

**RADIOGRAPHIC IMAGING AND SCIENCE I**

Credits: 4 (3-2)

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

**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 radiographic image with focus upon the interaction of various radiographic factors such as density, contrast, detail and distortion.

RAD 190

**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

**RAD 210**

**CLINICAL PRACTICUM I**

Credits: 2 (0-16)

Prerequisite(s): RAD 128, RAD 141, RAD 142, RAD 171, RAD 190

Corequisites: RAD 220

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

**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

**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

**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 (0-3)
  - 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 250, 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 274
- **RADIOGRAPHIC IMAGING AND SCIENCE III**
  - Credits: 1 (0-2)
  - Prerequisite(s): RAD 145, RAD 146, RAD 172, RAD 220, PHY 118
  - Corequisites: RAD 230, RAD 247, RAD 248
  - Radiographic Imaging and Science III is designed to build upon previous objectives and introduce additional concepts and practices in equipment operation and maintenance as well as image production and evaluation. Topics discussed include quality control, advanced circuit theory, bone densitometry, digital X-ray imaging and the technical aspects 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.
R S P I R A T O R Y  C A R E

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 pediatric-neonatal respiratory care is also provided (Clinical hours: 180).

S C I E N C E

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  
■ 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  
■ 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 156  
■ 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  
■ INTRODUCTION TO METEOROLOGY  
Credits: 4 (3-2)  
Prerequisite(s): One year of laboratory science, MAT 014 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  
■ 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  
■ 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 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 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 perform 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 Chairperson
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 Chairperson
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 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

- **SOCIOMETRY 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 Chairperson
  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 Chairperson
  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 permission of Department Chairperson
  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 224 or SPA 226 or permission of Department Chairperson
  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 Chairperson
  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*  
*Corequisite(s): MAT 241, PHY 241*

Focuses on the hardware aspects of networking. Learn to upgrade, repair and troubleshoot 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 setup. 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*  
*Corequisite(s): 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*  
*Corequisite(s): 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 routed 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 Chairperson*

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 weekly, one-hour seminar on campus and work a minimum of 13 hours a week. Individuals must be recommended by the faculty and the chairperson of the department. For additional details see the Department Chairperson.
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Desiree Brower, Instructor; Admissions; B.A., Rutgers, The State University
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<tr>
<th>Name</th>
<th>Position and Affiliations</th>
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<tr>
<td>Ellen Burke</td>
<td>Director, Grants Development; B.A. University of Scranton; MBA, Rutgers, The State University</td>
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<td>Francis Burke</td>
<td>Associate Professor, Associate Chairperson, Computer Science; B.S.M.E., General Motors Institute; M.S., Stevens Institute of Technology</td>
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<td>Rita Burton</td>
<td>Instructor; Counseling and Career Services; B.A., St. Joseph's College India; M.A., Montclair University</td>
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<td>Professor, English; B.A., Saint Bonaventure University</td>
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<td>Yolanda D.J. Calacat</td>
<td>Administrative Assistant to Vice President for Academic and Student Affairs</td>
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<td>Claudia Carron</td>
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<tr>
<td>Brenda A. Cavanaugh</td>
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<tr>
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<td>Linda Christopher</td>
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<td>John Clelesz Jr.</td>
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<td>Wilson Class</td>
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<td>Ricki J. Cohn</td>
<td>Associate Professor; English; B.A., Drew University; M.A., University of Connecticut</td>
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<td>Robert W. Colburn, Jr.</td>
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Daniel Zimmerman, Professor; English; B.A., M.A., Ph.D., State University of New York at Buffalo

EMERITI
Elaine A. Busconi, Professor Emerita, Dental Auxiliaries Education; B.S., Columbia University; M.Ed., Rutgers, The State University
Frank M. Chambers, President Emeritus; B.S., Saint Lawrence University; M.Ed., Cornell University; Ed.D., University of Florida
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Sidney Danzis, Professor Emeritus; Dental Hygiene; D.D.S., College of Dentistry, New York University
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Virginia Filardi, Professor Emerita; Chemistry, B.A., College of New Rochelle; M.S., Ph.D., Fordham University
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**Lucy Achenbach,** B.S., Rutgers, The State University; M.A., Seton Hall University

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**Myriam Alami,** B.S., M.A., University of Oregon

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**Ronald L. Anderson,** B.A., Boston University; M.A., Kean University

**Nathaniel C. Anderson,** B.S., Kean University

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**Julio Arboleda,** B.A., Rutgers, The State University

**Charles Armstrong,** B.A., Newark State College

**Vivek Arora,** B.S., M.S., PiBan University, India

**Kelly Atkinson,** A.A.S., Middlesex County College; B.S., New Jersey Institute of Technology

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**Andrea Bachmann,** B.S., The College of New Jersey

**Daniel Baker,** B.A., William Paterson University; M.A., Montclair State University

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**Christine M. Barton,** A.A.S., SUNY College of Technology at Farmingdale; B.A., Thomas Edison State College

**Michael Beltranena,** A.A., Rider University; B.S., Rutgers, The State University; M.A., John Jay College of Criminal Justice

**Leonard Berness,** B.S., M.S., Long Island University

**Michael Berns,** M.S.E.E., Power Institute

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**Karen Blyskal,** B.Ed., University of Miami; M.S., Rutgers, The State University

**Kim Bongjorno,** A.A.S., Middlesex County College; B.S., Rutgers, The State University

**Audrey Botnick,** B.A., Brooklyn College; M.A., Kean University

**Nagy Botros,** B.S.L., M.S., Ain Shams University

**Lampos Bourodinos,** B.A., M.S., Rutgers, The State University; B.S. C.E., College of Engineering; Ph.D., Polytechnic University

**Barbara Brown,** B.S., M.S., New Jersey City University

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**Karen S. Ford,** Professional Development and Administrative Services Coordinator, NJCATE; B.A., Rutgers, The State University

**Kevin Jarido,** Tutor/Counselor; B.A., M.P.A., Seton Hall University

**Denise Jennings,** Tutor Coordinator; B.A., Johnson C. Smith University

**Ruth Lapidow,** Coordinator, Job Placement Services, Career Training Center; B.S., Springfield College; M.S., New Jersey City University

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**Arthur Okwamba,** Business Technology Coordinator; B.S., New Jersey City University

**Pratima Sharma,** Trainer, Career Training Center; B.S., Delhi University

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**Linda Urbach,** Project Coordinator for Job Search; B.A., State University of New York, Plattsburgh

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Majid Noori, A.S., Teheran Institute of Technology; B.S.C., Teheran University; Ph.D., University of Maine
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Susan O'Brien, B.A., Princeton University
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Harriet Osorio, B.A., Douglass College
Patricia Palanker, B.S., Biology Nazareth College
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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 Padhke, 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 Piro, B.A., Fairleigh Dickinson University; M.A., Montclair University
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Barry Prag, B.A., Rutgers, The State University
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2. 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.

3. 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.

4. Garden State Parkway South. Take Exit 130 to U.S. Highway 1 South. Follow directions for No. 2 above.

5. N.J. Turnpike North and 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.

6. Interstate Highway 287 Northbound. Exit at County Highway Route 514 West (Woodbridge Avenue) and follow directions for No. 3 above.

7. Interstate Highway 287 Southbound. Exit at 1-B onto County Highway Route 531 and follow directions for No. 2 above.

8. State Highway 35 North or 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.