Table of Contents

GENERAL INFORMATION

Academic Calendar 2
Foreword 2
Visitors 2
Accreditation 2
Accessibility for Persons with Disabilities 3
Address 3
Affirmative Action and Compliance Statement 3
Telephone Directory 3
Mission, Goals and Objectives of Middlesex County College 4
College Governance 5
College and Division Hours 5
Alumni Association 5
Middlesex County College Foundation 5

Expenses and Financial Aid

Residency Defined 6
Residency Policy 6
International Students 6
Chargeback Policy 6
Tuition Waivers 6
Payment Policy 6
Encumbrance Policy 6
Tuition and Fees 7
General Expenses 7
Miscellaneous Fees 7
Special Fees 7
Books and Supplies 7
Fitness Club Rates 7
Financial Appeals 8
Refund Policies 8
Financial Aid 8
Grants and Scholarships 8-9

Enrollment Services, Programs and Activities

Academic Advising 10
Admissions Counseling 10
Change of Major 10
Readmission 10
Leave of Absence 10
Career Services 10
Child Care Services 10
College Center 10
College Programming Board 10
COLTNet - Information Kiosk 10
Community Scholars Corps 10-11
Cooperative Education and Internships 11
Educational Opportunity Fund 11
English As A Second Language (ESL) 11
High School Scholars Program 11
Hispanic Entry Program (HEP) 11
Honor Societies 11
Independent Study Program 11
Intercollegiate Sports 11
Intramural Sports 11
International Student Adviser 11
Library and Media Services 12
Minority Student Affairs 12
Off-Campus Centers 12
Peer Guidance Organization 12
Physical Education Center 12
Project Connections 12
Registration 12
Auditing a Course 12
Certifications of Enrollment 12-13
Course Load 13
Grade Reports 13
Withdrawal 13
Semesters and Sessions 13
Spanish/English Counseling – Consejería Bilingüe 13
Students with Disabilities 13
Study-Abroad Program 14
Transfer Services 14
ARTSYS 14
Tutoring Centers 14
Veterans and Military and Applicants 14
Workforce Development Program 14

Community Outreach

Career Training Center 15
New Brunswick Center 15
Perth Amboy Center 15
The Center for International Education 15
The Center for the Study of Prejudice, Genocide and the Holocaust 15
Office of School Relations 15
Professional and Community Programs 15-16
Job Readiness and Job Search 16
Project SPAN. 16
The Institute for Management and Technical Development 16

Academic Standards and Regulations

General Education 17
Skills Assessment and Placement 17-18
Remediation Policies 18
Advanced Standing 18-19
Credit for Non-Collegiate Experience 19
Credit for Prior College Experience 19
Course Time Limits 19
Degree and Certificate of Achievement Requirements 20
Graduation 20-21
Transcripts 21
Academic Integrity Policy 21
Attendance 21
Grading System 21-22
Scholastic Standing 22
Standards of Progress 22-23
Statuses 23
Amnesty Appeal 23
Administrative Withdrawal 23

Students' Rights and Responsibilities

Student Responsibilities 24
Student Rights 24-25
Student Grievance Procedure 25
Code of Student Conduct 25
Disciplinary Procedures 26
College Judicial Board 27
Sexual Harassment Policy 27

Academic Programs

Alphabetical Listing 28

Course Descriptions

Alphabetical Listing 98

Directories

Organization of the College 161
Faculty and Professional Staff 161
Adjunct Faculty 166
Maps: Area Directions 175
Campus 175

Calendar & General Information

FALL 2001

August	27	Faculty Orientation & Meetings; First Day of Faculty Obligation
	28	Faculty Development; Mandatory Day for Faculty
	29 & 30	Change of Program; New Student Orientation & Advisement by Faculty
September	3	Labor Day – College Closed
	4	Classes Begin – Fall Semester
October	8	Columbus Day – College Closed
November	12	Veterans Day – College Closed
	13	Monday classes meet on Tuesday. No Tuesday classes.
	22, 23, 24 & 25	Thanksgiving – College Closed
December	14	Last Day of Classes
	17, 18 & 19	Specially Scheduled Final Exams
	20	Winter Recess Begins

SPRING 2002

January	16	Faculty Orientation & Meetings; First Day of Faculty Obligation, Spring Semester
	17 & 18	Change of Program; New Student Orientation & Advisement by Faculty
	21	Martin Luther King, Jr. Day – College Closed
	22	Classes Begin – Spring Semester
February	18	Presidents' Day – College Closed
March	25	Spring Recess Begins
	29, 30 & 31	Good Friday/Easter – College Closed
April	1	Classes Resume
May	7	Last Day of Classes
	8 & 9	Reading Days
	10, 13 & 14	Specially Scheduled Final Exams
	15	Last Day of Faculty Obligation
	23	Graduation

FALL 2002

August	26	Faculty Orientation & Meetings; First Day of Faculty Obligation
	27	Faculty Development; Mandatory Day for Faculty
	28 & 29	Change of Program; New Student Orientation & Advisement by Faculty
September	2	Labor Day – College Closed
	3	Classes Begin – Fall Semester
October	14	Columbus Day – College Closed
November	11	Veterans Day – College Closed
	12	Monday classes meet on Tuesday. No Tuesday classes.
	28, 29, 30 & December 1	Thanksgiving – College Closed
December	13	Last Day of Classes
	16, 17 & 18	Specially Scheduled Final Exams
	19	Winter Recess Begins

SPRING 2003

January	15	Faculty Orientation & Meetings; First Day of Faculty Obligation, Spring Semester
	16 & 17	Change of Program; New Student Orientation & Advisement by Faculty
	20	Martin Luther King, Jr. Day – College Closed
	21	Classes Begin – Spring Semester
February	17	Presidents' Day – College Closed
March	15	Spring Recess Begins – No classes
	22	Weekend Classes resume and will meet on March 22 & 23
	24	Regular Classes Resume
April	18, 19 & 20	Good Friday/Easter – College Closed
May	7	Last Day of Classes
	8	Reading Day
	9, 12 & 13	Specially Scheduled Final Exams
	14	Last Day of Faculty Obligation
	22	Graduation

Subject to change

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. Because this is a two-year catalog, a supplement will be issued in July 2002. 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.

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: Technology Accreditation Commission of the Accreditation Board for Engineering and Technology, 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 currently granted developmental accreditation by the commisssion 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. Students requesting information regarding procedures should contact the Counselor for Students with Disabilities at (732) 906-2546. The campus is accessible to students with physical disabilities.

ADDRESS

Middlesex County College
2600 Woodbridge Avenue
P.O. Box 3050
Edison, New Jersey 08818-3050
http://www.middlesex.cc.nj.us

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, services, 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, Edison, NJ 08818-3050.

DIRECTORY INFORMATION FOR MIDDLESEX COUNTY COLLEGE

Office	Building	Telephone
Academic Advising Center	Johnson Learning Center	(732) 906-2596
Admissions and Recruitment Office	Chambers Hall	(732) 906-2510
Bursar	Chambers Hall	(732) 906-2572
Corporate and Community Education	West Hall	(732) 906-2556
Counseling and Career Services	Edison Hall	(732) 906-2546
Financial Aid Office	South I	(732) 906-2520
Health Services	South II	(732) 906-2558
The Institute	Instructional Resources Center	(732) 906-4681
Physical Education Center	Physical Education Center	(732) 906-2558
Office of the Registrar	Chambers Hall	(732) 906-2523
Testing Center	Johnson Learning Center	(732) 906-2508

Mission, Goals and Objectives

MISSION STATEMENT

■ 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.

In order to accomplish this mission, the College sets for itself the following goals and objectives:

GOALS

■ To offer quality transfer-oriented associate degree programs to students who desire to complete the first two years of a baccalaureate degree program.

■ To offer quality technologically current associate degree career curricula and certificate programs which prepare students for employment and advancement in their chosen occupations.

■ To provide access to education for a diverse population.

■ To offer general education courses which foster an appreciation of knowledge, values and diversity that contribute to the development of intellectual, personal, and social skills.

■ To offer community education programs and services which meet students needs for self-development and occupational advancement and which respond to business, industry, and community needs.

■ To offer a comprehensive range of student and learning support services stressing student development, appropriate placement in courses and curricula, and the promotion of intellectual and social development consistent with the needs of our students.

■ To offer opportunities that encourages 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 of social and environmental issues.

■ To integrate the use of technology throughout our 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, 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 Appeal 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 2:00 p.m. 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

More than 20,000 alumni of Middlesex County College live in New Jersey, throughout the United States and in several foreign countries. These alumni are united in an association to maintain mutually beneficial relations between Middlesex County College and its alumni, and promote the interests of the College.

Through a newsletter, the Alumni Pipeline, alumni are kept aware of developments at the College and provided with news of classmates. The Association also coordinates social functions such as group trips, reunions and dinner meetings.

The Association is a non-profit corporation of the State of New Jersey and is governed by a Board of Trustees comprising members elected by the alumni. The day-to-day activities of the Association are the responsibility of the Vice President of Finance and Operations.

All graduates of degree or certificate programs at Middlesex County College, as well as former students who have completed 60 credits, are automatically members of the Association.

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 five million dollars. 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 paid 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, MCC 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.* If all is in order, the MCC official will sign the form.

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 the week prior to the first day 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 and 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, unless a completed withdrawal form has been submitted to the Office of the Registrar.*

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

ENCUMBRANCE POLICY

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

EXPENSES

Tuition and Fees

These rates apply to the Fall 2001 semester. The College reserves the right to change these rates for subsequent semesters.

Tuition

Middlesex County Residents ..... $ 70.00 per credit or credit equivalent
Out of County Residents ..... $140.00 per credit or credit equivalent

Fees

General Service
Middlesex County Residents ..... $ 8.00 per credit or credit equivalent
Out of County Residents ..... $ 16.00 per credit or credit equivalent

Student Service
Middlesex County Residents ..... $ 3.00 per credit or credit equivalent
Out of County Residents ..... $ 6.00 per credit or credit equivalent

Technology
Middlesex County Residents ..... $ 4.00 per credit or credit equivalent
Out of County Residents ..... $ 8.00 per credit or credit equivalent

General Expenses

Course Fees ..... $10 to $195

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

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

Parking decal fees are refundable only upon return of the decal.

Insurance

Accident/Health and Sickness ..... $62.00 per year

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

Malpractice Insurance $17.00

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

Miscellaneous Fees

These miscellaneous fees are non-refundable.

Application Fee $25.00

Curriculum Change Fee $10.00

Late Registration Fee $40.00

Begins one week immediately prior to the first day of classes and continues through the registration period.

Graduation Application Fee $40.00

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

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

Official Transcript ..... $3.00 each

Special Fees

International Student Fee

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

Fall and Spring semester only

Dental Hygiene Senior Students Licensing Examination Fees

National Board Examination ..... $130.00 (approximately)
North East Regional Board ..... $450.00 (approximately)

Advanced Placement-Nursing
Phase I ..... $ 65.00
Phases II and III $135.00

Books and Supplies

These charges are approximate and subject to change.

Automotive Technology

Tools $1,800.00

Dental Hygiene

Instrument Kit ..... $1,000.00 (approximately)
Uniform ..... $175.00 (approximately)

Dietetic Technology

Knives ..... $ 20.00 (approximately)
Uniform $100.00

Engineering Program

Drawing Kits $50.00

Hotel, Restaurant, and Institution Management

Knives ..... $20.00 (approximately)
Uniform $70.00

Media Art and Design

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

Art and photographic equipment and supplies $125.00

Medical Laboratory Technology

Uniform $45.00

Nursing-Joint Program with UMDNJ

Uniform $100.00

Radiography Education

Uniform $175.00

Respiratory Care

Uniform $100.00

Fitness Club Rates

MCC Students

Individual
Fall or Spring Semester ..... $ 19.00
Summer Session ..... $ 12.00
Winter Session ..... $ 6.00

Family
Fall or Spring Semester ..... $ 62.00
Summer Session ..... $ 39.00
Winter Session ..... $ 19.00

Full-Time Staff

Individual
Annual ..... $ 95.00

Full Time Faculty/Staff-Family
Annual $246.00

MCC Alumni

Individual
Annual $123.00

Family
Annual $308.00

Rates will be prorated for full-time staff with contracts of less than one year.

General Use Fees

Racquetball Courts

Monday-Friday
7 a.m. - 4 p.m. ..... $6/hour MCC community
$9/hour general public
4-9 p.m. ..... $9/hour MCC community
$16/hour general public

Saturday ..... $9/hour MCC community
$16/hour general public

MCC community player is entitled to play with one guest; additional guests will be charged $2.00 each.

MCC community members include registered students charged the Student Service fee, full-time faculty, full-time staff and Fitness Club members.

Swimming Pool

The general public is charged $4.00 per person per session. There is no charge for children under five years of age. Children 16 years old and younger need parent or guardian, dressed in appropriate swimming attire, to enter pool.

Rentals-School $60.00/hour
Community nonprofit and county organizations $70.00/hour
Other groups $90.00/hour

APPEALS

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.

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 using federal and state requirements.

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

Financial aid students who withdraw after the ninth week of the semester are required to pay full tuition and fee charges. Financial aid students who withdraw after receiving a student aid check will have a repayment calculation performed to determine if repayment is required.

The College's Business Office will return the undisbursed student loan check to the lender for any borrower who has not met loan requirements, who has less than six credits or who has withdrawn completely from the College. If loan requirements have been met and there are outstanding charges, the loan, minus charges, will be returned to the lender. The student must repay loan checks disbursed prior to withdrawal after the grace period as outlined in the student's loan promissory note.

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. The FAFSA must be mailed to the federal processing agency.

Students with access to a personal computer may apply over the Internet at **http://www.fafsa.ed.gov.**

The FAFSA must be filed each academic year. This form is available in January for the following academic year, and should be filed as early as possible. The College also requires that students complete a Financial Aid Student Data and Authorization form. This form is available at the Financial Aid Office. Campus aid funds are a limited resource. Students should apply by May 1 to insure priority processing.

The federal processing agency takes the information provided on the FAFSA and determines each applicant's family contribution using a federal methodology formula. The 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 and is subject to the College's review of the applicant's academic progress as defined by federal, state and College standards. 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 906-2520. Consumer information is available upon request, or on the College's Website. The address for financial aid consumer information is **www.middlesex.cc.nj.us**

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 $3,750 per year.
- 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 $400 to $900 per year.
- 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 $1,890 per year.
- The Higher Education Student Assistance Authority uses a State formula to determine eligibility.
- The student is notified via a Student Eligibility Notice (SEN) from the State.

Educational Opportunity Fund Program

- Awards range from $425 to $850 per year.
- 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 per year.
- 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 $400 to $900 per year.
- 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 $1,000 to $4,000 per year.
- 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 per year.
- The 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 loan application must be completed. Loan applications are available at the lending institutions. Information about the current terms of the program is available at the time of application.

OTHER SOURCES OF ASSISTANCE

Part-Time Jobs

Many students work part-time in the surrounding area. *The Middlesex County College Career Services Office can assist in locating part-time jobs (732) 906-2595.*

Cooperative Education

Students in most majors may have the opportunity to gain work experience in their fields while earning money to help finance their college costs. *Contact the College's Career Services for further information (732) 906-2595.*

Outside Scholarships

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

MCC Scholarships

MCC awards several full-time scholarships each year for academic and athletic 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.ED.GOV/finaid.html
- The Financial Aid Information Page
http://www.finaid/org/
- National Association of Student Financial Aid Administrators
http://www.NASFAA.org
- HESAA (Higher Education Student Assistance Authority)
http://www.hesaa.org

If you do not have a computer at home check with your local high school, public library or the College's library 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 Student Data and 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 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.
4. All required forms must be on file in the Office of Financial Aid before the established promissory note deadline date (usually two weeks before the start of classes).
5. The promissory note allows students a grace period of 30 days before payment of the term bill is required.

For students who have already received financial aid awards and returned the completed award documents, an application for a promissory note is not necessary. Their financial aid will be credited automatically toward their bills.

Students not satisfying their bills with financial aid must make payment at the end of the note period. Under special circumstances, the note may be 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.

As a part-time student, you may meet with an advisor in the Academic Advising Center JLC Room 243 on a drop-in basis. Advisors may refer you to a counselor in the Office of Counseling and Career Services when appropriate.

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 simply to 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) 906-2510*. For more detailed admissions information and deadlines please refer to our Applicants Guide.

CHANGE OF MAJOR

You may change your major if you meet the admissions requirements for the new major and space is available. To change your major you must submit to the Office of the Registrar a Request for Change form signed by the Dean or Department Chairperson of the academic division which administers the new major. If you want to change your major to Automotive Technology, Dental Hygiene, Medical Laboratory Technology, or Nursing - Joint Program with UMDNJ Psychosocial Rehabilitation and Treatment, Radiography Education, Respiratory Care, you must file an Application for Admission with the Office of Admissions and Recruitment. Open College students who change to a degree or certificate program must contact the Office of Admissions and Recruitment.

READMISSION

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

LEAVE OF ABSENCE

You may apply for up to one year of Leave of Absence from the College by completing a form that is available in the Office 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.

CAREER SERVICES

You can get help with full-time, part-time, or summer employment. Services include workshops for employment preparation, on-campus interviews with local employers, job placement and career counseling, an extensive library of information and materials on employers and employment trends, and a job referral service which notifies registered students of job opportunities listed by area employers. The Career Center in Edison Hall *(732) 906-2546* provides information on career choices, decision-making skills, job-search materials, and specific vocational fields. Or visit the Career Information Center on our website: **www.middlesex.cc.nj.us/admin/careerserv/jobs.htm**

CHILD CARE SERVICES

Childcare is available on-campus in a modern childcare center for the children of students, staff, and residents of the community. Professionals offer childcare and preschool education for children between 2-5 years of age during the day and for children 2 1/2 - 8 years of age in the evening. As a bonus, students from the Middlesex education programs assist in the Center - giving your child individualized attention, *(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 more than 50 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.

COLLEGE-ON-LINE-TRANSACTION-NETWORK

COLTNet kiosks are strategically located around campus. On COLTNet, you may access College video messages, campus maps, campus phone directories, a calendar of events and a list of frequently asked questions. As a student, you may also check course availability and access your class schedules, grade reports, unofficial transcripts, account status and financial aid status. Official transcripts can be ordered at these terminals, and you can even do a degree audit and check on your address information, and update it if necessary.

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. You may also consult the "Cooperative Education" heading in the section of listings for major areas of study. *(732) 906-2595.*

EDUCATIONAL OPPORTUNITY FUND

The Educational Opportunity Fund (EOF) program provides individual and group counseling services, academic support, and financial aid to educationally and economically disadvantaged students who might not otherwise attend college. For information about admission to the program, contact the EOF Office in South I. *(732) 906-2544.*

ENGLISH AS A SECOND LANGUAGE

If your native language is not English, you can study and prepare for college courses or gain needed language skills for the current job market in our ESL program. The College will test your language skills and place you in a program of study to meet your specific needs. TOEFL is not needed. *(732) 906-2508.*

HIGH SCHOOL SCHOLARS PROGRAM

If you are a high school student who has completed the sophomore year, you may take either college credit courses for which you have completed the prerequisites, or developmental courses. If you have not completed the sophomore year but exhibit superior academic ability and emotional maturity, you may also take college courses. All students must have the recommendation of their school guidance counselor.

You may attend classes on the Middlesex County College campus or at one 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, you pay only a $100.00 fee 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

If you are interested in **Intercollegiate Sports**, you'll be happy to learn that 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.

INTRAMURAL SPORTS

With our **Intramural Sports**, you can join other students, faculty, and staff competing in a variety of sports throughout the academic year. Activities are held on weekdays. More information is available in the Physical Education Center. Check the Intramural Bulletin Board, or contact the Intramural Director for more information. Students need medical clearance from the Health Services Coordinator before participating. *(732) 906-2559.*

Included among our intramural sports are basketball, racquetball, soccer, softball, swimming, tennis, volleyball, and weight lifting.

INTERNATIONAL STUDENT ADVISER

An adviser assists international students with individual counseling regarding visa, government regulations, cross-cultural adaptation, and housing. International students must register with the Department of Counseling and Career Services, Edison Hall, at the time of enrollment. *(732) 906-2546.*

MIDDLESEX COUNTY COLLEGE LIBRARY

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 group and 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 and CD-ROM databases, including DIALOG, an on-line system covering more than 200 databases. The Star Ledger full text on the Internet; and EBSCO Masterfile.

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. 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 whose high school records and College Placement Test scores indicate a need for goal clarification and career development or academic assistance. Contact the Middlesex Minority Student Affairs Office. *(732) 906-2532.*

OFF-CAMPUS CENTERS

In order to serve as many residents of the Middlesex County community as possible, the College offers credit courses at public high schools in the evening. During the past academic year, over 2,000 individual student registrations were accepted for courses offered in various locations. Some of these centers are located in East Brunswick, North Brunswick, Old Bridge, Piscataway, South Brunswick and Woodbridge.

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 - complete with closed-circuit television - has state-of-the-art treadmills, computerized exercise bikes, and Stairmasters®. 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 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. *(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 during Advance Registration which is scheduled in May for the Fall semester and December 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.

You then submit your registration either in person at the registration site, or if you are eligible, you register through the College's Telephone Registration system which can be accessed by any touch tone telephone. You may register from the convenience of your home or office, or you may use one of the telephones reserved for this purpose in the lobby of Chambers Hall.

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's 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 in July for the Fall semester and December for the Spring semester. Schedule bulletins listing all academic offerings for the semester and registration instructions are mailed to the homes of all currently enrolled part-time students and all Middlesex County residents. The master class schedules are also available on the Middlesex's 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.

COURSE LOAD

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

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

GRADE REPORTS

At midterm, you will be notified in writing if you are not making satisfactory progress in your classes. At the end of each semester, a student copy of your academic transcript will be mailed to your home. You may print a copy of your semester grades at one of the COLTNet kiosks on campus. You may print an unofficial copy of your complete academic transcript at the kiosks. Official transcripts may be ordered at the kiosks and will be mailed by the Office of the Registrar.

WITHDRAWAL FROM A COURSE

If you decide to withdraw from a course, you must officially withdraw in writing. Depending on when you decide to withdraw, the following terms and conditions apply:

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

You may drop a course by using an ADD/DROP form. There is no academic penalty for withdrawing at this time, and the drop is not recorded on the permanent academic record. All forms must be submitted to the Office of the Registrar.

For developmental course withdrawal you must also obtain the written approval of the Director of the Testing Center or the Director of Academic Advising.

- *Eleventh day through the ninth week of classes:*

You may drop a course by using an ADD/DROP form. A grade of "W" will appear on your permanent academic record. All forms must be submitted to the Office of the Registrar.

For developmental course withdrawal, you must also obtain the written approval of the Director of the Testing Center or the Director of Academic Advising.

- *After the ninth week and prior to the tenth day before the end of the semester:*

You must submit a WP/WF ADD/DROP form to the instructor of the course. The instructor will assign either a "WP" or a "WF" and submit the form to the chairperson for approval. The chairperson will forward the form to the Office of the Registrar. Withdrawal from a course during this time period may result in academic penalty if the instructor assigns a "WF." All withdrawals during this time period will appear on the permanent academic record. See page 21 for more information on "WP/WF" grades.

For developmental course withdrawal you must also obtain the written approval of the Director of the Testing Center or the Director of Academic Advising.

Students withdrawing from Fall II or Spring II, Winter Session or Summer Session should refer to the current schedule bulletins for deadline dates.

WITHDRAWAL FROM THE COLLEGE

If you need to withdraw from all of your courses, you must go to the Office of Counseling and Career Services in Edison Hall, 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.

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.

Students who officially withdraw from the College during the first nine weeks of the semester will receive the grade "W" in all courses. After the ninth week, students will receive a grade of "WP" or "WF" in each course, depending upon progress in each course until the time of withdrawal, (See page 21 for an explanation of "WP" and "WF" grades).

Should withdrawal be necessitated for reasons of health, or circumstances beyond the student's control, the student may appeal to the Tuition Appeals Committee.

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 January, the College offers a concentrated 3-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 tambien 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 para estudiantes, en todas las areas que se mencionan más adelante. *(732) 906-2546 • (732) 906-2532.*

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 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 for additional information. *(732) 906-2546.*

STUDY-ABROAD PROGRAM

During the summer, the Center for International Education offers five distinctive 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

Transfer students can receive assistance with educational planning and choosing transferable courses appropriate to the four-year college and degree of your choice. The latest catalogs, reference books, scholarship guides, and other specialized information are available in the Transfer Services Center in Edison Hall. *(732) 906-2546.*

■ ARTSYS

Rutgers University has implemented a new articulation system, known as ARTSYS, with New Jersey's community colleges. ARTSYS is a computerized data information system designed to ease the transition from these institutions to Rutgers. Students attending one of New Jersey's two-year colleges can access the ARTSYS website **(http://artsys.rutgers.edu)** to obtain detailed information about transferring to Rutgers. Students can determine course requirements for the first two years of each major program of study offered by Rutgers' undergraduate colleges and assess the transferability of the courses they are completing at their community college.

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) 548-6000 ext. 3221.* Assistance in reading and writing is available in East Hall. *(732) 548-6000 ext. 3240*

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 approve 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 veteran 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. 18 or e-mail us at a-bnj-ru@rotcl.bragg.army.mil. For more information, visit us on the web at* **http://fas-digiclass.rutgers.edu./ROTC/**

WORKFORCE DEVELOPMENT PROGRAM

Assistance for students sponsored by the NJ Employment Services is availabe through the Career Services office located in Edison Hall, Room 100, provides the Trade Readjustment Act (TRA). *(732) 906-4188.*

Community Outreach

CENTERS

Career Training Center

The Career Training Center provides adults seeking workforce training and employment with a comprehensive education and computer-based training plan, including career assessment, career advisement, professional development, computer-based career training, and job placement services.

The Career Training Center's computer-based occupational skills training programs vary from 3 to 6 months in duration, and are available in both full-time day and part-time evening formats.

Programs include:

- Microsoft Certified Networking (MCP)
- PC Support Specialist Technician (A+ Certification)
- Computerized Accounting
- Specialized Office Skills
- Microsoft Office User Specialist (MOUS)
- Computer/Software Applications for Business

All career programs provide a career development and job placement component, including career counseling; career and professional development seminars; on-site career fairs; and job placement services, which insure that students successfully completing their programs are provided with career opportunities suited to their acquired training.

Career Training Center programs are offered on the Edison Campus and at the New Brunswick and Perth Amboy Centers. *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, financial aid counseling, computer training, English as a second language placement, college placement testing and job referral services.

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 Center also works in collaboration with the City of New Brunswick and New Brunswick Tomorrow to provide the Alliance for Successful Teen Employment Program (A-STEP). 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 clubs and activities. The staff is bi-lingual and includes program specialists, career counselors and teachers. At the Center, we want the community to know that we are here offering all the opportunities for a better future. This idea is the basis for our 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 a variety of counseling services including vocational assessment, academic and financial aid advisement, training and job referral services. These services are available on an individual basis by appointment or through group sessions and workshops conducted at the Center. All counseling services are offered in English and/or Spanish. Tutoring and a variety of student activities are offered for students at the Center.

In addition, the Center offers non-credit programs such as short-term computerized training, job training and referral and credit free mini-courses.

The Perth Amboy Center is located at 133 New Brunswick Avenue. *For more information call (732) 324-0700.*

The Center for International Education

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

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

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

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

The Center sponsors The International Business Round Table which has been a gathering place for business, government and education leaders since 1975. It is a central venue to give and receive information regarding foreign markets, new shipping regulations, new export credit and insurance requirements and all critical data for the expansion of foreign trade. A panel of experts in the various fields of international trade exchange accurate, up-to-the-minute information on a bimonthly basis. *For further information call (732) 906-2529.* The Center coordinates the College's Study Abroad Program and the International Festival each April.

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

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

Office of School Relations

The Office of School Relations is the College liaison to the K-12 school districts. Working with the school districts, School Relations coordinates professional development opportunities for teachers. The professional development includes customized in-district workshops to meet the specific needs of local school districts, on-campus workshops integrating the NJ Core Curriculum Content Standards, and summer institutes focused on math, science, and technology. Middlesex is registered with the NJ Department of Education as a professional development provider (#42).

Through School Relations, the 'Substitute Teacher Training Seminar' is offered as a one-stop preparation and certification for students who have successfully completed 60 college credits. For middle and high school students, School Relations offers career exploration and academic enrichment programs such as the Middlesex County Teen Arts Festival and the High School Scholar's program.

PROGRAMS AND SERVICES

Professional and Community Programs

A variety of professional, non-credit programs are available to working men and women who wish to enhance their current position and to increase opportunities for advancement. Taught by professionals, these courses are developed with business applications in mind. Comprehensive training is available in a wide range of areas that include: CISCO, Computers, Medical Records Coding, Training and Development, Technical Writing and Personnel/Human Resources.

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

A Summer Camp for children ages 6-18 offers youth enrichment programs in theater, computers, communications, science and the arts. Other specialty programs include a comprehensive series of Sports camps, Wildlife and Birding Adventure, a Kids Karavan Trips Series and Sciensational Workshops. Both half and full day programs are available for the convenience of working parents.

For information on Professional, Community or Summer Programs, call (732) 906-2556.

Job Readiness and Job Search

Job Readiness is a short-term program designed to meet the personal developmental needs of the Family Development Program (FDP) clientele in order to best prepare them to be successful in a job skill-training program. Participants are provided with activities to improve their skills in parenting, communications, self-esteem, decision-making time management, personal finance and job survival skills.

Job Search is designed to meet the job placement needs of FDP 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 programs are offered at both the New Brunswick and Perth Amboy Centers.

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, non-profit organizations, and professional groups. Since its inception, The Institute has served over 250 companies that range from multi-national manufacturers to small "start-ups". Programs include a wide range of offerings: including English as a Second Language (ESL) for production workers; comprehensive management training to implement company-wide ISO 9000 initiatives and specialized Programmable Logic Controller (PLC) and Packaging Machine Mechanics training for technicians. A partner with the New Jersey Department of Labor, The Institute assists employers in their application for training funds. *For information on Customized Training, 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 priorities and organize time and resources, so that students can identify and pursue their goals effectively and efficiently.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Other Highly Desirable Components of General Education
- Competency in a foreign language
- Active participation in the arts
- Knowledge of higher mathematics
- Computer programming ability

Humanities & Social Science Electives
Every humanities and social science elective is noted as such in the official course description included in this catalog.

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

- HUMANITIES
  AFS COM ENG GER ITA MUS SPA SPE
  ART DAN FRE HIS LNC PHI SPE
- SOCIAL SCIENCE
  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.

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. Thus, 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, are required to test before enrolling in their second semester of study. No one may enroll in English or mathematics courses without placement testing.

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

REMEDIATION 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 insure 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 Transfer
   Civil/Construction Engineering Technology
   Computer Science
   Electronic and Computer Engineering Technology
   Engineering Science
   Mechanical/Manufacturing Engineering Technology
   Mecomtronics
   Respiratory Care
   Science Transfer – Biology, Chemistry, Mathematics or Physics

- Completion Standards for Developmental Courses

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

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

Placement Test Exemptions

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

- Students who already hold an associate's, bachelor's or master's degree from a regionally accredited U.S. college or university.
- Students who score 500 or higher on the SAT Verbal or the SAT Math may be exempt in one or more categories. Scores may be no more than five years old.
- Students who are enrolled in the English as a Second Language Program (ESL) must take the ESL Placement Test instead of the College Placement Test.
- Students who take the ESL Placement Test followed by an oral interview may be exempt from ESL courses. If so, the student must then make an appointment for 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 reached sophomore status at a regionally accredited U.S. college or university and have completed one semester of English composition and 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 for one semester may be exempt from testing by submitting a "Visiting Student Letter" for that term.
- 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.

ADVANCED STANDING

College Credit by Examination

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

Applicants for these programs include anyone who:

- Has extended work experience and wishes to demonstrate it
- Has taken courses at a non-accredited educational institution and wishes to earn college credit
- Has taken courses through correspondence, television or adult education programs, or in the military service
- Has done extensive independent study and wishes to earn college credit

Applicants are encouraged to consult the Testing Center or a counselor in the Office 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 College Level Program (CLEP) and Credit By Examination Program (CBE). All applicants who plan to transfer from Middlesex County College are advised to consult the registrar at the prospective transfer college regarding the individual institutional policy on accepting transfer credit earned by CLEP and CBE Policy statements of those New Jersey colleges that have a formal policy on this matter are on file in the Office 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) general examinations in the following areas: (1) English composition with essay and (2) general mathematics. The College may grant a maximum of six semester hours of credit for each examination completed with a passing score. *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 29 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	2 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 (USAFI)/Defense Agency for Non-Traditional Education (DANTES) courses and/or tests in college-level subjects at other institutions may request that college credit be applied to their degree requirements at Middlesex. No final decision is made until the scores have been received from DANTES.

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

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

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

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

PREVIOUS COLLEGE CREDIT

If you have attended another college, you must submit official transcripts of all such work to the Office of Admissions and Recruitment. 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.
2. Minimum grades of "C" in English composition courses.
3. Minimum cumulative grade point average of 2.0.
4. Residency Requirements: Individual programs may require a minimum number of courses in the major to be taken at MCC. 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 one 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.*
***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 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 3 credits in the social sciences
6. A minimum of 6 credits at the 101 level or higher in the natural sciences and/or math
7. A minimum of one credit in physical education or health education
8. Additional credits as detailed in the associate in fine arts degree to comply with the specific fine arts discipline requirements

Associate in Science Degree

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

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

Associate in Applied Science Degree

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

Second Associate Degree

A second associate degree may be awarded in only those programs which differ by a minimum of 15 credits in major courses. Such a degree will 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 MCC. 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 their application, you must reapply in order to be considered for graduation at a later date. You are not charged an additional application fee.

May Commencement Ceremony

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

Honors and Awards

■ *The Frank M. Chambers Award for Academic Achievement*

This award for academic excellence is presented each year at Commencement to those students 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.

Honors at Graduation

Graduates who have earned honors at graduation will be given a gold tassel to wear with their cap and gown. Eligible August candidates who subsequently earn honors after having completed all degree/certificate requirements will be given a gold tassel when they receive their diplomas/certificates in September.

Degrees are conferred in absentia when candidates have received permission in advance from their academic dean to be excused from the May commencement ceremony.

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 their 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.

Examples of academic dishonesty include but are not limited to:

- Plagiarism - presenting someone else's words, ideas, or findings, in whole or in part, as one's own, without properly acknowledging the source.
- Consulting or possession of unapproved materials during a test.
- Submitting for a grade work copied in any medium from another student.
- Using a stand-in to take an exam or acting as a stand-in to take an exam.
- Falsification of a lab report.
- Unapproved possession of test material.
- Unapproved collaboration.
- Sabotaging another's work.
- Altering a graded assignment to obtain a better grade without instructor permission.
- Forgery, alteration or misuse of any College document.
- Deliberately aiding another in committing an act of academic dishonesty.

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

ATTENDANCE

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

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

Attendance and Grading Procedures

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

Students who receive an "N" grade in all course work at midterm are subject to administrative withdrawal. Students who are administratively withdrawn must reapply and be approved for admission to re-enroll as full-time students.

An "N" grade will not be assigned as a final grade when the student's pattern of nonattendance began after midterm. In such cases, the S, D, or F grade received at midterm must be revised by the instructor to an appropriate final evaluated grade of A, 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 summer session, Fall II and Spring II, 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

Honor Points	Grade	Description
4	A	Outstanding achievement in meeting the objectives of the course
3.5	B+	Above average achievement +
3	B	Above average achievement
2.5	C+	Average achievement +
2	C	Average achievement
1	D	Below average achievement
0	E	Credit by examination
0	F	Failure to meet the objectives of the course
0	I	Incomplete work to be made up within one week from the end of the semester or by special arrangement of the department. An "I" grade is temporary and will be changed to an F if make-up is not accomplished in a timely fashion.
0	N	Not evaluated – insufficient course participation *(See Attendance and Grading Procedures)*
0	S	Satisfactory
0	T	Transfer credit from another institution
0	W	Withdrawal from course – no evaluation
0	WP	Withdrawn – passing at the time of withdrawal *(does not affect grade point average, see page 13.)*
0	WF	Withdrawn - failing at the time of withdrawal *(affects grade point average as though it were a failing grade. See page 13.)*
0	X	Audit

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

Credit Equivalent

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

Grade Changes - Time Limit

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

Repeated Courses

Students may repeat any course regardless of the grade first received. If the course number or title has changed, students must submit a student appeal to the division dean requesting that an equivalent course be approved. Students may enroll in the same course a maximum of 3 times. Any grades assigned including "F," "N," "W," "WF," or "WP" 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 XX** for an explanation of the repeat policy pertaining to their program.

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

Calculation of Grade Point Average

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

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

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

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

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

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

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

Therefore, your GPA in this case would be 2.7.

SCHOLASTIC STANDING

Honors

- Dean's List

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

- Dean's Letter of Commendation

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

  Grades of "I" (Incomplete), "N" (Not evaluated), or "WF" (withdrawn - failing) will disqualify students for an evaluation period. When an "I" grade is changed, students will be reevaluated for Dean's honors.

- Honors at Graduation

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

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

STANDARDS OF PROGRESS

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

Credit Courses

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

- *If a student has attempted no more than 11 credits,*
  Below 2.00 = Academic Warning
- *If a student has attempted between 12 and 23 credits,*
  Below 2.00 = Academic Warning
  Below 1.60 = Academic Probation
  Below 1.00 = Academic Restriction
- *If a student has attempted between 24 and 39 credits,*
  Below 2.00 = Academic Warning
  Below 1.80 = Academic Probation
  Below 1.60 = Academic Suspension
- *If a student has attempted 40 or more credits,*
  Below 2.00 = Academic Warning
  Below 1.80 = Academic Suspension

Developmental Courses

- A student whose schedule includes developmental (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 3 times, failure to complete a course successfully within 3 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 special program requirements)*.

ACADEMIC STATUSES

Academic Warning

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

Academic Probation

Students who have been placed on Academic Probation will be limited to 14 credits and credit equivalents or 4 courses. Additional limitations may include non-admittance to certain courses and/or required enrollment in one of the College's freshman orientation-type 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-admittance to certain courses and/or required enrollment in one of the College's freshman orientation-type courses. 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 MCC 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.XX**). 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.XX**). 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, MCC 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.

Campus Traffic

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 Placement Services, and Division of Continuing Education and Instructional Resources. The policy is also printed annually in Quo Vadis, the student newspaper. The offices mentioned also maintain a directory of records which lists all education records maintained on students by the College.

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

Directory Information

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

- *Category I* - Name, program of study, enrollment status (full- or part-time), dates of enrollment, date of actual or anticipated graduation, degree earned, and any honors received.
- *Category II* - Postal address, i.e., city, town, or township and state, but not including street address *(to be released to Office of Public Information for the purpose of media distribution in connection with Dean's List and graduation)*.

■ *Category III* - Social security number, current address, telephone number *(to be released to College police, for the purpose of investigation of campus traffic violations, and encumbrance of student transcripts in connection with violation charges).*

■ *Category IV* - Permanent home address *(to be released by the international students advisor in compliance with appropriate and necessary institutional reports).*

■ *Category V* - Name, address, telephone number, program of study, enrollment status (full-time or part-time), dates of enrollment, date of actual or anticipated graduation, degree earned, and any honors received *(to be released to College-affiliated corporations, such as the Middlesex County Retail Services Corporation, the Middlesex County College Foundation and similar organizations for their exclusive use, for the purpose of providing information and services to current and former students).*

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 potentially warrant disciplinary action, the administrator shall advise the faculty member, the Union and the dean of the nature of the complaint and the name of the grievant.
5. The dean of the Division shall complete the investigation and hold a hearing with 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 Affairs of the College.

CODE OF STUDENT CONDUCT

Students of Middlesex County College may be suspended, placed on probation, or given a lesser sanction for the following causes, which must be County College related:

Violations

1. Forgery, alteration or misuse of any official college document, records, student or faculty identification or credit card.
2. Unauthorized use of, or misuse, including mutilation and/or defacing of educational materials, college records or college property.
3. Construction of or actual possession of firearms, inherently dangerous or explosive materials including fireworks.
4. Threat of, or inflicting bodily harm or physical abuse or injury to the person of a fellow student, faculty or staff member, administrative officer or guest of the College.
5. Theft, misappropriation, vandalism, non-accidental damage, grossly negligent damage or arson to any College property or private property of a fellow student, faculty or staff member, administrative officer or guest of the College.
6. Physical or verbal obstruction or disruption of teaching, research, administration disciplinary proceedings or any other office or authorized College program event, function or activity.
7. Resisting a campus police officer while acting in the performance of his/her duties on the College premises, or intentionally ignoring citations issued by campus police officers.
8. Unauthorized entry into any secured College building or facility.
9. Obstructing access to any campus building or other facility and unregistered, unreserved or unauthorized use or occupation of any College meeting facilities, classrooms, public or common indoor or outdoor areas, teaching, research, recreational, athletic, faculty offices or other components of the College physical plant or property.
10. Use of or actual possession, distribution, transfer or sale of narcotics, hallucinogenic agents and abusive drugs.
11. Failure to register the dissemination of printed material or unauthorized display of posters and advertising material.
12. Abusive or unauthorized use and operation of outdoor and indoor sound systems, public address systems, sound tracks, or bull horns.
13. Furnishing false information to the College with intent to deceive.
14. Unauthorized consumption and/or unauthorized possession of alcoholic beverages on campus.
15. Cheating or plagiarism in connection with an academic program at the College.
16. Failure, after a warning, to wear adequate clothing and foot covering while attending classes or utilizing any campus facility.
17. Smoking in areas designated "No Smoking."
18. Consumption of food and beverages in classrooms, lounges and hallways of classroom buildings, laboratories, and the library.
19. Gambling on College property.
20. The violation of any of the criminal statutes of the State of New Jersey which violation occurs either on the College campus or directly affects the College community.
21. Soliciting or assisting another to do any act which would subject a student to suspension or probation.

Sanctions

The various penalties for the commission of a violation are set forth hereafter. Upon a finding of guilty of any violation, one or more of the listed sanctions may be imposed, accumulatively or in the alternative. The maximum penalty for the commission of said violation shall be an indefinite suspension from the College.

a. ***Warning:*** Notice, orally or in writing, that continuation or repetition of conduct found wrongful may be cause for more severe disciplinary action.

b. ***Censure:*** A written reprimand which becomes a part of the student's file and includes the possibility of more severe disciplinary sanctions in the event of the finding of a subsequent violation of a College regulation within a stated period of time.

c. ***Probation:*** Exclusion from participation in privileged or extracurricular College activities for a period not exceeding one academic year.

d. ***Suspension:*** Exclusion from participation in all College programs, academic and extracurricular.

e. ***Fines:*** A money penalty not to exceed $200.00 to cover the costs of replacing physical property to the College intentionally damaged or stolen by any student, or damaged through the gross negligence of the student. The payment of any fine by students shall in no way limit the right of the College to seek restitution for appropriate damages through appropriate civil proceedings.

DISCIPLINARY PROCEDURES

A. Complaints

1. Charges of violations of the Code of Student Conduct may be made by any member or guest of the College community, or by any representative of any department or agency of the College.
2. Charges shall be in writing and shall be filed with the Office of the Vice President for Academic Affairs *(hereafter "Vice President")*. Upon such filing, the Vice President shall notify the dean in charge of that student of the charge.
3. The appropriate dean shall then investigate the alleged violation of the Code of Student Conduct. If he/she determines that there is no substance to the charge, he/she shall notify the Vice President and all charges shall be dropped. In the event that the dean determines that the charge warrants as a penalty only a warning, the dean will meet with the student to discuss the charge and issue the warning. The issuance of the warning terminates the complaint.
4. If the dean determines that there is sufficient evidence to warrant a penalty other than a warning, the dean will prepare and serve on the person charged a complaint setting forth the nature, time, and place of the violation charged. The complaint will be served on the person charged within 30 days of the filing of charges. Service of the complaint will be in person or by certified mail, return receipt requested, addressed to the person. The complaint will be accompanied with notification of the date, time and place of a hearing with the Vice President.

B. Information Hearings

1. If students wish to plead guilty to the complaint and waive their right to a hearing, they may do so by signing a written waiver to this effect. The student will return the waiver to the dean who will make recommendation of disciplinary action to the Vice President who in turn will assign appropriate sanctions.
2. If students wish to plead innocent, an informal hearing will be held before the Vice President. At said hearing, the dean will present the charges and evidence supporting said charges. Students have the right to be present at the hearing, be informed of the evidence considered against them, have an opportunity to rebut it and to present evidence on their own behalf and have the assistance of an advisor of their choice.
3. If after said hearing the Vice President shall determine that either the student is innocent or that the violation committed by the student warrants as a penalty only a warning or censure, he/she shall, if applicable, assess said penalty and the matter shall be deemed closed.
4. If after said hearing the Vice President shall determine that the violation committed by the student warrants either probation, suspension, or the levying of a fine, he/she shall advise the student, who shall then have a period of 15 days to request a hearing before the Judicial Board. If the student does not request such a hearing within such time, the Vice President shall determine the sanction and advise the student in writing of such sanction, or may refer the matter to the Judicial Board. If the student or Vice President requests such a hearing, the dean shall forward the reports and evidence concerning the case to the College Judicial Board for action. Thereafter, the dean will be concerned with presenting the charges to the Board and receiving the report of the finding of the Board and aiding the student to comply with any punishment decreed by the Board.

C. Judicial Board Hearings

1. The College Judicial Board shall then serve on the person charged notification of the date, time and place of the hearing before the Board, which date shall not be less than 10 days from the date of service. Service of the complaint shall be in person or by certified mail, return receipt requested, addressed to the person. A copy of this notification shall be filed in the Office of the Vice President and the respective division dean. In addition, the College Judicial Board shall instruct the dean to forward to the student immediately a list of witnesses and a copy of their statements or complaints which the complainant intends to submit against him/her.
2. If after due notice of the complaint and the date of hearing, the student fails to appear, and the majority of the Judicial Board is satisfied that the student had appropriate notice of the complaint and date of the hearing and no valid excuse for not appearing, the Board may then hold the hearing without the student present.
3. Decision in all cases shall be determined by a simple majority vote of the members present.
4. The Board shall follow the Rules Governing Procedures attached hereto. In addition, the Board may adopt any other procedural rules which are not inconsistent with these rules in order to assure a fair and impartial hearing. Within 15 days of the conclusion of the hearing, the College Judicial Board shall file a report containing findings of fact and conclusions as to the validity of the charges. The report along with recommendations of disciplinary action shall be filed with the Vice President. If the hearing was conducted in the absence of the individual charged, the report shall so indicate.

D. Imposition of Sanctions

If the person charged is found guilty, the Vice President shall impose any sanction or sanctions. A report of findings and imposition of sanctions shall be forwarded to the respective division dean and served on the person charged in person or by certified mail, return receipt requested, addressed to the person.

E. Appeals

1. Within 30 days of the student's receipt of notice of the Board's disposition of the case and subsequent imposition of sanctions by the Vice President, the student may appeal the decision to the President. Such notice shall be in writing and shall not be subject to any other formal requirements except to reasonably express his/her desire to appeal the decision. Upon receipt of such notice, the President shall advise the chairperson of the Board and the Vice President that such an appeal has been filed. They shall then make the record of the proceedings available to the President.
2. The President may give the appellant an opportunity to present his/her reasons for the appeal, and if in the President's discretion it is desirable, may hear from the dean, Vice President, and representatives from the Board. After hearing the student and such others as deemed appropriate, and considering the record of the Board, the President shall make the final decision and set the sanction.

F. Administrative Suspension

Pending the completion of the hearing before the Board and the imposition of sanctions, the status within the College of the person charged shall not be altered unless his/her continued presence on campus shall be found by the Vice President to constitute a serious threat to the College community or to the property of the College. Such findings shall be preceded by an appropriate hearing before the Vice President unless extraordinary circumstances preclude a hearing. In any case, the Vice President is authorized to suspend the person charged, and the temporary suspension is to remain in effect pending the completion of the hearing before the Board and final determination of the case.

G. Pending Criminal Proceedings

On written motion of the person charged, filed in the Office of the Vice President any time before the hearing begins before the Board, the hearing before the Board shall be postponed until disposition at the trial court level of any pending criminal proceedings arising out of the same conduct, provided however that students who are convicted of a criminal offense arising out of the same conduct and are charged with the violation of a college rule shall be ineligible to register at the College in the semester following their conviction and thereafter unless and until the College charges against them have been heard and decided.

COLLEGE JUDICIAL BOARD

A College Judicial Board shall be organized to hear cases referred to it by the Vice President or brought before it by students facing charges.

A. Composition of the Board

The College Judicial Board shall consist of 12 persons: seven students and five faculty members. A faculty member shall be elected chairperson of the College Judicial Board by the other members for a one-year term. The responsibilities of the chairperson will be to insure that the RIGHT TO DUE PROCESS is not abridged and that the College Judicial Board holds its hearings in accordance with procedures set forth herein. A simple majority of the members of the Board shall constitute a quorum.

B. Eligibility

A student member of the College Judicial Board shall be a student who has been enrolled at least one semester and has at least a 2.0 cumulative average.

C. Appointment Process

Students and faculty shall be nominated for membership on an individual basis by each respective Division Council (faculty members: one each from Social Sciences and Humanities, Business, Computer Science and Engineering Technologies, and Science, Mathematics and Health Technologies; student members: two each from Social Sciences and Humanities and Business, Computer Sciences and Engineering Technologies, one from Science, Mathematics and Health Technologies and forwarded to the Vice President, who shall make the final appointment of the members of the College Judicial Board. Appointments shall be made within the first 30 days of the Fall semester.

D. Terms of Office

Students and faculty members shall be appointed for one-year terms. In the event of a resignation, an appointment will be made after nomination by the appropriate body for the length of the unexpired term.

E. Jurisdiction

The Judicial Board shall be the principal campus-wide committee with jurisdiction to hear all charges of student misconduct which have as a possible penalty either probation, suspension, or the levying of a fine. After careful deliberation the Board will recommend appropriate action to the Vice President. The Vice President in turn will impose appropriate sanctions if students are found to be guilty.

The Judicial Board shall have the authority to prescribe supplementary rules of procedure consistent with the requirements contained herein. The Board may also, on request, render written advisory opinions concerning the meaning and application of this code, or of the rules and regulations promulgated pursuant to this code.

Rules Governing Procedures of the College Judicial Board and Procedural Rights of Individuals Charged

1. The Judicial Board proceedings are de novo, that is, without reference to any matter developed previously in an informal proceeding in which disciplinary action was considered.
2. No member of the Judicial Board, who has previously participated in the particular case or who would appear as a participant before the Board itself, shall sit in judgment during that particular proceeding.
3. Hearings before the Judicial Board shall be held in private unless students charged request that the public be admitted. The public may then be admitted subject to the following stipulations:
   a. That in the event of disorder or disruption of the hearing by spectators, the Board may order the hearing closed to the public.
   b. The Board may order all spectators excluded from the hearing during the testimony of a witness when the Board concludes that such exclusion is necessary and appropriate to avoid embarrassing publicity for a witness.
4. Persons charged shall have the right to be represented by an attorney or any other representative of their choice from within or without the College community.
5. Persons charged shall have the right to be informed of the identity of the person initiating the charges against them and the right to hear the witnesses against them, subject to reasonable rules of procedure, the right to cross-examine such witnesses either personally or by their representative.
6. Persons charged shall have the right to produce witnesses in their own defense. The Board may limit the number of repetitive witnesses in order to avoid dilatory tactics.
7. Persons charged shall have the right to testify in their own behalf, or to refuse to testify without such refusal being construed against them.
8. The charges may be presented by either the appropriate Dean or legal counsel or another agent of the College appointed by the Vice President.
9. A written transcript or other record of the hearing shall be made and preserved for not less than 60 days after persons charged have been notified of the Board's action in the case. In the event no appeal is taken from the Board's action within the time set for such appeal, the transcript or record may be destroyed.
10. Order of Business:
    a. Call to Order, Chairperson
    b. Statement of case to be heard, Chairperson
    c. Opening Statement, Complainant or College Delegate
    d. Opening Statement, Defendant or Advisor
    e. Presentation and cross-examination of evidence and witnesses for the prosecution
    f. Presentation and cross-examination of evidence and witnesses for the defense
    g. Closing Statement, Complainant or College Delegate
    h. Closing Statement, Defendant or Advisor
    i. Closing comments and announcement regarding the calendar, Chairperson
    j. Adjournment, Chairperson
11. Deliberations of the Board shall be conducted out of the presence of persons charged with misconduct and with no other persons or spectators present.
12. No record or transcript of the Board's deliberation shall be made except a formal record of the Board's action.

SEXUAL HARASSMENT POLICY

The 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 administration to maintain an environment that allows them to enjoy the full benefits of their work or learning experiences. Therefore, the use of implicit or explicit sexual harassment to control, influence or affect the performance or status of an individual, regardless of where such conduct is initiated, will not be tolerated.

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 be found guilty of this illegal behavior.

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

Academic Programs Index

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

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

Area of Interest	Major	Page
Accounting	Accounting	30
Advertising Graphics	Media Arts & Design	80
Aeronautics	Engineering Science	51
Air Conditioning	Heating, Ventilating and Air Conditioning Design Technology	60
Air Pollution	Environmental Technology	53
Art	Fine Arts - Art Option	55
	Liberal Arts - Visual Arts Option	71
	Media Arts & Design	80
AutoCad	Civil/Construction Engineering Technology	38
	Computer Aided Drafting	40
	Mechanical/Manufacturing Engineering Technology	78
Automotive	Automotive Technology	31
Biochemistry	Biological Laboratory Technology	32
	Science Transfer - Biology Option	33
Biology	Biological Laboratory Technology	32
	Science Transfer - Biology Option	33
	Science Transfer - Biology Pre-Professional Option	33
Biotechnology	Biological Laboratory Technology	32
	Science Transfer -Biology Option	33
Business	Business Administration Transfer	34
	Liberal Arts - Business Option	67
	Small Business Management/Entrepreneurial Studies	94
Business Software	Business Software Applications	35
Chemical Instrumentation	Chemical Technology	36
Chemical Technology	Chemical Technology	36
Chemistry	Chemical Technology	36
	Science Transfer - Chemistry Option	37
Civil/Construction	Civil/Construction Engineering Technology	38
	Engineering Science	51
Commercial Art	Media Arts & Design	80
Commercial Photography	Media Arts & Design	80
Communication	Liberal Arts - Communication Option	67
	Telecommunications Networking Technology	97
Computers	Business Software Applications	35
	Computer Aided Drafting	40
	Computer Programming	42
	Computer Science	41
	Computer Science - Network Administration and Support Option	41
	Electronic and Computer Engineering Technology	50
	Internet/Web Page Development	65
	Network Administration	41
Computer Graphics	Graphics for Digital Media	58
Construction	Civil/Construction Engineering Technology	38
Corrections	Criminal Justice - Correction Administration Option	45
Credit	Management - Credit and Finance Option	72
Criminal Justice	Criminal Justice	45
	Criminal Justice - Correction Administration Option	45
	Criminal Justice - Police Science Option	46
Culinary	Culinary Arts	61
	Hotel, Restaurant and Institution Management - Culinary Arts Option	61
Dance	Liberal Arts - Dance Option	68
Dental Hygiene	Dental Hygiene	47
Dietetics	Dietetic Technology	48
Early Childhood	Education Practitioner	49
Education	Education Practitioner	49
	Liberal Arts - Education Option	68
	Teacher Aide	96
Electronics	Electronic and Computer Engineering Technology	50
Energy	Industrial Technology	64
Engineering	Civil/Construction Engineering Technology	38
	Civil/Construction Engineering Technology - Land Surveying Option	39
	Electronic and Computer Engineering Technology	50
	Engineering Science	51
	Industrial Technology	64
	Mechanical/Manufacturing Engineering Technology	78
	Mecomtronics Engineering Technology	79
	Telecommunications Networking Technology	97
English	Liberal Arts - English Option	68
English as a Second Language	English as a Second Language Program	52
Environment	Environmental Technology	53
Fashion	Fashion Merchandising and Retail Management	54
Finance	Management - Credit and Finance Option	72
Fine Arts	Fine Arts - Art Option	55
	Liberal Arts - Visual Arts Option	71
Fire Fighting	Fire Science Technology	57

Area of Interest	Major	Page
Food	Culinary Arts	61
	Dietetic Technology	48
	Hotel, Restaurant and Institution Management - Culinary Arts Option	61
	Hotel, Restaurant and Institution Management - Restaurant Foodservice Management Option	63
	Management - Food Industry Management Option	73
French	Liberal Arts - Modern Language Option	69
German	Liberal Arts - Modern Language Option	69
Graphic Arts	Media Arts & Design	80
Graphic Design	Media Arts & Design	80
	Graphics for Digital Media	58
Hazardous Waste	Environmental Technology	53
Heating	Heating, Ventilating and Air Conditioning Design Technology	60
History	Liberal Arts - History Option	68
Hotel/Motel Management	Hotel, Restaurant and Institution Management - Hotel-Motel Management Option	62
Industrial Engineering	Industrial Technology	64
Internet	Internet/Web Page Development	65
Italian	Liberal Arts - Modern Language Option	69
Journalism	Liberal Arts - Journalism Option	69
Laboratory Technologies	Biological Laboratory Technology	32
	Chemical Technology	36
	Medical Laboratory Technology	82
Legal Assistant	Paralegal Studies	86
Liberal Arts	Liberal Arts	66
Management	Management	72
	Management - Credit and Financial Management Option	72
	Management - Food Industry Management Option	73
	Management - Management Support Services	73
Manufacturing	Mechanical Engineering Technology	78
Marketing	Marketing	74
	Marketing - Materials Management Option	75
	Marketing - Transportation and Distribution Option	76
Materials Management	Marketing - Materials Management Option	75
Mathematics	Science Transfer - Mathematics Option	77
Mechanical	Mechanical/Manufacturing Engineering Technology	78
Mecomtronics	Mecomtronics Engineering Technology	79
Medical Laboratory	Medical Laboratory Technology	82
Modern Languages	Liberal Arts - Modern Language Option	69
Music	Fine Arts - Music Option	56
	Liberal Arts - Music Option	69
Network Administration	Computer Science - Network Administration and Administration Support Option	41
Nursing	Nursing, Joint Program with the University of Medicine and Dentistry of New Jersey	83
Office Administration	Office Administration	84
Paralegal	Paralegal Studies	86
Pharmacy/Pharmaceutical	Biological Laboratory Technology	32
	Chemical Technology	36
	Pharmacy Assistant	89
Photography	Media Arts & Design	80
Physical Education	Liberal Arts - Physical Education/Recreation Option	69
Physics	Science Transfer - Physics Option	90
Police Science	Criminal Justice - Police Science Option	46
Political Science	Liberal Arts - Political Science Option	70
Pre-Medical	Science Transfer - Chemistry	37
Pre-Pharmacy	Science Transfer - Chemistry	37
Pre-Physical Therapy	Science Transfer - Chemistry	37
Pre-Veterinarian	Science Transfer - Chemistry	37
Professional Photography	Media Arts & Design	80
Psychology	Liberal Arts - Psychology	70
Psychosocial Rehabilitation	Psychosocial Rehabilitation and Treatment Joint Program with the University of Medicine and Dentistry of New Jersey	91
Radiography	Radiography Education	92
Recreation	Liberal Arts - Physical Education/Recreation Option	69
Respiratory Care	Respiratory Care Joint Program with the University of Medicine and Dentistry of New Jersey	93
Restaurant Management	Hotel, Restaurant and Institution Management - Restaurant Foodservice Management	63
Retail	Fashion Merchandising and Retail Management	54
Sanitary Inspector	Environmental Technology	53
	Industrial Technology	64
Small Business Management	Small Business Management/Entrepreneurial Studies	94
Social and Rehabilitation Services	Liberal Arts - Social and Rehabilitation Services Option	70
Social Sciences	Liberal Arts - Social Sciences Option	70
	Liberal Arts - Social and Rehabilitation Services Option	70
Sociology	Liberal Arts - Sociology Option	70
Spanish	Liberal Arts - Modern Language Option	69
Special Education	See Education	49
Structural Design	Civil/Construction Engineering Technology	38
Surveying	Civil/Construction Engineering Technology - Land Surveying Option	39
Teacher Assistant	See Education	49
Technical Graphics	Computer Aided Drafting	40
	Mechanical/Manufacturing Engineering Technology	78
Telecommunications Networking Technology	Telecommunications Networking Technology	97
Theatre	Fine Arts - Theatre Option	56
Transportation	Marketing - Transportation and Distribution Option	76
Water/Wastewater Treatment	Civil/Construction Engineering Technology	38
Web Design	Internet/Web Page Development	65
	Graphics for Digital Media	58

Accounting

ACCOUNTING AND 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 which prepares you to begin a career in business, industry, and government as a junior accountant.

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

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

■ *What will I learn if I study Accounting?*

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

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

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.

■ *Where should I direct specific questions about this program?*

Contact Professor Goldfarb, Department Chair, at (732) 906-2576.

DEGREE PROGRAM

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

Courses		Credits	Prerequisites
ACC 101	Financial Accounting	4	
BUS 101	Business Organization & Management	3	
BUS 107	Computer Applications for Business [1]	3	
ENG 121	English Composition I	3	
	Mathematics Elective [2]	3-4	
ACC 102	Managerial Accounting	4	ACC 101
BUS 201	Business Law I	3	
ENG 122	English Composition II	3	ENG 121
	Humanities Elective	3	
	Social Science Elective	3	
ACC 202	Cost Accounting	4	ACC 102
ACC 211	Intermediate Accounting I	4	ACC 102
BUS 202	Business Law II	3	BUS 201
ECO 201	Principles of Economics I	3	
	Physical/Health Ed Elective	1-3	
	Science Elective [3]	3-4	
Choose one of the following (3 credits each):			
ACC 203	Accounting Systems & Procedures		ACC 102
ACC 206	Tax Accounting		ACC 102
ACC 208	Accounting Field Experience [4]		ACC 102 & 211
ACC 212	Intermediate Accounting II	4	ACC 211
ACC 280	Senior Accounting Seminar [5]	3	ACC 202 & 211; BUS 107 & 202
ECO 202	Principles of Economics II	3	ECO 201
	Humanities or Social Science Elective	3	
	TOTAL CREDITS	66-70	

ACCOUNTING TECHNICAL CERTIFICATE

The Accounting Technical Certificate is designed for individuals with a college degree who have satisfied basic skills, general education and mathematics requirements.

Courses		Credits	Prerequisites
ACC 101	Financial Accounting	4	
ACC 102	Managerial Accounting	4	ACC 101
ACC 202	Cost Accounting	4	ACC 102
ACC 211	Intermediate Accounting I	4	ACC 102
Recommended Elective:			
ACC 212	Intermediate Accounting II	4	ACC 211
	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 Program Director.

[5] Prerequisite or corequisite - ACC 212.

Automotive Technology

STUDENT SERVICE EDUCATIONAL PROGRAM (ASSET)
ELECTRICAL ENGINEERING TECHNOLOGY DEPARTMENT

DEGREE PROGRAM

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

Courses		Credits	Prerequisites
AUT 111	Minor Automotive Services	3	
AUT 115	Automotive Brake Systems	2	
AUT 117	Automotive Electrical Systems	3	
ENG 121	English Composition I	3	
MAT 107	Mathematics I	3	
	Physical/Health Ed Elective	1-3	
AUT 108	Automotive Technology Work Experience I (A 15 week cooperative education course)	3	AUT 111, 115 & 117
AUT 122	Analysis and Tune Up	3	AUT 108
AUT 124	Automotive HVAC Systems	3	AUT 108
AUT 126	Alignment, Suspension & Steering Systems	2	AUT 108
CSC 103	Computers for Technicians	2	
ENG 122	English Composition II	3	ENG 121
MAT 108	Mathematics II	3	MAT 107
AUT 208	Automotive Technology Work Experience II (A 15 week cooperative education course)	3	AUT 122, 124 & 126
AUT 211	Standard Transmission & Drive Train	3	AUT 208
AUT 213	Automatic Transmission I	3	AUT 208
AUT 216	Fuel and Emission Systems	3	AUT 208
AUT 217	Engine Diagnostics & Repair I	3	AUT 208
	Humanities Elective	3	
AUT 218	Automotive Technology Work Experience III (A 15 week cooperative education course)	3	AUT 211, 213, 216 & 217
AUT 226	Automatic Transmission II	2	AUT 218
AUT 228	Engine Diagnostics & Repair II	3	AUT 218
AUT 229	Automotive Electricity & Electronics	3	MAT 108 & AUT 218
PHY 101	Principles of Physics I	4	MAT 107
	Social Science Elective	3	
	TOTAL CREDITS	70-72	

Why major in Automotive Technology?

ASSET is an innovative program offered in cooperation with the Ford Motor Company and 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 which prepares you to begin a job as a technician in the service department of a Ford/Mercury dealership.

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. You must also be sponsored by a Ford/Mercury dealership to begin the program.

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

ASSET is an intensive full-time program. It includes 60 weeks spent in college classes and 45 weeks spent working in sponsoring Ford/Mercury dealerships. You rotate in 15-week cycles between the campus and the dealership. This alternating semester program takes approximately 2 1/3 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.

Biological Laboratory Technology

BIOLOGY DEPARTMENT

■ *If I major in Biological Laboratory Technology, what degree can I earn?*

The Associate in Applied Science Degree which prepares you forcareer opportunities in pharmaceutical firms and biotechnology companies.

■ *What will I learn if I study Biological Laboratory Technology?*

You acquire knowledge and develop practical skills in anatomy, chemistry, histology, physiology, microbiology, modern biological techniques, and laboratory instrumentation.

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

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

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

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

■ *Where should I direct specific questions about this program?*

Contact Professor Przygoda, Department Chair, at (732) 906-2592.

DEGREE PROGRAM

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

Courses		Credits	Prerequisites
BIO 117	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 118	Biology II	4	BIO 117
CHM 118	Chemistry II	4	CHM 117
ENG 122	English Composition II	3	ENG 121
MAT 108	Mathematics II	3	MAT 107
PHY 101	Principles of Physics I	4	MAT 107
BIO 221	Microbiology	4	BIO 118 or 124; CHM 118 or 124
CHM 201	Principles of Organic Chemistry	4	CHM 118
BIO 203	Methods of Biotechnology	3	BIO 118 or 124; CHM 118 or 124; MAT 108
	Social Science Elective	3	
BIO 214	Vertebrate Physiology [4]	4	BIO 118 or 124; CHM 118 or 124
CHM 202	Biochemistry		CHM 201
	or	3-4	
BIO 226	Biological Technology Cooperative Education		
BIO 224	Applied Microbiology	4	BIO 221
SCI 208	Laboratory Instrumentation	3	CHM 118 & MAT 108
	Humanities Elective	3	
	TOTAL CREDITS	64-67	

[1] You may substitute BIO 123, 124 if you have high school lab biology and lab chemistry or BIO 010 and CHM 010 and Algebra I.

[2] You may substitute CHM 123, 124 if you have high school lab chemistry and Algebra I and II.

[3] You may substitute MAT 129, 131 if you have sufficient background. See catalog or Department Chairperson.

[4] You may substitute another 200 level biology course with permission of Department Chairperson.

BIOLOGY OPTION - SCIENCE TRANSFER DEGREE

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

Courses		Credits	Prerequisites
BIO 123	General Biology I	4	
CHM 123	General Chemistry I	4	
ENG 121	English Composition I	3	
MAT 129	Precalculus [1]	4	
	Physical/Health Ed Elective	1-3	
BIO 124	General Biology II	4	BIO 123
CHM 124	General Chemistry II	4	CHM 123
ENG 122	English Composition II	3	ENG 121
MAT 131	Analytic Geometry & Calculus I	4	MAT 129
BIO 221	Microbiology	4	BIO 118 or 124; CHM 118 or 124
PHY 121	General Physics I	4	MAT 129
	Social Science Elective	3	
	Humanities Elective	3	
CSC 105	Computer Applications & Systems	3	
BIO	Elective [2]	4	
PHY 122	General Physics II	4	PHY 121
	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	Prerequisites
BIO 123	General Biology I	4	
CHM 123	General Chemistry I	4	
ENG 121	English Composition I	3	
MAT 129	Precalculus [1]	4	
	Physical/Health Ed Elective	1-3	
BIO 124	General Biology II	4	BIO 123
CHM 124	General Chemistry II	4	CHM 123
ENG 122	English Composition II	3	ENG 121
MAT 131	Analytic Geometry & Calculus I	4	MAT 129
BIO 111	Human Anatomy & Physiology I	4	
PHY 121	General Physics I	4	MAT 129
	Social Science Elective	3	
	Humanities Elective	3	
CSC 105	Computer Applications & Systems	3	
BIO 112	Human Anatomy & Physiology II	4	BIO 111
PHY 122	General Physics II	4	PHY 121
	Social Science Elective	3	
	Humanities Elective	3	
	Science/Math Elective [4]	4	
	TOTAL CREDITS	66-68	

[1] MAT 131-132 recommended.

[2] You may select from BIO 214, BIO 224 and BIO 228. Please see catalogue for appropriate prerequisites.

[3] You may select from BIO 203, BIO 214, BIO 224, BIO 228, BIO 226, CHM 223 and MAT 132 or a course with permission of the Department Chairperson. Please see catalogue 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 Transfer

BUSINESS ADMINISTRATION AND 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 which prepares you to transfer to upper division colleges and universities.

■ *What will I learn if I study Business Administration?*

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

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

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 and recommended course groupings and sequences for program completion.

Courses		Credits	Prerequisites
ENG 121	English Composition I	3	
MAT	Mathematics Elective [1]	3	
ACC 101	Financial Accounting	4	
BUS 101	Business Organization & Management	3	
	Social Science Elective [2]	3	
ENG 122	English Composition II	3	ENG 121
MAT	Mathematics Elective [1]	3	
ACC 102	Managerial Accounting	4	ACC 101
ECO 201	Principles of Economics I	3	
	Humanities Elective [2]	3	
ECO 202	Principles of Economics II	3	ECO 201
BUS 201	Business Law I	3	
	Social Science Elective [2]	3	
BUS 107	Computer Applications for Business [3]	3	
	Business Elective [4]	3	
	Physical/Health Ed Elective	1-3	
	Humanities Elective [2]	3	
	Science Elective	4	
	Free Elective	3	
	Business Elective [4]	3	
	Business Elective [4]	3	
	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] Introduction to Business Data Processing 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, 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 and recommended course groupings and sequences for program completion.

Courses		Credits
OAD 101*	Document Processing I [1]	3
OAD 102	Document Processing II [2]	2
OAD 110	Principles & Applications of Microsoft Access	2
OAD 113	Principles & Applications of Microsoft Excel	2
OAD 114	Principles & Applications of Microsoft Word	2
OAD 116	Principles & Applications of Microsoft PowerPoint	2
OAD 223*	Integrated Software Applications [3]	3
	Elective**	3
	TOTAL CREDITS	19

**Prerequisite is OAD 010 or OAD 106 or BUS 010 or Permission of Department Chairperson.*

***OAD 210, Records Management, recommended.*

[1] Recommended that this course be taken before the Principles & Applications 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 110, OAD 113, OAD 114, OAD 116 or OAD 222.

■ *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 which 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.

■ *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.

Chemical Technology

CHEMISTRY AND PHYSICS DEPARTMENT

■ *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 which 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. Murray, Department Chair, at (732) 906-2587.

DEGREE PROGRAM

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

Courses		Credits	Prerequisites
BIO 117	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 118	Biology II	4	BIO 117
CHM 118	Chemistry II	4	CHM 117
ENG 122	English Composition II	3	ENG 121
MAT 108	Mathematics II	3	MAT 107
PHY 101	Principles of Physics I	4	MAT 107
CHM 201	Principles of Organic Chemistry	4	CHM 118
CHM 219	Modern Methods of Analysis I	5	CHM 118
CSC 105	Computer Applications & Systems [4]	3	
	Social Science Elective	3	
CHM 220	Modern Methods of Analysis II	5	CHM 219 & 201
ENV 221	Hazardous Waste Management	3	
	Humanities Elective	3	
	Technical Elective	3-4	
Technical Elective Choices (select one):			
CHM 202	Biochemistry [5]	4	CHM 201
CHM 226	Chemical Technology Co-op Education	3	CHM 201 or 223 & 219
ENV 222	Water & Wastewater Analysis	3	CHM 118
	TOTAL CREDITS	62-65	

CERTIFICATE OF ACHIEVEMENT

Courses		Credits	Prerequisites
CHM 117	Chemistry I	4	
CHM 118	Chemistry II [2]	4	CHM 117
CHM 201	Principles of Organic Chemistry	4	CHM 118
CHM 219	Modern Methods of Analysis I	5	CHM 118
ENG 121	English Composition I	3	
ENG 122	English Composition II	3	ENG 121
MAT 107	Mathematics I [3]	3	
MAT 108	Mathematics II	3	MAT 107
	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 123-124 for BIO 117-118 if you have completed a high school biology lab course and high school lab chemistry.

[2] You may substitute CHM 123-124 for CHM 117-118 if you have completed a high school chemistry lab course.

[3] You may substitute MAT 123-124 or MAT 129-131 for MAT 107-108.

[4] You may substitute CSC 109 or 133 for CSC 105.

[5] You may substitute CHM 223 for CHM 202.

CHEMISTRY OPTION - SCIENCE TRANSFER DEGREE

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

Courses		Credits	Prerequisites
BIO 123	General Biology I [1]	4	
CHM 123	General Chemistry I	4	
ENG 121	English Composition I	3	
MAT 129	Precalculus [2]	4	
	Physical/Health Ed Elective	1-3	
BIO 124	General Biology II	4	BIO 123
CHM 124	General Chemistry II	4	CHM 123
ENG 122	English Composition II	3	ENG 121
MAT 131	Analytic Geometry & Calculus I	4	MAT 129
CHM 223	Organic Chemistry I	4	CHM 124
PHY 121	General Physics I	4	MAT 129
CSC	Computer Science Elective [3]	3-4	
	Humanities Elective	3	
	Social Science Elective	3	
CHM 224	Organic Chemistry II	4	CHM 223
PHY 122	General Physics II	4	PHY 121
	General Elective	3	
	Humanities Elective	3	
	Social Science Elective	3	
	TOTAL CREDITS	65-67	

[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] You may substitute MAT 131-132 for MAT 129-131 if you have four years of college prep math.
[3] Choose CSC 109 or higher.

Why major in Chemistry Transfer?

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

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

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

What will I learn if I study Chemistry Transfer?

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

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

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

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

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

Where should I direct specific questions about this program?

Contact Dr. Murray, Department Chair, at (732) 906-2587.

Civil/Construction Engineering Technology

MECHANICAL AND CIVIL/CONSTRUCTION ENGINEERING TECHNOLOGY DEPARTMENT

■ *Why major in Civil/Construction Engineering Technology?*

You can find employment opportunities in occupations such as construction inspector, construction supervisor, materials tester, architectural or structural drafter, surveyor, estimator, shop-drawing detailer, site plan designer, CAD operator, specification writer, and technical sales representative. The Technology Accreditation Commission of the Accreditation Board accredits this program for Engineering and Technology.

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

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

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

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

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

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

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

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

DEGREE PROGRAM

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

Courses		Credits	Prerequisites
CIT 107	Construction Quantity Estimating I	2	
CIT 110	Intro to Civil/Construction Engineering Tech	2	
MEC 123	Technical Graphics/CAD I	3	
ENG 121	English Composition I	3	
MAT 109	College Algebra & Trigonometry I	3	
SPE 121	Intro to Public Speaking	3	
CIT 105	Statics for Technicians	3	CIT 110 or MCT 101, MAT 109
CIT 106	Civil Engineering Drawing	2	CIT 110 or MCT 101, MEC 123
CIT 116	Construction Graphics/CAD II	2	CIT 110 or MCT 101, MEC 123
ENG 122	English Composition II	3	ENG 121
MAT 110	College Algebra & Trigonometry II	2	MAT 109
PHY 115	College Physics I	4	
CIT 104	Construction Surveying I	3	CIT 106, MAT 109
CIT 203	Strength of Materials	4	CIT 105 & SPE 121
CIT 210	Soils in Construction	2	CIT 105
CIT 211	Construction Cost Estimating	2	CIT 107, 110 or MCT 101, MAT 109
CIT 213	Construction Materials Laboratory	2	CIT 107
MAT 112	Unified Calculus I	3	MAT 110
	Physical/Health Ed Elective	1-3	
CIT 205	Construction Surveying II	3	CIT 104 & 106
CIT 208	Reinforced Concrete Design (USD)	3	CIT 203 & MAT 110
CIT 209	Steel Design (ASD)	2	CIT 203 & MAT 110
CIT 212	Water Resources Technology	3	MAT 110, PHY 115, SPE 121
PHY 116	College Physics II	4	PHY 115
	Social Science Elective	3	
	TOTAL CREDITS	67-69	

CERTIFICATE PROGRAM

Courses		Credits	Prerequisites
CIT 104	Construction Surveying I	3	CIT 106, MAT 109
CIT 106	Civil Engineering Drawing	2	CIT 110, MEC 123
CIT 107	Construction Quantity Estimating I	2	
CIT 110	Intro to Civil/Construction Engineering Technology	2	
CIT 205	Construction Surveying II	3	CIT 104 & 106
CIT 211	Construction Cost Estimating	2	CIT 107, 110 or MCT 101, MAT 109
CIT 213	Construction Materials Laboratory	2	CIT 107
ENG 121	English Composition I	3	
ENG 122	English Composition II	3	ENG 121
MAT 109	College Algebra & Trigonometry I	3	
MAT 110	College Algebra & Trigonometry II	2	MAT 109
MEC 123	Technical Graphics/CAD I	3	
SPE 121	Intro to Public Speaking	3	
	TOTAL CREDITS	33	

LAND SURVEYING DEGREE OPTION

Courses		Credits	Prerequisites
ENG 121	English Composition I	3	
MAT 129	Precalculus	4	
CSC 105	Computer Applications & Systems	3	
MEC 123	Technical Graphics/CAD I	3	
CIT 110	Intro to Civil/Construction Engineering Technology	2	
ENG 122	English Composition II	3	ENG 121
MAT 131	Analytic Geometry & Calculus I	4	MAT 129
CIT 106	Civil Engineering Drawing	2	CIT 110, MEC 123
BUS 201	Business Law I	3	
PHY 121	General Physics I	4	MAT 129
	Physical/Health Ed Elective	1-3	
CIT 104	Construction Surveying I	3	CIT 106, MAT 109
MAT 123	Intro to Probability & Statistics	3	
BUS 202	Business Law II	3	BUS 201
PHY 122	General Physics II	4	PHY 121
CSC 165	Beginners C-Programming	3	
CIT 116	Construction Graphics/CAD II	2	CIT 110 & MEC 123
CIT 205	Construction Surveying II	3	CIT 104 & 106
LST 250	Boundary Law I	3	
CIT 212	Water Resources Technology	3	MAT 110, PHY 115, SPE 121
	Social Science Elective	3	
	Humanities Elective	3	
	TOTAL CREDITS	65-67	

■ *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.

Computer Aided Drafting

(DESIGN: USING THE AUTOCAD PROGRAM)
MECHANICAL AND CIVIL/CONSTRUCTION ENGINEERING TECHNOLOGY DEPARTMENT

■ *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.

■ *Where should I direct specific questions about this program?*

Contact Professor Rubino, Department Chair, at (732) 906-2586.

CERTIFICATE PROGRAM

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

Courses		Credits	Prerequisites
MCT 101	Intro to Engineering Technology	2	
MEC111	Manufacturing Processes & Materials I	4	
MEC123	Technical Graphics/CAD I	3	
ENG 121	English Composition I	3	
MAT 109	College Algebra & Trigonometry I	3	
CSC 105	Computer Applications & Systems	3	
ELT 106	Technical Electricity	4	
MAT 110	College Algebra & Trigonometry II	2	MAT 109
MEC112	Manufacturing Processes & Materials II	4	MCT 101 & MEC 111
MEC124	Technical Graphics/CAD II	3	MEC 123
	TOTAL CREDITS	31	

Computer Science

COMPUTER SCIENCE DEPARTMENT

COMPUTER AND INFORMATION SYSTEMS GENERAL DEGREE OPTION

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

Courses		Credits	Prerequisites
CSC 105	Computer Applications & Systems	3	
CSC 133	Intro to Computer Science Using C++	4	
ENG 121	English Composition I	3	
MAT 125	Mathematics for Decision Sciences I	3	
	or		
MAT 129	Precalculus	4	
	Social Science Elective	3	
	Physical/Health Ed Elective	1-3	
CSC 110	Microcomputer Operating Systems & Architecture	3	CSC 105 or BUS 107
CSC 134	Object Oriented Programming Using C++	4	CSC 133, MAT 125 or 129
CSC 208	Visual BASIC Programming	4	CSC 109 or 115 or 133 or 165
ENG 122	English Composition II	3	ENG 121
MAT 126	Mathematics for Decision Sciences II	3	MAT 125
	or		
MAT 131	Analytic Geometry & Calculus I	4	MAT 129
CSC 225	Systems Analysis	3	CSC 134
CSC 235	Data Structures	4	CSC 134, MAT 126 or 131
CSC 241	Internet Applications - HTML/CGI	4	CSC 208
CSC 245	UNIX and Shell Programming	4	CSC 134
	Free Elective[1]	3	
CSC 200	Networking Technologies	3	CSC 110
CSC 239	DataBase System Concepts	3	CSC 134
CSC 246	UNIX/Web Server Administration	3	CSC 245
	Humanities Elective	3	
	Free Elective [1]	3	
	Recommended Computer Science Electives [2]		
	TOTAL CREDITS	67-71	

NETWORK ADMINISTRATION AND SUPPORT DEGREE OPTION

Courses		Credits	Prerequisites
CSC 105	Computer Applications & Systems	3	
CSC 133	Intro to Computer Science Using C++	4	
ENG 121	English Composition I	3	
MAT 125	Mathematics For Decision Sciences I	3	
	or		
MAT 129	Precalculus	4	
	Social Science Elective	3	
	Physical/Health Ed Elective	1-3	
CSC 110	Microcomputer Operating Systems & Architecture	3	CSC 105 or BUS 107
CSC 134	Object Oriented Programming Using C++	4	CSC 133, MAT 125 or 129
	or		
CSC 208	Visual Basic Programming	4	CSC 109 or 133 or 165
CSC 247	NetWare System Administration	3	CSC 105
ENG 122	English Composition II	3	ENG 121
MAT 126	Mathematics For Decision Sciences II	3	MAT 125
	or		
MAT 131	Analytic Geometry & Calculus I	4	MAT 129

continued on the next page

[1] The following courses cannot be taken as electives: CSC 107, 108, 109, 115, 117, 125, 160, 165 or BUS 107.
[2] Recommended computer science electives are as follows: CSC 205, 206, 211, 230, 247 or 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 Information Systems 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.

■ *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 competency must be verified with a passing score on the College's placement test. You must also have a grade of "C" or better in algebra II and geometry.

continued on the next page

■ *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 for me to complete this degree?*

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

■ *Where should I direct specific questions about this program?*

Contact Professor Bhatia, Department Chair, at (732) 906-2526.

Courses		Credits	Prerequisites
CSC 200	Networking Technologies	3	CSC 110
CSC 245	UNIX & Shell Programming	4	CSC 133
CSC 251	Windows 2000 Professional Administration	3	CSC 110
CSC 257	NetWare Advanced Administration	2	CSC 247
	Free Elective [1]	3	
CSC 246	UNIX/Web Server Administration	3	CSC 245
CSC 248	NetWare Service & Support	3	CSC 200, 202
CSC 252	Windows 2000 Server Administration	3	CSC 251
	Humanities Elective	3	
	Free Elective [1]	3	
	Recommended Computer Science Electives [2]		
	TOTAL CREDITS	61-65	

COMPUTER PROGRAMMING CERTIFICATE PROGRAM

Courses		Credits	Prerequisites
CSC 105	Computer Applications & Systems	3	
CSC 110	Microcomputer Operating Systems & Architecture	3	CSC 105 or BUS 107
CSC 133	Intro to Computer Science Using C++	4	
CSC 134	Object Oriented Programming Using C++	4	CSC 133, MAT 125 or 129
CSC 208	Visual BASIC Programming	4	CSC 109 or 115 or 133 or 165
	Free Elective [3]	3	
ENG 121	English Composition I	3	
ENG 122	English Composition II	3	ENG 121
MAT 125	Mathematics for Decision Sciences I	3	
	or		
MAT 129	Precalculus	4	
MAT 126	Mathematics for Decision Sciences II	3	MAT 125
	or		
MAT 131	Analytic Geometry and Calculus I	4	MAT 129
	Recommended Computer Science Electives [4]		
	TOTAL CREDITS	33-36	

[1] The following courses cannot be taken as electives: CSC 107, 108, 109, 125, 160, 165 or BUS 107.
[2] Recommended computer science electives are as follows: CSC 133, 205, 206, 208, 211, 230, 239 or 241.
[3] The following courses cannot be taken as electives: CSC 107, 108, 109, 115, 117, 125, 165 or BUS 107.
[4] Recommended computer science electives are as follows: CSC 160, 211, 230, 235, 241 or 247.

NETWORK ADMINISTRATION CERTIFICATE PROGRAM

Courses		Credits	Prerequisites
CSC 105	Computer Applications & Systems	3	
CSC 110	Microcomputer Operating Systems & Architecture	3	CSC 105 or BUS 107
CSC 160	Intro to UNIX	3	
CSC 200	Networking Technologies	3	CSC 110
CSC 247	NetWare System Administration	3	CSC 105
CSC 251	Windows 2000 Professional Administration	3	CSC 110
CSC 252	Windows 2000 Server Administration	3	CSC 251
CSC 257	NetWare Advanced Administration	2	CSC 247
	Free Elective [3]	3-4	
ENG 121	English Composition I	3	
ENG 122	English Composition II	3	ENG 121
MAT 125	Mathematics for Decision Sciences I	3	
	or		
MAT 129	Precalculus	4	
	Recommended Computer Science Electives [5]		
	TOTAL CREDITS	34-36	

TECHNICAL CERTIFICATE IN WINDOWS NT/NOVELL NETWARE

Courses		Credits	Prerequisites
CSC 110	Microcomputer Operating Systems & Architecture	3	CSC 105 or BUS 107
CSC 247	NetWare System Administration	3	CSC 105
CSC 200	Networking Technologies	3	CSC 110
CSC 251	Windows 2000 Professional Administration	3	CSC 110
CSC 252	Windows 2000 Server Administration	3	CSC 251
CSC 257	NetWare Advanced Administration	2	CSC 247
	Free Elective [6]	3	
	Recommended Computer Science Elective [7]		
	TOTAL CREDITS	19	

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 ENG 121 and MAT 125.
2. Students must complete CSC 105 or demonstrate the equivalent proficiency prior to beginning this certificate program.
3. The dotted lines between groups of classes indicate the recommended three-semester sequence.
4. Successful completion of this Certificate helps prepare students to take the certification tests for NOVELL CNA (Certified NetWare Administrator) and MICROSOFT WINDOWS NT MCPS (Microsoft Certified Product Specialist).

[3]The following courses cannot be taken as electives: CSC 107, 108, 109, 115, 117, 125, 165 or BUS 107.
[4]Recommended computer science electives are as follows: CSC 160, 211, 230, 235, 241 or 247.
[5]Recommended computer science electives are as follows: CSC 133, 208 or 248.
[6]The following courses cannot be taken as electives: CSC 107, 108, 109, 115, 117, 125, 165 or BUS 107.
[7]Recommended computer science elective is as follows: CSC 248.

Why major in Technical Certificate in Microsoft Windows NT/Novell NetWare Administration?

The increase in the number of networked PCs in business and industry has created a demand for related support personnel including Help Desk Analysts, Desktop Support Technicians, and entry-level PC server Administrators. The technical certificate in Windows NT/Novell NetWare Administration trains students on widely used networked operating systems (NOSes), Windows NT 4.0 and NetWare 4.11. Students successfully completing this certificate will be prepared to take the related Novell Certified NetWare Administrator examination and the Microsoft Windows NT Product Specialist examination.

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

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

Where should I direct specific questions about this program?

Contact Professor Bhatia, Department Chair, at (732) 906-2526.

Computer Science

COMPUTER SCIENCE DEPARTMENT

■ *Why major in Computer Science Transfer Program?*

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

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

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

■ *What will I learn if I study Science Transfer?*

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

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

Algebra 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 winter sessions.

■ *Where should I direct specific questions about this program?*

Contact Professor Bhatia, Department Chair, at (732) 906-2526.

COMPUTER SCIENCE TRANSFER DEGREE

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

Courses		Credits	Prerequisites
CSC 133	Intro to Computer Science Using C++	4	
ENG 121	English Composition I	3	
MAT 129	Precalculus	4	
	or		
MAT 131	Analytic Geometry & Calculus I	4	MAT 129
	Science Elective*	3	
	Physical/Health Ed Elective	1-3	
CSC 134	Object Oriented Programming Using C++	4	CSC 133, MAT 125 or 129
ENG 122	English Composition II	3	ENG 121
MAT 131	Analytic Geometry & Calculus I	4	MAT 129
	or		
MAT 132	Analytic Geometry & Calculus II	4	MAT 131
	Science Elective*	3	
	Humanities Elective	3	
CSC 233	Computer Architecture and Assembly Language I	4	CSC 134
CSC 235	Data Structures	4	CSC 134, MAT 126 or 131
MAT 132	Analytic Geometry & Calculus II	4	MAT 131
	or		
MAT 200	Level Mathematics Elective*	4	
	Computer Science/Math Science Elective*	3-4	
MAT 206	Discrete Mathematics	4	
	Computer Science/Math Science Elective*	3-4	
	Social Science Elective	3	
	Social Science Elective	3	
	Humanities Elective	3	
	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.

Computer Science Electives:
Students can select their Computer Science Electives from the following list: CSC 200, 208, 211, 234 or 245.

Mathematics Requirement:
Students, who have taken Precalculus in high school and have placed at the required level of the college Calculus placement exam, can take MAT 131 as their first mathematics course.

Mathematics Electives:
Students should carefully review the pages titled "Mathematics/Science Distribution Requirements of Four-Year Public Colleges and Universities for Computer Science Majors" before selecting their Mathematics Electives. Students can select their Mathematics Electives from the following list: MAT 210, 233, 234 or 285.

Science Electives:
Students should carefully review the pages titled "Mathematics/Science Distribution Requirements of Four-Year Public Colleges and Universities for Computer Science Majors" before selecting their Science Sequence Electives. Students can select their Science Sequence Electives from the following list: BIO 117 & 118 or BIO 123 & 124 or CHM 117 & 118 or CHM 123 & 124 or ENV 211 & 212 or PHY 121 & 122 or PHY 131 & 132 & 231.

Criminal Justice

HISTORY AND SOCIAL BEHAVIOR DEPARTMENT

CORRECTION ADMINISTRATION DEGREE OPTION

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

Courses		Credits	Prerequisites
ENG 121	English Composition I	3	
CJU 123	Criminal Justice I	3	
SOC 121	Introduction to Sociology I	3	
POS 201	U.S. State and Local Government	3	
	Social Science Elective	3	
ENG 122	English Composition II	3	ENG 121
CJU 124	Criminal Justice II	3	CJU 123
SOC 140	Introduction to Criminology	3	
POS 220	U.S. National Government	3	
PSY 123	Introductory Psychology	3	
	Humanities Elective	3	
	Mathematics or Lab Science Elective [1]	3-4	
	Social Science Elective	3	
	Physical/Health Ed Elective	1-3	
CSC 105	Computer Applications & Systems	3	
COR 207	Correctional Institutions	3	CJU 123
PSY 222	Social Psychology	3	PSY 123 or SOC 121
	Mathematics or Lab Science Elective [1]	3-4	
	Humanities Elective	3	
COR 201	Intro to Correction Administration	3	CJU 123
SOC 225	Juvenile Delinquency	3	
	or		
POS 231	Constitutional Law	3	POS 121 or 201 or 220
COR 280	Corrections Externship	3	COR 201 or 207
	or		
POL 204	Law Enforcement & the Community	3	
	TOTAL CREDITS	64-68	

CORRECTION ADMINISTRATION CERTIFICATE PROGRAM

Courses		Credits	Prerequisites
CJU 123	Criminal Justice I	3	
CJU 124	Criminal Justice II	3	CJU 123
COR 201	Intro to Correction Administration	3	CJU 123
COR 207	Correctional Institutions	3	CJU 123
COR 280	Corrections Externship		COR 201 or 207
	or	3	
POL 204	Law Enforcement & the Community		
ENG 121	English Composition I	3	
ENG 122	English Composition II	3	ENG 121
POS 201	U.S. State & Local Government	3	
POS 220	U.S. National Government	3	
PSY 123	Introductory Psychology	3	
SOC 121	Introduction to Sociology I	3	
SOC 140	Introduction to Criminology	3	
	TOTAL CREDITS	36	

continued on the next page

[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 123-124 are recommended. All mathematics and science courses require knowledge of algebra I and some may require algebra II. You should discuss your choice with your academic advisor.*

Why major in Criminal Justice?

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

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

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

What will I learn if I study Criminal Justice?

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

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

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

continued on the next page

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

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

■ *Where should I direct specific questions about this program?*

Contact Professor Shindelman, Department Chair, at (732) 906-2503.

POLICE SCIENCE DEGREE OPTION

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

Courses		Credits	Prerequisites
ENG 121	English Composition I	3	
CJU 123	Criminal Justice I	3	
SOC 121	Introduction to Sociology I	3	
POS 201	U.S. State and Local Government	3	
	Social Science Elective	3	
ENG 122	English Composition II	3	ENG 121
CJU 124	Criminal Justice II	3	CJU 123
SOC 140	Introduction to Criminology	3	
POS 220	U.S. National Government	3	
PSY 123	Introductory Psychology	3	
	Humanities Elective	3	
	Mathematics or Lab Science Elective [1]	3-4	
	Social Science Elective	3	
	Physical/Health Education	1-3	
CSC 105	Computer Applications & Systems	3	
POL 202	Police Operations	3	
POL 204	Law Enforcement and the Community	3	
	Mathematics or Lab Science Elective [1]	3-4	
	Humanities Elective	3	
POL 201	Police Administration	3	
PSY 222	Social Psychology	3	PSY 123 or SOC 121
SOC 225	Juvenile Delinquency	3	
	or		
POS 231	Constitutional Law	3	POS 121 or 201 or 220
	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 123-124 are recommended. All mathematics and science courses require knowledge of algebra I and some may require algebra II. You should discuss your choice with your academic advisor.*

Dental Hygiene

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 and recommended course groupings and sequences for program completion.

Courses		Credits	Prerequisites
BIO 111	Human Anatomy & Physiology I	4	
BIO 211	Principles of Microbiology [1]	4	
DHY102	Radiology [2]	2	
DHY105	Oral Anatomy and Histology	4	
DHY107	Preventive Oral Health Services I	3	
BIO 112	Human Anatomy & Physiology II	4	BIO 111
DHY108	Preventive Oral Health Services II [3]	5	DHY 102, 105 & 107
DHY110	Nutrition	3	DHY 102, 105 & 107
DHY 204	Dental Materials	2	DHY 102, 105 & 107
DHY205	Periodontology	2	BIO 211; DHY 102, 105 & 107
ENG 121	English Composition I	3	
CHM107	Principles of Chemistry	4	
DHY203	General and Oral Pathology	2	DHY 108, 110, 204 & 205
DHY207	Dental Health Education	2	DHY 108, 110, 204 & 205
DHY211	Preventive Oral Health Services III [3]	5	DHY 108, 110, 204 & 205
DHY215	Advanced Periodontology	1	DHY 108, 110, 204 & 205
ENG 122	English Composition II	3	ENG 121
PSY 123	Introductory Psychology	3	
DHY 208	Pharmacology	2	BIO 112, CHM 107, DHY 203, 207, 211 & 215
DHY210	Public Health	2	DHY 203, 207, 211 & 215
DHY212	Preventive Oral Health Services IV [3]	5	DHY 203, 207, 211 & 215
SOC 121	Introduction to Sociology	3	
	Physical/Health Ed Elective	1-3	
	Humanities Elective	3	
	TOTAL CREDITS	72-74	

Standards of Progress

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

[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.

Why major in Dental Hygiene?

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

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

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

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

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

What will I learn if I study Dental Hygiene?

You study general education and science. Specialty courses in dental hygiene include both theory and practice. Laboratories, clinic, and radiology facilities are furnished with the most modern equipment. Your instructors include highly qualified dental hygienists and dentists who add to the high-quality education in the dental specialties.

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

Algebra I is a prerequisite for all majors. Competency in algebra I must be verified with a passing score on the College's placement test. You must also have a "C" or better in high school laboratory biology and laboratory chemistry. When you apply, you must take the Allied Health Aptitude Test and score above the cutoff scores established by the College. 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. **The Dental Hygiene Program is open to New Jersey residents only.**

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

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

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

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

Where should I direct specific questions about this program?

Contact Professor LeBlond, Department Chair, at (732) 906-2580.

Dietetic Technology

HOTEL, RESTAURANT AND INSTITUTION MANAGEMENT

■ *Why major in Dietetic Technology?*

The program is currently granted Developmental Accreditation by the Commission on Accreditation for Dietetics Education of the American Dietetic Association, 216 W. Jackson Boulevard, Chicago, IL 60606-6995, (312) 899-5400. When you graduate you are eligible for membership in the American Dietetic Association and to write the registration examination for dietetic technicians administered by the Commission on Dietetic Registration to become a Dietetic Technician Registered (DTR). You are also eligible for membership in the Dietary Managers Association and to sit for the credentialing examination to become a Certified Dietary Manager (CDM).

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

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

■ *What will I learn if I study Dietetic Technology?*

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

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

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

■ *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 Marilyn Laskowski-Sachnoff, Department Chair of Hotel, Restaurant and Institution Management and Director, Dietetic Technology, at (732) 906-2538.

DEGREE PROGRAM

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

Courses		Credits	Prerequisites
BUS 107	Computer Applications for Business [1]	3	
DTC 101	Introduction to Dietetic Technology	1	
ENG 121	English Composition I	3	
HRI 103	Principles of Food Selection and Preparation	3	
HRI 105	Basic Nutrition [5]	3	
HRI 208	Environmental Sanitation in Foodservice Operations	3	
	Physical/Health Ed Elective	1-3	
BIO 108	Essentials of Human Anatomy & Physiology [2]	4	
DTC 102	Orientation to Dietary Services [5]	1	DTC 101, HRI 103 & HRI 105
DTC 208	Supervised Field Experience in Foodservice Management Sys I [5]	3	DTC 101 & HRI 105
ENG 122	English Composition II	3	ENG 121
HRI 108	Quantity Food Production	3	HRI 103
HRI 210	Nutrition in Modified Diet	3	HRI 105
DTC 209	Supervised Field Experience in Foodservice Management Sys II [5]	4	DTC 208 & HRI 210
HRI 203	Volume Food Management and Production	4	HRI 108
HRI 213	Health Facilities Foodservice Management	3	
HRI 218	Nutrition Throughout the Life Span	3	HRI 105
PSY 123	Introductory Psychology	3	
DTC 210	Supervised Field Experience in Foodservice Management Sys III [5]	4	DTC 209 & HRI 218
DTC 220	Seminar in Dietetic Technology [5]	1	DTC 209 & HRI 218
HRI 205	Food & Beverage Controls and Purchasing	3	HRI 103
MAT 101	Freshman Mathematics I [3]	3	
	Humanities Elective	3	
SOC 121	Introduction to Sociology I	3	
	TOTAL CREDITS	68-70 [4]	

[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. If you want to transfer to a four-year college majoring in dietetics, you must meet with your academic advisor before selecting mathematics and science courses.

[4] Sixty-eight credits are required for graduation.

[5] See course descriptions for corequisites.

Education Practitioner

PSYCHOLOGY AND EDUCATION DEPARTMENT

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

Courses		Credits	Prerequisites
ENG 121	English Composition I	3	
PSY 123	Introductory Psychology	3	
	Mathematics Requirement [1]	3-4	
HED 150	Contemporary Health Issues	3	
SPE 121	Fundamentals of Public Speaking	3	
ENG 122	English Composition II	3	ENG 121
	or		
ENG 125	English Composition II: Writing About Literature	3	ENG 121
PSY 223	Child Psychology	3	PSY 123
	Mathematics Requirement II	3-4	
PSY 226	Educational Psychology: Classroom Application	3	
	Humanities Elective	3	
SOC 121	Intro to Sociology	3	
EDU 280	Education Field Experience	3	PSY 226, ENG 122 or 125
Take one of the following:			
BIO 103	Plants, People & Culture	3	
	or		
BIO 105	Heredity, Evolution & Society	4	
	or		
BIO 106	Human Biology: Biomedical Issues	4	
	or		
BIO 117	Biology I	4	
	or		
BIO 123	General Biology I	4	
	ART Elective	3	
	Approved Elective*	3	
MUS 140	Music Fundamentals	3	
ENG 212	Children's Literature	3	ENG 121
	Approved Electives*	12	
	TOTAL CREDITS	63-66	

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

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

**Approved electives are free electives taken after consultation with a faculty advisor and might include an additional science course, liberal arts courses 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 student 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.*

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

■ *Why major in Education Practitioner?*

You help prepare programs and activities, academic subject learning, caring for physical and emotional needs of children and supervising children in educational settings.

■ *If I major in Education Practitioner, what degree can I earn?*

The Associate in Applied Science Degree which prepares you for a paraprofessional career. You may choose to have a practical field experience in a general classroom, an early childhood classroom, or a special education classroom. This degree, with proper choice of courses, can lead to a group teacher approval. Consult with an advisor or the department chairperson.

■ *If I major in Education Practitioner, can I transfer to an upper division college or university?*

Advisors can assist you with choosing mostly transfer-oriented courses and/or a mix of transfer-oriented and applied courses. This degree can help you obtain a "Group Teacher Approval" for use in private care centers through the authority of the State of New Jersey Department of Human Services - Division of Youth and Family Services (DYFS). Not all of those applied courses are transferable. Students desiring a transfer-only degree might consider as an alternative the Liberal Arts Education Degree Option (which is an Associate of Arts Degree, pp. 66 & 68).

■ *What will I learn if I study Education Practitioner?*

Your program combines a strong core of general education courses with the possibility of choosing courses that provide a variety of practical experiences in teaching/learning settings. You are supervised by external school personnel as well as by your college supervisor while working with individuals and small groups.

■ *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. Additional Math study is required and studying Biology at different levels is possible. In any case, your math and science level of study is based upon your preparation and your desired career, or is shaped by the policies of your desired transfer institution. Consultation with the department chairperson or with an advisor about your math and science choices is strongly recommended.

■ *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 Gutowski, Department Chair, at (732) 906-2590.

Electronic and Computer Engineering Technology

ELECTRICAL ENGINEERING TECHNOLOGY DEPARTMENT

■ *Why major in Electronic and Computer Engineering Technology?*

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

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

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

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

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

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

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

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

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

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

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

■ *Where should I direct specific questions about this program?*

Contact Professor Waintraub, Department Chair, at (732) 906-2584.

DEGREE PROGRAM

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

Courses		Credits	Prerequisites
ELT 101	Circuits I	4	
ELT 111	Digital Electronics	3	
ENG 121	English Composition I	3	
MAT 109	College Algebra & Trigonometry I	3	
MCT 101	Introduction to Technology	2	
MEC 117	Electrical Drawing	1	
ELT 102	Circuits II	4	ELT 101
ELT 103	Electronics I [1]	4	
ELT 223	Electronic Design & Manufacturing	2	ELT 111 & MEC 117
ELT 226	Microcomputers	2	ELT 111
ENG 122	English Composition II	3	ENG 121
MAT 110	College Algebra & Trigonometry II	2	MAT 109
ELT 203	Electronics II	4	ELT 103
ELT	Technical Elective I	3	
MAT 112	Unified Calculus I	3	MAT 110
PHY 115	College Physics I	4	
	Humanities Elective	3	
ELT 224	Communication Electronics	3	ELT 203
ELT 230	Industrial Electronics	3	ELT 103
ELT	Technical Elective II	3	
PHY 116	College Physics II	4	PHY 115
	Physical/Health Ed Elective	1-3	
	Social Science Elective+	3	
Technical Elective Courses (select two):			
CSC 133	Introduction to Computer Science Using C++	4	
ELT 205	Electromagnetic Devices	3	ELT 102
ELT 208	Electronic & Computer Engineering Technology Work Experience	3	ELT 102 & 103
ELT 233	Control of Industrial Motors*	3	ELT 230
ELT 234	Audio Technology	3	ELT 103
ELT 239	Digital Data Communication and Networking	3	ELT 226
	TOTAL CREDITS	67-69	

CERTIFICATE PROGRAM

Courses		Credits	Prerequisites
ELT 101	Circuits I	4	
ELT 102	Circuits II	4	ELT 101
ELT 103	Electronics I [1]	4	
ELT 111	Digital Electronics	3	
ELT 223	Electronic Design & Manufacturing	2	ELT 111 & MEC 117
ELT 226	Microcomputers	2	ELT 111
ENG 121	English Composition I	3	
ENG 122	English Composition II	3	ENG 121
MAT 109	College Algebra & Trigonometry I	3	
MAT 110	College Algebra & Trigonometry II	2	MAT 109
MCT 101	Introduction to Technology	2	
MEC 117	Electrical Drawing	1	
	TOTAL CREDITS	33	

+Students must have 3 credits of Social Science and 3 credits of Humanities.
**Course to be taken as Technical Elective in fourth semester only.*
[1] You must enroll in ELT 102 at the same time you enroll in ELT 103.

Engineering Science

ELECTRICAL ENGINEERING TECHNOLOGY DEPARTMENT

DEGREE PROGRAM

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

Courses		Credits	Prerequisites
CHM 123	General Chemistry I	4	
CSC 133	Introduction to Computer Science Using C++	4	
ENG 121	English Composition I	3	
MAT 131	Analytic Geometry and Calculus I	4	MAT 129
MEC 119	Graphic Science	2	
	Physical/Health Ed Elective	1-3	
CHM 124	General Chemistry II	4	CHM 123
ENG 122	English Composition II	3	ENG 121
MAT 132	Analytic Geometry and Calculus II [1]	4	MAT 131
PHY 131	Analytical Physics I	4	
	Social Science Elective	3	
CHM 223	Organic Chemistry I	4	CHM 124
	or		
ELT 221	Electric Circuits I	4	
MAT 233	Analytic Geometry and Calculus III	4	MAT 132
MEC 221	Engineering Mechanics I	3	MAT 131
PHY 132	Analytical Physics II	4	PHY 131
	Humanities Elective	3	
CHM 224	Organic Chemistry II	4	CHM 223
	or		
ELT 222	Electric Circuits II	4	ELT 221
	or		
MEC 222	Engineering Mechanics II	3	MEC 221
MAT 234	Differential Equations	4	MAT 233
PHY 231	Analytical Physics III	4	PHY 132; MAT 132
	Humanities Elective	3	
	Social Science Elective	3	
	TOTAL CREDITS	71-74	

[1] *You must enroll in MAT 132 at the same time you enroll in ELT 221.*

■ *Why major in Engineering Science?*

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

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

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

■ *What will I learn if I study Engineering Science?*

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

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

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

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

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

■ *Where should I direct specific questions about this program?*

Contact Professor Waintraub, Department Chair, at (732) 906-2584.

English As A Second Language Program

ENGLISH AS A SECOND LANGUAGE DEPARTMENT

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

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

■ *How is the English as A Second Language Program different from other ESL programs?*

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

■ *Can International students enroll in the ESL Program?*

Yes. You may obtain an I-20 to study in this program and be admitted as a full-time student. After fully completing the ESL program, you may move directly into an Associate Degree program. You must meet the selective admissions criteria for programs in the health technologies.

■ *What is the application process for this program?*

You submit a completed application form with a $25 application fee to the Office of Admissions and Recruitment. Make an appointment for the ESL Placement Exam by calling (732) 906-2508 or visiting the Testing Center. Attend the oral interview in the ESL Department, which is part of the placement test. You will be told what your placement is when you complete the oral interview. Once you have become proficient in English, if you want to pursue a degree program, you must re-submit an application to the Office of Admissions and Recruitment. There is no charge for the second application. You must provide high school and prior college transcripts when you apply for a major.

■ *What is the ESL Placement Exam?*

It is a written test that takes approximately two hours to complete. The oral interview takes 15-20 minutes. The written test measures your listening skills, grammar and writing abilities. The oral interview tests your conversational skills.

■ *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 Dr. Hansen, Department Chair, at (732) 906-2597.

LEVEL I - INTENSIVE

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

Courses		Credit Equivalents
ESL 060	Listening I	3
ESL 061	Phonology I	3
ESL 062	Discussion I	3
ESL 063	Structure I	4
ESL 064	Writing I	4
	TOTAL CREDITS	17

LEVEL II - INTENSIVE

Courses		Credit Equivalents
ESL 071	Phonology II	3
ESL 072	Discussion/Cultural Orientation II	3
ESL 073	Structure II	4
ESL 074	Writing II	4
ESL 075	Reading/Vocabulary II	3
	TOTAL CREDITS	17

LEVEL III - INTENSIVE

Courses		Credit Equivalents
ESL 083	Structure III	4
ESL 084	Writing III	4
ESL 085	Reading/Vocabulary III	3
ESL 086	Discussion/Phonology III	3
	TOTAL CREDITS	14

You may also take a mathematics course.

LEVEL IV

Courses		Credit Equivalents
ESL 091	Advanced Discussion and Phonology IV	3
ESL 092	Advanced Structure IV	3
ESL 093	Structure/Writing IV	4
ESL 094	Reading/Vocabulary IV	4
	TOTAL CREDITS	14

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

LEVEL V

Courses		Credit Equivalents
ESL 099	Reading/Writing V	4
	TOTAL CREDITS	4

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

INFORMATION ABOUT THE PROGRAM IS AVAILABLE IN GUJARATI, POLISH, RUSSIAN AND SPANISH FROM THE OFFICE OF ADMISSIONS AND RECRUITMENT.

Environmental Technology

CHEMISTRY AND PHYSICS DEPARTMENT

DEGREE PROGRAM

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

Courses		Credits	Prerequisites
BIO 117	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 118	Biology II	4	BIO 117
CHM 118	Chemistry II	4	CHM 117
ENG 122	English Composition II	3	ENG 121
ENV 208	Environmental Health Hazards	3	
MAT 108	Mathematics II	3	MAT 107
ENV 205	Atmospheric Pollution Control	3	BIO 118; CHM 118
ENV 220	Principles of Occupational Health & Safety	3	CHM 118
	Technical Electives	3-4	
	Social Science Elective	3	
ENV 221	Hazardous Waste Management	3	
ENV 222	Water and Wastewater Analysis	3	CHM 118
PHY 101	Principles of Physics I	4	MAT 107
	Technical Electives	3-4	
	Humanities Elective	3	
Technical Elective Choices (select three):		*9-10*	
BIO 211	Principles of Microbiology [4]	3	
BIO 221	Microbiology	4	BIO 118 or 124; CHM 118 or 124
CHM 201	Principles of Organic Chemistry	4	CHM 118
CSC 105	Computer Applications & Systems	3	
ENV 201	Advanced Wastewater Operations I	3	
ENV 202	Advanced Wastewater Operations II	3	ENV 201
ENV 203	Advanced Water Operations I	3	ENV 201
ENV 204	Advanced Water Operations II	3	ENV 201
ENV 226	Environmental Technology Co-Op Ed	3	ENV 201 or 203
	TOTAL CREDITS	63-66	

CERTIFICATE PROGRAM [5]

Courses		Credits	Prerequisites
BIO 211	Principles of Microbiology [4]	4	
CHM 117	Chemistry I	4	
CSC 105	Computer Applications & Systems	3	
ENG 121	English Composition I	3	
ENG 122	English Composition II	3	ENG 121
ENV 208	Community Sanitation	3	
MAT 107	Mathematics I	3	
Take one of the following sequences:			
ENV 201	Advanced Wastewater Operations I	3	
ENV 202	Advanced Wastewater Operations II	3	ENV 201
	or		
ENV 203	Advanced Water Operations I	3	ENV 201
ENV 204	Advanced Water Operations II	3	ENV 201
Optional			
ENV 226	Environmental Technology Co-op Ed [6]	3	ENV 201 or 203
	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 123-124 for BIO 117-118 if you have completed a high school biology lab course.

[2] You may substitute CHM 123-124 for CHM 117-118 if you have completed a high school chemistry lab course.

[3] You may substitute MAT 123-124 or MAT 129-131 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] You must complete Introduction to Water Wastewater Operations (150 hours) at the Middlesex County Vocational Technology High School before starting this program.

[6] This course meets the one year operating experience required for classifications 1 and 2 New Jersey State Operators License upon completion of the certificate program.

Why major in Environmental Technology?

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

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

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

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

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

What will I learn if I study Environmental Technology?

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

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

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

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

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

Where should I direct specific questions about this program?

Contact Dr. Murray, Department Chair, at (732) 906-2587.

Fashion Merchandising and Retail Management

BUSINESS ADMINISTRATION AND MANAGEMENT DEPARTMENT

■ *Why major in Fashion Merchandising and Retail Management?*

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

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

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

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

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

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

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

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

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 17 credits each semester, you can complete the degree in two years. You can shorten the amount of time by taking courses in the summer and winter sessions. **Note:** Not all RET courses are offered every semester both day and evening. Please call the Department Chair at (732) 906-2594 to discuss course offerings for future semesters.

■ *Where should I direct specific questions about this program?*

Contact Professor Bailey, Department Chair, at (732) 906-2594.

DEGREE PROGRAM

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

Courses		Credits	Prerequisites
ENG 121	English Composition I	3	
BUS 101	Business Organization and Management	3	
BUS 107	Computer Applications for Business [1]	3	
RET 201	Fashion Merchandise Information	4	
	Mathematics Elective [2]	3	
ENG 122	English Composition II	3	ENG 121
ACC 101	Financial Accounting	4	
BUS 201	Business Law I	3	
MKT 201	Marketing I	3	BUS 101
RET 207	Retail Advertising, Sales Promotion & Display	3	
ACC 102	Managerial Accounting	4	ACC 101
MKT 143	Salesmanship	3	
RET 202	Retail Buying and Merchandising	3	
RET 205	Store Field Experience I	3	Senior status
	Humanities Elective	3	
	Physical/Health Ed Elective	1-3	
ECO 201	Principles of Economics I	3	
RET 204	Retail Management	3	BUS 101, MKT 143 & 201, RET 201, 202, 205 & 207
RET 206	Store Field Experience II	3	Senior status
	Social Science or Humanities Elective	3	
	Science Elective [3]	3	
	General Education Elective	3	
	TOTAL CREDITS	67-69	

[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.

Fine Arts

VISUAL AND PERFORMING ARTS DEPARTMENT

CORE DEGREE REQUIREMENTS

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

Courses		Credits	Prerequisites
ENG 121	English Composition I	3	
HIS 121	History or Western Civilization	3	
	Language	3	
PED	Physical Education Elective	1	
ENG 122	English Composition II	3	ENG 121
	or		
ENG 125	English Composition II: Writing About Literature		ENG 121
HIS 122	History of Western Civilization II	3	
CSC 105	Computer Applications & Systems	3	
	or		
BUS 107	Computer Applications for Business	3	
	Language	3	
	Diversity Elective	3	
	Math or Science Elective	3-4	
	Social Science Elective	3	
SPE 121	Fundamentals of Public Speaking	3	
	Math or Science Elective	3-4	
	Humanities Elective	3	
	Free Elective	3	
	TOTAL CREDITS	40-47	

ART DEGREE OPTION

Below are required courses.

Courses		Credits	Prerequisites
ART 109	Drawing		
	or		
ART 101	Figure Drawing	3	
ART 123	Art History: Ancient to Renaissance	3	
ART 124	Art History: Renaissance to Modern	3	
ART 145	Art Fundamentals - Two Dimensions	3	
ART 146	Art Fundamentals - Three Dimensions	3	
ART 148	Art Portfolio Workshop	1	
ART 149	Art Studio Seminar	1	
Plus one of the following:		3	
ART 221	Painting: Traditional		
ART 222	Painting: Contemporary		
ART 223	Sculpture in Relief		
ART 224	Sculpture in the Round		
Plus one additional art course			
	TOTAL CREDITS	63-66	

continued on the next page

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.

Courses		Credits	Prerequisites
MUS 123	Music History: Traditional	3	
	or		
MUS 124	Music History: Contemporary	3	
MUS 131	Keyboard Studies I	3	
MUS 132	Keyboard Studies II	3	
MUS 140	Music Fundamentals	3	
MUS 201	Music Notation & Composition I	3	
MUS 202	Music Notation & Composition II	3	
Plus additional music courses		3	
	TOTAL CREDITS	61-64	

THEATRE DEGREE OPTION

Below are required courses.

Courses		Credits	Prerequisites
THE 123	Theatre History	3	
	OR		
THE 152	American Musical Theatre		
THE 124	Contemporary Theatre	3	
THE 131	Acting I	3	
THE 145	Stagecraft	4	
THE 146	Play Production	4	
Plus additional three credits in theatre or a course selected from the following: Modern Drama, Shakespeare, Oral Interpretation of Literature, Music History, Music Fundamentals or any dance course.		3	

Fire Science Technology

CHEMISTRY AND PHYSICS DEPARTMENT

DEGREE PROGRAM

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

Courses		Credits	Prerequisites
CHM 107	Principles of Chemistry	4	
CSC 105	Computer Applications & Systems	3	
FSC 103	Introduction to Fire Protection	3	
FSC 204	Building Construction	3	FSC 103
FSC 206	Fire Strategy and Tactics	3	FSC 103
FSC 207	Hazardous Materials for the Fire Service	3	CHM 107 & FSC 103
FSC 209	Fire Suppression & Detection Systems	3	FSC 103
FSC 210	Fire and Arson Investigation	3	FSC 103
FSC 212	Fire Prevention and Inspection	3	FSC 103
ENG 121	English Composition I	3	
ENG 122	English Composition II	3	ENG 121
MAT 107	Mathematics I*	3	
MAT 108	Mathematics II*	3	MAT 107
MGT 200	Principles of Supervision	3	
PHY 101	Principles of Physics I	4	MAT 107
POS 201	United States State and Local Government	3	
	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	Prerequisites
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 103
FSC 206	Fire Strategy and Tactics	3	CHM 107 & FSC 103
FSC 207	Hazardous Materials for the Fire Service	3	FSC 103
FSC 209	Fire Suppression & Detection Systems	3	FSC 103
FSC 210	Fire and Arson Investigation	3	FSC 103
FSC 212	Fire Prevention and Inspection	3	FSC 103
MAT 107	Mathematics I	3	
	TOTAL CREDITS	31	

**With advisor approval students may select a higher level science or mathematics sequence.*

Why major in Fire Science Technology?

This program meets the continuing education needs of professional and volunteer fire fighters. It enables fire fighters to perform their current duties more effectively and to prepare for greater levels of responsibility within the fire service system.

If I major in Fire Science Technology, what degree can I earn?

The Associate in Applied Science Degree or the Certificate of Achievement, which prepares you for professional or volunteer jobs in fire service field.

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

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

What will I learn if I study Fire Science Technology?

You develop skills and knowledge in protection systems, hydraulics, hazardous materials, building construction and codes, departmental organization, investigation, fire ground strategy and tactics, and fire prevention and inspection.

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

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

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

This program is offered exclusively in the evening. If you do not need developmental coursework, you can complete the degree in four years. You can earn the certificate in two years. You can shorten the amount of time by taking courses in the summer and winter sessions.

Where should I direct specific questions about this program?

Contact Dr. Murray, Department Chair, at (732) 906-2587.

Graphics for Digital Media

MEDIA ARTS & DESIGN DEPARTMENT

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

Courses		Credits	Prerequisites
CSC 208	Introduction To the Internet	2	
MAD 121	Graphics for Computer Authors & Presenters	3	
DMA 212	Web Animation & Motion Graphics	4	
DMA 210	Web Page Design and Layout	3	
CSC 230	Multimedia Production & Authoring Tools I	4	
	Free Elective	2	
	TOTAL CREDITS	18	

MEDICAL LABORATORY TECHNOLOGY DEPARTMENT

DEGREE PROGRAM

General Education Requirements

Courses		Credits	Prerequisites
ENG 121	English Composition I	3	
ENG 122	English Composition II	3	ENG 121
PSY 123	Intro to Psychology	3	
PED	Physical Education		
	or		
HED 150	Contemporary Health Issues	1-3	
	Humanities Elective	3	
SPE 121	Fundamentals of Public Speaking	3	
	General Education Credits	16-18	
Science and Math Requirements:			
CSC 107	Computers in Health Technology	1	
	Laboratory Science [1]	8	
BIO 211	Principles of Microbiology	4	
	Mathematics [2]	6	
	Science and Math Credits	19	

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.

TOTAL CREDITS 65-67

[1] Lab Science: one year sequence of lab science requirement satisfied by Biology (BIO117 & BIO118 or higher) or Anatomy & Physiology (BIO111 & BIO112) or Chemistry (CHM0117 & CHM118 or higher)

[2] Mathematics: Mathematics I (MAT107) & Mathematics II (MAT108) 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; EMTs, paramedics, LPNs, RNs (diploma) and military trained allied health practitioners.

■ *What are the benefits?*

Credit for previous study in a specific discipline can be awarded. If you are a non-degree certified or licensed allied health practitioner or graduate of a certificate or diploma program, you may be able to earn valuable credits toward a college degree.

■ *Admission to the Health Science program.*

Admission to the College is open to anyone who holds a high school diploma or GED: or is 18 years of age and can demonstrate an ability to benefit from college. SAT scores are optional. In addition, students in the Health Science program must have non-degree certification or licensure in an allied health field. Full- or part-time study is available.

■ *Credit for previous Allied Health training.*

After successful completion of the general education requirements with a GPA of 2.0 or higher, students must submit an original post-secondary school transcript and a current license or certificate as part of the process. The number of credits awarded will be based upon an evaluation of the candidate's prior training and licensure or certification. The director of Health Technology programs and the dean of Science, Mathematics and Health Technologies will conduct the review.

■ *Transfer.*

Transfer to the bachelor's degree programs is possible. Several colleges and universities offer a program in Health Science. Formal transfer agreements are being pursued. For information about courses transferring to other colleges, contact a transfer counselor or the MLT office.

■ *Employment opportunities.*

Graduates of Health Science programs have chosen to work in: hospital laboratories, private or reference laboratories, pharmaceutical companies, insurance industry, doctor's offices, HMO's and clinics, veterinarian hospitals, assisted living facilities, long-term care facilities, research and sales. Graduates may use this degree for career advancement or change, to enhance job security, or to satisfy personal fulfillment.

■ *Where should I direct specific questions about this program?*

Contact Professor Larkin, Department Chair, at (732) 906-2581.

Heating, Ventilating and Air Conditioning Design Technology

(AN ENERGY TECHNOLOGY PROGRAM)
MECHANICAL AND CIVIL/CONSTRUCTION
ENGINEERING TECHNOLOGY DEPARTMENT

■ *Why major in Heating, Ventilating and Air Conditioning Design Technology?*

The heating, ventilating, and air conditioning industry (HVAC) is a dynamic and ever growing field. As a technician, you can find career opportunities working with mechanical contractors, equipment manufacturers and other large-scale industrial and commercial facilities. This career-oriented program is a joint effort between the College and the Middlesex County Vocational-Technical Schools.

■ *If I major in Heating, Ventilating and Air Conditioning Design Technology, what degree can I earn?*

The Associate in Applied Science Degree or the Certificate of Achievement, which prepares you for entry level jobs.

■ *If I major in Heating, Ventilating and Air Conditioning Design Technology, can I transfer to an upper division college of university?*

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

■ *What will I learn if I study Heating, Ventilating and Air Conditioning Design Technology?*

You study the design of heating, ventilating and air conditioning system. The program does not teach you how to service or repair these systems.

■ *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 earn the certificate in four semesters. You can shorten the amount of time by taking courses in the summer and winter sessions. Major courses offered only in the evenings.

■ *Where should I direct specific questions about this program?*

Contact Professor Rubino, Department Chair, at (732) 906-2586.

DEGREE PROGRAM

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

Courses		Credits	Prerequisites
HVA 101	Air Conditioning, Refrigeration & Heating Principles I	4	
MEC123	Technical Graphics/CAD I	3	
MAT 107	Mathematics I	3	
CSC 109	Basic Programming and Systems	3	
ENG 121	English Composition I	3	
HVA 102	Air Conditioning, Refrigeration & Heating Principles II	4	HVA 101
HVA 106	HVAC Drafting	2	MEC 123
MAT 108	Mathematics II	3	MAT 107
PHY 101	Principles of Physics	4	MAT 107
ENG 122	English Composition II	3	ENG 121
HVA 201	HVAC Design Principles I	4	HVA 102; MAT 108
HVA 203	HVAC Equipment Laboratory	1	HVA 102
MEC210	Fluid Systems	4	MAT 108; CSC 109
ELT 215	Applied Electricity	3	
	Physical/Health Ed Elective	1-3	
	Social Science Elective	3	
HVA 202	HVAC Design Principles II	4	HVA 201
HVA 204	Mechanical Estimating & Planning	3	
HVA 210	Thermodynamics of Refrigeration	3	MAT 108
ELT 216	HVAC Control Systems	3	ELT 215
	Humanities Elective	3	
	TOTAL CREDITS	64-66	

CERTIFICATE PROGRAM

Courses		Credits	Prerequisites
CSC 109	Basic Programming and Systems	3	
ENG 121	English Composition I	3	
ENG 122	English Composition II	3	ENG 121
HVA 101	Air Conditioning, Refrigeration & Heating Principles I	4	
HVA 102	Air Conditioning, Refrigeration & Heating Principles II	4	HVA 101
HVA 106	HVAC Drafting	2	MEC 123
HVA 203	HVAC Equipment Laboratory	1	HVA 102
MAT 107	Mathematics I	3	
MAT 108	Mathematics II	3	MAT 107
MEC123	Technical Graphics/CAD I	3	
Choose two courses from the following:		6-8	
ELT 215	Applied Electricity	3	
ELT 216	HVAC Control Systems	3	ELT 215
HVA 201	HVAC Design Principles I	4	HVA 102; MAT 108
HVA 202	HVAC Design Principles II	4	HVA 201
HVA 210	Thermodynamics of Refrigeration	3	MAT 108
MEC210	Fluid Systems	4	
	TOTAL CREDITS	35-37	

Hotel, Restaurant and Institution Management

HOTEL, RESTAURANT AND INSTITUTION MANAGEMENT DEPARTMENT

CULINARY ARTS MANAGEMENT DEGREE OPTION

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

Courses		Credits	Prerequisites
BUS 107	Computer Applications for Business [1]	3	
ENG 121	English Composition I	3	
HRI 103	Principles of Food Selection & Preparation	3	
HRI 208	Environmental Sanitation in Food Service Operations	3	
	Mathematics Elective [2]	3-4	
	Physical/Health Ed Elective	1-3	
ENG 122	English Composition II	3	ENG 121
HRI 108	Quantity Food Production	3	HRI 103
HRI 115	Foodservice Operations	3	
HRI 109	Professional Culinary Techniques	3	HRI 103
PSY 123	Introductory Psychology	3	
HRI 107	Baking Fundamentals	3	HRI 103
HRI 203	Volume Food Management & Production	4	HRI 108
HRI 215	Beverage Management	3	
	Social Science Elective	3	
	Humanities Elective	3	
HRI 114	Garde Manger	3	HRI 103
HRI 205	Food & Beverage Controls & Purchasing	3	HRI 103
HRI	HRI Elective	3	
	General Education Elective	3	
	Science Elective [3]	3-4	
Summer Session			
HRI 111	Food Preparation Practicum	3	HRI 103
	TOTAL CREDITS	65-69	

CULINARY ARTS - CERTIFICATE OF ACHIEVEMENT

Courses		Credits	Prerequisites
ENG 121	English Composition I	3	
HRI 103	Principles of Food Selection & Preparation	3	
HRI 107	Baking Fundamentals	3	HRI 103
HRI 108	Quantity Food Production	3	HRI 103
HRI 114	Garde Manger	3	HRI 103
HRI 115	Foodservice Operations	3	
HRI 203	Volume Food Management &Production	4	HRI 108
HRI 205	Food & Beverage Controls & Purchasing	3	HRI 103
HRI 208	Environmental Sanitation in Food Service Operations	3	
	General Education Elective	3	
Summer Session			
HRI 111	Food Preparation Practicum	3	HRI 103
	TOTAL CREDITS	34	

continued on the next page

[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.

Why major in Hotel, Restaurant and Institution Management?

You acquire the necessary practical and theoretical skills for employment in one of the nation's fastest growing industries. As a graduate, you may be employed as an assistant restaurant manager, hotel/motel assistant manager, front office manager, dining room manager, cafeteria production manager, cook, sous chef or management trainee. You are eligible for certification in several course areas by the American Hotel and Lodging Association and the National Restaurant Association.

If I major in Hotel, Restaurant and Institution Management, what degree can I earn?

The Associate in Applied Science Degree which prepares you for a career in restaurant and food service management hotel-motel management or culinary arts. You may choose the Hotel-Motel Management Option, the Restaurant Foodservice Management Option, or the Culinary Arts Management Option which prepares you to work in hotels, motels, resorts, restaurants, clubs, cruise ships, catering centers and health care facilities.

If I major in Hotel, Restaurant and Institution Management, can I transfer to an upper division college?

Many colleges and universities with hotel and restaurant management programs, including Fairleigh Dickinson University, NYU, Widener University as well as other schools, will apply the courses you have taken towards a bachelor's degree.

What will I learn if I study Hotel, Restaurant and Institution Management?

You receive training in restaurant and food service management, hotel-motel management or culinary arts. If you have limited related industry experience, you are encouraged to enroll in a cooperative work experience seminar that includes paid employment in the final semester. In Culinary Arts additional training is provided in a culinary externship.

Can I take more than one option in Hotel, Restaurant and Institution Management?

If your interests include both Hotel-Motel Management and Restaurant Foodservice Management you can apply for a dual option.

continued on the next page

■ *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.

■ *If I take the Culinary Certificate Program can I also work towards the A.A.S. degree?*

Yes. All of the culinary courses 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.

HOTEL-MOTEL MANAGEMENT DEGREE OPTION

Courses		Credits	Prerequisites
ENG 121	English Composition I	3	
HRI 101	Intro to Hotel, Restaurant & Institution Management	3	
HRI 103	Principles of Food Selection & Preparation	3	
HRI 208	Environmental Sanitation in Food Service Operations	3	
	Mathematics Elective [2]	3-4	
	Physical/Health Ed Elective	1-3	
ACC 108	Accounting Practices for Hotels, Restaurants & Institutions	4	
BUS 107	Computer Applications for Business [1]	3	
ENG 122	English Composition II	3	ENG 121
HRI 108	Quantity Food Production	3	HRI 103
HRI 110	Supervisory Development in the Lodging & Foodservice Industry	3	
HRI 201	Hotel-Motel Front Office Operations	3	BUS 107
HRI 206	Merchandising for the Hospitality Industry	3	
HRI 217	Supervisory Housekeeping	3	
PSY 123	Introductory Psychology	3	
	Humanities Elective	3	
	Social Science Elective	3	
HRI 203	Volume Food Management & Production	4	HRI 108
HRI 216	Hospitality Property Management	3	
HRI	HRI Elective	3	
	General Education Elective	3	
	Science Elective [3]	3-4	
	TOTAL CREDITS	66-70	

TECHNICAL CERTIFICATE IN HOTEL OPERATIONS

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

Courses		Credits	Prerequisites
BUS 107	Computer Applications for Business [1]	3	
HRI 110	Supervisory Development in the Lodging & Foodservice Industry [4]	3	
HRI 201	Hotel-Motel Front Office Operations	3	BUS 107
HRI 206	Merchandising for the Hospitality Industry	3	
HRI 216	Hospitality Property Management	3	
HRI 217	Supervisory Housekeeping	3	
	TOTAL CREDITS	18	

[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.

RESTAURANT FOODSERVICE MANAGEMENT DEGREE OPTION

Courses		Credits	Prerequisites
ENG 121	English Composition I	3	
HRI 101	Intro to Hotel, Restaurant & Institution Management	3	
HRI 103	Principles of Food Selection & Preparation	3	
HRI 208	Environmental Sanitation in Food Service Operations	3	
	Mathematics Elective [2]	3-4	
	Physical/Health Ed Elective	1-3	
ACC 108	Accounting Practices for Hotels, Restaurants & Institutions	4	
BUS 107	Computer Applications for Business [1]	3	
ENG 122	English Composition II	3	ENG 121
HRI 203	Volume Food Management & Production	4	HRI 108
HRI 108	Quantity Food Production	3	HRI 103
HRI 110	Supervisory Development in the Lodging & Foodservice Industry	3	
HRI 206	Merchandising for the Hospitality Industry	3	
HRI 215	Beverage Management	3	
PSY 123	Introductory Psychology	3	
	Humanities Elective	3	
HRI 202	Facilities Layout & Design	3	
HRI 205	Food & Beverage Controls & Purchasing	3	HRI 103
HRI	HRI Elective	3	
	General Education Elective	3	
	Science Elective [3]	3-4	
	Social Science Elective	3	
	TOTAL CREDITS	66-70	

TECHNICAL CERTIFICATE IN RESTAURANT OPERATIONS

Courses		Credits	Prerequisites
BUS 107	Computer Applications for Business	3	
HRI 103	Principles of Food Selection & Preparation	3	
HRI 205	Food & Beverage Controls & Purchasing	3	HRI 103
HRI 206	Merchandising for the Hospitality Industry	3	
HRI 208	Environmental Sanitation in Food Service Operations	3	
HRI 215	Beverage Management [4]	3	
	TOTAL CREDITS	18	

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

Industrial Technology

(QUALITY CONTROL)
MECHANICAL AND CIVIL/CONSTRUCTION ENGINEERING TECHNOLOGY DEPARTMENT

■ *Why major in Industrial Technology?*

You acquire a technical education in quality control.

■ *If I major in Industrial Technology, what degree can I earn?*

The Associate in Applied Science Degree or the Certificate of Achievement which prepares you for a variety of industrial career fields.

■ *If I major in Industrial 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 Industrial Technology?*

You gain both theory and hands-on training necessary for a career in production management, process engineering, inspection, reliability and quality control. You also learn the practical aspects of Quality Control problem solving in today's industrial world.

■ *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 earn the certificate in three semesters. You can shorten the amount of time by taking courses in the summer and winter sessions. Major courses offered only in the evenings.

■ *Where should I direct specific questions about this program?*

Contact Professor Rubino, Department Chair, at (732) 906-2586.

DEGREE PROGRAM+

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

Courses		Credits	Prerequisites
CHM 117	Chemistry I*	4	
ENG 121	English Composition I	3	
IND 105	Industrial Graphics and Specifications*	2	
IND 103	Occupational Safety & Health & the OSHA Law*	3	
MAT 107	Mathematics I [1]	3	
CSC 109	Basic Programming & Systems	3	
ENG 122	English Composition II	3	ENG 121
IND 104	Inspection Techniques*	3	
IND 207	Quality Control Concepts and Techniques*	3	
MAT 108	Mathematics II [2]	3	MAT 107
PHY 101	Principles of Physics I	4	MAT 107
BUS 101	Business Organization and Management*	3	
IND 203	Statistical Quality Control I*	3	
MGT 210	Concepts of Business Management	3	BUS 101
MEC 111	Manufacturing Processes & Materials I	4	
	Social Science Elective	3	
IND 204	Statistical Quality Control II*	3	IND 203
MGT 214	Operations Management	3	MGT 210
ELT 215	Applied Electricity	3	
MEC 112	Manufacturing Processes & Materials II	4	MCT 101 & MEC 111
	Physical/Health Ed Elective	1-3	
	Humanities Elective	3	
	TOTAL CREDITS	67-69	

CERTIFICATE PROGRAM

Courses		Credits	Prerequisites
BUS 101	Business Organization and Management	3	
ENG 121	English Composition I	3	
ENG 122	English Composition II	3	ENG 121
IND 104	Inspection Techniques	3	
IND 105	Industrial Graphics and Specifications	2	
IND 207	Quality Control Concepts and Techniques	3	
MAT 107	Mathematics I [3]	3	
MEC 111	Manufacturing Processes & Materials I	4	
MEC 112	Manufacturing Processes & Materials II	4	MCT 101 & MEC 111
MGT 210	Concepts of Business Management	3	BUS 101
MGT 214	Operations Management	3	MGT 210
	TOTAL CREDITS	34	

+This program is offered exclusively in the evening. The program provides students with technical education in a variety of industrial career fields with an emphasis on the practical aspects of problem solving in today's industrial world. The Industrial Technology program provides students with an excellent balance of theory and hands-on training necessary for a career in industry. This program provides the necessary theory and hands-on training for a career in production management, process engineering, inspection, reliability and quality control.

**Major courses*

[1] Students may use MAT 109 & 110, or MAT 129 or MAT 131 with proper advisement.

[2] Students may use MAT 112, MAT 131 or MAT 132 with proper advisement.

[3] You may take a higher level math course with advisement.

Internet/Web Page Development

COMPUTER SCIENCE DEPARTMENT

CERTIFICATE PROGRAM

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

Courses		Credits	Prerequisites
CSC 1O8	Introduction to the Internet	2	CSC 105, 107 or BUS 107
CSC 110	Microcomputer Operating Systems & Architecture	3	CSC 105 or BUS 107
CSC 125	Web Page Design & Development	3	CSC 108
CSC 230	Multimedia Production & Authoring Tools	4	CSC 110
MAD 121	Graphics for Computer Authors & Presenters	3	BUS 107 or CSC 105 or MCT 101
	Elective [1]	3	
	TOTAL CREDITS	18	

[1] *CSC 160 is recommended.*

■ *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 persons with stories to share will acquire the necessary skills to publish useful, attractive, and quality web pages. Upon completion of this certificate program, students will be able to create web sites and useful web pages.

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

The Technical Certificate.

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

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

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

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.

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 which prepares you to transfer to upper division colleges and universities and prepares you to continue in most majors.

■ *What will I learn if I study Liberal Arts?*

You receive a solid foundation upon which to build conceptual and communication skills and the essential components of a general education, which make up a large part of every liberal arts career or professional program at the bachelor's degree level. You also study a foreign language, which is a basic component of a liberal arts education. It broadens your world perspectives by introducing you to another culture and helps you develop an awareness of your own language and cultural identity. You may earn your degree by selecting either the general option or by choosing one of the many specialized options.

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

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

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

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

■ *Where should I direct specific questions about this program?*

Contact the Office of the Dean, at (732) 906-2528.

CORE DEGREE REQUIREMENTS

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

Courses		Credits	Prerequisites
ENG 121	English Composition I	3	
HIS 121	History of Western Civilization I	3	
	Language [1]	3	
	Computer Literacy [2]	3	
	Social Science [3]	3	
ENG 122	English Composition II	3	ENG 121
	or		
ENG 125	English Composition II: Writing About Literature	3	ENG 121
	Diversity [4]	0-3	
HIS 122	History of Western Civilization II	3	
	Language [1]	3	
	Social Science [3]	3	
SPE 121	Fundamentals of Public Speaking	3	
	or		
SPE 123	Discussion and Debate	3	
	Science [3]	3-4	
	Mathematics [6]	3-4	
	Liberal Arts Electives [7]	6	
	Health/Physical Education [8]	1-3	
	Science [5]	4	
	Mathematics [6]	3-4	
	Liberal Arts Electives [7]	6	
	Divisional Elective [9]	3	
	Humanities [10]	3	
	TOTAL CREDITS	62-70	

[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 of the current catalog. If the course is also designated as GE HUM, GE SS, GE SCI or GE PED, it may also be used to satisfy an additional graduation requirement.

[5] Choose a minimum of seven credits by choosing two of the following courses: BIO 103, BIO 105, BIO 106, ENV 207, ENV 211, ENV 212, SCI 108, SCI 155, SCI 156, SCI 157, SCI 204 or choose 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 & 124 or MAT 129 & 131 or MAT 131 & 132 or MAT 131 & 285. For the business option choose one of the following sequences: MAT 123 & 124 or MAT 129 & 131 or MAT 131 & 132 or MAT 131 & 285 or by advisement.

[7] 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 EC 202 for a total of fourteen credits.

[8] 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.

[9] 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.

[10] 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.

GENERAL DEGREE OPTION

Courses	Credits	Prerequisites
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.	12	
TOTAL CREDITS	62-70	

BUSINESS DEGREE OPTION

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

Courses		Credits	Prerequisites
ACC 101	Financial Accounting	4	
ACC 102	Managerial Accounting	4	ACC 101
ECO 201	Principles of Economics I	3	
ECO 202	Principles of Economics II	3	ECO 201
Mathematics Elective Choices (select one sequence):		6-8	
MAT 123	College Algebra & Data Analysis	3	
MAT 124	Statistics	3	MAT 123
	or		
MAT 129	Precalculus	4	
MAT 131	Analytic Geometry & Calculus I	4	MAT 129
	or		
MAT 131	Analytic Geometry & Calculus I	4	MAT 129
MAT 132	Analytic Geometry & Calculus II	4	MAT 131
	or		
MAT 131	Analytic Geometry & Calculus I	4	MAT 129
MAT 285	Basic Statistics for Business	4	MAT 131
TOTAL CREDITS		66-72	

COMMUNICATION DEGREE OPTION

Courses		Credits	Prerequisites
COM 105	Introduction to Communication	3	
COM 110	Interpersonal Communication	3	
COM 121	Mass Communication Study	3	COM 105
Recommended Courses (select one):			
COM 115	Intercultural Communication	3	
COM 131	Introduction to Broadcasting	3	COM 105
COM 208	Communication Seminar & Field Experience	3	
COM 210	Radio Broadcasting Production	3	
ENG 205	Introduction to Journalism	3	
LNC 123	Introduction to the Study of Human Language	3	
SPE 123	Discussion and Debate	3	

With permission of the department chairperson, COM 208 or COM 210 may be replaced with a course relevant to the student's special focus in the communication field which will assist the student in transferring to a senior institution in communication.

TOTAL CREDITS	62-70

continued on the next page

DANCE DEGREE OPTION

Courses		Credits	Prerequisites
DAN131	Elements of Dance	3	
DAN 132	Dance Appreciation	3	
DAN 201	Methods and Modern Techniques in Dance	3	
DAN 202	Improvisation and Composition	3	
	Recommended Courses [11]		
	TOTAL CREDITS	62-70	

EDUCATION DEGREE OPTION

Courses		Credits	Prerequisites
SOC 121	Introduction to Sociology	3	
AND three advised Liberal Arts Electives		9	
(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:		6	
PSY 123	Introductory Psychology	3	
PSY 223	Child Psychology	3	
You should meet with the Chairperson of the 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.			
	TOTAL CREDITS	62-70	

ENGLISH DEGREE OPTION

Courses	Credits	Prerequisites
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 (except ENG 212, which has a prerequisite of ENG 121). In addition, courses with a prerequisite must be completed sequentially. For example, ENG 235 must be taken prior to ENG 236, and ENG 205 must be taken before ENG 206 or ENG 214.	12	
TOTAL CREDITS	62-70	

HISTORY DEGREE OPTION

Courses	Credits	Prerequisites
To satisfy the 12 credit requirement choose History courses that you have not taken to satisfy the core requirements for the degree.	12	
TOTAL CREDITS	62-70	

[11] *Recommended courses: HED 205, MUS 123, PED 210, THE 123*

JOURNALISM DEGREE OPTION

Courses		Credits	Prerequisites
ENG 205	Introduction to Journalism	3	ENG 122 or 125
ENG 206	Journalism Workshop	3	ENG 205
ENG 214	Journalism/Writing Field Experience	3	ENG 205 or ENG 235 or BUS 205
Recommended Courses (select one):			
ENG 235	Creative Writing	3	ENG 122 or 125
ENG 225	World Literature I	3	ENG 122 or 125
ENG 226	World Literature II	3	ENG 122 or 125
POS 201	United States State and Local Government	3	
	TOTAL CREDITS	62-70	

MODERN LANGUAGE DEGREE OPTION

Courses	Credits	Prerequisites
To satisfy the 12 credit requirement choose modern language courses that you have not taken to satisfy the core requirements for the degree.	12	
TOTAL CREDITS	62-70	

MUSIC DEGREE OPTION

(Also see Fine Arts - Music Option)

Courses		Credits	Prerequisites
MUS 131	Keyboard Studies I	3	
MUS 132	Keyboard Studies II	3	MUS 131
MUS 140	Music Fundamentals	3	
MUS 201	Music Notation & Composition I [12]	3	MUS 140
MUS 202	Music Notation & Composition II	3	MUS 201
	Recommended Courses [13]		
	TOTAL CREDITS	65-73	

PHYSICAL EDUCATION/RECREATION DEGREE OPTION

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

Courses		Credits	Prerequisites
HED 150	Contemporary Health Issues	3	
HED 200	Human Sexuality and Family Life	3	
PED 225	First Aid, CPR and Safety Education	3	
Three one credit activity classes offered by the Department.			
	TOTAL CREDITS	62-70	

continued on the next page

[12] *You may substitute the prerequisite of MUS 140 with a passing score on the music theory placement exam.*
[13] *Recommended music courses: MUS 103, 104, 107, 109, 110, 123, 124, 130, 133, 134, 136, 145, 207, 208.*

POLITICAL SCIENCE DEGREE OPTION

Courses		Credits	Prerequisites
POS 121	Introductory Government & Politics	3	
POS 220	United States National Government	3	
Choose two of the following courses:			
POS 201	United States State and Local Government	3	
POS 222	Foreign Governments: A Comparative Analysis	3	
POS 231	Constitutional Law	3	POS 121 or 201 or 220
	TOTAL CREDITS	62-68	

PSYCHOLOGY DEGREE OPTION

Courses	Credits	Prerequisites
Choose psychology courses to satisfy the 12 credit requirement that you have not taken to satisfy the core requirements for the degree.	12	

You should meet with the Chairperson of the 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[14]

Courses		Credits	Prerequisites
PSY 123	Introductory Psychology	3*	
SOC 121	Introduction to Sociology I	3*	
SOC 131	Contemporary Social Problems	3	
SOC 141	Intro to Social Work & Social Welfare Policy	3	
SOC 205	Minority Groups in U.S. Society	3	
SOC 210	Methods of Social Casework & Counseling	3	
	TOTAL CREDITS	62-68	

SOCIAL SCIENCES DEGREE OPTION

Courses	Credits	Prerequisites
Choose liberal arts electives from: POS, PSY or SOC. (Courses that you have not taken to satisfy the core requirements for the degree.)	12	
TOTAL CREDITS	62-68	

SOCIOLOGY DEGREE OPTION

Courses	Credits	Prerequisites
Choose sociology courses to satisfy the 12 credit requirement that you have not taken to satisfy core requirements for the degree.	12	
TOTAL CREDITS	62-68	

**Should be taken for fulfillment of Social Science requirement.*

[14] Certain major courses may be offered only in the evenings.

THEATRE DEGREE OPTION

(Also see Fine Arts - Theatre Option)

Courses		Credits	Prerequisites
THE 145	Stagecraft	3	
THE 146	Play Production	3	
Choose two courses from the following:		6	
DAN 131	Elements of Dance	3	
DAN 132	Dance Appreciation	3	
DAN 201	Methods and Modern Techniques in Dance	3	
DAN 202	Improvisation and Composition	3	
SPE 124	Oral Interpretation	3	
THE 105	Introduction to Theatre	3	
THE 123	Theatre History	3	
THE 124	Contemporary Theatre	3	
THE 131	Acting I	3	
THE 132	Acting II	3	THE 131
THE 152	American Musical Theatre	3	
	TOTAL CREDITS	62-70	

VISUAL ARTS DEGREE OPTION

(Also see Fine Arts - Art Option)

Courses		Credits	Prerequisites
ART 145	Art Fundamentals: Two Dimensions	3	
ART 146	Art Fundamentals: Three Dimensions	3	
Choose two of the following three art history courses:		6	
ART 123	Art History: Ancient to Renaissance	3	
ART 124	Art History: Renaissance to Modern	3	
ART 125	Art History: Modern & Contemporary	3	
	Recommended Courses: [15]		
	TOTAL CREDITS	62-70	

[15] *Recommended art courses: ART 109, 110, 201, 202, 219, 220, 221, 222, 223, 224*

Management

BUSINESS ADMINISTRATION AND 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 experience in a particular field, earning your degree in Management may open up employment and promotion opportunities in various aspects of industry, commerce, specialized institutions, and government. The option in Credit and Financial Management opens career possibilities for you in credit and finance departments of commercial houses, industrial plants, or any establishment where credit is extended. As a Credit and Finance graduate, you will analyze financial reports and investigate the credit reputations of loan applicants. As a Food Industry Management graduate, you can work as a manager at the manufacturing, wholesale or retail level.

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

You have several choices with this major. You can earn the Associate in Applied Science in Management or you can choose one of two options, Credit and Finance or Food Industry Management. Another choice is the Certificate of Achievement in Management Support Services.

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

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

What will I learn if I study Management?

You establish or upgrade your managerial skills. The program is a comprehensive blend of social science theories, organizational behavior and design, classical management theories, managerial processes, functions, and decision-making.

Note: Not all MGT or FIN 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.

DEGREE PROGRAM

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

Courses		Credits	Prerequisites
BUS 101	Business Organization and Management	3	
BUS 107	Computer Applications for Business	3	
ENG 121	English Composition I	3	
	Mathematics Requirement [1]	3	
	Social Science Elective	3	
ACC 101	Financial Accounting	4	
ECO 201	Principles of Economics I	3	
ENG 122	English Composition II	3	ENG 121
MGT 210	Concepts of Business Management	3	BUS 101
	Social Science or Humanities Elective	3	
ACC 102	Managerial Accounting	4	ACC 101
MGT 205	Principles of Labor Relations	3	BUS 101 or MGT 220
ECO 202	Principles of Economics II	3	ECO 201
MGT 220	Human Resources Management	3	
	Humanities Elective	3	
	Physical/Health Ed Elective	1-3	
BUS 201	Business Law I	3	
MGT 214	Operations Management	3	MGT 210
MGT 216	Seminar in Management Experiences [2]	3	ACC 102; ECO 202; ENG 122; MGT 205, 210 & 220
	Recommended Business Elective [3]	3	
	Science Requirement [4]	3	
	TOTAL CREDITS	63-65	

CREDIT AND FINANCIAL MANAGEMENT DEGREE OPTION

Courses		Credits	Prerequisites
BUS 101	Business Organization and Management	3B	
BUS 107	Computer Applications for Business	3B	
ENG 121	English Composition I	3	
PSY 123	Introductory Psychology	3B	
	Mathematics Requirement [1]	3	
ACC 101	Financial Accounting	4A	
BUS 201	Business Law I	3B	
FIN 201	Credit and Collection Principles	3A	ACC 101
ENG 122	English Composition II	3	ENG 121
ECO 201	Principles of Economics I	3A	
ACC 102	Managerial Accounting	4A	ACC 101
BUS 202	Business Law II	3B	BUS 201
ECO 202	Principles of Economics II	3A	ECO 201
FIN 202	Advanced Credits	3A	FIN 201
MGT 220	Human Resources Management	3B	
	Physical/Health Ed Elective	1-3	
MKT201	Marketing I	3B	BUS 101

[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 201, 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. A Courses required for the Associate Award of The National Institute of Credit, 3000 Marcus Avenue, Lake Success, New York 11042 (516-488-1166)B Courses required for the Fellow Award of The National Institute of Credit 3000 Marcus Avenue, Lake Success, New York 11042 (516-488-1166)

***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.*

Courses		Credits	Prerequisites
BUS 205	Business Communications	3A	
FIN 203	Problems in Credit Management	3B	FIN 201 & 202
SPE 121	Fundamentals of Public Speaking	3B	
	or		
MKT143	Salesmanship	3B	
	or		
FIN 205	Credit & Financial Management		
	Field Experience	3	
	Science Requirement [5]	3	
	TOTAL CREDITS	63-65	

FOOD INDUSTRY MANAGEMENT DEGREE OPTION

Courses		Credits	Prerequisites
BUS 101	Business Organization and Management	3	
BUS 107	Computer Applications for Business	3	
ENG 121	English Composition I	3	
	Mathematics Requirement [6]	3	
	Social Science Elective	3	
ACC 101	Financial Accounting	4	
ECO 201	Principles of Economics I	3	
ENG 122	English Composition II	3	ENG 121
FIM 202	Sanitation & Regulatory Issues	3	
MKT201	Marketing I	3	BUS 101
ACC 102	Managerial Accounting	4	ACC 101
FIM 201	Food Marketing & Merchandising	3	MKT 201
FIM 203	Food Distribution, Sales & Production	3	
MGT 210	Concepts of Business Management	3	BUS 101
	Humanities Elective	3	
	Physical/Health Ed Elective	1-3	
FIM 205	Issues & Problems in Food Industry Mgt	3	FIM 201, 202, 203
FIM 204	Food Management Co-Operative Ed	3	FIM 201, 202, 203
	Science Requirement [5]	3	
	Free Elective	3	
	TOTAL CREDITS	63-65	

MANAGEMENT SUPPORT SERVICES CERTIFICATE PROGRAM

Courses		Credits	Prerequisites
BUS 101	Business Organization and Management	3	
BUS 205	Business Communications	3	
MGT 210	Concepts of Business Management	3	BUS 101
MGT 220	Human Resources Management	3	
ENG 121	English Composition I	3	
ENG 122	English Composition II	3	ENG 121
MGT 205	Principles of Labor Relations	3	BUS 101 or MGT 220
	Social Science Elective	3	
	Business Electives	6	
	TOTAL CREDITS	30	

[5]Students may elect courses with a code of BIO, CHM, ENV, PHY or SCI for which they have the appropriate academic preparation.
[6]BUS 115 recommended. Students with the appropriate academic prerequisites, in consultation with their Academic Advisor, should elect the appropriate Mathematics course. A Courses required for the Associate Award of The National Institute of Credit, 3000 Marcus Avenue, Lake Success, New York 11042 (516-488-1166)B Courses required for the Fellow Award of The National Institute of Credit 3000 Marcus Avenue, Lake Success, New York 11042 (516-488-1166)

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.*

■ *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. 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.

Marketing

BUSINESS ADMINISTRATION AND MANAGEMENT DEPARTMENT

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. The Materials Management Option is a senior year sequence, which will prepare you for a position in materials scheduling, forecasting and inventory management. The Transportation and Distribution option is a senior year elective sequence, which will prepare you for a position in customer servicing, transportation management, and/or warehousing and inventory supervision.

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

You have several choices with this major. You can earn the Associate in Applied Science in Marketing or you can choose one of two options, Materials Management or Transportation and Distribution. You may also choose to earn the Certificate of Achievement in Materials Management or Transportation and Distribution.

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 or, physical distribution, or materials management.

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.

DEGREE PROGRAM

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

Courses		Credits	Prerequisites
ACC 101	Financial Accounting	4	
BUS 101	Business Organization and Management	3	
	Mathematics Requirement [1]	3	
BUS 107	Computer Applications for Business	3	
ENG 121	English Composition I	3	
ACC 102	Managerial Accounting	4	ACC 101
BUS 201	Business Law I	3	
ENG 122	English Composition II	3	ENG 121
MKT201	Marketing I	3	BUS 101
	Social Science Elective	3	
MKT209	Marketing Field Experience	3	MKT 201
	or		
BUS 202	Business Law II	3	BUS 201
ECO 201	Principles of Economics I	3	
MKT202	Marketing II	3	MKT 201
MKT203	Principles of Advertising	3	BUS 101
	Physical/Health Ed Elective	1-3	
	Social Science or Humanities Elective	3	
ECO 202	Principles of Economics II	3	ECO 201
MKT143	Salesmanship	3	
MKT206	Marketing Management Seminar	3	Senior status
	Science Requirement [2]	3	
	Humanities Elective	3	
	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.

***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.*

MATERIALS MANAGEMENT DEGREE OPTION

Courses		Credits	Prerequisites
ACC 101	Financial Accounting	4	
BUS 101	Business Organization and Management	3	
	Mathematics Requirement [1]	3	
BUS 107	Computer Applications for Business	3	
ENG 121	English Composition I	3	
ACC 102	Managerial Accounting	4	ACC 101
BUS 201	Business Law I	3	
DIS 101	Concepts of Materials Management, Transportation & Distribution	3	BUS 101
ENG 122	English Composition II	3	ENG 121
	Social Science Elective	3	
ECO 201	Principles of Economics I	3	
MMG201	Materials Management I	3	DIS 101
MGT 205	Principles of Labor Relations	3	BUS 101 or MGT 220
MKT201	Marketing I	3	BUS 101
	Physical/Health Ed Elective	1-3	
	Social Science or Humanities Elective	3	
MMG 202	Materials Management II	3	DIS 101
PUR 201	Purchasing Principles	3	BUS 101
MKT209	Marketing Field Experience		MKT 201
	or	3	
	Recommended Business Elective [3]		
	Science Requirement [2]	3	
	Humanities Elective	3	
	TOTAL CREDITS	63-65	

MATERIALS MANAGEMENT CERTIFICATE PROGRAM

Courses		Credits	Prerequisites
BUS 101	Business Organization and Management	3	
BUS 107	Computer Applications for Business	3	
DIS 101	Concepts of Materials Management, Transportation & Distribution	3	BUS 101
MMG 201	Materials Management I	3	DIS 101
MMG 202	Materials Management II	3	DIS 101
PUR 201	Principles of Purchasing	3	BUS 101
	Appropriate Business Elective [4]	3	
ENG 121	English Composition I	3	
ENG 122	English Composition II	3	ENG 121
BUS 205	Business Communications	3	
	TOTAL CREDITS	30	

continued on the next page

[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.

[3] Elective must be selected after consultation with an academic advisor to insure that a solid foundation is developed in a potential area of application of Materials Management Concepts.

[4] Elective must be selected after consultation with an academic advisor to insure that a solid foundation is developed in a potential area of application.

***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.*

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.

Note: Not all MKT or MMG 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.

Note: Not all MKT or DIS 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.

MARKETING - TRANSPORTATION - DISTRIBUTION DEGREE OPTION

Courses		Credits	Prerequisites
ACC 101	Financial Accounting	4	
BUS 101	Business Organization and Management	3	
	Mathematics Requirement [5]	3	
BUS 107	Computer Applications for Business	3	
ENG 121	English Composition I	3	
ACC 102	Managerial Accounting	4	ACC 101
BUS 201	Business Law I	3	
ENG 122	English Composition II	3	ENG 121
MKT201	Marketing I	3	BUS 101
	Social Science Elective	3	
DIS 101	Concepts of Materials Management, Transportation & Distribution	3	BUS 101
DIS 201	Customer Servicing	3	BUS 101
ECO 201	Principles of Economics I	3	
MGT 205	Principles of Labor Relations	3	BUS 101 or MGT 220
	Physical/Health Ed Elective	1-3	
	Social Science or Humanities Elective	3	
DIS 202	Transportation	3	DIS 101
DIS 204	Warehousing and Inventory	3	DIS 101
MKT209	Marketing Field Experience		MKT 201
	or	3	
	Recommended Business Elective [6]		
	Science Requirement [7]	3	
	Humanities Elective	3	
	TOTAL CREDITS	63-65	

TRANSPORTATION AND DISTRIBUTION CERTIFICATE PROGRAM

Courses		Credits	Prerequisites
BUS 101	Business Organization and Management	3	
BUS 107	Computer Applications for Business	3	
BUS 205	Business Communications	3	
DIS 101	Concepts of Materials Management, Transportation, & Distribution	3	BUS 101
DIS 201	Customer Servicing	3	BUS 101
DIS 202	Transportation	3	DIS 101
DIS 204	Warehousing and Inventory	3	DIS 101
ENG 121	English Composition I	3	
ENG 122	English Composition II	3	ENG 121
MKT 201	Marketing I	3	BUS 101
	TOTAL CREDITS	30	

[4] Elective must be selected after consultation with an academic advisor to insure that a solid foundation is developed in a potential area of application.

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

[6] Elective must be selected after consultation with an academic advisor to insure that a solid foundation is developed in a potential area of application of Transportation Distribution Concepts.

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

***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.*

MATHEMATICS OPTION - SCIENCE TRANSFER DEGREE

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

Courses		Credits	Prerequisites
BIO 123	General Biology I [1]	4	
	or		
CHM 123	General Chemistry I [1]	4	
ENG 121	English Composition I	3	
MAT 131	Analytic Geometry and Calculus I	4	MAT 129
	Social Science Elective	3	
	Physical/Health Ed Elective	1-3	
BIO 124	General Biology II [1]	4	BIO 123
	or		
CHM 124	General Chemistry II [1]	4	CHM 123
ENG 122	English Composition II	3	ENG 121
MAT 132	Analytic Geometry and Calculus II	4	MAT 131
	Computer Science Elective [2]	3-4	
	Social Science Elective	3	
	Humanities Elective	3	
MAT 233	Analytic Geometry and Calculus III	4	MAT 132
	Mathematics Elective [3]	4	
PHY 121	General Physics I [4]	4	MAT 129
	General Elective	3	
	Humanities Elective	3	
MAT 234	Differential Equations	4	MAT 233
	Mathematics Elective [3]	4	
PHY 122	General Physics II [4]	4	PHY 121
	TOTAL CREDITS	65-69	

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

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 & 014), as well as precalculus (MAT 129 or MAT 127/128). 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 Professor DeLucia, Mathematics Department Chair, at (732) 906-2585.

Mechanical Engineering Technology

MECHANICAL AND CIVIL/CONSTRUCTION ENGINEERING TECHNOLOGY DEPARTMENT

■ *Why major in Mechanical/ Manufacturing Technology?*

Mechanical/Manufacturing Engineering Technology provides the right combination of theory and hands-on training for the rapidly developing field of automated, flexible manufacturing. The program emphasizes manufacturing, electronics, robotics, and computers. 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/ Manufacturing Engineering Technology, what degree can I earn?*

The Associate in Applied Science Degree which prepares you for a career in Computer Assisted Design (CAD) drafting, mechanical design, material testing, fluid power, stress analyst or as an engineering assistant.

■ *If I major in Mechanical/ Manufacturing Engineering Technology, can I transfer to an upper division college or university?*

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

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

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

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

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

■ *Where should I direct specific questions about this program?*

Contact Professor Rubino, Department Chair, at (732) 906-2586.

DEGREE PROGRAM

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

Courses		Credits	Prerequisites
ENG 121	English Composition I	3	
MAT 109	College Algebra & Trigonometry I	3	
MEC111	Manufacturing Processes & Materials I	4	
MEC123	Technical Graphics/CAD I	3	
MCT 101	Intro to Engineering Technology	2	
SPE 121	Public Speaking	3	
ENG 122	English Composition II	3	ENG 121
MAT 110	College Algebra & Trigonometry II	2	MAT 109
MEC112	Manufacturing Processes & Materials II	4	MCT 101 & MEC 111
MEC124	Technical Graphics/CAD II	3	MEC 123
PHY 115	College Physics I	4	MAT 110
CIT 105	Statics for Technicians	3	CIT 110 or MCT 101; MAT 109
ELT 106	Technical Electricity	4	MAT 110
MAT 112	Unified Calculus	3	MAT 110
MEC218	Kinematics	3	
PHY 116	College Physics II	4	PHY 115
CIT 203	Strength of Materials	4	CIT 105 & SPE 121
MEC204	Fluid Mechanics	4	CIT 105, MAT 110
MEC220	Intro to Robotics & Automated Systems	4	ELT 106; MEC 112, 124, 219; PHY 116
	Social Science Elective	3	
	Physical/Health Ed Elective	1-3	
	TOTAL CREDITS	67-69	

Mecomtronics Engineering Technology

ELECTRICAL ENGINEERING TECHNOLOGY DEPARTMENT

DEGREE PROGRAM

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

Courses		Credits	Prerequisites
ENG 131	Research, Composition & Presentation I	2	
MAT 145	Integrated Mathematics I	2	
MCT 101	Intro to Engineering Technology	2	
MCT 103	Foundations of Mecomtronics	4	
PHY 145	Mecomtronics Physics I	2	
	Physical/Health Ed Elective	1-3	
	Social Science/Humanities Elective	3	
ENG 132	Research, Composition & Presentation II	2	ENG 131
MAT 146	Integrated Mathematics II	2	MAT 145
MCT 102	Support & Maintenance of Computer Systems	2	MCT 101 & 103
MCT 104	Electrical & Mechanical Power Systems	4	MCT 101 & 103
MCT 106	Automated Systems	4	MCT 101 & 103
PHY 146	Mecomtronics Physics II	2	PHY 145
ENG 133	Research, Composition & Presentation III	2	ENG 132
MAT 245	Integrated Mathematics III	2	MAT 146
MCT 201	Telecommunications with Industrial Applications	3	MCT 102, 104 & 106
MCT 203	Control & Automation of Manufacturing Systems	3	MCT 104 & 106
MCT 205	Manufacturing Processes & Quality Management	4	MCT 106
PHY 245	Mecomtronics Physics III	2	PHY 146
MAT 246	Integrated Mathematics IV	2	MAT 245
MCT 202	Special Topics in Engineering Technology	3	MCT 201, 203 & 205
MCT 206	Capstone Project	3	MCT 201, 203 & 205
PHY 246	Mecomtronics Physics IV	2	PHY 245
	Social Science/Humanities Elective	3	
	Technical Elective or Co-op*	3	MCT 201 & 203
Technical Elective Courses*		3-4	
Choose one of the following courses:			
CSC 125	Web Page Design & Development	3	CSC 108
CSC 133	Intro to Computer Science Using C++	4	
CSC 230	Multimedia Production & Authoring Tools	4	CSC 110
ELT 224	Communication Electronics	3	ELT 203
ELT 230	Industrial Electronics	3	ELT 103
ELT 234	Audio Technology	3	ELT 103
ELT 238	Advanced Digital Electronics	3	ELT 111
MCT 208	Mecomtronics & Telecommunication Technology Field Experience	3	MCT 102, 104 & 106; TCT 104 & 122
MEC219	Dynamics of Machine Elements	3	MAT 110, MCT 101, MEC 123, PHY 115 & SPE 121
	TOTAL CREDITS	64-66	

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

■ *Why major in Mecomtronics Engineering Technology?*

Mecomtronics combines the areas of mechanical, electronics, computers and telecommunications technology. As an engineering technician you will work individually, or as a member of a professional team, in the applied aspects of science and engineering devoted to the implementation and extension of existing and continually emerging new technologies.

■ *If I major in Mecomtronics Engineering Technology, what degree can I earn?*

The Associate in Applied Science Degree which prepares you to begin your career after graduation. Career opportunities exist in business, industry and government.

■ *If I major in Mecomtronics Engineering Technology, can I transfer to an upper division college of university?*

Many upper division colleges and universities will apply some of the courses you have taken towards a bachelor's degree in engineering technology, engineering and technology education.

■ *What will I learn if I study Mecomtronics Engineering Technology?*

You acquire knowledge and skills in demand by business and industry in the areas of administration, installations and maintenance of computer and telecommunications system; automated systems development, operation and maintenance; assist with manufacturing processes, planning management and operation, as well as apply quality principles for improvement of products.

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

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

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

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

■ *Where should I direct specific questions about this program?*

Contact Professor Waintraub, Department Chair, at (732) 906-2584.

Media Arts & Design

MEDIA ARTS & DESIGN DEPARTMENT

■ *What will I learn if I study Marketing Art & Design?*

Your studies combine computer-linked commercial photography and commercial art with business and general education. The program emphasizes hands-on experience in the laboratory or studio to develop both your creative ability and the mechanical skills essential to business-oriented art and photography careers. The faculty who teach your major courses have professional experience in the fields of commercial art and photography as well as in marketing and business.

■ *If I major in Media Arts & Design, what degree can I earn?*

The Associate in Applied Science which prepares you for a career as a commercial artist, or a photographer, in advertising agencies, company advertising departments, publishing companies, photography studios, color reproduction laboratories, printing firms, or retail establishments.

■ *If I major in Media Arts & Design, can I transfer to a four-year college or university?*

Many colleges and universities will apply the courses you have taken for your degree towards a bachelor's degree. Articulation agreements exist with some colleges that will accept you as a junior and accept all of your courses.

■ *Why major in Media Arts & Design?*

There is a growing need for computer graphic artists. This program includes a cooperative work experience option. As a senior, if you choose this option, you may be placed in a paid approved position that will enhance your competency by providing hands-on experience with state-of-the-art equipment used by professional designers and photographers. You spend a semester working part-time on a one-to-one basis with a graphic designer or commercial photographer learning the latest techniques used in these fields. Job coordinators visit you at work to hold progress review sessions with you and your employer. You also attend a weekly co-op seminar on campus.

DEGREE PROGRAM

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

Courses		Credits	Prerequisites
BUS 107	Computer Applications for Business [1]	3	
ENG 121	English Composition I	3	
MAD 107	Photography I	3	
MAD 111	Color and Design I	3	
MAD 117	Freehand Drawing	3	
	Physical/Health Ed Elective	1-3	
ART 103	Art in Industry and Commerce	2	
BUS 101	Business Organization and Management	3	
ENG 122	English Composition II	3	ENG 121
MAD 106	Mechanical & Computer Studio Skills	3	
MAD 108	Photography II	3	MAD 107
MAD 112	Color and Design II	3	MAD 111
MKT143	Salesmanship	3	
	or		
MKT 203	Principles of Advertising	3	BUS 101
	Social Science Elective	3	
	Mathematics Requirement [2]	3	
You must take a minimum of six credits from below: [3]			
AGD 205	Layout Design	2	All MAD courses and ART 103
AGD 211	Advertising Design I	2	All MAD courses and ART 103
AGD 217	Mechanical Print Production	2	All MAD courses and ART 103
PCP 225	Production & Stock Photography	3	All MAD courses and ART 103
PCP 221	Color Printing Methods & Practice	3	All MAD courses and ART 103
AGD 209	Portfolio Project [4]	2	6 credits of AGD completed and 6 more in progress.
	or		
PCP 213	Portfolio Project	4	6 credits of PCP completed and 6 more in progress.
	Humanities Elective or Social Science Elective	3	
	Humanities Elective	3	
	Science Elective [5]	3	
You must take a minimum of six credits from below: [3]			
AGD 206	Typography	2	All MAD courses and ART 103
AGD 212	Advertising Design II	2	AGD 211
AGD 218	Computer Pre-Press	2	AGD 217
PCP 226	Professional/Studio Photography	3	All MAD courses and ART 103
PCP 224	Computer Imagery	3	6 credits of AGD/PCP
	TOTAL CREDITS	63-65	

[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.

AGD 222 SEMINAR & CO-OP AND PCP 222 SEMINAR & CO-OP, 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.

You may select twelve credits in your option from the following courses. If you do not want to choose one of the two options, you may combine courses from either group to total 12 credits. Additionally, all students must take AGD 209 or PCP 213 as appropriate to their interests.[1] This must include a minimum of 6 credits of odd numbered courses and 6 even numbered courses, excluding AGD 209 and PCP 213.

ADVERTISING GRAPHICS DESIGN DEGREE OPTION

Courses		Credits	Prerequisites
AGD 205	Layout Design	2	All MAD courses and ART 103
AGD 206	Typography	2	All MAD courses and ART 103
AGD 209	Portfolio Project	2	All MAD courses and ART 103 6 credits of AGD* completed and 6 more in progress
AGD 211	Advertising Design I	2	All MAD courses and ART 103
AGD 212	Advertising Design II	2	AGD 211
AGD 217	Mechanical Print Production	2	All MAD courses and ART 103
AGD 218	Computer Pre-Press	2	AGD 217

PROFESSIONAL COMMERCIAL PHOTOGRAPHY DEGREE OPTION

Courses		Credits	Prerequisites
PCP 213	Portfolio Project	3	All MAD courses and ART 103 6 credits of PCP* completed and 6 more in progress
PCP 221	Color Printing Methods & Practice	3	All MAD courses and ART 103
PCP 224	Computer Imagery	3	6 credits of PCP/AGD
PCP 225	Production & Stock Photography	3	All MAD courses and ART 103
PCP 226	Professional/Studio Photography	3	All MAD courses and ART 103

**If you are not pursuing a specific option you may mix AGD and PCP courses. In that case you will be assigned to AGD 209 or PCP 213 depended on the option in which you have the majority of your major credits.*

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

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. 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 Stewart, Department Chair, at (732) 906-2577.

Medical Laboratory Technology

MEDICAL LABORATORY TECHNOLOGY DEPARTMENT

The program in Medical Laboratory Technology is accredited by the National Accrediting Agency for Clinical Laboratory Science (NAACLS).

Why major in Medical Laboratory Technology?

Qualified personnel are needed to work for laboratories in the community. You can find positions in hospitals, reference laboratories, research laboratories, pharmaceutical companies, veterinary laboratories, as well as sales and quality control. As a technician you perform scientific analyses that facilitate physicians' diagnoses and treatment of diseases.

If I major in Medical Laboratory Technology, what degree can I earn?

The Associate in Applied Science Degree which prepares you for a career as a medical laboratory technician, working as a member of the paramedical team. Graduates qualify to meet requirements for certification by the National Certification Agency (NCA), American Society of Clinical Pathologists, and other certifying bodies.

What will I learn if I study Medical Laboratory Technology?

You receive an integrated experience, with lectures and laboratory practices both on-campus and in clinical facilities off-campus. You learn how to test specimens accurately and swiftly, with the highest ethical standards.

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

Algebra I is a prerequisite for all majors. Algebra I competency must be verified with a passing score on the College's placement test. You must have a "C" or better in high school laboratory biology and laboratory chemistry. As a result of your performance on the College's placement test, you may need developmental coursework. All developmental coursework must be completed before you will be considered for admission to the program.

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

If you register for an average of 17 credits each semester, you can complete the degree in two years. You must register for the summer session following your first year.

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

You must meet the academic standards of progress outlined at left to stay in the program.

Where should I direct specific questions about this program?

Contact Professor Larkin, Department Chair, at (732) 906-2581.

DEGREE PROGRAM

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

Courses		Credits	Prerequisites
BIO 117	Biology I [1]	4	
CHM 117	Chemistry I [1]	4	
ENG 121	English Composition I	3	
MAT 107	Mathematics I [2]	3	
MED 101	Intro to the Medical Laboratory I	2	
BIO 118	Biology II [1]	4	BIO 117
CHM 118	Chemistry II [1]	4	CHM 117
ENG 122	English Composition II	3	ENG 121
MAT 108	Mathematics II [2]	3	MAT 107
MED 102	Intro to the Medical Laboratory II	3	BIO 117, CHM 117, ENG 121, MAT 107 & MED 101
PSY 123	Introductory Psychology	3	
Summer Session			
MED 210	Medical Laboratory Technology I [3]	6	BIO 118, CHM 118, ENG 122, MAT 108 & MED 102
BIO 211	Principles of Microbiology [4]	4	
CHM 201	Principles of Organic Chemistry	4	CHM 118
MED 211	Medical Laboratory Technology II [5]	8	MED 210
	Physical/Health Ed Elective	1-3	
CHM 202	Biochemistry	4	CHM 201
MED 212	Medical Laboratory Technology III [5]	8	MED 211, BIO 211
	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 Lab 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 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 MLT program.
8. The goals of the program are consistent with the College's mission of developing competencies for employment and continuing education.

[1] BIO 123-124 and CHM 123-124 may be substituted for BIO 117-118, CHM 117-118 for students who meet those course prerequisites and with the Chairperson's written approval.

[2] MAT 123-124 or MAT 129-131 may be substituted for MAT 107-108 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 is a 16 hour/week clinical practicum.

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

DEGREE PROGRAM

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

Courses		Credits	Prerequisites
BIO 111	Anatomy and Physiology I [1]	4	
ENG 121	English Composition I	3	
NRS 111	Foundations of Nursing [2]	6	CPR Certificate
NRS 112	Principles & Practice of Health Promotion [2]	3	
PSY 123	Introductory Psychology	3	
BIO 112	Anatomy and Physiology II	4	BIO 111
CSC 107	Computers in Health Technologies	1	
ENG 122	English Composition II	3	ENG 121
NRS 115	Family Health Across the Life Span [2]	8	BIO 111; NRS 111 & 112; PSY 123
BIO 211	Principles of Microbiology [1]	4	
NRS 211	Nursing of Adults I [2]	8	NRS 111, 112 & 115; BIO 211
	Humanities Elective	3	
	Sociology Elective	3	
NRS 212	Nursing of Adults II [2]	8	BIO 211& NRS 211
SCI 121	Physical Science	4	
	Humanities Elective	3	
	Physical/Health Ed Elective	1-3	
	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 than "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;
5. Attendance and participation in all scheduled learning activities; and
6. Adherence to the policies of UMDNJ and MCC and their affiliating health care agencies.
7. UMDNJ-SN Students must complete their Academic Nursing Program within 5 years of beginning enrollment in their first nursing course.

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 vult contendere or non vult to an indictment, information or complaint alleging a violation of any Federal or State law relating to narcotic drugs. . ." Application for licensure may be denied by the Board if violations exist. Application for the Board of Nursing also may deny licensure if an applicant has charges pending or has ever been convicted of a felony or misdemeanor and/or been found guilty of professional misconduct or negligence. These matters should be cleared with the New Jersey Board of Nursing before applying for admission to the Joint Nursing Program.

[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] See course descriptions for corequisites.

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

The courses you take can be applied to the Bachelor of Science Degree. The College has established an articulation agreement with the University of Medicine and Dentistry of New Jersey to facilitate transfer into UMDNJ's program with Ramapo College of New Jersey and the New Jersey Institute of Technology.

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

The Associate in Science Degree which prepares you for entry-level positions in nursing and to take the National Council Licensure Examination for Registered Nurses (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 is a prerequisite for all majors. Algebra I must be verified with a passing score on the College's placement test. **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 you must have a GPA of 2.0 or higher to be considered. When you apply, you must take the National League of Nursing Exam. As a result of your performance on the College's placement test, you may need developmental coursework. All developmental coursework must be completed before you will be considered for admission to the program.

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

If you register for an average of 17 credits each semester, you can complete the degree in two years. If you have health care experience as an LPN, and are highly motivated, you may obtain credit for previously acquired nursing knowledge and skills by taking advantage of the Advanced Placement Program (APP). You must pass a written test and a clinical performance evaluation in order to receive credit for nursing courses.

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

You must 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.

Office Administration

OFFICE ADMINISTRATION DEPARTMENT

Why major in Office Administration?

Technology continues to change the office environment, and office personnel at all levels must keep pace to retain a professional edge. Job opportunities are available part-time while attending Middlesex and full time upon graduation. As a graduate of this program, you can play a strategic role in helping an organization run smoothly. As a senior or graduate, you are eligible to take the Certified Professional Secretary Examination (CPS) given by the International Association of Administrative Professionals (IAAP).

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

You have three choices with this major. You can earn the Associate in Applied Science Degree, the Certificate of Achievement, or the Business Software Applications Technical Certificate, all of which prepare you to become an integral member of a professional office team.

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

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

What will I learn if I study Office Administration?

You acquire a background in business and general education, enhanced by the development of high-level technological and organizational skills including decision making, time management, teamwork, and setting priorities as well as the ability to use a variety of software packages. Through cooperative work experiences, you apply skills and classroom theory to on-the-job situations.

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

Algebra I is a prerequisite for all majors. Competency must be verified with a passing score on the College's placement test. If you demonstrate proficiency in touch typewriting, the keyboarding course may be waived with the permission of the Office Administration Chairperson.

DEGREE PROGRAM

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

Courses		Credits	Prerequisites
BUS 101	Business Organization and Management	3	
BUS 107	Computer Applications for Business [1]	3	OAD 010 or BUS 010 or OAD 106
ENG 121	English Composition I	3	
OAD 101	Document Processing I [2]	3	OAD 106 or BUS 010 or OAD 010
	Physical/Health Ed Elective	1-3	
	Mathematics Requirement [3]	3	
ACC 101	Financial Accounting	4	
ENG 122	English Composition II	3	ENG 121
OAD 102	Document Processing II [4]	2	OAD 101
OAD 107	Transcription for Business [5]	3	OAD 101
OAD 122	Word Processing [5]	3	OAD 101
	Humanities Elective	3	
OAD 207	Advanced Transcription for Business	3	OAD 101, 102, 107 & 122
OAD 210	Records Management	3	OAD 101
OAD 222	Information Processing	3	BUS 107; OAD 122
OAD 211	Contemporary Office Procedures	3	OAD 102, 107 & 122
	Science Elective [6]	3	
	General Education Elective	3	
OAD 223	Integrated Software Applications	3	OAD 110, 113, 114, 116 or 222
OAD 213	Administrative Office Management	3	OAD 211
OAD 208	Office Administration Cooperative Work Experience	3	OAD 211
	General Education Elective	3	
	Social Science Elective	3	
	TOTAL CREDITS	67-69	

[1] Prerequisite or Corequisite: OAD 010 or BUS 010 or OAD 106 or keyboarding course with a grade of "C" or higher or department waiver. Credit-by-Exam is available for BUS 107.

[2] Prerequisite: OAD 010 or BUS 010 or OAD 106 or permission of Department Chairperson. Credit-by-Exam is 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.

[3] BUS 115 is recommended. Students with the appropriate academic prerequisites, in consultation with their academic advisor, should enroll in an appropriate mathematics course.

[4] Credit-By-Exam is available for this course. For additional information contact the Testing Center or the Department Chairperson.

[5] See course descriptions for corequisites.

[6] Students may elect courses offered by the Biology, Chemistry, or Physics Department for which they have an appropriate academic background.

CERTIFICATE OF ACHIEVEMENT PROGRAM

Courses		Credits	Prerequisites
BUS 107	Computer Applications for Business [1]	3	
BUS 205	Business Communications	3	
ENG 121	English Composition I	3	
OAD 101	Document Processing I [2]	3	OAD 106 or BUS 010 or OAD 010
OAD 102	Document Processing II [4]	2	OAD 101
OAD 107	Transcription for Business [5]	3	OAD 101
OAD 122	Word Processing [5]	3	OAD 101
OAD 211	Contemporary Office Procedures	3	OAD 102, 107 & 122
OAD 222	Information Processing	3	BUS 107; OAD 122
	Mathematics Elective [3]	3	
	General Education Elective	3	
	TOTAL CREDITS	32	

[1] Prerequisite or Corequisite: OAD 010 or BUS 010 or OAD 106 or keyboarding course with a grade of "C" or higher or department waiver. Credit-by-Exam is available for BUS 107.

[2] Prerequisite: OAD 010 or BUS 010 or OAD 106 or permission of Department Chairperson. Credit-by-Exam is 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.

[3] BUS 115 is recommended. Students with the appropriate academic prerequisites, in consultation with their academic advisor, should enroll in an appropriate mathematics course.

[4] Credit-By-Exam is available for this course. For additional information contact the Testing Center or the Department Chairperson.

[5] See course descriptions for corequisites.

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

If you do not need to take developmental coursework, and you register for an average of 17 credits each semester, you can complete the degree in two years. You can complete the certificate program in one year if you register for one-half of the required credits each semester. You can shorten the amount of time by taking courses in the summer and winter sessions or by taking Credit-By-Exam.

Note: Not all OAD courses are offered every semester both day and evening. Please call the Department Chair at (732) 906-2594 to discuss course offerings for future semesters.

If you have been working as an Office Professional, you may have acquired some of the skills needed for the degree.

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 Testing Center, Johnson Learning Center, Room 229, (732) 906-2508, for more information. 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 AND 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 include legal research, law office management and preparation of legal documents. Only an attorney may provide legal services directly to the public. The US and NJ Departments of Labor rank Paralegal as one of the fastest growing careers.

If I major in Paralegal Studies, what degree can I earn?

You have two choices with this major, which is also known as Legal Assistant. You can earn the Associate in Applied Science which prepares you for employment in law offices, corporate legal departments, legal services corporations, state government offices, title companies and federal and state courts. If you have 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 and three years of paralegal 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 have either 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, and you register for an average of 18 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.

DEGREE PROGRAM

Below are required courses and recommended course groupings and sequences for program completion. The Program is approved by the American Bar Association and the College is a member of the American Association for Paralegal Education.

Courses		Credits	Prerequisites
BUS 107	Computer Applications for Business [1]	3	
ENG 121	English Composition I	3	
LET 100	Introduction to Legal Assisting	2	
LET 101	Legal Research [2]	4	ENG 121; LET 100
LET 113	Legal Writing [3]	2	ENG 121, LET 100 & 101
	Social Science Elective	3	
ECO 201	Principles of Economics I	3	
ENG 122	English Composition II	3	ENG 121
LET 104	Property Transactions	3	LET 100, 101 & 113
LET 110	Litigation Procedure	4	LET 100, 101 & 113
LET 111	Contracts and the Uniform Commercial Code	3	LET 100, 101 & 113
LET 108	Torts	3	LET 100, 101 & 113
LET 112	Business Organizations & Government Regulations	3	LET 100, 101, 111 & 113
LET	Paralegal Elective [5]	3	LET 100, 101&113
	Humanities Elective [6]	3	
	Physical/Health Ed Elective	1-3	
	Mathematics Elective [4]	3-4	
LET 114	Computer Applications for the Law Office [7]	3	LET 100, 101 & BUS 107
LET 280	Senior Seminar for Legal Assistants	3	LET 100, 101, 104, 108, 110, 111, 112 & 113
LET	Paralegal Elective [5]	3	LET 100, 101&113
	Humanities or Social Sci Elective [6]	3	
	Science Elective [8]	3-4	
	TOTAL CREDITS	64-68	

[1] Prerequisite or Corequisite: OAD 010, OAD 106, BUS 010, keyboarding course with a grade of "C" or higher or department waiver.

[2] Prerequisites or Corequisites: ENG 121 and LET 100.

[3] Prerequisites or Corequisites: ENG 121, LET 100 and LET 101.

[4] BUS 115 will satisfy the math requirement. Students considering transfer to a baccalaureate program should consult an academic advisor as to other math choices.

[5] Paralegal Electives: LET 105, LET 106, LET 107, LET 109 & LET 208.

[6] See department chairperson for acceptable courses.

[7] It is recommended that this course be taken after LET 104, LET 108 and LET 110.

[8] You may choose a science course for which you have the appropriate academic background from Biology, Chemistry, Environmental Science, Physics or Science.

***NOTE:** Not all LET courses are offered every semester both day and evening. Please call the Program Director at (732) 906-2576 to discuss course offerings for future semesters.*

CERTIFICATE OF ACHIEVEMENT PROGRAM

The Certificate Program in Paralegal Studies is designed for the person who already has a college degree - Associates, Bachelors or higher. The Program is approved by the American Bar Association and the College is a member of the American Association for Paralegal Education.*

Courses		Credits	Prerequisites
ENG 121	English Composition I [9]	3	
ENG 122	English Composition II [9]	3	ENG 121
LET 100	Introduction to Legal Assisting	2	
LET 101	Legal Research [10]	4	ENG 121; LET 100
LET 113	Legal Writing [11]	2	ENG 121; LET 101
LET 104	Property Transactions	3	LET 101
LET 108	Torts	3	LET 101
LET 110	Litigation Procedure	4	LET 101
LET 111	Contracts and the Uniform Commercial Code	3	LET 101
LET 112	Business Organizations & Government Regulations	3	LET 101 & 111
LET 114	Computer Applications for the Law Office [12]	3	LET 101
LET 280	Senior Seminar for Legal Assistants	3	LET 100, 101, 104, 108, 110, 111 & 112
Electives: You may, but are not required, to select one or more of the following electives.			
LET 105	Family Law	3	LET 101
LET 106	Wills and Estate Administration	3	LET 101
LET 107	Law Office Management	3	LET 101
LET 109	Criminal Law and Procedure	3	LET 101
LET 208	Legal Assistant Field Experience [13]	3	LET 100, 101, 110 plus 104 or 108 or 109
	TOTAL CREDITS	36**	

continued on the next page

**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.*

[9] This course may be satisfied by acceptable transfer credits or by Credit-by-Examination or CLEP credits.

[10] Prerequisites or Corequisites: ENG 121 (or waiver) and LET 100.

[11] Prerequisites or Corequisites: ENG 121 (or waiver) and LET 101.

[12] Students who do not have a working knowledge of word processing, spreadsheets and databases are encouraged to take BUS 107. It is also recommended that this course be taken after LET 104, LET 108 and LET 110.

[13] Permission of the Program Director.

What are the objectives of this program?

1. Maintain a strong, flexible program for the quality education of 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, and 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 are met?

1. Through flexible curriculum planning which stresses a balance between 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 legal assistant employment. This will be determined in the same method as number 2 above.

continued on the next page

4. By providing the program with a well qualified full-time director with the necessary time to devote to the extensive administrative duties of the position.

■ *What will I be able to do when I complete this program?*

1. Use the law library, including encyclopedias, reporter systems, digests, and practice manuals, including updating sources; utilize computer assisted research using WESTLAW, including 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, etc.

3. Use forms and filing procedures relevant to typical legal proceedings.

4. Use forms and follow 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 LET 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 Goldfarb, Program Director, at (732) 906-2576.

PARALEGAL STUDIES TECHNICAL CERTIFICATE

College degree & three years full time (or part time equivalent) work experience required. The Program is approved by the American Bar Association and the College is a member of the American Association for Paralegal Education.

Courses		Credits	Prerequisites
LET 100	Introduction to Legal Assisting	2	
LET 101	Legal Research [10]	4	LET 100
LET 113	Legal Writing [11]	2	LET 101
LET 110	Litigation Procedure	4	LET 101
LET 111	Contracts and the Uniform Commercial Code	3	LET 101
LET 280	Senior Seminar for Legal Assistants	3	LET 100, 101, 110, 111, 113 and Elective
Electives: Choose one of the following electives.			
LET 104	Property Transactions	3	LET 101
LET 105	Family Law	3	LET 101
LET 106	Wills and Estate Administration	3	LET 101
LET 107	Law Office Management	3	LET 101
LET 108	Torts	3	LET 101
LET 109	Criminal Law and Procedure	3	LET 101
LET 112	Business Organizations & Government Regulations	3	LET 101 & 111
LET 114	Computer Applications for the Law Office [12]	3	LET 101
	TOTAL CREDITS	21	

[10] *Prerequisites or Corequisites: ENG 121 (or waiver) and LET 100.*
[11] *Prerequisites or Corequisites: ENG 121 (or waiver) and LET 101.*
[12] *Students who do not have a working knowledge of word processing, spreadsheets and databases are encouraged to take BUS 107. It is also recommended that this course be taken after LET 104, LET 108 and LET 110.*

Pharmacy Assistant

BIOLOGY DEPARTMENT

CERTIFICATE PROGRAM

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

Courses		Credits	Prerequisites
BIO 106	Human Biology, Biomedical Issues & Society [1]	4	
CHM 107	Principles of Chemistry [2]	4	
CSC 107	Computers in Health Technologies [3]	1	
ENG 121	English Composition I	3	
MAT 107	Mathematics I [4]	3	
ENG 122	English Composition II	3	ENG 121
HED 150	Contemporary Health Issues	3	
HIS 130	Health Care & Medicine in the Western World	3	
MAT 108	Mathematics II	3	MAT 107
PHA 101	Intro to Pharmacy	4	CHM 107
PSY 123	Introductory Psychology	3	
	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 123 for CHM 107.
[3] You may substitute a higher-level computer science course.
[4] You may substitute MAT 129-131 for MAT 107-108.

Why major in Pharmacy Assistant Technology?

As a pharmacy technician, you can assist in various technical activities in a pharmacy under the supervision of a licensed pharmacist. You can maintain patient records; set-up, package and label medication doses; fill and dispense routine orders for stock supplies in patient care areas; maintain drug supply inventories and mix drugs with injectable fluids.

If I major in Pharmacy Assistant Technology, what do I earn?

The Certificate of Achievement which prepares you to enter the field as supportive personnel in hospitals or community pharmacies.

If I major in Pharmacy Assistant 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 program in science or pharmacy. See department chair for specific details. Students specifically seeking pharmacy should consider Chemistry Option - Science Transfer.

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

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

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

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

Where should I direct specific questions about this program?

Contact Professor Przygoda, Department Chair, at (732) 906-2592.

Physics

CHEMISTRY AND PHYSICS DEPARTMENT

■ *Why major in Physics Transfer?*

This program parallels the first two years of baccalaureate degree programs in physics related fields. Your major prepares you upon graduation, to transfer to a four-year college or university to pursue studies in physics, applied Physics, computational Physics, astronomy, astrophysics, geology, meteorology, material sciences, and other related fields.

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

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

■ *What will I learn if I study Science Transfer?*

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

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

You must have a grade of "C" or better in high school algebra II, geometry, advanced algebra and trigonometry, laboratory chemistry and laboratory physics. You must also pass the College's placement test.

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

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

■ *Where should I direct specific questions about this program?*

Contact Dr. Murray, Department Chair, at (732) 906-2587.

PHYSICS OPTION - SCIENCE TRANSFER DEGREE

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

Courses		Credits	Prerequisites
CHM 123	General Chemistry I	4	
ENG 121	English Composition I	3	
MAT 131	Analytic Geometry & Calculus I	4	
	Social Science Elective	3	
	Physical/Health Ed Elective	1-3	
CHM 124	General Chemistry II	4	CHM 123
MAT 132	Analytic Geometry & Calculus II	4	MAT 131
PHY 131	Analytical Physics I	4	MAT 131
	Social Science Elective	3	
ENG 122	English Composition II	3	ENG 121
MAT 210	Linear Algebra	4	MAT 132
MAT 233	Analytic Geometry & Calculus III	4	MAT 132
PHY 132	Analytical Physics II	4	PHY 131
	Humanities Elective	3	
MAT 234	Differential Equations	4	MAT 233
PHY 231	Analytical Physics III	4	PHY 132; MAT 132
	Computer Science Elective*	3-4	
	Humanities Elective	3	
	TOTAL CREDITS	62-65	

**Choose CSC 109 or higher.*

Psychosocial Rehabilitation and Treatment

JOINT PROGRAM WITH THE UNIVERSITY OF MEDICINE AND DENTISTRY OF NEW JERSEY
DEPARTMENT OF PSYCHIATRIC REHABILITATION AND BEHAVIORAL HEALTH CARE

DEGREE PROGRAM

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

Courses		Credits	Prerequisites
CSC 107	Computers in Health Technologies	1	
ENG 121	English Composition I	3	
PSR 101	Intro to the Principles of Psychosocial Rehabilitation	3	
PSR 102	Communication Techniques in Interviewing and Counseling	3	
PSY 123	Introductory Psychology	3	
BIO 105	Heredity, Evolution & Society [1]	4	
PSR 103	Intro to Group Dynamics	3	PSR 101
PSR 104	Clinical Principles in Psychosocial Rehabilitation and Treatment	3	PSR 101
ENG 122	English Composition II	3	ENG 121
Summer Session			
PSR 105	Rehabilitation and the Individual with Severe Mental Illness I	5	PSR 101, 102, 103 & 104
BIO 106	Human Biology, Biomedical Issues & Society [1]	4	
PSR 206	Rehabilitation and the Individual with Severe Mental Illness II	5	PSR 101, 102, PSR 105
PSR 207	Community Resource Management and the Individual with Severe Mental Illness	3	PSR 101
PSY 235	Abnormal Psychology	3	PSY 123
PHI 123	Ethics	3	
PSR 208	Rehabilitation and the Individual with Severe Mental Illness III	5	PSR 206
PSR 209	Emerging Topics in Psychosocial Rehabilitation and Treatment	3	PSR 206
SOC 121	Intro to Sociology	3	
	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.

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

Why major in Psychosocial Rehabilitation and Treatment?

It is an exciting and innovative field that empowers and encourages individuals with a psychiatric disability to become more self-sufficient, improve their quality of life, and sustain themselves in the community.

If I major in Psychosocial Rehabilitation and Treatment, what degree can I earn?

The Associate in Science Degree that prepares you for a career caring for individuals with mental illness in community based service settings.

What will I learn if I study Psychosocial Rehabilitation and Treatment?

You can empower and encourage people with psychiatric disabilities to become more self-sufficient, improve their quality of life, and sustain themselves in the community. You learn basic helping skills and specific techniques of psychiatric rehabilitation.

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

Algebra I is a prerequisite for all majors. Algebra I competency must be satisfied with a passing score on the College's placement test. You must have a "C" or better in one year of a high school laboratory science. As a result of your performance on the College's placement test, you may need developmental coursework. All developmental coursework must be completed before you will be considered for admission to the program.

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

If you register for an average of 15 credits each semester, 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. You must meet with program director each semester prior to registration.

Where should I direct specific questions about this program?

Contact Professor Barrett, Program Director, at (732) 906-4177.

Radiography Education

RADIOGRAPHY 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' and 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 through three of our affiliates providing the "hands-on" experience necessary to perform the tasks of an entry level radiographer. The curriculum also includes the general education and science courses required for the Associates in Applied Science degree.

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

You must have a "C" or better in high school laboratory biology and laboratory chemistry. Algebra I is a prerequisite for all majors. Algebra I competency must be verified with a passing score on the College's placement test. As a result of your performance on the College's placement test, you may need developmental coursework. All developmental coursework must be completed before you will be considered for admission to the program.

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

In accordance with NJ State law, this program runs for a minimum of 24 consecutive months. You must register for major coursework in the summer session for both years. If you register for an average of 16 credits each semester, you can complete the degree in a two-year period.

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

You must meet the academic standards of progress outlined 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.

■ *Where should I direct specific questions about this program?*

Contact Professor Snopek, Department Chair, at (732) 906-2583 or **Albert_Snopek@middlesex.cc.nj.us**

DEGREE PROGRAM

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

Courses		Credits	Prerequisites
RAD 128	Basic Medical Principles	4	
RAD 141	Radiographic Positioning, Anatomy and Pathology I	2	
RAD 142	Positioning Laboratory I	1	
RAD 171	Radiographic Imaging and Science I	4	
RAD 190	Clinical Orientation	1	
BIO 111	Human Anatomy and Physiology I	4	BIO 010 & CHM 010
RAD 139	Radiation Protection and Biology	2	RAD 128, 141, 142, 171 & 190
RAD 143	Radiographic Positioning, Anatomy and Pathology II	2	RAD 128, 141, 142, 171 & 190
RAD 144	Positioning Laboratory II	1	RAD 128, 141, 142, 171 & 190
RAD 172	Radiographic Imaging and Science II	2	RAD 128, 141, 142, 171 & 190
RAD 210	Clinical Practicum I	2	RAD 128, 141, 142, 171 & 190
BIO 112	Human Anatomy and Physiology II	4	BIO 111
PHY 118	Topics in Radiographic Physics	4	MAT 013
Summer Session I			
RAD 145	Radiographic Positioning, Anatomy and Pathology III	3	RAD 139, 143, 144, 172 & 210
RAD 146	Positioning Laboratory III	1	RAD 139, 143, 144, 172 & 210
RAD 220	Clinical Practicum II	2	RAD 145 & 146
RAD 247	Radiographic Positioning, Anatomy and Pathology IV	2	RAD 145, 146 & 220
RAD 248	Positioning Laboratory IV	1	RAD 145, 146 & 220
RAD 273	Radiographic Imaging and Science III	3	RAD 145, 146, 172, 220 & PHY 118
RAD 230	Clinical Practicum III	2	RAD 247, 248 & 273
ENG 121	English I	3	
	Humanities Elective	3	
RAD 250	Clinical Practicum IV	3	RAD 230, 247, 248 & 273
RAD 256	Radiographic Seminar I	2	RAD 230, 247, 248 & 273
RAD 285	Advanced Radiographic Imaging	2	RAD 230, 247, 248 & 273
CSC 107	Computers in Health Technologies	1	
ENG 122	English II	3	ENG 121
PSY 123	Introductory Psychology	3	
	Physical Education/Health Education	1-3	
Summer Session II			
RAD 260	Clinical Practicum V	3	RAD 250, 256 & 285
RAD 257	Radiographic Seminar II	2	RAD 256 & 260
	TOTAL CREDITS	73-75	

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 sequence under these conditions may not continue in the program.

Respiratory Care

JOINT PROGRAM WITH THE UNIVERSITY OF MEDICINE AND DENTISTRY OF NEW JERSEY RESPIRATORY THERAPY DEPARTMENT

DEGREE PROGRAM

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

Courses		Credits	Prerequisites
BIO 111	Human Anatomy & Physiology I [1]	4	
CHM 119	General Organic & Biochemistry I	4	
CSC 107	Computers in Health Technologies	1	
ENG 121	English Composition I	3	
MAT 107	Mathematics I	3	
	Humanities Elective	3	
BIO 112	Human Anatomy & Physiology II	4	BIO 111
BIO 211	Principles of Microbiology [1]	4	
ENG 122	English Composition II	3	ENG 121
PSY 123	Introductory Psychology	3	
	Humanities Elective	3	
	Physical/Health Ed Elective	1-3	
	Social Science Elective	3	
RST 100	Core Concepts in Respiratory Care	1	
RST 101	Fundamentals of Respiratory Care	4	
RST 102	Clinical Practice I	1	
RST 103	Applied Cardiopulmonary Pathophysiology I	2	
RST 203	Applied Cardiopulmonary Pathophysiology II	2	RST 103
RST 207	Cardiopulmonary Pharmacology	2	RST 103
RST 208	Principles of Ventilatory Support	4	RST 101
RST 209	Clinical Practice II	2	RST 101 & 102
RST 210	Cardiopulmonary Evaluation	2	RST 103
RST 201	Patient Management/Critical Care	3	RST 208 & 211
RST 211	Pediatric/Neonatal Respiratory Care	2	RST 208
RST 212	Long-Term, Home & Rehabilitative Care	2	
RST 215	Clinical Practice III	2	RST 208 & 209
	Social Science Elective	3	
	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. a 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 high school laboratory biology and one year high school laboratory chemistry before taking this course.

■ *If I major in Respiratory Care, what degree can I earn?*

The Associate in Science Degree which prepares you for a career as a respiratory therapist.

■ *Why major in Respiratory Care?*

If you would like to help people of all ages recover from serious illness, and if you like working with high tech equipment, you'll like working in Respiratory Care. All major courses taught at UMDNJ, Newark.

■ *What will I learn if I study Respiratory Care?*

You will learn the latest techniques used to diagnose, treat and prevent cardiopulmonary disorders among infants, children and adults. You will also learn the work skills needed to get and maintain a satisfying job in the fast-paced health care environment.

■ *Do I need any special skills before I start taking courses in my major?*

Algebra I is a prerequisite for all majors. Algebra I competency must be verified with a passing score on the College's placement test. You must also have a "C" or better in high school laboratory biology and laboratory chemistry and algebra II. As a result of your performance on the College's placement test, you may need developmental coursework. All developmental coursework must be completed before you will be considered for admission to the program.

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

You can complete the degree in two years. You must register for the summer session at the end of your first year.

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

You must meet the academic standards of progress outlined at right to stay in the program.

■ *Where should I direct specific questions about this program?*

Contact Dr. Scanlon, Program Director, at (732) 972-5503.

Small Business Management/Entrepreneurial Studies

BUSINESS ADMINISTRATION AND MANAGEMENT DEPARTMENT

■ *Why major in Small Business Management/Entrepreneurial Studies?*

Small Business Management/ Entrepreneurial Studies is for people who intend to start, or who already operate a small business. If you have a skill, an idea, a thing you have always liked to do - and you want to be your own boss - this program can help you realize your goal of running a successful business.

■ *If I major in Small Business Management/Entrepreneurial Studies, what degree can I earn?*

You have several choices with this major. You can earn an Associate in Applied Science Degree, a Certificate of Achievement or a Technical Certificate. The degree program incorporates general education courses with the small business management curriculum. The Certificate of Achievement is designed for those with no prior college course work and includes English composition with the small business management curriculum. The Technical Certificate program is geared toward people who already hold a college degree and intend to operate a small business.

■ *If I major in Small Business Management/Entrepreneurial Studies, can I transfer to a four-year college or university?*

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

■ *What will I learn if I study Small Business Management/Entrepreneurial Studies?*

You will study the elements that are necessary for a thriving business; business plan, capital needs, marketing strategies, legal and tax issues, forms of ownership, employee management, new technologies, sales, marketing and new product development. You will acquire skills particular to entrepreneurs but transferable to the general business environment.

Note: Not all SBM courses are offered every semester both day and evening. Please call the Department Chair at (732) 906-2594 to discuss course offerings for future semesters.

SMALL BUSINESS MANAGEMENT

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

Courses		Credits	Prerequisites
ENG 121	English Composition I	3	
BUS 101	Business Organization & Management	3	
BUS 115	Mathematics of Finance	3	
BUS 107	Computer Applications for Business	3	
	Social Science Elective	3	
ENG 122	English Composition II	3	ENG 121
SBM 110	Accounting for Small Business	4	
SBM 120	Small Business Management	3	
SBM 130	Marketing & Sales for Small Business	3	
	Humanities Elective	3	
BUS 201	Business Law I	3	
SBM 210	Advertising & Promotion for Small Business	3	
SBM 220	Leadership & Supervision	3	
	Business Elective	3	
	Social Science Elective	3	
	Physical/Health Education	1-3	
SBM 230	Risk & Financial Management	3	
SBM 240	Cooperative Ed/Internship in Small Business	3	
SBM 250	Seminar in Entrepreneurial Studies	3	BUS 101; SBM 110, 120, 130, 210 or permission of department chairperson
	General Education Science Elective*	3	
	General Education Elective	3	
	TOTAL CREDITS	62-64	

CERTIFICATE OF ACHIEVEMENT

Courses		Credits	Prerequisites
BUS 101	Business Organization & Management	3	
BUS 107	Computer Applications for Business	3	
ENG 121	English Composition I	3	
ENG 122	English Composition II	3	ENG 121
SBM 110	Accounting for Small Business	4	
SBM 120	Small Business Management	3	
SBM 130	Marketing & Sales for Small Business	3	
SBM 210	Advertising & Promotion for Small Business	3	
SBM 230	Risk & Financial Management	3	
SBM 250	Seminar in Entrepreneurial Studies	3	BUS 101; SBM 110, 120, 130, 210 or permission of department chairperson
	TOTAL CREDITS	31	

**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.*

***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.*

TECHNICAL CERTIFICATE

Below are required courses and recommended course groupings and sequences for program completion.
Designed for the person with a college degree. Assumes Basic Skills and General Education (including Math) requirements are satisfied.

Courses		Credits	Prerequisites
BUS 101	Business Organization & Management	3	
SBM 110	Accounting for Small Business	4	
SBM 120	Small Business Management	3	
SBM 130	Marketing & Sales for Small Business	3	
SBM 210	Advertising & Promotion for Small Business*	3	
	or		
SBM 230	Risk & Financial Management*	3	
SBM 250	Seminar in Entrepreneurial Studies	3	BUS 101; SBM 110, 120, 130, 210 or permission of department chairperson
	TOTAL CREDITS	19	

**Recommended Elective: Choose one.*
***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.*

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

You must demonstrate proficiency in keyboarding or typewriting by either completing OAD 010, Keyboarding for Computers or by appropriate waiver of the Office Administration Department Chairperson. Algebra I is a prerequisite for all majors. You may satisfy this requirement with a grade of "C" or better in high school Algebra I. Algebra I competency must be verified with a passing score on the College's placement test.

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

If you do not need developmental coursework, and you register for an average of 16 credits each semester, you can complete the degree in two years. If you do not need developmental coursework, and you register for an average of 15 credits each semester, you can complete the certificate in one year. You can shorten the amount of time by taking courses in the summer and winter sessions. Some major courses in the Small Business Management program may only be offered in the evenings.

■ *Where should I direct specific questions about this program?*

Contact Professor Bailey, Department Chair, at (732) 906-2594.

Teacher Aide

PSYCHOLOGY AND EDUCATION DEPARTMENT

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

The Certificate of Achievement which prepares you for a job working with children in an educational setting.

■ *If I major in Teacher Aide, can I use the credits I have earned towards a degree?*

You can apply the credits you earn towards the Associate in Applied Science Degree in Education Practitioner.

■ *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.

CERTIFICATE PROGRAM

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

Courses		Credits	Prerequisites
ENG 121	English Composition I	3	
EDU 121	Introduction to Education	3	
PSY 226	Educational Psychology: Classroom Application	3	
SOC 121	Introduction to Sociology I	3	
PSY 223	Child Psychology	3	PSY 123
EDU 123	Fundamentals of Reading Instruction	3	
ENG 212	Children's Literature	3	ENG 121
EDU 223	Teacher Assistant Seminar & Practicum I	4	EDU 121 & 126
MAT 104	Math in the Elementary School	3	
EDU/HED	Education/Health Ed Elective [1]	3	
Education Elective Choices (select one): [1]		3	
EDU 207	Introduction to Early Childhood Education	3	
EDU 208	Creative Activities for Young Children	3	
EDU 210	Education of Exceptional Children	3	
HED 209	Child Health & Nutrition	3	
	TOTAL CREDITS	31	

[1] *You may choose one of the following courses: EDU 207, 208, 210, OR HED 209.*

Telecommunication Networking Technology

ELECTRICAL ENGINEERING TECHNOLOGY DEPARTMENT

DEGREE PROGRAM

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

Courses		Credits	Prerequisites
ENG 131	Research, Composition & Presentation I	2	
MAD 121	Graphics for Computer Authors & Presenters	3	
MAT 141	Mathematics for Telecommunications I	2	
MCT 101	Introduction to Engineering Technology	2	
PHY 141	Foundations of Physics I	2	
TCT 103	Product Maintenance I	4	
ENG 132	Research, Composition & Presentation II	2	ENG 131
MAT 142	Mathematics for Telecommunications II	2	MAT 141
PHY 142	Foundations of Physics II	2	PHY 141
TCT 104	Product Maintenance II	4	TCT 103 & MCT 101
CSC 230	Production and Authoring Tools (Recommended - MAD 121)	4	CSC 110
	Humanities Elective	3	
ENG 133	Research, Composition & Presentation III	2	ENG 132
MAT 241	Mathematics for Telecommunications III	2	MAT 142
PHY 241	Foundations of Physics III	2	PHY 142
TCT 201	PC and LAN Hardware	4	TCT 104
TCT 221	Wide-Area Networking I	4	TCT 104 & 122
	Social Science Elective (Economics)	3	
PHY 242	Foundations of Physics IV	2	PHY 241
MAT 242	Mathematics for Telecommunications IV	2	MAT 241
CSC 251	Windows NT Workstation Administration	2	CSC 110 or TCT 103
TCT 222	Wide-Area Networking II	4	TCT 221 & 201
	Physical/Health Ed Elective	1-3	
	Technical Elective or Co-op	3-4	
Technical Elective Choices (select one):			
BUS 101	Business Organization & Management	3	
BUS 201	Business Law I	3	
CSC 247	Netware System Administration	3	CSC 105 or TCT 103
CSC 133	Intro to Computer Science Using C++	4	
CSC 160	Introduction to UNIX	3	
CSC 165	Beginners C-Programming	3	
MCT 208	Mecomtronics & Telecommunication Networking Technology Field Experience	3	TCT 201 & 221
	TOTAL CREDITS	63-66	

■ *Why major in Telecommunication Networking Technology?*

Telecommunication Networking Technology deals with the transmission of digital information over local and wide-area networks. The telecom industry has an ongoing need for technicians in such areas as computer installation and operations, network installation and troubleshooting, router configuration, video and teleconferencing, cable installation and multimedia authoring.

■ *If I major in Telecommunication Networking Technology, what degree can I earn?*

The Associate in Applied Science Degree which prepares you to begin your career after graduation. Career opportunities exist in business and industry.

■ *If I major in Telecommunication Networking Technology, can I transfer to an upper division college or university?*

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

■ *What will I learn if I study Telecommunication Networking Technology?*

You acquire a background in digital and analog electronics, computer technology, multimedia authoring and presentations, local and wide area networking, videoconferencing and remote and automated testing. Additionally, you study mathematics, science, and general education.

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

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

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

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

■ *Where should I direct specific questions about this program?*

Contact Professor Waintraub, Department Chair, at (732) 906-2584.

Course Descriptions

Course descriptions are listed alphabetically by subject area. The three letters identify the subject area and are followed by three numbers that identify the course. The numbers in parentheses indicate the number of lecture and lab hours, respectively, scheduled per week in a typical 14-week semester. By adding the numbers, students can determine the number of contact hours required per week for each course. (NOTE: Courses meet for more hours per week during sessions shorter than 14 weeks, such as those held during the summer.)

The number of credits is used to calculate tuition and fees, to determine credit load and full-time/part-time status, and is the normal academic measure to monitor progress toward the requirements for a degree. Courses listed as "credit equivalent" do not count towards the degree requirements and are used solely for the calculation of charges. However, the courses do represent program requirements for many students based upon past academic performance and/or the results of the College Placement Test.

Prerequisites are courses or other requirements that must be satisfied before enrolling in a course.

Corequisites may be satisfied prior to enrollment or may be taken at the same time. Italicized information at the end of some course descriptions provides additional important information about the course.

Courses that satisfy any of the General Education requirements are coded as follows:

GE	COM	Communications
GE	CSC	Computer Science
GE	DIV	Diversity
GE	HUM	Humanities
GE	MAT	Mathematics
GE	PED	Physical Education/Health
GE	SCI	Nature Sciences
GE	SS	Social Sciences

Courses coded GE DIV satisfy the diversity requirement, those coded GE HUM satisfy the humanities elective requirement and those coded GE SS satisfy the social sciences elective requirement.

All courses coded GE PED satisfy both the Physical Education/Health Graduation Requirement and the General Education elective requirement included in some programs. Activity courses listed under "PED" satisfy Physical Education/Health Education Graduation Requirement, but not the General Education Requirement.

To determine which courses satisfy the computer science, mathematics, and natural science requirements for a particular degree program, refer to the section in this catalog on Degree Requirements and also the Plan of Study for the specific degree or certificate in the appropriate Division. Not all programs require computer science, mathematics, and natural science courses.

The General Education requirement in communications is also specified in the individual program outlines included in this catalog.

In programs that include a "General Education Elective," any course with a "GE" designation may be used to satisfy that requirement, regardless of the General Education category.

ACCOUNTING

ACC 101
- FINANCIAL ACCOUNTING

4 credits (4-0)

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

4 credits (4-0)

Prerequisite: ACC 101

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, RESTAURANTS, AND INSTITUTIONS

4 credits (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

4 credits (4-0)

Prerequisite: 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

3 credits (3-0)

Prerequisite: ACC 102

Students design and install an accounting system tailored to the requirements of a particular business and available automatic data processing equipment. Commences with an analytical approach to the problem and proceeds through the theoretical knowledge required for the actual design of procedures.

ACC 206
- TAX ACCOUNTING

3 credits (3-0)

Prerequisite: 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

3 credits (3-0)

Prerequisite: ACC 212 or permission of Department Chairperson

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

3 credits (1-12)

Prerequisites: 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 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.

ACC 211
- INTERMEDIATE ACCOUNTING I

4 credits (4-0)
Prerequisite: ACC 102
Reviews 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

4 credits (4-0)
Prerequisite: 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

3 credits (3-0)
Prerequisites: 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

2 credits (1-2)
Prerequisites: All MAD courses and ART 103
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

2 credits (1-2)
Prerequisites: All MAD courses and ART 103
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)

2 credits (1-3)
Prerequisites: All MAD courses, ART 103 and minimum of six credits of AGD/PCP courses
Corequisites: Any number of credits of AGD and PCP courses such 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

2 credits (1-2)
Prerequisites: All MAD courses and ART 103
Applications of design fundamentals to practical layout and advertising design problems such as: brochures, posters, books, magazine ads, and audio-visual 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

2 credits (1-2)
Prerequisite: 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

2 credits (1-2)
Prerequisites: All MAD courses and ART 103
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

2 credits (1-2)
Prerequisite: AGD 217 or permission of Department Chairperson
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.

AGD 222
- MEDIA ARTS & DESIGN FIELD EXPERIENCE

3 credits (1-12)
Prerequisite: Senior status in advertising graphics design option or professional commercial photography option
A cooperative work experience program whereby students are provided with a job that will enhance their competency by getting practical hands-on experience on state-of-the-art technology utilized by commercial designers and photographers. Students are assigned to work on a one-to-one basis with a professional designer or photographer using the latest techniques and equipment. The College through on-the-job visits and individual progress review sessions provides supervision of this departmentally approved position. 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 during the semester. Open to senior students recommended by the faculty of the department. Career interest and goals taken into account. Media Arts & Design Field Experience is not a graduation requirement.

AFRICAN-AMERICAN STUDIES

AFS 121 GE SS
- INTRODUCTION TO AFRICAN-AMERICAN STUDIES

3 credits (3-0)

Introduces the foundations and approaches of African-American studies. Examines historical, sociological, psychological, religious and philosophical perspectives of the African-American experience.

AFS 122
- INTRODUCTION TO AFRICAN-AMERICAN AESTHETICS

3 credits (3-0)

Introduces the concepts and definitions necessary for a basic understanding of the African-American aesthetic. Designed to acquaint students with important historical and philosophical investigations of the creative process and to explore interrelationships, similarities, and differences in the various cultural expressions (art, music, dance, poetry, etc.) of African peoples.

AFS 123 GE HUM
- INTRODUCTION TO AFRICAN CIVILIZATIONS

3 credits (3-0)

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 201
- AFRICAN DIASPORA IN LATIN AMERICA

3 credits (3-0)

Examines comparatively the origin and development of the African Diaspora in colonial Spanish societies including the Spanish "Slavocracy" within the context of African phenomenon and cultural continuity. Aspects of the African Diaspora in South American, Central American and Caribbean geographies (e.g. Cuba, Puerto Rico, Panama, Mexico, Peru, Colombia, Venezuela) will be analyzed with respect to social, cultural, political, economic, religious, psychological and moral content.

AFS 202
- AFRICAN LATIN SOCIETIES

3 credits (3-0)

The development of the African in Latin America and the Caribbean. The concepts of racial democracy, cultural relativism and national culture will be compared and contrasted in various Latin American Societies. Uses a comparative approach to investigate African experiences during colonial and post-colonial periods. Emphasis will be placed on the African-Latino experiences and the emancipatory predicament.

AFS 231 GE HUM
- AFRICAN-AMERICAN HISTORY

3 credits (3-0)

Historical material focusing on the influence, contributions and impact of African peoples in the Americas from 1468 to the present. Emphasis on North and South America and the Caribbean Islands.

ART

(For related courses, see Media Arts & Design)

ART 103
- ART IN INDUSTRY AND COMMERCE

2 credits (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

3 credits (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

3 credits (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)

3 credits (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

3 credits (3-0)

The visual expressions, traditions, philosophies, materials and aesthetics of art created in Africa, Asia and the Americas. Explores developments from ancient times to the present, as well as diverse cultural influences on western artists. Includes slide presentations, films, and field trips to museums and art galleries.

ART 123 GE HUM
- ART HISTORY: ANCIENT TO RENAISSANCE

3 credits (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

3 credits (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 AND CONTEMPORARY

3 credits (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

3 credits (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

3 credits (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

1 credit (1-0)

Prerequisite: 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

1 credit (1-0)

Prerequisite: 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 artmaking 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 201 GE HUM
- CERAMICS: HANDBUILDING

3 credits (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

3 credits (3-0)

Prerequisite: 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

3 credits (3-0)

Prerequisite: ART 202 or demonstrated throwing ability

Advanced throwing techniques and surface treatments, including englobe decoration, wax resist, lustres, 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

3 credits (1-16)

Prerequisite: 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 departmentally 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 on-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
- PRINTMAKING: MONOPRINT AND BASIC RELIEF

3 credits (3-0)

Introduces Printmaking 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
- PRINTMAKING: SCREEN AND INTAGLIO

3 credits (3-0)

Introduces Printmaking through the practice of two traditional yet growing graphic techniques: screenprinting and intaglio - any method that involves a "plate" from which multiples may be printed. 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

3 credits (3-0)

The language and materials of painting through still life, landscape and live model. Practice of easel techniques is 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

3 credits (3-0)

Objective and imaginative form in painting 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 is required. Students will provide some of their own supplies.

ART 223 GE HUM
- SCULPTURE IN RELIEF

3 credits (3-0)

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 THE ROUND

3 credits (3-0)

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

3 credits (1-12)

Prerequisites: AUT 111, 115 and 117

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. The College through on-the-job visits and individual progress review sessions provides supervision of this departmentally approved position. 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. A Ford-Lincoln/Mercury Dealer must sponsor students.

AUT 111
- MINOR AUTOMOTIVE SERVICES

3 credits (0-6)

Corequisite: MAT 107

Introduces shop operations, customer relations, flat rate manuals, safety, organizational design, pay structure, equipment, tools and basic operational theories. Includes service procedures for lubrication, batteries, the cooling system, wheels and tires and new car pre-delivery service.

AUT 115
- AUTOMOTIVE BRAKE SYSTEMS

2 credits (0-5)

Corequisite: AUT 111

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

3 credits (0-6)

Corequisite: AUT 111

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

3 credits (0-6)

Prerequisite: AUT 108

Corequisites: AUT 124 and 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 insure the proper application to the automobile.

AUT 124
- AUTOMOTIVE HVAC SYSTEMS

3 credits (0-6)

Prerequisite: AUT 108

The principles of operation and service techniques applied to automobile air conditioning systems. Topics include component familiarization, testing, diagnosing, charging and repair practices.

AUT 126
- ALIGNMENT, SUSPENSION AND STEERING SYSTEMS

2 credits (0-5)

Prerequisite: AUT 108

The 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

3 credits (1-12)

Prerequisites: AUT 122, 124, and 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. The College through on-the-job visits and individual progress review sessions provides supervision of this departmentally approved position. 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. A Ford-Lincoln/Mercury Dealer must sponsor students.

AUT 211
- STANDARD TRANSMISSION & DRIVE TRAIN

3 credits (0-6)

Prerequisite: AUT 208

Studies the operating principles, construction, and maintenance of the manual transmission and related drive train components.

AUT 213
- AUTOMATIC TRANSMISSION I

3 credits (0-6)

Prerequisite: AUT 208

Corequisite: AUT 211

Studies the theory, operation and diagnosis of automatic transmissions. Rebuilding of automatic transmissions is introduced.

AUT 216
- FUEL AND EMISSION SYSTEMS

3 credits (0-6)

Prerequisite: AUT 208

Corequisite: AUT 217

Studies the principles and functions of the automotive fuel system including the carburetor, fuel pump, gas tank and emission control systems. Stresses the diagnosis and repair and adjustment of emission control systems, repair and adjustment of the carburetor, fuel injection and their components.

AUT 217
- ENGINE DIAGNOSTICS & REPAIR I

3 credits (0-6)

Prerequisite: AUT 208

Corequisite: AUT 216

Studies 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 218

■ AUTOMOTIVE TECHNOLOGY WORK EXPERIENCE III

3 credits (1-12)

Prerequisites: AUT 211, 213, 216, and 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. The College through on-the-job visits and individual progress review sessions provides supervision of this departmentally approved position. Students attend a weekly seminar on campus that guides them through the process of job search and decision-making. Explores career opportunities in the automotive field, develops resume writing skills, interviewing techniques, and demonstrates how to apply these techniques and skills in the job market. Students must work for a minimum of 180 hours for the duration of the session. Students must register with the Department of Cooperative Education. A Ford-Lincoln/ Mercury Dealer must sponsor students.

AUT 226

■ AUTOMATIC TRANSMISSION II

2 credits (0-5)

Prerequisites: AUT 213 and AUT 218

A continuation of Automatic Transmission I. Transmission rebuilding is continued with emphasis on in-service automotive repair.

AUT 228

■ ENGINE DIAGNOSTICS & REPAIR II

3 credits (0-6)

Prerequisites: AUT 217 and AUT 218

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

3 credits (0-6)

Prerequisites: MAT 108 and AUT 218

Corequisites: AUT 226 and 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

4 credit equivalents (3-3)

Corequisite: 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 DIV GE SCI

■ PLANTS, PEOPLE AND CULTURE

3 credits (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 105 GE SCI

■ HEREDITY, EVOLUTION AND SOCIETY

4 credits (3-2)

Prerequisites: Appropriate score on the College's Placement Test or MAT 013 and one year high school laboratory science or a 3-credit college level science course with a grade of "C" or better.

Introduces 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, audiovisual materials and laboratory observations (without dissection). Recommended for non-science majors.

BIO 106 GE SCI

■ HUMAN BIOLOGY, BIOMEDICAL ISSUES AND SOCIETY

4 credits (3-2)

Prerequisites: Appropriate score on the College's Placement Test or MAT 013 and one year high school laboratory science or a 3-credit college level science course with a grade of "C" or better.

Introduces 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

4 credits (3-2)

Prerequisites: 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.

A one semester survey of the cells, tissues, organs, 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 only.

BIO 111 GE SCI

■ HUMAN ANATOMY AND PHYSIOLOGY I

4 credits (3-3)

Prerequisites: One year of high school laboratory biology or BIO 010 and one year of high school laboratory chemistry or CHM 010 and appropriate score on the College's Placement Test or MAT 013

Human cells and tissues as they relate to organs and systems. Structural and functional features of the skeletal, muscular and nervous systems are examined. Recommended for students in the health sciences.

BIO 112 GE SCI

■ HUMAN ANATOMY AND PHYSIOLOGY II

4 credits (3-3)

Prerequisite: 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

4 credits (3-3)

Prerequisites: Appropriate score on the College's Placement Test or MAT 013 and one year high school laboratory science or BIO 010 or CHM 010

A general study of the physical and chemical properties of living material, cell organelles, transport cell division, energy transformations in photosynthesis and cellular respiration, plant and animal tissues, the classification of organisms and genetics.

BIO 118 GE SCI
■ BIOLOGY II
4 credits (3-3)
Prerequisite: BIO 117
A continuation of Biology 117. Emphasis is on supporting life processes, animal systems, evolution, ecosystems and communities.

BIO 123 GE SCI
■ GENERAL BIOLOGY I
4 credits (3-3)
Prerequisites: One year of high school laboratory biology or BIO 010 and one year of high school laboratory chemistry or CHM 010. Also appropriate score on the College's Placement Test or MAT 013
The basic principles and origins of life; the chemistry of living things; cell structure, function and reproduction; cell metabolic processes; plant taxonomy, anatomy, physiology and reproduction; Mendelian genetics and modern genetics principles. Required of science transfer students in biology and chemistry.

BIO 124 GE SCI
■ GENERAL BIOLOGY II
4 credits (3-3)
Prerequisite: BIO 123
A continuation of BIO 123. Emphasis is on plant and animal systems, evolution and ecology.

BIO 203
■ METHODS OF BIOTECHNOLOGY
3 credits (2-3)
Prerequisites: BIO 118 or 124; CHM 118 or 124; MAT 108 or department approval
Corequisite: BIO 221
Laboratory experience in common biological techniques. Emphasis is on microscopy, histological techniques, tissue culturing, and macromolecular separation and identification.

BIO 211
■ PRINCIPLES OF MICROBIOLOGY
4 credits (3-3)
Prerequisites: One year of high school laboratory biology or BIO 010 and one year of high school laboratory chemistry or CHM 010 and appropriate score on the College's Placement Test or MAT 013
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 214
■ VERTEBRATE PHYSIOLOGY
4 credits (3-3)
Prerequisites: BIO 118 or 124; CHM 118 or 124
An analysis of basic physiological concepts and their relationship to selected vertebrate types. Emphasis is on mammalian physiology with laboratory exercises in instrumentation, animal handling and basic in class computer analysis of data. Formal laboratory reports and notebooks are required.

BIO 221
■ MICROBIOLOGY
4 credits (3-3)
Prerequisites: BIO 118 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
4 credits (3-3)
Prerequisite: 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
3 credits (1-12)
Prerequisite: Permission of the Department Chairperson
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 biological technology. The college through on-the-job visits and individual progress review sessions provides supervision of this departmentally approved position. 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
4 credits (3-3)
Prerequisite: BIO 124 and 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
3 credit equivalents (3-0)
Introduces the touch operation of the alphabetic, numeric, and symbolic keys of the computer keyboard. Increases students' ability to think critically, abstractly, and systemically. 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. Emphasis placed on solving cases, study skills, and time management.

BUS 101
- BUSINESS ORGANIZATION AND MANAGEMENT

3 credits (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

3 credits (3-0)

Corequisites: OAD 010, OAD 106, BUS 010, keyboarding course with a grade of "C" or higher or department waiver

Covers a full range of data processing methods and devices. Emphasis is placed on the use of microcomputers. Hands-on-instruction includes use of electronic spreadsheets, database management software, word processing, disk operating systems and graphics.

BUS 115
- MATHEMATICS OF FINANCE

3 credits (3-0)

Prerequisite: Passing score on the College's Placement Test or successful completion of MAT 013

The mathematics of consumer interest, compound interest, time value of money, and problems in retailing, business ownership and basic business probability and statistics.

BUS 201
- BUSINESS LAW I

3 credits (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

3 credits (3-0)

Prerequisite: 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 law are surveyed. (In applicable areas the Uniform Commercial Code is covered as well as the common law principles.)

BUS 205
- BUSINESS COMMUNICATIONS

3 credits (3-0)

Prerequisite: A passing score on the College's Placement Test or a grade of "C" or better in English 010: Writing Skills for College

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

4 credits (4-0)

Prerequisite: CHM 117

Corequisite: MAT 108

Introduces 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 properties, 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.

CHEMISTRY

(For related courses, see Science)

CHM 010
- BASIC CHEMISTRY

4 credit equivalents (2-4)

Prerequisite: MAT 013 or appropriate score on College's Placement Test

Introduces 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

4 credits (3-2)

Prerequisite: One year of high school laboratory chemistry or CHM 010

Introduces 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

4 credits (2-5)

Prerequisites: MAT 013 or appropriate score on College's 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

4 credits (2-5)

Prerequisite: 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

4 credits (3-3)

Prerequisites: One year of high school laboratory chemistry or CHM 010 and MAT 014 or appropriate score on College's Placement Test

Introduces 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

4 credits (3-3)

Prerequisite: 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

4 credits (2-5)

Prerequisites: MAT 014 or appropriate score on College's 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

4 credits (2-5)

Prerequisite: 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 incudes qualitative and quantitative determinations related to lecture topics.

CHM 201 GE SCI

■ PRINCIPLES OF ORGANIC CHEMISTRY

4 credits (3-3)

Prerequisite: CHM 118 or equivalent

Introduces the basic concepts of organic chemistry in a non-mechanistic approach. Laboratory experiences include the basic techniques of organic synthesis and the related techniques used in the isolation and purification of organic compounds.

CHM 202 GE SCI

■ BIOCHEMISTRY

4 credits (3-3)

Prerequisite: CHM 201

Introduces 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 219

■ MODERN METHODS OF ANALYSIS I

5 credits (3-6)

Prerequisites: CHM 118 and MAT 014 or equivalent

The theory relating to the quantitative techniques of volumetric, gravimetric and spectrophotometric analysis. Topics include evaluation of measurements, concentration calculations, acid-base and precipitation equilibria. Laboratory experiments cover classical volumetric and gravimetric analysis and use of visible spectrometers.

CHM 220

■ MODERN METHODS OF ANALYSIS II

5 credits (3-4)

Prerequisites: CHM 219 and CHM 201 or equivalent

An overview of the theory and equipment of modern instrumentation in the chemistry laboratory. These include Infrared UV/Visible, Nuclear Magnetic Resonance, and Mass Spectrometry. The course also explores different techniques of separation including gas, high performance liquid, and thin layer Chromatography.

CHM 223 GE SCI

■ ORGANIC CHEMISTRY I

4 credits (2-5)

Prerequisite: 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 include basic techniques for the preparation, isolation, purification, and identification of organic compounds.

CHM 224 GE SCI

■ ORGANIC CHEMISTRY II

4 credits (2-5)

Prerequisite: CHM 223

A mechanistic study of the preparation and chemical reactivity of alcohols, phenols, ethers, aldehydes, ketones, amines, carboxylic acids, and carboxylic acid derivatives. Laboratory experience includes the characterization and identification of organic compounds using modern spectroscopic techniques: IR, 1H-NMR, 13C-NMR, and Mass Spectrometry (MS). Introduction to basic techniques of chromatography (GC, HPLC) are also included.

CHM 226

■ CHEMICAL TECHNOLOGY COOPERATIVE EDUCATION

3 credits (1-12)

Prerequisites: CHM 201 or CHM 223 and CHM 219 and departmental approval

A cooperative work experience program employing students in technical positions to gain practical experience necessary for success in chemical technology. The college through on-the-job visits and individual progress review sessions provides supervision of this departmentally approved position. 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.

CIVIL/CONSTRUCTION ENGINEERING TECHNOLOGY

CIT 104
- CONSTRUCTION SURVEYING I

3 credits (1-2-3)
Prerequisites: MAT 109, CIT 106
Introduces surveying, measurement theory, field and office procedures and error analysis. Lectures emphasize the concepts, computations, analysis and adjustments of leveling, angle observation, distance measure and control traverses. Field exercises stress the techniques of distance measure from rough pacing to use of the Electronic Distance Measure instrument, as well as the correct procedures for horizontal and vertical angle observations. Students prepare drawings and maps from their field notes.

CIT 105
- STATICS FOR TECHNICIANS

3 credits (3-0)
Prerequisites: CIT 110 or MCT 101; MAT 109
Practical study of statics for the engineering technology student. Topics include: force system resultants, force system equilibrium, load analysis of structural trusses and frames, cross-sectional area properties, centroid, moment of inertia, radius of gyration, and polar moment of inertia. Use of the TI-85 calculator or approved equivalent is required for the solution of several types of problems.

CIT 106
- CIVIL ENGINEERING DRAWING

2 credits (1-2)
Prerequisite: Passing score on the College's Placement Test or successful completion of MAT 014, MEC 123, CIT 110
Study and execution of drawings normally encountered in Civil Engineering. These include: survey plans, deed plots, topographic plans, right of way utility plan and profiles, property subdivision plans, structural sketches in steel, wood and concrete. Plans will be made using surveyors notes as input and calculations associated with horizontal and vertical control will be covered.

CIT 107
- CONSTRUCTION QUANTITY ESTIMATING I

2 credits (1-2)
Prerequisite: Passing score on the College's Placement Test or successful completion of MAT 013
Introduces the drawings and procedures used in the construction industry. Students will examine and interpret construction drawings to determine quantities of various materials of construction. Construction material properties and methods of quantity takeoffs are presented. Topics include: area and volume calculations; blueprint reading; quantity calculations; use of engineering scales; construction documents and the use of computer programs for estimating. Laboratory projects reinforce the lecture material and emphasize proper estimating procedures and format. Students will prepare a quantity estimate for a small construction project.

CIT 110
- INTRODUCTION TO CIVIL/CONSTRUCTION ENGINEERING TECHNOLOGY

2 credits (1-2)
Prerequisite: Passing score on the College's Placement Test or successful completion of MAT 013
Corequisite: MAT 014
Introduces engineering practices in the field of Civil and Construction Engineering Technology through the use of project-centered/activity-based learning. Hands-on activities include PC setup and software use, construction blueprint reading and sketching, along with structural model building and testing.

CIT 116
- CONSTRUCTION GRAPHICS/CAD II

2 credits (1-2)
Prerequisites: CIT 110 and MEC 123
Corequisite: CIT 106
Advanced computer graphics designed for students who have passed MEC 123 or equivalent. Includes advanced drafting techniques using AutoCad such as: menu customization, use of LISP routines to facilitate drafting production. Advanced techniques applied to drawings commonly used in a civil/construction environment.

CIT 151
- URBAN AND SUBURBAN DEVELOPMENT

3 credits (3-0)
Prerequisite: CIT 205
Land use planning, zoning and planning boards, general building codes, local control surveys, land data systems, subdivision design, professional land planning systems.

CIT 203
- STRENGTH OF MATERIALS

4 credits (3-3)
Prerequisites: CIT 105 and SPE 121
Strength of materials with emphasis on practical applications. Topics include: axial stress and strain, material properties, torsional stress and strain, shear and moment diagrams, bending moment stresses, bending shear stresses, beam design, theoretical and specification column analysis and design, connection analysis, and combined stresses using Mohr's Circle. Weekly laboratory experiments and written reports are used to reinforce lecture material. Students are required to present one oral presentation during the semester. Graphical calculator required.

CIT 205
- CONSTRUCTION SURVEYING II

3 credits (2-3)
Prerequisites: CIT 104 and CIT 106
A continuation of Construction Surveying I with emphasis on the methods of layout of 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. Laboratory exercises demonstrate and reinforce these topics. Computer software is available to aid in the computations.

CIT 208
- REINFORCED CONCRETE DESIGN

3 credits (3-0)
Prerequisites: CIT 203 and MAT 110
Analysis and design of beams, girders, columns and footings using The Strength Design criteria. Topics include principles of structural design, loads, properties of concrete and reinforcement. Emphasizes the use of the ACI code. Use of computer programs will aid the student in the design process. Review of basic detailing practices.

CIT 209
- STEEL DESIGN

2 credits (1-2)
Prerequisites: CIT 203 and MAT 110
Practical applications of strength of materials using the AISC Steel Manual in allowable stress design. Topics include: steel framing load analysis, tension member analysis and design, beam analysis and design, concentric and eccentric column analysis and design, concentric connection analysis and design. Graphing calculator required.

CIT 210
■ SOILS IN CONSTRUCTION
2 credits (1-2)
Prerequisite: CIT 105
A 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. Topics covered in lectures dealing with theory and practical computations. The use of some computer software will be required to carry out some of the computational projects.

CIT 211
■ CONSTRUCTION COST ESTIMATING
2 credits (1-2)
Prerequisites: CIT 107, CIT 110, MAT 109
Basic discussions will be presented for cost estimating of residential, commercial and heavy-highway construction projects. Specifications and specification standards will be reviewed as set forth by the CSI. Includes types of estimates, alternate quantity takeoff procedures, unit pricing, material and labor costs, job overhead and profit and contingencies. Discussions of various construction documents and bid presentations. The use of the computer and estimating software will be used to facilitate the final estimate and summary sheets.

CIT 212
■ WATER RESOURCES TECHNOLOGY
3 credits (1-5)
Prerequisites: MAT 110, PHY 115, SPE 121
Hydrology and Hydraulics as they relate to Stormwater generation and collection; Wastewater collection and treatment and Water treatment and distribution systems. Lectures include: Hydrology and runoff; groundwater; pipeline hydraulics; open channel hydraulics; Wastewater treatment; pump selection; reservoir and detention design; drainage structures; water pollution and flood control. Laboratory exercises consist of design projects such as stormwater collection system, sanitary sewer lift station, culvert, drainage channel, culvert, detention pond, backwater curves and water distribution system. Computer software is available to aid in the design calculations.

CIT 213
■ CONSTRUCTION MATERIALS LABORATORY
2 credits (1-3)
Prerequisite: CIT 107
Laboratory experience emphasizing procedures and techniques involved in standard soil, concrete and asphalt testing. Testing of field and laboratory soil samples is carried out to determine the engineering properties of the soil. Aggregates for concrete and asphalt are tested for acceptability. Concrete and asphalt mixes are designed and tested for workability and strength.

COMMUNICATION

COM 105
■ INTRODUCTION TO COMMUNICATION STUDY
3 credits (3-0)
The field of communication studies, including the production, transmission and reception of messages among persons, groups, organizations and cultures.

COM 110
■ INTERPERSONAL COMMUNICATION
3 credits (3-0)
Prerequisite: COM 105
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
3 credits (3-0)
A general orientation to and overview of the communication between cultures. The emphasis will be upon offering insights into how cultural differences and similarities impact upon the relationship between culture and communication. Focuses on the challenges of communication in a culturally diverse society and offers techniques for improving communication between members of different cultures.

COM 121
■ MASS COMMUNICATION STUDY
3 credits (3-0)
Prerequisite: COM 105 or permission of Department Chairperson
The institutions, history and technology of the mass communication media, concentrating on radio, television, film and other electronic and print media forms. Topics include the growth of print and electronic media, and the relationship among government, media and the public, including the social responsibility and ethics of mass communication.

COM 131
■ INTRODUCTION TO BROADCASTING
3 credits (3-0)
Prerequisite: COM 105 or permission of Department Chairperson
A comprehensive introduction to the historical development and regulatory policies of radio and television broadcasting. Emphasizes the social, economic and ethical impact of radio and television on society and its citizens.

COM 208
■ COMMUNICATION SEMINAR & FIELD EXPERIENCE
3 credits (1-12)
Prerequisite: Permission of Department Chairperson
A cooperative program whereby the student may gain experience in a communication-related position in radio, television or public relations in order to gain some of the practical experience necessary for growth and success. The College through site visits provides supervision of this departmentally approved position and individual progress review related to the position in order to effect the attainment of specific competencies. The student attends a weekly, one-hour seminar on campus and serves a minimum of 180 hours during the semester.

COM 210
■ RADIO BROADCASTING PRODUCTION
3 credits (3-0)
Classroom and studio practice in the preparation and presentation of radio materials including writing, announcing, newscasting, interviewing, musical and dramatic programming. Practical concerns involve studio-recording techniques, editing of audio tapes and program organization and management. The emphasis is on effective communication and ethical and aesthetic values in a production setting. Hands-on experience with equipment conducted in the campus radio studio, WMCC.

CORRECTION ADMINISTRATION

(For related courses, see Criminal Justice)

COR 201

■ INTRODUCTION TO CORRECTION ADMINISTRATION

3 credits (3-0)

Prerequisite or corequisite: CJU 123

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

3 credits (3-0)

Prerequisite or corequisite: CJU 123

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

3 credits (2-6)

Prerequisite or corequisite: 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. The College through on-the-job visits and individual progress review sessions provides supervision of this departmentally approved position. 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

3 credits equivalents (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 on PCs 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 020

■ INTRODUCTION TO ADAPTIVE TECHNOLOGY

3 credit equivalents (2-1)

Introduces the personal computer and adaptive hardware and software aids for the personal computer. Students learn to use DOS and Windows to operate a microcomputer, start applications, and install and load adaptive software. Screen text magnifiers, CCTV (closed caption television) for enlargement, a scanner for input of data directly from the printed page, OCR (Optical Character Recognition) for translation of scanned data into editable text, voice input hardware and software for direct entry of text and commands, and voice output software for production of synthesized speech will be presented. Students learn word processing concepts. DOS- and Windows-based word processors will be used to produce and edit documents, using adaptive hardware and software. Artificial Intelligence-based software will be used to minimize the keystrokes necessary to enter text.

CSC 105 GE CSC

■ COMPUTER APPLICATIONS AND SYSTEMS

3 credits (3-0)

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

1 credit (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

2 credits (2-0)

Prerequisite recommended: Prior completion of one of the following courses: CSC 105, CSC 107, or BUS 107 or equivalent microcomputer experience

Introduces 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

3 credits (2-2)

Prerequisite: Two years of high school Algebra or MAT 013 or appropriate score on the college placement test.

Corequisite: 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

3 credits (2-2)

Prerequisite: 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 ardware and system software will also be discussed.

CSC 125

■ WEB PAGE DESIGN AND DEVELOPMENT

3 credits (2-2)

Prerequisite: 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 include 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 ++

4 credits (3-1-2)

Prerequisite: MAT 014 or appropriate score on College's Placement Test

Corequisite: MAT 125 or MAT 127 or MAT 129 or MAT 110I

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. 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. Recommended for students in other programs seeking a rigorous introduction to computer programming.

CSC 134

■ OBJECT ORIENTED PROGRAMMING USING C ++

4 credits (3-1-2)

Prerequisite: CSC 133, and MAT 125 or MAT 127 or MAT 129

Corequisite: MAT 126 or MAT 128 or MAT 131 or MAT 131A

Builds on the C++ foundation developed in CSC 133 and is the second core course required for students in the Computer Information Systems and Computer Science Transfer programs. 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

3 credits (3-0)

Prerequisite: 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 165

■ BEGINNERS C-PROGRAMMING

3 credits (2-2)

Prerequisite: Two years of high school algebra or MAT 014

The syntax and semantics of the C programming language including: data types, operators, control structures, functions, program structure, pointers, array, structures, input and output. Students complete programs in C of moderate complexity on the UNIX system.

CSC 200

■ NETWORKING TECHNOLOGIES

3 credits (3-0)

Prerequisite: 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

3 credits (1-12)

Prerequisite: Completion of all courses in first year of CIS or Network Administration option

A cooperative work experience program whereby 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. The College through on-the-job visits and individual progress review sessions provides supervision of this departmentally approved position. 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

3 credits (1-12)

Prerequisite: 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 student and is presented to the class.

CSC 208

■ VISUAL BASIC PROGRAMMING

4 credits (3-3)

Prerequisite: 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

4 credits (3-3)
Prerequisite: 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 is taught. Platform independent graphical user interfaces is built using Java's Abstract Window Toolkit (AWT).

CSC 225
- SYSTEMS ANALYSIS

3 credits (2-3)
Prerequisite: 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

4 credits (3-2)
Prerequisite: CSC 110 (Recommended - MAD 121)
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 leading software and author their own multimedia presentations.

CSC 233
- COMPUTER ARCHITECTURE AND ASSEMBLY LANGUAGE I

4 credits (3-2)
Prerequisite: CSC 133 or permission of Chairperson
Corequisite: 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 234
- COMPUTER ARCHITECTURE AND ASSEMBLY LANGUAGE II

4 credits (3-2)
Prerequisite: CSC 233
A continuation of CSC 233, including a systems view of linking programs, the functions of operating system modules (the linkage editor, loaders, control program, interrupt handlers device drivers, etc.), virtual storage concepts, and command languages. Programs are written in IBM Assembly language. The computer organization topics include an overview of computer systems organization (processor, memory, I/O and interrupt handling), the digital logic level, the machine level, and the operating system level.

CSC 235
- DATA STRUCTURES

4 credits (3-1-2)
Prerequisite: CSC 134, MAT 126 or MAT 131
Different techniques of storing, accessing and processing data as utilized in the development of programs and algorithms. Topics include linked lists, stacks, queues, trees, recursion and graphs. Algorithms for applications such as sorting, searching and merging will be analyzed and implemented. Solutions are designed using object-oriented techniques and implemented in the C ++ programming language. This is the third course in the C ++ programming sequence and is required for students in the Computer Information Systems General Option and Computer Science Transfer Option.

CSC 239
- DATABASE SYSTEM CONCEPTS

3 credits (2-3)
Prerequisite: CSC 134
Provides students with a thorough understanding of what a database is and how it is used. Emphasis is placed on the design of a database for the effective storage and retrieval of user data. The use of structured query language (SQL) is presented. Hands-on laboratory experiences provides the student with practical applications in the use of databases.

CSC 241
- INTERNET APPLICATIONS-HTML/CGI

4 credits (3-3)
Prerequisite: CSC 208
Prepares students to build and maintain computer applications utilizing the Internet and the World Wide Web. Emphasis is placed on planning, analysis, design, implementation, promotion, and innovation as they pertain to the Web Development process. Client/server computing, human computer interaction, and hands on use of HTML, CGI, and form tools to implement effective applications will be studied.

CSC 243
- ADVANCED PROGRAMMING IN C

3 credits (2-3)
Prerequisite: CSC 165 or permission of Department Chairperson
Advanced topics in program design, testing and modular integration. Presents "C" programming language and its use to implement programs of moderate difficulty in a UNIX* environment. Topics include data types, control structures, functions, pointers, arrays, structures, UNIX* system interface, readability, efficiency, portability and tools for software development.

CSC 244
- C ++ FOR C PROGRAMMERS

4 credits (3-3)
Prerequisite: CSC 243
Introduces the concepts underlying object-oriented programming. Topics include abstract data types, classes and objects, inheritance, polymorphism, and operator overloading. Students use these features in programs implemented using the C ++ programming language. Students also learn how to use existing class libraries provided with the C ++ compiler as basic building blocks to create more complex programs. Designed for students who have a strong background in 'C' programming.

CSC 245
- UNIX AND SHELL PROGRAMMING

4 credits (3-3)
Prerequisite: CSC 133
The basic concepts of the UNIX and Linux operating systems including files, processes, and input/output. Features of the UNIX and Linux shells are explored, namely: input and output redirection, pipes, filters, pattern matching, shell variables and commands, and shell program control structures. Students learn the Bourne and Korn shells and develop the ability to write shell programs of moderate difficulty covering a variety of application types.

CSC 246
- UNIX AND WEB SERVER ADMINISTRATION

3 credits (2-3)
Prerequisite: CSC 245
Builds on the basic understanding of UNIX and shell programming developed in CSC245. 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 suite 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

3 credits (2-3)
Prerequisite: CSC 105
Corequisite: CSC 110
Taught using a NetWare 5.1 environment and will provide the student with the necessary knowledge and skills to become a Certified Novell Administrator (CAN). Topics include terminology, hardware and software requirements, workstation configuration, setting up various types of objects, managing the file system, 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. Covers the topes included in the Novel course #560: NetWare 5.1 Administration. Upon successful completion of this course, students will be prepared to take the associated certification test.

CSC 248
- NETWARE SERVICE AND SUPPORT

3 credits (2-2)
Prerequisite: CSC 200 and 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. Includes topics covered in Novell Course #580 NetWare Service and Support version 2. Upon successful completion of this course, students will be prepared to take the associate certification test.

CSC 251
- WINDOWS 2000 PROFESSIONAL ADMINISTRATION

3 credits (2-2)
Prerequisite: 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 enable students to implement the tasks necessary to become a Windows 2000 administrator. Successful completion of this course will prepare students to take the associated Windows 2000 certification test.

CSC 252
- WINDOWS 2000 SERVER ADMINISTRATION

3 credits (2-2)
Prerequisite: 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 students to perform the above-mentioned tasks. Successful completion of this course will prepare students to take the associated Windows 2000 certification test.

CSC 257
- NETWARE ADVANCED ADMINISTRATION

2 credits (1-2)
Prerequisite: CSC 247
A continuation of NetWare 4.11 Administration course. It discusses additional administration skills to provide students with the ability to design, configure, and administer a complex network as well as handle more challenging network situations. This course covers the Novell course #525 IntranetWare 4.11 Advanced Administration. Upon successful completion of the course, students will be prepared to take the associated NetWare Certification test for this Novell course.

COUNSELING AND PLACEMENT SERVICES

CPS 031
- BECOMING A MASTER STUDENT

3 credit equivalents (3-0)
Students learn how to learn, to become "Master Students." Topics covered include notetaking, taking tests, improving memory skills, "effective" reading, managing time and finances, dealing with pressure, handling relationships with family, friends, and faculty, setting goals and communicating effectively.

CPS 041
- STRATEGIES FOR SUCCESS

3 credit equivalents (3-0)
Prerequisite: CPS 031 or departmental approval
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 and Police Science)

CJU 123
- CRIMINAL JUSTICE I

3 credits (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 within the framework of Constitutional law. Special emphasis will be on New Jersey statutory law and court rules.

CJU 124
- CRIMINAL JUSTICE II

3 credits (3-0)

Prerequisite: CJU 123

A continuation of Criminal Justice I. Particular emphasis on the New Jersey court system including detailed discussions of the role of prosecutors versus defense attorneys; pretrial, trial and post-trial functions and the constant influence of ethical considerations.

DANCE

(For related courses, see Physical Education and Recreation)

DAN 131 GE DIV GE HUM
- ELEMENTS OF DANCE

3 credits (3-3)

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 GE DIV GE HUM
- DANCE APPRECIATION

3 credits (3-3)

Students learn 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. Include 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

3 credits (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

3 credits (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.

DENTAL HYGIENE

DHY 102
- RADIOLOGY

2 credits (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

4 credits (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

3 credits (1-6)

Introduces 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. Laboratory and clinical exercises supplement didactic materials. May not be audited.

DHY 108
- PREVENTIVE ORAL HEALTH SERVICES II

5 credits (2-10)

Prerequisites: DHY 102, 105 and 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

3 credits (3-0)

Prerequisites: DHY 102, 105 and 107

Fundamental principles of normal nutrients, nutrient requirements, sources, food values, deficiencies, and energy. Covers basic nutrition as it applies to general and oral health. Nutritional concepts applied to the science of preventive dentistry.

DHY 203
- GENERAL AND ORAL PATHOLOGY

2 credits (2-0)
Prerequisites: DHY 108, 110, 204 and 205
Introduces 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

2 credits (1-2)
Prerequisites: DHY 102, 105 and 107
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

2 credits (2-0)
Prerequisites: BIO 211; DHY 102, 105 and 107
Detailed study of the principles and concepts of periodontal disease, including the tissues surrounding the teeth in both healthy and disease states. Emphasizes the dental hygienist's role in initial therapy and as a disease control therapist in the maintenance of oral health.

DHY 207
- DENTAL HEALTH EDUCATION

2 credits (2-0)
Prerequisites: DHY 108, 110, 204 and 205
Principles and procedures of dental health education and the use of visual aids as applied to all types of dental programs. Emphasis on group presentations. Opportunity provided for observation and practice teaching.

DHY 208
- PHARMACOLOGY

2 credits (2-0)
Prerequisites: BIO 112, CHM 107, DHY 203, 207, 211, 215
Acquaints 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

2 credits (1-3)
Prerequisites: DHY 203, 207, 211 and 215
A basic course in the concept, scope and administration of public health programs. Emphasis on the needs of the population and the role of the dental hygienist within public health practice. Opportunity provided for field experience in analysis and planning of public health education projects.

DHY 211
- PREVENTIVE ORAL HEALTH SERVICES III

5 credits (1-13)
Prerequisites: DHY 108, 110, 204 and 205 and current CPR certification
Continuation of DHY 108. May not be audited.

DHY 212
- PREVENTIVE ORAL HEALTH SERVICES IV

5 credits (1-13)
Prerequisites: DHY 203, 207, 211 and 215 and current CPR certification
Continuation of DHY 211. May not be audited.

DHY 215
- ADVANCED PERIODONTOLOGY

1 credit (1-1)
Prerequisites: DHY 108, 110, 204 and 205
An expanded study of the principles and concepts of, and current research on periodontal disease. In this advanced course the evaluation and monitoring of the periodontal disease process; the latest concepts in treatment; immunology; the relationship of periodontics to other dental specialties; and critique of related literature will be discussed. Various guest lecturers will share their expertise with the students.

DIETETIC TECHNOLOGY

(For related courses, see Hotel, Restaurant and Institution Management)

DTC 101
- INTRODUCTION TO DIETETIC TECHNOLOGY

1 credit (1-0)
An introduction to the organization of food service in health care facilities and the role of the dietetic technician.

DTC 102
- ORIENTATION TO DIETARY SERVICES

1 credit (1-0)
Prerequisites: DTC 101, HRI 103 and HRI 105. Students must have earned a grade of "C" or better in all prerequisites.
Corequisites: HRI 108 and HRI 210
An introduction to the total organization of health care facilities, departmental function and responsibilities, as well as professional and paraprofessional interrelationships.

DTC 208
- SUPERVISED FIELD EXPERIENCE IN FOODSERVICE MANAGEMENT SYSTEMS I

3 credits (0-9)
Prerequisites: DTC 101 and HRI 105 both with a grade of "C" or better
Corequisites: DTC 102, HRI 108 and 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 IN FOODSERVICE MANAGEMENT SYSTEMS II

4 credits (1-9)
Prerequisites: DTC 208 and HRI 210 both with a grade of "C" or better
Corequisites: HRI 213 and HRI 203
A clinical 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 IN FOODSERVICE MANAGEMENT SYSTEMS III

4 credits (0-12)
Prerequisites: DTC 209 and HRI 218 both with a grade of "C" or better
Corequisites: HRI 205, DTC 220
A clinical experience in a health care facility designed to emphasize the managerial functions of planning and control in relation to food procurement, inventory management, cost accounting and overall evaluation of a dietary department.

DTC 220
- SEMINAR IN DIETETIC TECHNOLOGY
  1 credit (1-0)
  Prerequisites: DTC 209 and 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 facilities and community nutrition programs and prepares students for entry into the health care field.

DIGITAL MEDIA ARTS

DMA 210
- WEB PAGE DESIGN AND LAYOUT
  3 credits (1-3)
  Prerequisite: MAD 121
  Introduces web publishing with an emphasis on design and content. Learn to use the latest tools for electronic publication, including HTML, and web authoring tools such as Dreamweaver for the production of web pages. Learn aspects of layout that are unique to web design. Explores exciting areas of electronic publishing such as animation, sound and video.

DMA 212
- WEB ANIMATION AND MOTION GRAPHICS
  3 credits (1-3)
  Prerequisite: MAD 121
  Computer-based approaches to creating original visual imagery for use in interactive multimedia. Introduces the integration of sound, grpahics, video, and text on the desktop. Hands-on experience with Macromedia Flash, Adobe Photoshop, ImageReady, and non-linear post-production using Adobe Premier and/or Apple Final Cut Pro and QuickTime. Introduces special effects and compositing using Adobe After Effects to create movies, animation, and special effects for distribution on video, DVD/CD and the internet. Includes overview of career opportunities.

DISTRIBUTION
(INCLUDING PHYSICAL DISTRIBUTION, TRANSPORTATION, MATERIALS MANAGEMENT)

DIS 101
- CONCEPTS OF MATERIALS MANAGEMENT, TRANSPORTATION AND DISTRIBUTION
  3 credits (3-0)
  Prerequisite: BUS 101
  Introduces basic principles of materials management and physical distribution. The interrelationships between materials management, physical distribution and other organizational activities are studied. Principal methods of planning and forecasting as related to these disciplines are examined. Control and measurement methods in terms of costs, processes, and efficiency are identified and defined in detail.

DIS 201
- CUSTOMER SERVICING
  3 credits (3-0)
  Prerequisite: BUS 101
  Physical distribution concepts and the development and processing of orders for goods and services placed on suppliers. Manual and data processing order-handling systems are discussed and cost benefits of each system are detailed. Includes analysis and student preparation for communications between customer service personnel and internal or external individuals such as manufacturing, credit and collection, the sales force, and customers. The order analyst is conceptualized as a self-contained entity capable of troubleshooting problem orders through the system.

DIS 202
- TRANSPORTATION
  3 credits (3-0)
  Prerequisite: DIS 101
  History, organization, and economic aspects of the American transportation system are considered. Introductory topics include the development of interstate rail, water, motor, and air carriers. The evolution of public regulation for each mode is studied. Advantages and limitations of each form of transportation are considered. Middlemen, such as freight forwarders and internodal transportation companies, are discussed. Major aspects of international transportation are considered. Insurance and packaging aspects of each transportation mode are analyzed.

DIS 204
- WAREHOUSING AND INVENTORY
  3 credits (3-0)
  Prerequisite: DIS 101
  Public and private storage, materials control, and materials handling. Manual- and electronic-processing-based control systems, physical count, access, and location of materials inventory from raw material to finished goods, interpretation of data processing reports and updating, methods of physical inventory, including sampling. Manual versus automated storage and retrieval, storage at the factory versus storage near the marketplace, and the usage of integrated distribution centers versus storage warehouses are analyzed.

ECONOMICS

ECO 201 GE SS
- PRINCIPLES OF ECONOMICS I
  3 credits (3-0)
  Prerequisite: A passing score on the algebra portion of 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
  3 credits (3-0)
  Prerequisite: 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
  3 credits (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 123
- FUNDAMENTALS OF READING INSTRUCTION

3 credits (3-0)

Presents elementary reading programs and the various causes of reading disabilities. An introduction to methods and materials of teaching reading, formal and informal tests, scoring and interpreting data, reading laboratory materials, phonics, vocabulary and comprehension problems and individualized reading programs. Students also investigate how young children learn their own language. An essential course component is the role of the aide in the reading environment.

EDU 207
- INTRODUCTION TO EARLY CHILDHOOD EDUCATION

3 credits (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

3 credits (3-0)

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 OF EXCEPTIONAL CHILDREN

3 credits (3-0)

Introduces 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

3 credits (3-6)

Prerequisites: PSY 226, ENG 121 and 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.

ELECTRONIC AND COMPUTER ENGINEERING TECHNOLOGY

ELT 010
- INTRODUCTION TO ELECTRICAL TECHNOLOGY

3 credit equivalents (3-0)

Corequisite: MAT 013 or appropriate score on College's Placement Test

Introduces terms and methods used in the field of Electrical Technology and the mathematics and physical concepts that are essential for higher level courses. Increases students' ability to think critically, abstractly, and systematically. Calculator proficiency will be gained. Provides laboratory experiences. Recommended for all Electrical Engineering Technology students who must remediate MAT 013 or MAT 014.

ELT 101
- CIRCUITS I

4 credits (3-3)

Corequisites: MAT 109 and MCT 101

Studies the fundamentals of DC electrical circuits. Topics include: current and voltage, resistance and resistive networks, work and power, network theorems, electrical measurement techniques, capacitance and inductance and an introduction to AC theory. Computers are used in the analysis of electric circuits. Theory is supplemented by laboratory experimentation.

ELT 102
- CIRCUITS II

4 credits (3-3)

Prerequisite: ELT 101 or equivalent

Corequisite: MAT 110

A continuation of ELT 101. Topics include inductance, DC transients, alternating current circuits, power, reactance and impedance, and frequency analysis, vector mathematics and resonance. Theory is supplemented by laboratory experimentation.

ELT 103
- ELECTRONICS I

4 credits (3-3)

Corequisite: ELT 102

An investigation of the physical operation of semiconductor devices and a discussion of the analytical and graphical techniques used in the design and analysis of circuits which use these devices. Equivalent circuits are used to describe the operation of basic amplifying circuits. Applications of these circuits are covered. Computers are used in the analysis of electronic circuits.

ELT 106
- TECHNICAL ELECTRICITY

4 credits (3-3)

Corequisite: MAT 110

Studies the theory and practical applications of electricity. Topics include fundamental principles of electricity, AC and DC circuits, electrical instruments, electro-magnetic devices (transformers and rotating machinery) and electronic circuits and devices. Laboratory provides hands-on experience.

ELT 111
- DIGITAL ELECTRONICS

3 credits (2-3)

Corequisite: ELT 101

Studies 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 203
- ELECTRONICS II

4 credits (3-3)

Prerequisite: ELT 103

Studies the performance and applications of transistor and linear integrated circuits. Laboratory experiments are used to supplement the studies of electronic circuits and to verify analytical results. Topics covered are feedback systems, operational amplifiers, power amplifiers, regulated power supplies and power control circuits. Computers are used in the analysis of electronic circuits.

ELT 205
- ELECTROMAGNETIC DEVICES

3 credits (2-3)
Prerequisite: ELT 102
Introduces the basic principles and practices of electromechanical energy conversion devices. AC-DC motors and generators, transformers, magnetic amplifiers, and three phase circuits are studied. Theory is supplemented by laboratory experimentation.

ELT 208
- ELECTRONIC AND COMPUTER ENGINEERING TECHNOLOGY WORK EXPERIENCE

3 credits (1-12)
Prerequisites: ELT 102 and 103
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. The College through on-the-job visits and individual progress review sessions provides supervision of this departmentally approved position. 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. The Department faculty must recommend students. Students must register with the Department of Cooperative Education.

ELT 215
- APPLIED ELECTRICITY

3 credits (2-3)
Corequisite: MAT 108
Introduces the theory and practical applications of electricity. Topics such as: DC and AC circuit theory, electrical instrumentation, electromagnetic devices and circuits and electronic devices and circuits are covered. Laboratory experimentation included. Recommended for HVAC students.

ELT 216
- HVAC CONTROL SYSTEMS

3 credits (2-3)
Prerequisite: ELT 215
Introduces the fundamentals of measurement and control of electric, electronic and fluid control systems. Topics include control of residential, commercial and industrial air conditioning and heating systems, zone control, special control systems and supervisory control systems. Recommended for HVAC students.

ELT 221
- ELECTRIC CIRCUITS I

4 credits (3-3)
Corequisite: MAT 132
Introduces 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

4 credits (3-3)
Prerequisite: ELT 221
A continuation of ELT 221. A study of the phasor concept, AC power, complex frequency, resonance, Fourier analysis techniques, Laplace transforms, polyphase circuits, and two port networks. Laboratory experiments supplement theoretical topics.

ELT 223
- ELECTRONIC DESIGN AND MANUFACTURING

2 credits (1-3)
Prerequisites: ELT 111 and MEC 117
Corequisite: ELT 103
Studies 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

3 credits (2-3)
Prerequisite: ELT 203
Studies Electronic Communication Systems. Introduces signal processing methods, analog and digital modulation techniques, radio receivers, transmitters, and microwave principles and antennas. Laboratory experiments supplement theoretical topics.

ELT 226
- MICROCOMPUTERS

2 credits (1-3)
Prerequisite: ELT 111
Studies the hardware, software, interfacing and programming of a contemporary microcomputer. Students demonstrate the application of the microcomputer through laboratory projects. For Electrical Engineering Technology students.

ELT 230
- INDUSTRIAL ELECTRONICS

3 credits (2-3)
Prerequisite: ELT 103 or approval of Department Chairperson
Studies industrial electronics, components and systems. Topics include: Operational Amplifiers and Linear Integrated Circuits in Industrial Applications, Motors, Industrial Control Devices and Circuits, Transducers, Industrial Process Control, Programmable Controllers, Virtual Instrumentation and Principles of Robotics. Laboratory experiments supplement theoretical topics.

ELT 233
- CONTROL OF INDUSTRIAL MOTORS

3 credits (2-3)
Corequisite: ELT 230
Studies control circuits used in starting, stopping, reversing, and speed control of DC and AC motors. Both conventional and programmable logic methods are used to implement control circuits.

ELT 234
- AUDIO TECHNOLOGY

3 credits (2-3)
Prerequisite: ELT 103
Studies the basic principles of acoustics. Students consider the specific roles of the audio building-blocks-the microphone, amplifier, filter, mixer, loudspeaker, etc. Topics include home and professional (studio) configuration with consumer education. Laboratory experiments supplement theoretical topics.

ELT 239

■ DIGITAL DATA COMMUNICATION AND NETWORKING

3 credits (2-3)

Prerequisite: ELT 226

Studies various types of data communication systems including WANS and LANS, system components, network structures, and interface techniques are examined. Transmission codes and multiplexing methods are emphasized. Extensive laboratory work includes use of protocol analyzers, installation of networks, hardware and software troubleshooting.

ENGLISH

ENG 009

■ WRITING SKILLS FOR COLLEGE I

4 credit equivalents (3-1)

For students whose College Placement Test scores show they need intensive work to improve their writing abilities. Develops 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

3 credit equivalents (3-0)

Prerequisite: Appropriate score on the College's Placement Test or a grade of "C" or better in ENG 009

Improves 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

3 credits (3-0)

Prerequisites: Appropriate scores on the reading and writing portions of the College's Placement Test or a grade of "C" or better in RDG 009 and ENG 009
Corequisites: RDG 011 and ENG 010. Completing RDG 011 and ENG 010 with grades of "C" or better or passing the reading and writing portions of the College's Placement Test waives the corequisite.

Introduces 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 freshman composition - ENG 121 and ENG 122/125, and cannot be used to fulfill Liberal Arts elective requirements.)

ENG 121 GE COM

■ ENGLISH COMPOSITION I

3 credits (3-0)

Prerequisite(s): A passing score on the writing portion of the College's Placement Test or a grade of "C" or better in ENG 010; completion of RDG 009 with a "C" or better or a score on the reading portion of the College's Placement Test that exempts the student 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 bases 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

3 credits (3-0)

Prerequisite(s): A grade of "C" or better in ENG 121 and a passing score on the reading portion of the College's Placement Test or a grade of "C "or better in ENG 121 and a grade of "C" or better in RDG 011.

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

3 credits (3-0)

Prerequisite(s): A grade of "C" or better in ENG 121 and a passing score on the reading portion of the College's Placement Test or a grade of "C" or better in ENG 121 and a grade of "C" or better in RDG 011.

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

2 credits (2-0)

Prerequisite: A passing score on the College's Placement Test or a grade of "C" or better in ENG 010

Written and oral communication skills for students in the Mecomtronics Engineering Technology and Telemedia Communications Technology programs. Students read and write technical documents and prepare a variety of written and oral projects and a documented research report. Develop competence in clear, correct, effective written English. Students will write between 5,000 and 7,000 words, including drafts and revisions, present two formal oral reports and learn basic word processing skills.

ENG 132 GE COM

■ RESEARCH, COMPOSITION AND PRESENTATION II

2 credits (2-0)

Prerequisite: A grade of "C" or better in ENG 131

Continuation of ENG 131. Emphasizes more complex written projects, oral reports and presentations and a documented field research report. In addition, the student develops competence in the reading and writing of technical documents, the analysis and interpretation of written material and the use of written sources as the starting point for expository writing. Students continue to develop interviewing, oral communication and presentation skills and learn how to prepare visual materials. Students will write between 5,000 and 7,000 words, including drafts and revisions, and present two formal oral reports. For Mecomtronics Engineering Technology and Telemedia Communications Technology majors.

ENG 133 GE COM

■ RESEARCH, COMPOSITION AND PRESENTATION III

2 credits (2-0)

Prerequisite: A grade of "C" or better in ENG 132

Continuation of ENG 132. Emphasizes more complex written projects-augmentation and persuasion-and a documented research project that integrates oral reports and presentations. In addition, students develop additional competence in the reading and writing of technical documents, the analysis and interpretation of written material-including poetry, drama and fiction-and the use of written sources as the starting point for expository writing. Students polish interviewing, oral communication and presentation skills; prepare visual materials; participate in team writing projects and prepare a resume. Students will write between 5,000 and 7,000 words, including drafts and revisions, and present two formal oral reports. For Mecomtronics Engineering Technology and Telemedia Communications Technology majors.

ENG 205 GE HUM

■ INTRODUCTION TO JOURNALISM

3 credits (3-0)

Prerequisite: ENG 122 or 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

■ JOURNALISM WORKSHOP

3 credits (3-0)

Prerequisite: 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.

ENG 212 GE HUM

■ CHILDREN'S LITERATURE

3 credits (3-0)

Prerequisite: ENG 121

Surveys the field of children's literature. Covers many forms of this literature, both traditional and modern. Attention is given to ways of helping children enjoy literature. It is strongly recommended that all degree students complete ENG 122 or 125 before registering for this course.

ENG 214 GE HUM

■ JOURNALISM/WRITING FIELD EXPERIENCE

3 credits (2-6)

Prerequisites: ENG 205 or ENG 235 or BUS 205 and permission of Department Chairperson

Corequisite: ENG 206

A cooperative work experience through which students are employed in a professional writing or journalism position to gain the practical experience necessary for success in the field. The College through the instructor's on-the-job visits and individual progress reviews provides supervision of this departmentally approved position. 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.

ENG 215 GE HUM

■ SCIENCE FICTION

3 credits (3-0)

Prerequisite: ENG 122 or 125 or permission of Department Chairperson

Significant works of science fiction like those of Shelley, Verne, Wells, Huxley, Asimov, Heinlein, and Bradbury are read and analyzed. Major topics include science fiction as a literary genre, the advance of technology and its effects on society and the individual, and the scientist as evil genius.

ENG 220 GE HUM

■ DETECTIVE FICTION

3 credits (3-0)

Prerequisite: ENG 122 or 125 or permission of Department Chairperson

The "Who Done It?" as it evolved in America and spread through the world as a popular genre. Students read, analyze, and write about crime/mystery fiction with emphasis on the development of the character of the detective. Writers include but are not limited to Poe, Conan Doyle, Hammett, Chandler, Chesterton, Freeman, Bramah, Futrelle, Ross MacDonald, McBain, Christie, Ibarguengoita, Sayers, P.D. James, Robert Parker, Simeon, Sjowall & Wahloo, Rendell, Stribling, Togawa, and Van der Wetering.

ENG 221 GE HUM

■ ENGLISH LITERATURE I

3 credits (3-0)

Prerequisite: ENG 122 or 125 or permission of Department Chairperson

Works by major authors in English literature from the Anglo-Saxon period through 1789 are read and analyzed. Authors studied include the Beowulf poet, Chaucer, Shakespeare, Milton, the metaphysical poets, Swift and Blake.

ENG 222 GE HUM

■ ENGLISH LITERATURE II

3 credits (3-0)

Prerequisite: ENG 122 or 125 or permission of Department Chairperson

Works by major authors in English literature from 1789 to the present are read and analyzed. Authors studied include Wordsworth, Shelley, Keats, Tennyson, Browning, Yeats, Joyce, and Eliot.

ENG 225 GE DIV GE HUM

■ WORLD LITERATURE I

3 credits (3-0)

Prerequisite: ENG 122 or 125 or permission of Department Chairperson

Introduces masterpieces of world literature to 1500. A variety of cultural, intellectual, historical and literary perspectives are explored in selections by authors from Asia, Africa, and Continental Europe. Students complete reading, writing, and research assignments designed to develop the skills of literary interpretation and analysis.

ENG 226 GE DIV GE HUM

■ WORLD LITERATURE II

3 credits (3-0)

Prerequisite: ENG 122 or 125 or permission of Department Chairperson

An introduction to masterpieces of world literature from 1500. A variety of cultural, intellectual, historical and literary perspectives are explored in selections by authors from Asia, Africa, Continental Europe and Latin America. Students complete reading, writing, and research assignments designed to develop the skills of literary interpretation and analysis.

ENG 227 GE DIV GE HUM

■ LITERATURE OF BLACK AMERICA

3 credits (3-0)

Prerequisite: ENG 122 or 125 permission of Department Chairperson

The literature of the black American from African and Pre-Civil War songs and tales to the writers of the Reconstruction, the early 1900's, the Harlem renaissance, the WPA Writers-Workshop, and the new black writers of the 1990's.

ENG 228 GE HUM
- MODERN BRITISH AND AMERICAN POETRY

3 credits (3-0)
Prerequisite: ENG 122 or 125 permission of Department Chairperson
British and American poets from the time of Dickinson through the 20th century are read and analyzed. Poets studied could include Dickinson, Whitman, Yeats, Frost, Stevens, Eliot, Hughes, Auden, Brooks, Ginsberg, Sexton, Rich, and Plath.

ENG 233 GE HUM
- INTRODUCTION TO THE NOVEL

3 credits (3-0)
Prerequisite: ENG 122 or 125 or permission of Department Chairperson
The novel from its earliest forms to the present. Authors include Fielding, Austen, Dickens, Melville, James, Flaubert, Dostoevski, Joyce and Faulkner. Works are analyzed in terms of genre, point of view, structure, characterization and theme.

ENG 234 GE HUM
- INTRODUCTION TO SHAKESPEARE

3 credits (3-0)
Prerequisite: ENG 122 or 125 or permission of Department Chairperson
Introduces Shakespeare's dramas. Students read, discuss, and write about selected histories, comedies, and tragedies. Included is a discussion of the Elizabethan theater.

ENG 235 GE HUM
- CREATIVE WRITING I

3 credits (3-0)
Prerequisite: ENG 122 or 125 or permission of Department Chairperson
A basic course in creative and imaginative writing. Various literary forms are discussed and undertaken by the students. Student manuscripts are extensively analyzed and criticized.

ENG 236 GE HUM
- CREATIVE WRITING II

3 credits (3-0)
Prerequisite: ENG 122 or 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

3 credits (3-0)
Prerequisite: ENG 122 or 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

3 credits (3-0)
Prerequisite: ENG 122 or 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 DIV GE HUM
- WOMEN IN LITERATURE

3 credits (3-0)
Prerequisite: ENG 122 or 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

3 credits (3-0)
Prerequisite: ENG 122 or 125 or permission of Department Chairperson
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

3 credits (3-0)
Prerequisite: ENG 122 or 125 or permission of Department Chairperson
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

3 credits (3-0)
Prerequisite: ENG 122 or 125 or permission of Department Chairperson
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

3 credits (3-0)
Prerequisite: ENG 122 or 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

3 credits (3-0)
Prerequisite: ENG 122 or 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

3 credits (3-0)
Prerequisite: ENG 122 or 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 DIV GE HUM
- GAY AND LESBIAN LITERATURE

3 credits (3-0)
Prerequisite: ENG 122 or 125 or permission of Department Chairperson
Students read works which have either homosexuality as a prominent theme or prominent homosexual characters. Writers include, but are not be limited to, Sappho, Catullus, Walt Whitman, Gertrude Stein, Virginia Woolf, Allen Ginsberg, Martin Duberman, Rita Mae Brown, Audre Lorde, Susan Sontag, Adrienne Rich, Minnie Bruce Pratt and Paul Monette. Old world and new world cultures, as well as a variety of genres, will be discussed in this course.

ENG 253 GE DIV GE HUM
- MYTHOLOGY IN LITERATURE

3 credits (3-0)
Prerequisite: ENG 122 or 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

3 credits (3-0)
Prerequisite: ENG 122 or 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

3 credits (3-0)
Prerequisite: ENG 122 or 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

3 credits (3-0)
Prerequisite: ENG 122 or 125 or permission of Department Chairperson
Introduces 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

3 credit equivalents (3-0)
Corequisites: ESL 061 and 062
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

3 credit equivalents (3-0)
Corequisites: ESL 060 and 062
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

3 credit equivalents (3-0)
Corequisites: ESL 060 and 061
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

4 credit equivalents (3-1)
Corequisite: ESL 064
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

4 credit equivalents (3-1)
Corequisite: ESL 063
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

3 credit equivalents (3-0)
Prerequisite: ESL 061 or permission of Department Chairperson
Corequisite: ESL 072
An intermediate course in pronunciation. Students review the vowel and consonant sounds, and intensive practice 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

3 credit equivalents (3-0)
Prerequisite: ESL 062 or permission of Department Chairperson
Corequisite: ESL 071
A course in oral communication at the intermediate level. Attention paid to conversation techniques and strategies in different situations. Addresses the cultural conventions of communicating in American English.

ESL 073
- STRUCTURE-INTENSIVE LEVEL II

4 credit equivalents (3-1)
Prerequisite: ESL 063 or permission of Department Chairperson
Corequisites: ESL 071, 072, 074 and 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

4 credit equivalents (3-1)
Prerequisite: ESL 064
Corequisites: ESL 071, 072, 073, and 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

3 credit equivalents (3-0)
Prerequisite: ESL 063
Corequisites: ESL 071, 072, 073, and 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

4 credit equivalents (3-1)
Prerequisite: ESL 073 or permission of Department Chairperson
Corequisites: ESL 084, 085, and 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 one hour of individualized work session in the ESL Lab in addition to class hours.

ESL 084
- WRITING-INTENSIVE LEVEL III

4 credit equivalents (3-1)
Prerequisite: ESL 074 or permission of Department Chairperson
Corequisites: ESL 083, 085, and 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 of individualized work in the ESL Learning Center in addition to class hours.

ESL 085
- READING/VOCABULARY-INTENSIVE III

3 credit equivalents (3-0)
Prerequisite: ESL 075 or permission of Department Chairperson
Corequisites: ESL 083, 084, and 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

3 credit equivalents (3-0)
Prerequisites: ESL 071 and 072 or permission of Department Chairperson
Corequisites: ESL 083, 084, and 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 IV

3 credit equivalents (3-0)
Prerequisite: ESL 086 or permission of the ESL Chairperson
Corequisites: ESL 092, 093, 094, 099
Designed to facilitate the ESL student 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

3 credit equivalents (3-0)
Prerequisite: ESL 083 or permission of the ESL Chairperson
Corequisites: ESL 086, 091, 093, 094, 099
An advanced structure course that will review verb tenses included in ESL 083. Advanced structures such as gerunds, infinitives, participial phrases and various types of clauses will be introduced. Students will practice these structures in the context of writing.

ESL 093
- ESL STRUCTURE/WRITING IV

4 credit equivalents (3-1)
Prerequisite: ESL 084 or permission of Department Chairperson
An advanced structure/writing course reviewing all of the structures covered in previous courses. Special attention made to the advanced structures necessary for good composition. Paragraph practice with an introduction to the various types of expository writing. Individualized work is required in the ESL Learning Center in addition to class hours. *"C" is the minimum acceptable grade for movement from one remedial/developmental level to another and for completion of remediation/developmental requirements to include all credit equivalent courses.*

ESL 094
- ESL READING/VOCABULARY IV

4 credit equivalents (3-1)
Prerequisite: ESL 085 or permission of Department Chairperson
Review and utilize all of the skills developed in previous courses. Continued emphasis upon comprehension, advanced vocabulary development and increased reading speed. Students read and interpret advanced reading passages. Individualized work is required in the ESL Learning Center in addition to class hours. *"C" is the minimum acceptable grade for movement from one remedial/developmental level to another and for completion of remediation/developmental requirements to include all credit equivalent courses.*

ESL 099

■ ESL READING/WRITING V

4 credit equivalents (3-1)

Prerequisite: ESL 093 or permission of Department Chairperson

Advanced course in reading/writing to improve composition skills through interpretation of reading passages. Students analyze readings and develop good expository essays in response to the readings. Individualized work is required in the ESL Learning Center in addition to class hours. *"C" is the minimum acceptable grade for movement from one remedial/developmental level to another and for completion of remediation/developmental requirements to include all credit equivalent courses.*

ENGLISH AS A SECOND LANGUAGE TRANSITION

EST 009

■ ENGLISH AS A SECOND LANGUAGE TRANSITION

4 credit equivalents (3-1)

For former ESL students whose test scores show they need intensive work to improve their writing abilities. Develop the ability to write in Standard American English. Provides instruction in sentence structure, punctuation and usage, taking into consideration the needs of second language learners; students regularly practice writing effective sentences, paragraphs and short essays. This course is in place of ENG 009 and students may have to enroll in ENG 010 after successfully completing EST 009. *"C" is the minimum acceptable grade for movement from one remedial/ developmental level to another for completion of remediation/ developmental requirements.*

ENVIRONMENTAL TECHNOLOGY

ENV 201

■ ADVANCED WASTEWATER OPERATIONS I

3 credits (3-0)

Prerequisites: CHM 010, MAT 013 or a recent course in basic water and wastewater operations approved by the Department of Environmental Protection of New Jersey

Topics include 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

3 credits (3-0)

Prerequisites: CHM 010, MAT 013 or a recent course in basic water and wastewater operations approved by the Department of Environmental Protection of New Jersey

Topics include 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

3 credits (3-0)

Prerequisite: See ENV 201

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

3 credits (3-0)

Prerequisite: See ENV 201

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

3 credits (3-0)

Prerequisites: 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 GE DIV GE SCI

■ ENVIRONMENTAL ISSUES IN OUR DIVERSE SOCIETY

3 credits (2-2)

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

3 credits (2-2)

A survey of current environmental health problems with emphasis on communicable diseases, waste disposal, water and air pollution control, food sanitation, pest control, hazardous waste disposal, and other topics. Applicable federal and New Jersey regulations are studied.

ENV 211 GE SCI

■ CRITICAL ISSUES IN AIR AND WATER POLLUTION

4 credits (3-3)

Prerequisite: MAT 013 or appropriate score on the College's Placement Test and one year of high school laboratory science

Topics include the values, attitudes, and concepts necessary to understand and appreciate the interrelationships among people, their culture, and their biophysical environment. Emphasis is on the air and water environment. Includes laboratory and field trips. ENV 211 and 212 are not sequential and may be taken in either order.

ENV 212 GE SCI

■ GLOBAL ENVIRONMENTAL ISSUES

4 credits (3-3)

Prerequisite: MAT 013 or appropriate score on the College's Placement Test and one year of high school laboratory science

Solid and hazardous wastes, toxicology, food, soil, 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

3 credits (2-3)
Prerequisite: CHM 118 or equivalent
Introduces industrial hygiene. 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. Develops 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

3 credits (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

3 credits (2-3)
Prerequisites: 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 226
- ENVIRONMENTAL TECHNOLOGY CO-OPERATIVE EDUCATION

3 credits (1-12)
Prerequisite: ENV 201 or 203 and Department Chairperson's permission
Corequisite: ENV 202 or 204
A cooperative work experience program whereby 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. Individuals must be recommended by the faculty of the department and register with the Department of Cooperative Education

FASHION MERCHANDISING AND RETAIL MANAGEMENT

RET 201
- FASHION MERCHANDISE INFORMATION

4 credits (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

3 credits (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

3 credits (3-0)
Prerequisites: BUS 101, RET 201, 202, 205, and 207, MKT 143 and 201
Corequisite: RET 206
The management principles and practices used in stores with emphasis on organization, operations, and customer relations.

RET 205
- STORE FIELD EXPERIENCE I

3 credits (1-12)
Prerequisite: 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. The College through on-the-job visits and individual progress review sessions provides supervision of this departmentally approved position. 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

3 credits (1-12)
Prerequisite: 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. The College through on-the-job visits and individual progress review sessions provides supervision of this departmentally approved position. Students are required to establish learning objectives related in 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

3 credits (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.

FINANCE

FIN 201
- CREDIT AND COLLECTION PRINCIPLES

3 credits (3-0)
Prerequisite: ACC 101
A basic course in credit and collections. Nature and function of credit, types and classification of credit, principles of bank and commercial credit, factors of credit risk, sources of information, analysis of agency reports, interchange services, and collection procedures.

FIN 202
■ ADVANCED CREDITS
3 credits (3-0)
Prerequisite: FIN 201
Interpreting the financial statement including value and purpose of the financial statement and types of financial statement; the analysis of financial statements as a basis for credit; the use of ratios of sales and balance sheet relationships in the analysis of financial statements; comparative statement analysis; policies and organizations for collections; procedures in handling collections; collection correspondence; legal aid and processes to assist creditors; adjustments and use of adjustment bureaus; bankruptcy; insurance and guarantees; credit practices and policies of banks; factors and finance companies; foreign credits and collections; and the retail credit organization and procedures.

FIN 203
■ PROBLEMS IN CREDIT MANAGEMENT
3 credits (3-0)
Prerequisites: FIN 201 and 202
The everyday functions of an operating credit manager in personnel hiring, motivation, decision-making, presentation, financial analysis, funds flow, policy, and management problems. In-depth cases studies are utilized.

FIN 205
■ CREDIT AND FINANCIAL MANAGEMENT FIELD EXPERIENCE I
3 credits (1-12)
A cooperative work experience program whereby students are employed in a credit or financial position in order to gain some of the practical experience necessary for success in the credit and financial management field. The college through on-the-job visits and individual progress review sessions provides supervision of this departmentally approved position. 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. FIN 205 Credit and Financial Management Field Experience is offered as an alternative to MKT 143 or 201.

FIRE SCIENCE TECHNOLOGY

FSC 103
■ INTRODUCTION TO FIRE PROTECTION
3 credits (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; chemistry of fire; building construction; 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
3 credits (3-0)
Prerequisite: FSC 103 or permission of Department Chairperson
Provides fire service personnel with an understanding of the basic principles of building construction and how design considerations and materials selection affect the life safety of both the building's 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
3 credits (3-0)
Prerequisite: 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
3 credits (3-0)
Prerequisites: CHM 107 and 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 haz-mat responder requirements as per OSHA 1910.120. Provides an introduction to the TECHNICIAN and INCIDENT COMMANDER levels of haz-mat responder requirements.

FSC 209
■ FIRE SUPPRESSION AND DETECTION SYSTEMS
3 credits (3-0)
Prerequisite: 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
3 credits (3-0)
Prerequisite: 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
3 credits (3-0)
Prerequisite: 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.

FOOD INDUSTRY MANAGEMENT

FIM 201
- FOOD MARKETING AND MERCHANDISING

3 credits (3-0)
Prerequisite: MKT 201
Provides an introduction to the food industry. Topics include the structure of the food industry, product and service categories, and regulations affecting food merchandising. Students will be introduced to store layout, buying and price management, advertising and promotion, profitability, and potential career options.

FIM 202
- SANITATION AND REGULATORY ISSUES

3 credits (3-0)
Techniques and procedures for employing hygienic practice in the food industry including food sanitation and microbiology, food spoilage and foodborne illnesses, and education and training in sanitation of food industry personnel. Government regulations, as they pertain to the food industry, will be studied.

FIM 203
- FOOD DISTRIBUTION, SALES AND PRODUCTION

3 credits (3-0)
Food Distribution, Sales and Production focuses on the structure and formulation of the channels of distribution, sales strategies, and marketing logistics in the food industry. Customer service, logistical costs, system planning and management are all analyzed. Topics also include transportation, warehouse operations, sales management and the application of information systems.

FIM 204
- FOOD MANAGEMENT CO-OP

3 credits (1-12)
Prerequisites: FIM 201, 202 and 203
Enables the student to learn and practice food marketing skills under professional guidance in a college approved work environment. The student's work is supervised by a trained faculty member. Students must work a minimum number of hours for the semester and attend a weekly seminar.

FIM 205
- ISSUES AND PROBLEMS IN FOOD INDUSTRY

3 credits (3-0)
Prerequisites: FIM 201, 202 and 203
Issues and Problems in Food Industry. Discusses the strategic basic aspects of food marketing and management. As the capstone course of the Food Industry Management Program it integrates theoretical concepts from a variety of business administration fields with current issues and problems in the food industry.

FRENCH

FRE 121 GE HUM
- ELEMENTARY FRENCH I

3 credits (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

3 credits (3-0)
Prerequisite: FRE 121
Continuation of FRE 121.

FRE 221 GE HUM
- INTERMEDIATE FRENCH I

3 credits (3-0)
Prerequisite: 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

3 credits (3-0)
Prerequisite: FRE 221 or 224 or 228 or permission of Department Chairperson
Continuation of FRE 221.

FRE 224 GE DIV GE HUM
- CONTEMPORARY FRENCH LITERATURE

3 credits (3-0)
Prerequisite: 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 DIV GE HUM
- FRENCH CIVILIZATION AND CULTURE

3 credits (3-0)
Prerequisite: FRE 221 or higher or permission of Department Chairperson
Readings, 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

3 credits (3-0)
Prerequisite: FRE 222 or a minimum of three years of high school French
An advanced course providing intensive training in speaking and writing colloquial French. Includes oral and written reports and discussions.

FRE 232 GE HUM
- FRENCH CONVERSATION AND COMPOSITION II

3 credits (3-0)
Prerequisite: FRE 231
Continuation of FRE 231.

GERMAN

GER 121 GE HUM
- ELEMENTARY GERMAN I

3 credits (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

3 credits (3-0)
Prerequisite: GER 121
Continuation of GER 121.

GER 221 GE HUM
- INTERMEDIATE GERMAN I

3 credits (3-0)
Prerequisite: 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

3 credits (3-0)
Prerequisite: GER 221 or higher or permission of Department Chairperson
Continuation of GER 221.

GER 224 GE DIV GE HUM
- MODERN GERMAN LITERATURE

3 credits (3-0)
Prerequisite: GER 221 or higher or permission of Department Chairperson
Introduces major writers of the modern era; emphasis is on short stories by authors from Austria, Germany, and Switzerland.

GER 228 GE DIV GE HUM
- GERMAN CULTURE AND CIVILIZATION

3 credits (3-0)
Prerequisite: GER 221 or higher
Survey of the major aspects of German culture and civilization, both historical and contemporary. Extensive use of media: film, slides, recordings.

GER 231 GE HUM
- GERMAN CONVERSATION AND COMPOSITION I

3 credits (3-0)
Prerequisite: 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

3 credits (3-0)
Prerequisite: GER 231 or equivalent
Continuation of GER 231.

HEALTH

(For related courses, see Physical Education, Recreation and Dance)

HED 150 GE DIV GE PED
- CONTEMPORARY HEALTH ISSUES

3 credits (3-0)
Enables 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 DIV GE PED
- HUMAN SEXUALITY AND FAMILY LIFE

3 credits (3-0)
Enables 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

3 credits (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

3 credits (3-0)
Basic principles and research findings concerning health and nutrition of young children in group settings. Sensitivity to mental and physical healthy: planning nutrition programs and optimal physical care in child care centers.

HEATING, VENTILATINGAND AIR CONDITIONING DESIGN TECHNOLOGY

HVA 101
- AIR CONDITIONING, REFRIGERATION AND HEATING PRINCIPLES I

4 credits (3-3)
Prerequisite: MAT 013 or appropriate score on the College's Placement Test
Basic refrigeration and air conditioning principles and system components. Topics include: Properties of Matter, Refrigeration Systems, Refrigerant Controls, Fundamentals of Electricity and Magnetism, Electric Motors and Refrigerant. Laboratory projects present experimental learning through a hands-on approach to illustrate and reinforce the lecture topics.

HVA 102
- AIR CONDITIONING, REFRIGERATION AND HEATING PRINCIPLES II

4 credits (3-3)
Prerequisite: HVA 101
A continuation of HVA 101. Covers commercial refrigeration, air conditioning and heating systems. Topics include: Commercial System Components, Heating and Cooling Load Analysis utilizing computers and standard forms, use of the Psychometric Chart, Air Conditioning and Heating System Components, Filtration Systems, Concepts of Air Duct Systems and Solar Energy Systems. Laboratory projects present experimental learning through a hands-on approach to illustrate and reinforce the lecture topics.

HVA 106
- HVAC DRAFTING

2 credits (0-6)
Prerequisite: 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

4 credits (3-3)
Prerequisites: HVA 102 and MAT 108
The design principles necessary for designing heating, refrigeration, and air conditioning systems. A survey of the scope of the HVAC industry precedes the topics of heating load analysis, boilers and furnaces, hydronic piping systems, cooling load analysis and Psychometrics analysis. Laboratory design projects included.

HVA 202
- HVAC DESIGN PRINCIPLES II

4 credits (3-3)
Prerequisite: 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

1 credit (0-3)
Prerequisite: 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

3 credits (2-3)
Corequisite: HVA 202
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

3 credits (3-0)
Prerequisite: MAT 108
Thermodynamics analysis of the mechanical refrigeration cycle and its associated equipment. Topics include: Properties of Matter, Ideal Gas Processes, The First & Second Laws of Thermodynamics, Mollier and p-h Diagrams, Psychometric Properties of Air, Reciprocating Compressors, Evaporators, System Equilibrium, Condensers and Cooling Towers.

HISTORY

(See also African-American Studies)

HIS 121 GE HUM
- HISTORY OF WESTERN CIVILIZATION I

3 credits (3-0)
The historical development of Western civilization from ancient times to approximately 1715 A.D. 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

3 credits (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
- HISTORY OF NON-WESTERN CIVILIZATION IN EAST ASIA

3 credits (3-0)
Traces the social, economic, political, and cultural forces that have shaped the cultures of the Far East from ancient times to the present. Emphasis is on the cultural interpenetration between these different 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
- HISTORY OF NON-WESTERN CIVILIZATION IN THE THIRD WORLD

3 credits (3-0)
Traces 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 interpenetration 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

3 credits (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 DIV GE HUM
- ANCIENT EGYPT'S HISTORY: AN INTRODUCTION

3 credits (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 B.C.). 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

3 credits (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

3 credits (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
3 credits (3-0)
Introduces 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
■ HISTORY OF MAJOR WORLD RELIGIONS
3 credits (3-0)
The origins, beliefs, and contemporary practices of Judaism, Christianity, Islam, Hinduism, Buddhism, Taoism, Confucianism, Shintoism. Attention is given to the interaction of specific religions and the cultures in which they are practiced.

HIS 256 GE HUM
■ HISTORY OF THE TWENTIETH CENTURY
3 credits (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
■ HISTORY OF WOMEN
3 credits (3-0)
The background of women in the Western world. The roles of women in various societies and upon the contributions made by women. Several women's movements are studied in detail.

HIS 260 GE DIV GE HUM
■ DIMENSIONS OF PREJUDICE, GENOCIDE AND THE HOLOCAUST
3 credits (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
3 credits (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
3 credits (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
3 credits (3-0)
Corequisite: BIO 108
Principles of nutrition including the various essential nutrients in foods and their functions in the human body.

HRI 107
■ BAKING FUNDAMENTALS
3 credits (1-5)
Prerequisite: 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
3 credits (1-4)
Prerequisite: 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 the culinary arts.

HRI 109
■ PROFESSIONAL CULINARY TECHNIQUES
3 credits (1-4)
Prerequisite: 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
3 credits (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. *Industry certification.*

HRI 111
■ FOOD PREPARATION PRACTICUM
3 credits (1-13)
Prerequisite: HRI 103. Admission to the Culinary Arts Program.
A practicum designed to develop and refine professional food preparation and production skills through an approved on-site industry experience. Learning activities are planned, supervised and evaluated by qualified chefs and/or food production managers in coordination with the program coordinator.

HRI 114
■ GARDE MANGER
3 credits (1-5)
Prerequisite: 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
3 credits (3-0)
An 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
3 credits (2-2)
Prerequisite: 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. *Industry certification.*

HRI 202
■ FACILITIES LAYOUT AND DESIGN
3 credits (2-2)
Study of physical property, selection, design, operation, and maintenance of equipment essential for hotel, restaurant, and institution operations. *Industry certification.*

HRI 203
■ VOLUME FOOD MANAGEMENT AND PRODUCTION
4 credits (2-4)
Prerequisite: HRI 108
The organization and management techniques for distribution and service of food, sanitation and safety, menu planning, employee relationships. Includes actual experience in conducting luncheons catered by students in the curriculum.

HRI 204
■ SEMINAR AND COOPERATIVE WORK EXPERIENCE
3 credits (1-12)
Prerequisites: HRI 101, 103 and 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
3 credits (2-2)
Prerequisite: HRI 103
Food controls and the importance of purchasing, receiving, storing, and issuing. The utilization of employees and maintenance of records to control food and labor costs. *Industry certification.*

HRI 206
■ MERCHANDISING FOR THE HOSPITALITY INDUSTRY
3 credits (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. *Industry certification.*

HRI 208
■ ENVIRONMENTAL SANITATION IN FOOD SERVICE OPERATIONS
3 credits (3-0)
Techniques and procedures for employing hygienic 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
■ NUTRITION IN MODIFIED DIET
3 credits (3-0)
Prerequisite: HRI 105 with a grade of "C" or better
Relationship of the principles of nutrition to special and abnormal physical conditions. The various types of school lunches, hospital diets, geriatrics, and related problems are explored.

HRI 213
■ HEALTH FACILITIES FOOD SERVICE MANAGEMENT
3 credits (3-0)
The organization of a hospital dietary department including the various types of food services available.

HRI 215
■ BEVERAGE MANAGEMENT
3 credits (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. *Industry certification.*

HRI 216
■ HOSPITALITY PROPERTY MANAGEMENT
3 credits (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. *Industry certification.*

HRI 217
■ SUPERVISORY HOUSEKEEPING
3 credits (3-0)
The fundamentals of housekeeping management. Management functions, tools and practices required in lodging and institutional housekeeping departments. *Industry certification.*

HRI 218
■ NUTRITION THROUGHOUT THE LIFE SPAN
3 credits (3-0)
Prerequisite: 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, investigate 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
3 credits (3-0)
Training needs in the hospitality industry. The systematic design of instruction, the evaluation of training programs, and management of the training function. *Industry certification.*

HRI 250
■ LAW FOR HOSPITALITY OPERATIONS
3 credits (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

3 credits (3-0)

The requirements and implications of The Occupational Safety and Health Act (OSHA) on the working environment. Topics included are accident causes and costs, workman's compensation, controlling unsafe acts and conditions, OSHA standards, inspection rights, enforcement procedures, and penalties.

IND 104
- INSPECTION TECHNIQUES

3 credits (2-2)

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 105
- INDUSTRIAL GRAPHICS AND SPECIFICATIONS

2 credits (1-3)

A fundamental graphical language course interpreting industrial drawings and specifications. Topics include detail and assembly drawings, bills of materials, tolerances, fit of mating parts, surface quality, welding, piping, and sheetmetal drawings, and drawings of mechanical components such as gears, cams, etc. Laboratory assignments supplement the lecture material.

IND 203
- STATISTICAL QUALITY CONTROL I

3 credits (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

3 credits (3-0)

Prerequisite: 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

3 credits (3-0)

Introduces 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

3 credits (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

3 credits (3-0)

Prerequisite: 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

3 credits (3-0)

Prerequisite: 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

3 credits (3-0)

Prerequisite: 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.

LAND SURVEYING TECHNOLOGY

LST 250
- BOUNDARY LAW I

3 credits (3-0)

An introductory course which analysis elements of boundary law, consisting of legal research, evidence, procedures and the synthesis needed for the surveying of land.

LANGUAGES AND CULTURES

LNC 123 GE DIV GE HUM
- INTRODUCTION TO THE STUDY OF HUMAN LANGUAGE

3 credits (3-0)

Introduces and explores the areas of language acquisition, dialects, social variations of language, language and ethnicity, language and gender, and cross-cultural and multi-cultural perspectives of language. The student will get a broad understanding of phonology, morphology, syntax, semantics, and pragmatics in the context of English and its history.

MANAGEMENT

MGT 200
- PRINCIPLES OF SUPERVISION

3 credits (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

3 credits (3-0)
Prerequisites: 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

3 credits (1-12)
Prerequisite: 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

3 credits (3-0)
Prerequisite: 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

3 credits (3-0)
Prerequisite: 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

3 credits (3-0)
Prerequisites: ACC 102, ECO 202, ENG 122, MGT 205, 210 and 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

3 credits (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 and training and maintaining morale.

MARKETING

MKT 143
- SALESMANSHIP

3 credits (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

3 credits (3-0)
Prerequisite: 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

3 credits (3-0)
Prerequisite: 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

3 credits (3-0)
Prerequisite: 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

3 credits (3-0)
Prerequisite or corequisite: ACC 102; BUS 201; ECO 201; ENG 122; MKT 202 & 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

3 credits (1-12)
Prerequisite: MKT 201
A cooperative work experience program employing students in a marketing position in order to gain practical experience necessary for success in marketing. The College through on-the-job visits and individual progress review sessions provides supervision of this departmentally approved position. 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.

MATERIALS MANAGEMENT

(See Transportation, Physical Distribution and Materials Management)

MMG 201

■ MATERIALS MANAGEMENT I

3 credits (3-0)

Prerequisite: DIS 101

An analysis of the characteristics of closed-loop materials management systems. Master production scheduling, materials requirement planning and capacity requirements planning will be introduced and described in detail. Principles, methods and processes in forecasting. Exponential smoothing, PERT and statistical methods will be reviewed.

MMG 202

■ MATERIALS MANAGEMENT II

3 credits (3-0)

Prerequisite: DIS 101

An analysis of the elements of an effective inventory management system, shop floor control and intermediate capacity control. Finite loading and infinite loading techniques will be examined in detail, together with such topics as input/output analysis dispatch lists, critical ratio and economic order quantity determination.

MATHEMATICS

MAT 009

■ BASIC MATHEMATICS ALTERNATIVE

1 credit equivalent (1-0)

Prerequisite: Permission of Mathematics Department

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

3 credit equivalents (3-0)

Prerequisite: 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 I (PART A)

3 credit equivalents (3-0)

Prerequisite: None

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 II (PART B)

3 credit equivalents (3-0)

Prerequisite: MAT 010A

A continuation of 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 or completion of the remedial requirements to qualify for credit courses.

MAT 013

■ ALGEBRA I

4 credit equivalents (4-0)

Prerequisite: Grade of "C" or better in MAT 010, MAT 010B, or appropriate score on College's Placement Test.

Introduces and develops 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 or completion of the remedial requirements to qualify for credit courses.

MAT 013A

■ ALGEBRA I (PART A)

4 credit equivalents (4-0)

Prerequisite: Grade of "C" or better in MAT 010, MAT 010B, or appropriate score on the College's Placement Test

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 or completion of the remedial requirements to qualify for credit courses.

MAT 013B

■ ALGEBRA II (PART B)

4 credit equivalents (4-0)

Prerequisite: MAT 013A or permission of Mathematics Department Chairperson

A continuation of MAT 013A. 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 or completion of the remedial requirements to qualify for credit courses.

MAT 014

■ ALGEBRA II

4 credit equivalents (4-0)

Prerequisite: Grade of "C" or better in MAT 013, MAT 013B, or appropriate score on College's Placement Test.

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. 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 or completion of the remedial requirements to qualify for credit courses.

MAT 014A

■ ALGEBRA II (PART A)

4 credit equivalents (4-0)

Prerequisite: Grade of "C" or better in MAT 013, MAT 013B, or appropriate score on the College's Placement Test

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. Students must complete this course and MAT 014B to fulfill the MAT 014 requirement.

Note: A minimum grade of "C" is required for movement from one remedial course to another and or completion of the remedial requirements to qualify for credit courses.

MAT 014B

■ ALGEBRA II (PART B)

4 credit equivalents (4-0)

Prerequisite: Grade of "C" or better in MAT 014A

A continuation of MAT 014A. Topics include: rational exponents, radical expressions, radical equations, quadratic equations, rational expressions, rational equations and complex fractions. The use of a graphing calculator is essential.

Note: A minimum grade of "C" is required for movement from one remedial course to another and or completion of the remedial requirements to qualify for credit courses.

MAT 020

■ GEOMETRY

3 credit equivalent (3-0)

Prerequisite: MAT 013 or MAT 013B

A traditional high school geometry course for students who have successfully completed one year of high school algebra or the equivalent. The course includes topics from Euclidean geometry including basic proofs, congruent triangles, parallel and perpendicular lines, lines and planes in space, polygons, circles, and the Pythagorean Theorem. Optional topics include logic and construction.

Note: A minimum grade of "C" is required for movement from one remedial course to another and or completion of the remedial requirements to qualify for credit courses.

MAT 080

■ ALGEBRA I ALTERNATIVE

1 credit (1-0)

Prerequisite: Grade of "C" or better in MAT 010, MAT 010B or appropriate score on The College's Placement Test.

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 or completion of the remedial requirements to qualify for credit courses.

MAT 101 GE MAT

■ FRESHMAN MATHEMATICS I

3 credits (3-0)

Prerequisite: Appropriate score on the College's Placement Test and two years of high school mathematics, or MAT 013, or departmental approval.

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

3 credits (3-0)

Prerequisite: MAT 101

A continuation of MAT 101. 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

3 credits (3-0)

Prerequisite: Appropriate score on the College's Placement Test or successful completion of MAT 013

Introduces 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

3 credits (3-0)

Prerequisite: Appropriate score on the College's 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.

MAT 108 GE MAT
- MATHEMATICS II

3 credits (3-0)

Prerequisite: 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.

MAT 109 GE MAT
- COLLEGE ALGEBRA AND TRIGONOMETRY I

3 credits (3-0)

Prerequisite: Satisfactory score on The College's Placement Test, MAT 014, 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.

MAT 110 GE MAT
- COLLEGE ALGEBRA AND TRIGONOMETRY II

2 credits (2-0)

Prerequisite: 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.

MAT 112 GE MAT
- UNIFIED CALCULUS I

3 credits (3-0)

Prerequisite: MAT 110 or equivalent

Introduces 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
- COLLEGE ALGEBRA AND DATA ANALYSIS

3 credits (3-0)

Prerequisite: MAT 014 or satisfactory score on the College's 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

3 credits (3-0)

Prerequisite: 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

3 credits (3-0)

Prerequisite: MAT 014, or at least two years of high school algebra and satisfactory score on placement examination, or departmental approval.

Introduces 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.

MAT 126 GE MAT
- MATH FOR DECISION SCIENCES II

3 credits (3-0)

Prerequisite: 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.

MAT 127
- PRECALCULUS I

2 credits (2-1)

Prerequisite: Appropriate score on the College's Placement Test and/or satisfactory score on the Diagnostic Examination, "C" or better in MAT 014 or MAT 014A and MAT 014B, or departmental approval.

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 128
- PRECALCULUS II

2 credits (2-1)

Prerequisite: MAT 127 or equivalent courses.

A continuation of MAT 127. 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 129 GE MAT
- PRECALCULUS

4 credits (4-0)

Prerequisite: Appropriate score on the College's Placement Test and/or satisfactory score on the Diagnostic Examination, "B" or better in MAT 014, or departmental approval.

Emphasis on those topics from algebra and trigonometry that best prepare 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 131 GE MAT

■ ANALYTIC GEOMETRY & CALCULUS I

4 credits (4-0)

Prerequisite: MAT 129, or MAT 127/128, or appropriate score on the College's 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)

2 credits (2-1)

Prerequisite: MAT 127/128 or MAT 129 or appropriate score on the College's 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)

2 credits (2-1) GE MAT

Prerequisite: MAT 131A

A continuation of MAT 131A. 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

4 credits (4-0) GE MAT

Prerequisite: MAT 131 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 141 GE MAT

■ MATHEMATICS FOR TELECOMMUNICATIONS I

2 credits (2-0)

Prerequisite: MAT 013 or equivalent

Basic mathematics emphasizing arithmetic, basic algebraic manipulation and graphing. Topics include: Mathematical logic, number systems, significant digits, scientific notation, operations on polynomials, solving linear equations, analytic geometry, graphing linear equations, systems of equations, ratio and proportion. For Telemedia Communications Technology majors.

MAT 142 GE MAT

■ MATHEMATICS FOR TELECOMMUNICATIONS II

2 credits (2-0)

Prerequisite: MAT 141

Emphasizes algebra and trigonometry, also introducing statistics. Topics include: essentials of right angle trigonometry, graphs of sine and cosine, basic trigonometric identities, factoring, algebraic fractions, fractional equations, quadratic equations, introduction to statistical ideas, types of data and graphical presentations of quantitative data. For Telemedia Communications Technology majors.

MAT 145 GE MAT

■ INTEGRATED MATHEMATICS I

2 credits (2-0)

Prerequisite: MAT 014 or two years of high school algebra and appropriate score on the College's Placement Test.

A collaborative learning, project-oriented course for technical students. This is the first semester of a four-semester sequence that culminates with topics in calculus. Its purpose is to make students aware of the mathematical concepts needed to compete in the twenty-first century. Students will apply problem-solving techniques using real world situations from their technical and science courses. Topics include functions, number sense, number bases, use of the graphing calculator, basic trigonometry, polynomial equations, elementary statistics, logic, analytical geometry, transforming real world situations into mathematical models, properties of basic geometric figures, ratio and proportion, scientific notation and conversion of units.

MAT 146 GE MAT

■ INTEGRATED MATHEMATICS II

2 credits (2-0)

Prerequisite: MAT 145

A continuation of MAT 145. Topics from the previous semester will be reinforced and expanded upon. Topics include functions, number sense, use of the graphing calculator, trigonometry, polynomial, rational and radical equations, elementary statistics, analytical geometry, transforming real world situations into mathematical models, properties of geometric figures, ratio and proportion.

MAT 206

■ INTRODUCTION TO DISCRETE MATHEMATICS

4 credits (4-0)

Prerequisite: MAT 132 or approval of Department Chairperson

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

4 credits (4-0)

Prerequisite: 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

4 credits (4-0)

Prerequisite: MAT 132 or equivalent

Emphasis is on the study of analytic geometry and calculus in three dimensions. Topics include solid analytic geometry, partial derivatives, multiple integrals, and 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

4 credits (4-0)
Prerequisite: MAT 233 or approval of Department Chairperson of Mathematics
Introduces 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 241 GE MAT
- MATHEMATICS FOR TELECOMMUNICATIONS III

2 credits (2-0)
Prerequisite: MAT 142
Probability and descriptive statistics. Topics include: graphical presentations of quantitative data, measures of central tendency, measures of dispersion, elementary probability theory, random variables, probability distributions, binomial distribution, Poisson distribution and normal distribution. For Telemedia Communications Technology majors.

MAT 242 GE MAT
- MATHEMATICS FOR TELECOMMUNICATIONS IV

2 credits (2-0)
Prerequisite: MAT 241
Algebra and discrete math. Topics include: fractional exponents, radicals, logarithmic functions, logarithmic and exponential equations, graphs, Euler circuits, Hamiltonian cycles, trees, minimal spanning trees, shortest route problems and scheduling problems. For Telemedia Communications Technology majors.

MAT 245 GE MAT
- INTEGRATED MATHEMATICS III

2 credits (2-0)
Prerequisite: MAT 146
A continuation of MAT 146. Topics from the previous semester will be reinforced and expanded upon. Topics include polynomial functions, rational functions, radical functions, trigonometry, exponential functions, logarithmic functions, probability and statistics and conic sections.

MAT 246 GE MAT
- INTEGRATED MATHEMATICS IV

2 credits (2-0)
Prerequisite: MAT 245
A continuation of MAT 245. Topics include limits, the derivative, the definite integral and integration. Calculus topics will be based on technical applications and computer software will be utilized to solve problems

MAT 257
- SELECTED TOPICS IN MATHEMATICS

3 credits (3-0)
Prerequisite: 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

4 credits (4-0)
Prerequisite: 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

MEC 111
- MANUFACTURING PROCESSES AND MATERIALS I

4 credits (3-3)
Conventional and non-conventional machining processes, quality control techniques, and a survey of metallic and non-metallic materials used in manufacturing. Topics include manufacturing operations, machining variables, the selection, failure and life of cutting tools, machining tolerances and surface quality, inspection devices and quality control charts, and material selection. Laboratory provides hands-on experiences in the set-up and operation of machine tools.

MEC 112
- MANUFACTURING PROCESSES AND MATERIALS II

4 credits (3-3)
Prerequisites: MCT 101 and MEC 111
Materials, their engineering properties, destructive and non-destructive materials testing, primary forming processes used in manufacturing as well as processes used to modify the properties of materials. Laboratory projects provide hands-on experience with commonly used materials testing and inspection methods, heat treatment, coldworking and joining processes.

MEC 116
- NUMERICAL CONTROL, ROBOTICS, AND BONDING PROCESSES

3 credits (2-3)
Corequisite: MAT 108
The modern manufacturing processes of chipless machining, numerical control, (CNC, DNC, CAM), robotics, and joining along with the primary forming processes of casting, forging, rolling, and extruding. Laboratory emphasis is on numerical control, robotics, and joining processes.

MEC 117
- ELECTRICAL DRAWING

1 credit (0-3)
The graphic language as it applies to electrical drawings. Includes linework, lettering, wiring diagrams, logic diagrams, and printed circuits. All projects are completed using (CAD), computer-aided drafting system with AUTOCAD.

MEC 119
- GRAPHIC SCIENCE

2 credits (1-3)
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

3 credits (0-6)

The graphic language of engineering and technology to include linework, lettering, geometric construction, orthographic projection, pictorial, sectional and auxiliary views and dimensioning techniques. Laboratory time is divided between technical sketching and drawings produced using AutoCAD software.

MEC 124
- TECHNICAL GRAPHICS/CAD II

3 credits (0-6)

Prerequisite: MEC 123

A study of working drawings as they relate to the mechanical field to include detail, assembly, exploded pictorial and welding drawings. Also included are limits, precision, geometric tolerances and fits of mating parts. Laboratory projects develop and demonstrate graphic skills. Projects are all completed using (CAD) computer-aided drafting with AUTOCAD.

MEC 204
- FLUID MECHANICS

4 credits (3-3)

Prerequisites: CIT 105, MAT 110

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. Computer software is used in several analysis and design projects. Oral presentation required.

MEC 210
- FLUID SYSTEMS

4 credits (3-3)

Prerequisite: MAT 108 or 109, CSC 117 or 109

Introduces hydraulic and pneumatic fluid power systems, liquid and air distribution systems, and the selection of the system components. Topics include: fluid statics, fluid dynamics, system flow and losses, pressure and flow measurement.

MEC 218
- KINEMATICS

3 credits (2-3)

Prerequisites: MCT 101, SPE 121, MAT 100, MEC 123, PHY 115

The displacements, velocities and accelerations associate with the motion of mechanisms including four bar linkages, cams and gears. Solutions to problems are obtained by using analytical techniques, a calculator, and appropriate computer software.

MEC 220
- INTRODUCTION TO ROBOTICS AND AUTOMATED SYSTEMS

4 credits (3-3)

Prerequisites: ELT 106; MEC 112, 124, 219; PHY 116

Corequisite: MEC 204

The hydraulic, pneumatic, electrical, and mechanical components and drives utilized in robotics and automated systems. Topics include the terminology, movements work envelopes, controllers, operations, and applications of robots. Students are required to complete a comprehensive project in an area of CIM (Computer Integrated Manufacturing) using the equipment in the laboratories including Robotics, FMS (Flexible Manufacturing System) cell, CAD/CAM (Computer-Aided Drafting/Computer-Aided Manufacturing) software, and CNC (Computer Numeric Control) machines. Professionally prepared reports and an oral presentation are required.

MEC 221
- ENGINEERING MECHANICS I

3 credits (3-0)

Prerequisite: 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

3 credits (3-0)

Prerequisite: 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.

MECOMTRONICS

MCT 101
- INTRODUCTION TO ENGINEERING TECHNOLOGY

2 credits (1-2)

Prerequisite: 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

2 credits (1-2)

Prerequisites: MCT 101 and 103

Corequisites: MCT 104 AND 106; PHY 146; MAT 146, and 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
- FOUNDATIONS OF MECOMTRONICS

4 credits (3-3)

Corequisites: MCT 101, PHY 145, MAT 145, and ENG 131

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
4 credits (3-3)
Prerequisite(s): MCT 101 and MCT 103
Corequisite(s): MCT 102, MCT 106, MAT 146, PHY 146, and ENG 132
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 their 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. Troubleshooting 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
4 credits (3-3)
Prerequisite(s): MCT 101 and MCT 103
Corequisite(s): MCT 102, MCT 104, MAT 146, PHY 146, and ENG 132
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
3 credits (2-3)
Prerequisite(s): MCT 102, MCT 104, and MCT 106
Corequisite(s): MCT 203, MCT 205, ENG 133, MAT 245 and 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
3 credits (3-0)
Prerequisite(s): MCT 201, MCT 203, and MCT 205 Corequisite(s): MAT 246 and PHY 246
Introduces 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
3 credits (2-3)
Prerequisite(s): MCT 104, MCT 106
Corequisite(s): ENG 133, MAT 245, MCT 201, MCT 205 and PHY 245
Theory, performance and application of Automated Manufacturing Systems, Programmable Logic Controls (PLC), Manufacturing Work Cells, Transportation of Materials during the Manufacturing Process and Automated Inspection Techniques. Topics include components and operation of hydraulic, pneumatic, electric drives and automated inspection techniques and their control. Industry- based projects are used to set-up, operate, analyze and control various automated manufacturing systems. For Mecomtronics Engineering Technology majors.

MCT 205

■ MANUFACTURING PROCESSES AND QUALITY MANAGEMENT
4 credits (3-3)
Prerequisite: MCT 106
Corequisite(s): MCT 203, ENG 133, MAT 245 and PHY 245
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
3 credits (2-3)
Prerequisite(s): MCT 201, MCT 203 and MCT 205
Corequisite(s): 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
3 credits (1-12)
Prerequisites: Mecomtronics Technology Field Experience - MCT 102, MCT 104, and MCT 106; Telecommunications Networking Technology Field Experience - TCT 104 and 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. The College through on-the-job visits and individual progress review sessions provides supervision of the departmentally approved position. 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.

MEDIA ARTS AND DESIGN

(See also Advertising Graphics Design, ART 103, Digital Media Arts and Professional Commercial Photography)

MAD 106

■ MECHANICAL AND COMPUTER STUDIO SKILLS
3 credits (1-5)
Introduces the basic tools and techniques of linework, 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
3 credits (2-3)
The theory, practice, technique, and technology of black & white still photography. Students learn about: 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 setable 35mm SLR camera.

MAD 108
- PHOTOGRAPHY II

3 credits (2-3)
Prerequisite: 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. Utilizes methods in darkroom equipment and fiber-based printing. Introduces digital photographic practices and computerized printouts.

MAD 111
- COLOR AND DESIGN I

3 credits (1-5)
Introduces the 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

3 credits (1-5)
Prerequisite: 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

3 credits (1-5)
Develops a firm foundation in the fundamentals of drawing and design, while developing visual awareness with sensitivity to line, texture, form, and value. Drawing and composition techniques are developed through the design of illustrative layouts, stressing the use of various media and the application of general illustration to the advertising design field. Computer draw and paint software is incorporated.

MAD 121
- GRAPHICS FOR COMPUTER AUTHORS AND PRESENTERS

3 credits (2-2)
Corequisite: BUS 107 or CSC 105 or MCT 101 or the equivalent
Introduces, color, design, and graphics. Explores 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. Not for Media Arts & Design students. Recommended for students interested in producing graphics solely for electronic media and presentation.

MEDICAL LABORATORY TECHNOLOGY

MED 101
- INTRODUCTION TO THE MEDICAL LABORATORY I

2 credits (1-2)
Prerequisite: Admission to the Medical Laboratory Technology program required
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

3 credits (2-3)
Prerequisites: BIO 117, CHM 117, ENG 121, MAT 107 and 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 on techniques and accuracy being stressed.

MED 210
- MEDICAL LABORATORY TECHNOLOGY I

6 credits (3-12)
Prerequisites: BIO 118, 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

8 credits (4-16)
Prerequisite: MED 210
Theoretical and practical aspects of hematology, coagulation, urinalysis, serology, and blood banking. Clinical instruction and technique are obtained in affiliated hospitals under the supervision of medical technologists and specialists. May not be audited. Requires 16 hours a week in a hospital laboratory.

MED 212
- MEDICAL TECHNOLOGY III

8 credits (4-16)
Prerequisite: MED 211, BIO 211
Continuation of MED 211. Includes microbiology and parasitology, and clinical chemistry. Clinical instruction and technique are obtained in affiliated hospitals. May not be audited. Requires 16 hours a week in a hospital laboratory.

MUSIC

MUS 103
- CHORUS I

1 credit (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

1 credit (0-2)
Prerequisite: MUS 103 or permission of the instructor
Continuation of MUS 103 with a more advanced choral experience in small groups. Participation in the college chorus is required.

MUS 107 GE HUM
- INTRODUCTION TO MUSIC

3 credits (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

1 credit (0-2)
Prerequisite: 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

1 credit (0-2)
Prerequisite: 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

3 credits (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

3 credits (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

3 credits (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

3 credits (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

3 credits (3-0)
Prerequisite: 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. Students are responsible for concert fees. Required for music majors. Open to non-music majors.

MUS 133
- APPLIED MUSIC STUDIO I

2 credits (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

2 credits (1-2)
For course description and fee, see MUS 133.

MUS 136 GE HUM
- GUITAR II

3 credits (3-0)
Prerequisite: 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

3 credits (3-0)
Introduces 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 DIV GE HUM
- MUSIC APPRECIATION: JAZZ HISTORY

3 credits (3-0)
Provides an understanding and appreciation of jazz history, performers and styles. The social, historical and multi-cultural forces that influenced the work of the jazz musician will be included. Improvisation will be studied while listening to representative selections of jazz compositions. Attendance at two professional concerts is required. Written concert reviews must be submitted. Course fee required.

MUS 201
- MUSIC NOTATION & COMPOSITION I

3 credits (3-0)
Prerequisite: MUS 140 or passing score on music theory placement test
A practical approach to music encompassing analysis, basic harmonic writing, and ear training. Designed for students with some previous musical background. Required of music majors.

MUS 202
- MUSIC NOTATION & COMPOSITION II

3 credits (3-0)
Prerequisite: MUS 201
Continuation of MUS 201. Students build musical skills in analysis, harmonic writing, and ear training. Required of music majors.

MUS 207
- APPLIED MUSIC STUDIO III

2 credits (1-2)
For course description, see MUS 133.

MUS 208
- APPLIED MUSIC STUDIO IV

2 credits (1-2)
For course description, see MUS 133.

NURSING

NRS 111
- FOUNDATIONS OF NURSING

6 credits (3-3-6)
Prerequisite: 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 HEATLH PROMOTION

3 credits (2-3)
Prerequisite: Acceptance into a health technologies curriculum or the permission of the Dean of Health Technologies and the nursing faculty administrator.
Corequisites: NRS 111 for nursing students, BIO 111 and ENG 121
Enables students to recognize how various life-style patterns influence health. Classroom lectures and symposiums 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

8 credits (4-3-9)
Prerequisites: NRS 111, 112; BIO 111; PSY 123
Corequisite: 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

8 credits (4-3-9)
Prerequisites: NRS 111, 112 and 115; BIO 112
Corequisite: 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 enable 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

8 credits (4-0-12)
Prerequisites: NRS 211 and BIO 211
Corequisite: SCI 121
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 multi-faceted 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

1 credit equivalent (0-2)
Develops keyboarding computer skills through hands-on applications. 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

3 credits (3-0)
Prerequisite: OAD 010 or OAD 106 or BUS 010 or permission of Department Chairperson
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

2 credits (1-3)
Prerequisite: OAD 101 or permission of Department Chairperson
The preparation of business documents through concepts and hands-on applications using word processing software and an up-to-date operating system. Emphasis will continue to be placed on development of speed and accuracy.

OAD 103
- SHORTHAND I

4 credits (3-2)
The emphasis of Shorthand I is balanced between theory and speed building. Thus, the first half of the semester yields a heavy concentration of theory and a gradual implementation of dictation; the second half reverses to a major emphasis on dictation, with heavy concentration on speed building. The standards have been set up realistically in order to concentrate on the preparation of quality shorthand writers.

OAD 104
- SHORTHAND II
  3 credits (2-2)
  Prerequisites: OAD 101 and 103
  Reinforces the fundamental principles of shorthand to develop word-building power, phrasing skill, and typewritten transcription skill. Emphasis is on increasing shorthand speed and transcription skills for mailability.

OAD 106
- KEYBOARDING/BASIC WORD PROCESSING FOR THE SECOND LANGUAGE LEARNER
  2 credits (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
  3 credits (2-2)
  Prerequisite: OAD 101
  Corequisites: OAD 102, OAD 122 or permission of Department Chairperson
  Integrates machine transcription and word processing skills to produce mailable documents. Machine transcription incorporates the skills of transcribing, proofreading, and editing. Students apply punctuation, spelling, vocabulary building, formatting, proofreading, and grammar to the transcription process.

OAD 110
- PRINCIPLES AND APPLICATIONS OF MICROSOFT ACCESS
  2 credits (1-1)
  Prerequisite: Keyboarding experience
  Introduces Microsoft Access, a database software program. A short (28 hour) hands-on course focusing on how to create and customize tables, edit, copy, restructure, and delete tables, forms, and reports.

OAD 113
- PRINCIPLES AND APPLICATIONS OF MICROSOFT EXCEL
  2 credits (1-1)
  Prerequisite: Keyboarding experience
  Introduces 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
  2 credits (1-1)
  Prerequisite: Keyboarding experience
  Introduces 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
  2 credits (1-1)
  Prerequisite: Keyboarding experience
  Introduces 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
- WORD PROCESSING
  3 credits (2-2)
  Prerequisite: OAD 101 or permission of Department Chairperson
  Corequisite: OAD 102 or permission of Department Chairperson
  The concepts of word processing software with an emphasis on the preparation of business documents. Includes introduction to the operating system.

OAD 207
- ADVANCED TRANSCRIPTION FOR BUSINESS
  3 credits (2-2)
  Prerequisites: OAD 101, OAD 102, OAD 107, OAD 122 or permission of Department Chairperson
  Corequisite: OAD 222
  Students continue to refine and apply proofreading, editing, grammar, punctuation and formatting skills for the transcription process. 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
  3 credits (1-12)
  Prerequisite: 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 the automated office. The College through on-the-job visits and individual progress review sessions provides supervision of this departmentally approved position. 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.

OAD 210
- RECORDS MANAGEMENT
  3 credits (3-0)
  Prerequisite: OAD 101 or keyboarding experience or permission of Department Chairperson
  The 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
  3 credits (3-0)
  Prerequisites: OAD 102, OAD 107, OAD 122 or permission of Department Chairperson
  Focuses on administrative 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
3 credits (3-0)
Prerequisite: OAD 211 or permission of Department Chairperson
The scope and responsibilities of administrative office managers. Emphasis is on administrative service responsibilities of the office and the management of administrative systems.

OAD 222
■ INFORMATION PROCESSING
3 credits (2-2)
Prerequisites: OAD 122 or permission of Department Chairperson; BUS 107 or permission of Department Chairperson
Further develops understanding of the integration of office functions through the use of technology. Office-simulation projects using advanced information processing applications allow students to develop proficiency in word processing, spreadsheet, database, graphics, and desktop publishing software.

OAD 223
■ INTEGRATED SOFTWARE APPLICATIONS
3 credits (2-2)
Prerequisite: OAD 110, 113, 114, 116 or OAD 222 or permission of Department Chairperson
Advanced information processing. Mastery of advanced word processing, spreadsheet, database, graphics, and presentation applications. Projects are used for advanced business applications.

PARALEGAL STUDIES

LET 100
■ INTRODUCTION TO LEGAL ASSISTING
2 credits (2-0)
An introduction to the functions and duties of the legal assistant. Students explore the regulation of legal assistants, ethics, privilege and ABA considerations. Students are introduced to the court system and law office routines.

LET 101
■ LEGAL RESEARCH
4 credits (4-0)
Prerequisites or Corequisites: ENG 121 and LET 100
Students explore the American legal system and are introduced to the New Jersey Court System. Student use the law library including encyclopedias, reporter systems, digests, and practice manuals including updating sources. Introduces the use of computer assisted research by the of WESTLAW, including reporter systems statutes, administrative codes, updating sources and extended data bases.

LET 104
■ PROPERTY TRANSACTIONS
3 credits (3-0)
Prerequisites: LET 101, 113
Forms and procedures used in real and personal property transactions including Real Estate Settlement Procedures Act.

LET 105
■ FAMILY LAW
3 credits (3-0)
Prerequisites: LET 101, 113
Introduces the substance and procedural aspects of family law in such areas as divorce, adoption, support and separation agreements, including domestic relation court procedures.

LET 106
■ WILLS AND ESTATE ADMINISTRATION
3 credits (3-0)
Prerequisites: LET 101, 113
Substance and procedure with respect to wills, estates, trusts, probate, life insurance, and federal and state taxes.

LET 107
■ LAW OFFICE MANAGEMENT
3 credits (3-0)
Prerequisites: LET 101, 113
Students learn the basics of law office management including accounting procedures, scheduling, filing, and office systems and many other areas.

LET 108
■ TORTS
3 credits (3-0)
Prerequisites: LET 101, 113
The principles of tort law, their application in commonly faced situations in law practice, and the role of the legal assistant in the preparation of a tort claim or defense.

LET 109
■ CRIMINAL LAW AND PROCEDURE
3 credits (3-0)
Prerequisites: LET 101, 113
Introduces the elements of crime and the criminal procedure system. A study of the incidents before and after trial, and an analysis of the impact of the Constitution on crimes and criminal procedure.

LET 110
■ LITIGATION PROCEDURE
4 credits (4-0)
Prerequisites: LET 101, 113
The rules governing courts and basic litigation procedures including telephone technique, client interviews, complaints, interrogatories, etc.

LET 111
■ CONTRACTS AND THE UNIFORM COMMERCIAL CODE
3 credits (3-0)
Prerequisites: LET 101, 113
Detailed study of the substantive law of contracts, sales law, and commercial paper. (In applicable areas, the Uniform Commercial Code is covered as well as the common law principles.) Emphasis is placed on source materials, research and writing. Legal principles are applied to theoretical problems as well as current New Jersey cases.

LET 112
■ BUSINESS ORGANIZATIONS AND GOVERNMENT REGULATIONS
3 credits (3-0)
Prerequisite: LET 111
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 the common law principles.)

LET 113
■ LEGAL WRITING
2 credits (2-0)
Corequisite: LET 101
A writing course focusing on the tasks commonly encountered by legal assistants. Topics covered include correspondence, opinion letters, various forms of briefs and memoranda. Emphasis will be placed on clarity and precision in the use of language.

LET 114
■ COMPUTER APPLICATIONS FOR THE LAW OFFICE
3 credits (3-0)
Prerequisites: LET 100, 101 & 113; BUS 107 (BUS 107 is not a prerequisite for LT or LTT candidates)
Introduces students to a variety of computer applications found in many law offices. Applications include time and billing, document assemblers, litigation support and real estate closing packages. Students will be exposed to a variety of Internet research techniques.

LET 208
■ LEGAL ASSISTANT FIELD EXPERIENCE
3 credits (1-12)
Prerequisites: LET 101, 110 plus 104 or 108 or 109 plus permission of the program director
A cooperative work experience whereby students are employed in law-related positions to gain some of the practical experience necessary for success as legal assistants. The College through on-the-job visits and individual progress review sessions provides supervision of these departmentally approved positions. Students are required to establish learning objectives related to their positions to effect the attainment of specific job competencies. Students attend a weekly, one-hour seminar on campus and work approximately 20 hours a week for a minimum of 180 hours during the semester. Individuals must be recommended by the faculty of the department.

LET 280
■ SENIOR SEMINAR FOR LEGAL ASSISTANTS
3 credits (3-0)
Prerequisites: LET 101, 104, 108, 110, 111, 112, 113 and 114 (LT and LTT candidates should see program director)
Students integrate their knowledge of theoretical concepts and practical application of legal research, litigation, property, torts, and business law through case analysis and the completion of assigned projects.

PHARMACY

PHA 101
■ INTRODUCTION TO PHARMACY
4 credits (3-2)
Prerequisites: CHM 107 and apropriate score on the College's Placement Test or MAT 013
Introduces the field of Pharmacy dealing with the daily activities that occur in pharmacy settings such as hospitals, nursing homes, home health care and community pharmacies. The course will teach many aspects of pharmacy including medical terminology, prescriptions and medications, pharmaceutical calculations, aseptic techniques, pharmacy law and pharmaceutical repackaging.

PHILOSOPHY

PHI 121 GE HUM
■ PHILOSOPHY
3 credits (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
3 credits (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
3 credits (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
2 credits (1-3)
Prerequisites: All MAD courses; ART 103; minimum of six credits from AGD/PCP
Corequisites: Any number of AGD/PCP credits such 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 & PRACTICE
3 credits (2-2)
Prerequisites: All MAD courses and ART 103
Photographic color and printing materials and techniques: subtractive color printing, visual and electronic analysis of color balance, making of internegatives, transparency duplication, and reversal printing. Advanced color print finishing techniques. Color correction and color separation for print media, manually and on the computer.

PCP 222
■ MEDIA ARTS & DESIGN FIELD EXPERIENCE
3 credits (1-12)
Prerequisite: Senior status in advertising graphics design option or professional commercial photography option
A cooperative work experience program whereby students are provided with a job that will enhance their competency by getting practical hands-on experience in state-of-the-art technology utilized by commercial designers and photographers. Students are assigned to work on a one-to-one basis with a professional designer or photographer using the latest techniques and equipment. The College through on-the-job visits and individual progress review sessions provides supervision of this departmentally approved position. 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 during the semester. Open to senior students recommended by the faculty of the department. Media Arts & Design Field Experience is not a graduation requirement.

PCP 224
■ COMPUTER IMAGERY
3 credits (2-2)
Prerequisites: All MAD courses, six credits of AGD/PCP, and ART 103
Development of techniques to manipulate multiple inputs to produce press-ready outputs for print media. Included are subjects such as: photomanipulation and special effects, production of transparencies and prints from digital images, and combining grabbed, scanned and electronic imagery.

PCP 225
- PRODUCT AND STOCK PHOTOGRAPHY

3 credits (2-2)

Prerequisites: All MAD courses and ART 103

Emphasizes the link between field and studio commercial photography and the production of images for the print media and for distribution through stock agencies. Extensive hands-on experience in the use of the view camera and studio lighting equipment will be combined with practice in the use of the computer for image correction and enhancement. Projects will concentrate on practical applications, such as the making of large format negatives and color transparencies for reproduction, as well as the production of line and halftone negatives for use in the print industry.

PCP 226
- PROFESSIONAL/STUDIO PHOTOGRAPHY

3 credits (2-2)

Prerequisites: All MAD courses, six credits of AGD/PCP, and ART 103

Studio and location portraiture and photojournalism, in medium and large format, from the point of view of a professional. Photography of events, groups, weddings, children, men, women, etc. Printing, finishing, and retouching of the resulting images. Quantity, and quality, control, trade vocabulary and business procedures for studios are also covered.

PHYSICAL EDUCATION

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

PED 108
- MODERN DANCE

1 credit (0-2)

Course will include practical experiences and technical applications of several modern dance techniques. 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

1 credit (0-2)

Students perform the basic skills of the activities and apply the rules and playing procedures.

PED 120
- GOLF

1 credit (0-2)

Basic instruction in the skills, rules, playing procedures. Students demonstrate appropriate shot-making abilities.

PED 122
- VOLLEYBALL

1 credit

Students will receive instruction in the skills, playing procedures and strategies of volleyball. Team play will be developed and stressed.

PED 124
- SKIING

1 credit (0-2)

Basic techniques, equipment selection and care, safety procedures and etiquette essential in skiing. (The half-semester course will require a weekend trip to an area ski resort at students' expense.)

PED 127
- TENNIS

1 credit (0-2)

Students receive instruction in the beginning skills playing procedures, etiquette and strategies of tennis.

PED 132
- BACKPACKING

1 credit (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

1 credit (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

1 credit (0-2)

The rules, basic strokes, shots and strategies of racquetball. Experience is provided in singles and doubles play.

PED 141
- AEROBIC DANCE

1 credit (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

1 credit (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

1 credit (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 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

1 credit (0-2)

Acquaints 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 210 GE PED
- SCIENTIFIC PRINCIPLES OF FITNESS

3 credits (3-0)

The physiological basis of fitness. Students explore the areas of strength, muscular and cardiovascular endurance, flexibility and nutrition. Students demonstrate, design and implement correct programs in these areas.

PED 212

■ AQUATICS MANAGEMENT

3 credits (3-0)

Develops professional aquatic workers. Includes an examination of the principles involved in establishing a multifaceted aquatic program. Includes the interrelationship between resources and management, facilities and equipment, facility operation, safety and legal considerations, lifeguarding, budgeting, staffing and managing, program development and promotion. Explores theoretical and practical aspects through classroom discussion and field trips.

PED 225

■ FIRST AID, CPR AND SAFETY EDUCATION

3 credits (3-0)

The theory and practice of basic life saving skills and accident prevention. Topics covered include basic first aid skills, rescue breathing and cardiopulmonary resuscitation (CPR). The ability to recognize serious medical emergencies and the recommended course of action are the basic elements of this course. American Red Cross certification will be given to qualified students.

PED 245

■ ARC LIFEGUARD TRAINING, CARDIOPULMONARY RESUSCITATION AND STANDARD FIRST AID

3 credits (3-0)

Prerequisites: 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 front crawl using rhythmic breathing and stabilizing propellant 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 rhytmic breathing or breastroke.

The 200 yards may be a mixture of front crawl and breastroke

Swim 20 yards using front crawl or breaststroke, surface dive to a depth of 7-10 feet, retrieve a 10-pound object, return to the surface and swim 20 yards back to the starting point with the object. When returning to the starting point, the participant's face must remain above the water and the participant must hold the 10 pound object with both hands.

Provides the lifeguard candidates with the skills and knowledge necessary to keep the 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

3 credits (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. The College through on-the-job visits and individual progress review sessions provides supervision of this departmentally approved position. 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. The faculty of the department must recommend students.

PHYSICS

PHY 010

■ BASIC PHYSICS

4 credit equivalents (2-4)

Corequisite: MAT 014 or equivalent

A one-semester non-credit introductory physics course designed to give students sufficient background to enter into non-calculus physics courses.

PHY 101 GE SCI

■ PRINCIPLES OF PHYSICS

4 credits (3-2)

Prerequisite: MAT 107 or equivalent

Includes an introduction to Newtonian mechanics with application of the conservation laws to physical systems. Electromagnetism and geometrical optics are introduced at an elementary level. Topics in wave propagation, thermodynamics, atomic and nuclear physics.

PHY 115 GE SCI

■ COLLEGE PHYSICS I

4 credits (2-4)

Corequisite: MAT 110

Emphasizes problem-solving methods for a technological environment. Students will use computers in the laboratory the analysis of experimental data. Topics include kinematics and dynamics, conversation of energy and momentum, waves, temperature and heat, and thermodynamics. The first course in a two-course trigonometry-based physics sequence.

PHY 116 GE SCI

■ COLLEGE PHYSICS II

4 credits (2-4)

Prerequisite: PHY 115

Emphasizes problem-solving methods for a technological environment. Students will use computers in the laboratory 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

4 credits (2-4)

Prerequisites: MAT 013 or equivalent

An introduction and review of the units of measurement, basic quantities in physics and scientifig{āalculations. Topics include work and energy, basic electricity, electromagnetism, alternating currents and x-ray machine circuitry. The material will focus on the physical principles necessary for an understanding of x-ray equipment operation for Radiography Education students. Laboratory experience is provided.

PHY 121 GE SCI

■ GENERAL PHYSICS I

4 credits (2-4)

Prerequisite: MAT 129

Emphasizes theoretical models and basic physical principals. 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 the analysis of experimental data. Topics include kinematics, dynamics, conservation of energy and momentum, waves, temperature and heat, and thermodynamics. The first semester of a two-semester college-parallel sequence for liberal arts science and pre-professional students.

PHY 122 GE SCI

■ GENERAL PHYSICS II

4 credits (2-4)

Prerequisite: 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 principals in a scientific environment. Students will use computers in the laboratory 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 a two-semester college-parallel sequence for liberal arts science and pre-professional students.

PHY 131 GE SCI

■ ANALYTICAL PHYSICS I

4 credits (2-4)

Prerequisite: One year of high school laboratory physics

Corequisite: MAT 131 or equivalent

A calculus-based general physics course. Topics include statics, kinematics, dynamics, and the conservation of energy and momenta. Appropriate computer and laboratory experiences are included. The first course in a three-course series consisting of PHY 131, 132, and 231.

PHY 132 GE SCI

■ ANALYTICAL PHYSICS II

4 credits (2-4)

Prerequisite: PHY 131

Corequisite: MAT 132 or equivalent

A continuation of PHY 131. Topics include wave motion, special relativity, thermodynamics, electrostatics and DC circuits. Appropriate computer and laboratory experiences included. The second course in a three-course series consisting of PHY 131, 132, and 231.

PHY 141

■ FOUNDATIONS OF PHYSICS I

2 credits (1-2)

Corequisite: MAT 141

Algebra-based physics. Topics include units, kinematics, dynamics, work and energy, geometric optics and optical instruments. Appropriate computer and laboratory experience included. The first semester of a four-semester sequence. For Telemedia Communications Technology majors.

PHY 142

■ FOUNDATIONS OF PHYSICS II

2 credits (1-2)

Prerequisite: PHY 141

Corequisite: MAT 142

A continuation of PHY 141. Topics include harmonic motion, wave motion, sound, electrostatics and direct current circuits. Appropriate computer and laboratory experience included. The second semester of a four-semester sequence. For Telemedia Communications Technology majors.

PHY 145

■ MECOMTRONICS PHYSICS I

2 credits (1-2)

Corequisites: MAT 145, MCT 101, MCT 103, and ENG 131

An activity-based physics course emphasizing the development of problem-solving and laboratory skills. Provides a concurrent presentation of the core scientific knowledge needed to support the technological courses in engineering technology curricula. Topics include kinematics, dynamics, conservation of energy and momentum, fluids, thermodynamics, properties of materials, electrostatics and electric circuits. The first semester of a four-semester algebra and trigonometry-based physics sequence in which topics will be revisited and explored in increasing depth. For Mecomtronics Engineering Technology majors.

PHY 146

■ MECOMTRONICS PHYSICS II

2 credits (1-2)

Prerequisites: PHY 145

Corequisites: MAT 146, MCT 102, MCT 104, MCT 106, and ENG 132

An activity-based physics course emphasizing the development of problem-solving and laboratory skills. Provides a concurrent presentation of the core scientific knowledge needed to support the technological courses in engineering technology curricula. Topics include kinematics, dynamics, conservation of energy and momentum, fluids, simple and damped harmonic motion, fluids, thermodynamics, properties of materials, electrostatics, electric circuits, magnetism and optics. The second semester of a four-semester algebra and trigonometry-based physics sequence in which topics will be revisited and explored in increasing depth. For Mecomtronics Engineering Technology majors.

PHY 231 GE SCI

■ ANALYTICAL PHYSICS III

4 credits (2-4)

Prerequisites: PHY 132; MAT 132

Continuation of PHY 132. Topics include magnetism, AC circuits, electro magnetic waves, optics and atomic and nuclear physics. Appropriate computer and laboratory experiences included. The third course in a three-course series consisting of PHY 131, 132, and 231.

PHY 241

■ FOUNDATIONS OF PHYSICS III

2 credits (1-2)

Prerequisite: PHY 142

Corequisite: MAT 241

Algebra-based physics. A continuation of PHY 142. Topics include magnetism, electromagnetism, alternating currents, electromagnetic waves and physical optics. Appropriate computer and laboratory experience included. The third semester of a four-semester sequence. For Telemedia Communications Technology majors.

PHY 242

■ FOUNDATIONS OF PHYSICS IV

2 credits (1-2)

Prerequisite: PHY 241

Corequisite: MAT 242

A continuation of PHY 241. Topics include temperature and heat, motion in two dimensions, momentum, angular momentum and rotational motion. Appropriate computer and laboratory experience included. The fourth semester of a four-semester sequence. For Telemedia Communications Technology majors.

PHY 245

■ MECOMTRONICS PHYSICS III

2 credits (1-2)

Prerequisites: PHY 146

Corequisites: MAT 245, MCT 201, MCT 203, MCT 205, and ENG 133

An activity-based physics course emphasizing the development of problem-solving and laboratory skills. Provides a concurrent presentation of the core scientific knowledge needed to support the technological courses in engineering technology curricula. Topics include kinematics, dynamics, conservation of energy and momentum, simple and damped harmonic motion, fluids, thermodynamics, properties of materials, electrostatics and electric circuits, magnetism and optics, atomic structure and quantization. The third semester of a four-semester algebra and trigonometry-based physics sequence in which topics will be revisited and explored in increasing depth. For Mecomtronics Engineering Technology majors.

PHY 246
- MECOMTRONICS PHYSICS IV

2 credits (1-2)
Prerequisite: PHY 245
Corequisites: MAT 246, MCT 206, and MCT 202
An activity-based physics course emphasizing the development of problem-solving and laboratory skills. This course will provide a concurrent presentation of the core scientific knowledge needed to support the technological courses in engineering technology curricula. Topics include kinematics, dynamics, conservation of energy, thermodynamics and optics, atomic and molecular physics. The fourth semester of a four-semester algebra and trigonometry-based physics sequence in which topics will be revisited and explored in increasing depth. For Mecomtronics Engineering Technology majors.

POLICE SCIENCE

(For related courses, see Criminal Justice)

POL 201
- POLICE ADMINISTRATION

3 credits (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

3 credits (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

3 credits (3-0)
The relationship between professional police officers and the community they serve with emphasis on ethical standards, human relations, civil rights, and community service. The attitudes and actions of the police and the public that lead to both positive and negative relationships between them.

POLITICAL SCIENCE

POS 121 GE SS
- INTRODUCTORY GOVERNMENT AND POLITICS

3 credits (3-0)
Surveys the field of political science including an analysis of the discipline as an academic pursuit and a profession. Themes are theory, behavior, and public opinion, parties and interest groups, public administration, law, comparative government, and international relations. Includes a case study of the most recent U.S. presidential election.

POS 201 GE SS
- UNITED STATES STATE AND LOCAL GOVERNMENT

3 credits (3-0)
A comparative analysis of the state, county, and municipal levels of government in the United States is offered. Particular attention is given to New Jersey government and politics, state party organizations, interest groups, and electorate behavior, as well as the formal governmental structure.

POS 220 GE SS
- UNITED STATES NATIONAL GOVERNMENT

3 credits (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 States politics.

POS 222 GE SS
- FOREIGN GOVERNMENTS: A COMPARATIVE ANALYSIS

3 credits (3-0)
The political systems of the major European powers and the developing nations compared. Political institutions are viewed against their economic, social, and cultural backgrounds.

POS 231 GE SS
- CONSTITUTIONAL LAW

3 credits (3-0)
Prerequisite: POS 121 or POS 201 or POS 220
Examines the principal methods by which United States Supreme Court Justices give meaning to Constitutional provisions in the context of individual cases. Particular attention paid to the fundamental importance of a full and coherent understanding of the principles, precedents and problems of America's democratic system.

PSYCHOSOCIAL REHABILITATION

PSR 101
- INTRODUCTION TO THE PRINCIPLES OF PSYCHOSOCIAL REHABILITATION

3 credits (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

3 credits (2-2)
Prerequisite/Corequisite: 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 helping principles through active participation in faculty supervised clinical practice.

PSR 103
- INTRODUCTION TO GROUP DYNAMICS

3 credits (2-2)
Prerequisite/Corequisite: 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 to demonstrate group dynamics, and group process. Includes participation in a faculty supervised group experience.

PSR 104
- CLINICAL PRINCIPLES IN PSYCHOSOCIAL REHABILITATION AND TREATMENT
  3 credits (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 mental health and mental illness. 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
  5 credits (3-0-12)
  Prerequisites: PSR 101, PSR 102, PSR 103, PSR 104
  Students will observe and identify common interventions for working with the individual with serious mental illness. Clinical experiences (semester total of 168 hours) will emphasize participation under supervision in group activities, program tasks, clients skills training and skills practice. 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
  5 credits (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 judgement, 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
  3 credits (3-0)
  Prerequisite: PSR 101
  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. Classroom lectures and seminars provide students with opportunities to explore the relationship of services to the individual's needs.

PSR 208
- REHABILITATION AND THE INDIVIDUAL WITH SEVERE MENTAL ILLNESS III
  5 credits (3-0-12)
  Prerequisite: PSR 206
  Corequisite: 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 judgement as part of a multi-disciplinary team providing service to people with severe mental illness.

PSR 209
- EMERGING TOPICS IN PSYCHOSOCIAL REHABILITATION AND TREATMENT
  3 credits (3-0)
  Corequisite: PSR 208
  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.

PSYCHOLOGY

PSY 123 GE SS
- INTRODUCTORY PSYCHOLOGY
  3 credits (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 DIV GE SS
- PSYCHOLOGY OF THE AFRICAN-AMERICAN EXPERIENCE
  3 credits (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 DIV GE SS
- PSYCHOLOGY OF WOMEN
  3 credits (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
  3 credits (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
  3 credits (3-0)
  Prerequisites: 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
  3 credits
  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 DIV GE SS

■ EDUCATIONAL PSYCHOLOGY: CLASSROOM APPLICATIONS
3 credits (3-0)
Prerequisite: PSY 123 or permission of Department Chairperson
Acquaints students with the concepts related to the teaching and learning process. Connections made between contemporary educational research findings and actual classroom practices. Stresses activities that motivate learning and their assessment. Explores various learner exceptionalities and differences (intelligence, socioeconomic status, culture/ethnicity, gender, and at-risk students). Explores, demonstrates and analyzes traditional and innovative practical instructional procedures in a variety of subject areas.

PSY 227 GE DIV GE SS

■ PSYCHOLOGY OF THE HANDICAPPED
3 credits (3-0)
Examines the psychological development and problems of children with handicaps and learning disabilities.

PSY 234 GE SS

■ PSYCHOLOGY OF DEATH AND DYING
3 credits (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
3 credits (3-0)
Prerequisite: 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 240 GE SS

■ PERSPECTIVES ON SEXUAL IDENTITY
3 credits (3-0)
Prerequisite: PSY 123 or SOC 121 or SOC 123 or permission of Department Chairperson
Examines the processes involved in the formation of sexual identity from psychological and anthropological perspectives, including contemporary, historical and cross - cultural viewpoints. Covers biological, cultural and psychological determinants of sex role behaviors and gender identification. Taught by psychology and/or anthropology/sociology faculty. May be taken to satisfy 3 credits in either psychology or sociology, but not both.

PSY 244 GE SS

■ BUSINESS AND INDUSTRIAL PSYCHOLOGY
3 credits (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
3 credits (3-0)
Prerequisite: 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
3 credits (1-12)
Prerequisite: 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 . Day students attend a weekly seminar and work a total of 180 field experience hours during the semester. Evening students' hours are adjusted to fit the different semester lengths, yet reflect the same total hours.

PSY 270 GE SS

■ ADULT DEVELOPMENT AND AGING
3 credits (3-0)
Prerequisite: 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.

PURCHASING

PUR 201

■ PURCHASING PRINCIPLES
3 credits (3-0)
Prerequisite: BUS 101
The purchasing functions in an organization and their role in business. Analytical descriptions of the latest development and techniques directed to price and value analysis, planning and forecasting, inventory control requirements, and its effect on the project structure.

RADIOGRAPHY EDUCATION

(These courses may not be audited)

RAD 128

■ BASIC MEDICAL PRINCIPLES
4 credits (4-0)
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
2 credits (2-0)
Prerequisites: RAD 128, 141, 142, 171, 190
Corequisites: RAD 143, 144, 172, 210
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
2 credits (2-0)
Corequisites: RAD 128, 142, 171, 190
A presentation of anatomy, positioning and pathology of the Upper extremity, Shoulder Girdle, Sternum, Sterno Clavicular and Acromio Clavicular Joints, Thoracic Cavity, Rib Cage, Chest, Lungs and Abdomen.

RAD 142
- RADIOGRAPHIC POSITIONING LABORATORY I

1 credit (0-3)
Corequisites: RAD 128, 141, 171, 190
Practical experience and competency evaluation covering positioning of the Upper extremity, Shoulder Girdle, Sternum, Rib Cage, Sterno Clavicular and Acromio Clavicular Joints, Abdomen, Thoracic Cavity, Chest and Lungs.

RAD 143
- RADIOGRAPHIC POSITIONING, ANATOMY AND PATHOLOGY II

2 credits (2-0)
Prerequisites: RAD 128, 141, 142, 171, 190
Corequisites: RAD 139, 144, 172, 210
A presentation of anatomy, positioning and pathology of the lower extremities, hip, pelvis, sacrum, coccyx, sacroiliac joints and vertebral column including scoliosis studies.

RAD 144
- RADIOGRAPHIC POSITIONING LABORATORY II

1 credit (0-3)
Prerequisites: RAD 128, 141, 142, 171, 190
Corequisites: RAD 139, 143, 172, 210
Practical experience and competency evaluation covering positioning of the lower extremities, pelvis and vertebral column.

RAD 145
- RADIOGRAPHIC POSITIONING ANATOMY AND PATHOLOGY III

3 credits (3-0)
Prerequisites: RAD 139, 143, 144, 172, 210
Corequisites: RAD 146
The specific anatomy of the digestive, urinary and biliary systems with the appropriate positioning techniques. A discussion of the pharmacological concepts of contrast media and their use in these procedures as well as the theoretical principles of venipuncture are presented. The principles and equipment used for body section radiography are discussed.

RAD 146
- RADIOGRAPHIC POSITIONING LABORATORY III

1 credit (0-3)
Prerequisites: RAD 139, 143, 144, 172, 210
Corequisites: RAD 145
Radiographic demonstration of the digestive, urinary and biliary systems with the appropriate positioning techniques. Practical application of various contrast media is demonstrated. Venipuncture techniques are demonstrated using the phantom injectable arm. Discussion of the principles and equipment used for body section radiography using the energized radiographic laboratory and the phantom patient. Practical competency must be demonstrated.

RAD 171
- RADIOGRAPHIC IMAGING AND SCIENCE I

4 credits (3-2)
Corequisites: RAD 128, 141, 142, 190
The first part of a three part 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-rays with matter, beam restriction, grids, radiographic film, processing and intensifying screens. In addition, an introduction to radiation protection for the patient and radiographer is presented in order to prepare the student for clinical practice.

RAD 172
- RADIOGRAPHIC IMAGING AND SCIENCE II

2 credits (2-0)
Prerequisites: 128, 141, 142, 171, 190
Corequisites: 139, 143, 144, 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
- CLINICAL ORIENTATION

1 credit (3-0)
Corequisites: RAD 128, 141, 142, 171
A hands-on clinical experience, introducing the student to the clinical setting. The student will demonstrate basic medical skills by assisting the staff technologists during radiographic examinations.

RAD 210
- CLINICAL PRACTICUM I

2 credits (0-16)
Prerequisites: RAD 128, 141, 142, 171 and 190
Corequisites: RAD 139, 143, 144 and 172
Introduces 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. Weekly discussions, assignments and reviews are given. Practical competencies must be demonstrated in specific radiographic examinations.

RAD 220
- CLINICAL PRACTICUM II

2 credits (0-16)
Prerequisite: RAD 145 and 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. Weekly discussions, assignments and reviews are given.

RAD 230
- CLINICAL PRACTICUM III

2 credits (0-16)
Prerequisite: RAD 220
Corequisites: RAD 247, 248 and 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 required. Weekly discussions, assignments and reviews are given.

RAD 247
- RADIOGRAPHIC POSITIONING, ANATOMY AND PATHOLOGY IV

2 credits (2-0)
Prerequisites: RAD 145, 146, 220
Corequisites: RAD 230, 248, 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 glands.

RAD 248
- RADIOGRAPHIC POSITIONING LABORATORY IV

1 credit (0-3)
Prerequisites: RAD 145, 146, 220
Corequisites: RAD 230, 247, 273
Practical experience and competency evaluation covering positioning of the cranium, sella turcia, facial bones (nasal bones, zygomatic arch, mandible, and temporomandibular joints), paranasal and mastoid sinuses, orbits, optic foramina and mammography.

RAD 250
- CLINICAL PRACTICUM IV

3 credits (0-24)
Prerequisites: RAD 230, 247. 248 and 273
Corequisites: RAD 256 and 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 required.

RAD 256
- RADIOGRAPHIC SEMINAR I

2 credits (1-2)
Prerequisites: RAD 230, 247, 248 and 273
Corequisites: RAD 250 and 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.

RAD 257
- RADIOGRAPHIC SEMINAR II

2 credits (1-2)
Prerequisite: RAD 256 and 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.

RAD 260
- CLINICAL PRACTICUM V

3 credits (0-24)
Prerequisites: RAD 250, 256, 285
A completion of the competency requirements as specified by the Radiologic Technology Board of X-ray Examiners and the Joint Review Committee on Education in Radiologic Technology. Emphasizes the assessment of performance competency and the student's mastery of the clinical objectives.

RAD 273
- RADIOGRAPHIC IMAGING AND SCIENCE III

3 credits (2-2)
Prerequisites: RAD 145, 146, 172, 220 & PHY 118
Corequisites: RAD 230, 247, 248
A continuation of RAD 172 that builds upon previous objectives and introduce additional concepts and practices in equipment operation and maintenance and as well as image production and evaluation. Topics discussed include quality control, advanced circuit theory, bone densitometry, digital x-ray imaging and technical aspects of mammography.

RAD 285
- ADVANCED RADIOGRAPHIC IMAGING

2 credits (2-0)
Prerequisites: RAD 230, 247, 248, 273
Corequisites: RAD 250, 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, computed tomography, magnetic resonance imaging and advanced contrast media studies.

READING

RDG 009
- READING SKILLS FOR COLLEGE I

4 credit equivalents (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

3 credit equivalents (3-0)
Prerequisite: Appropriate score on the College's 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.*

REAL ESTATE

REA 240
- REAL ESTATE PRINCIPLES AND PRACTICES FOR SALESPEOPLE

5 credits (5-0)
Introduces physical, economic, and social aspects of real estate principles. Conveyancing, mortgaging, valuation, marketing techniques, and practical application are discussed. Approved by New Jersey Real Estate Commission as prerequisite for Real Estate sales license examination.

REA 243
- REAL ESTATE APPRAISAL

3 credits (3-0)
Basic principles of determining property value, the appraisal process, approaches to value, depreciation techniques, and the preparation of appraisal reports.

RECREATION

REC 203 GE PED

■ OUTDOOR RECREATION
3 credits (2-2)
The fundamental values of nature and ways in which these relate to all people of the world. The application of theories, techniques and leadership skills to aid students in their study of the importance of a comprehensive outdoor recreation programs and how they contribute to a better quality of life. Written projects and papers requiring the use of the library are necessary to complete the course.

RESPIRATORY CARE

RST 100

■ CORE CONCEPTS IN RESPIRATORY CARE
1 credit (0-2-1)
Prerequisites: Acceptance into Respiratory Care Program and BIO 111
Corequisites: RST 100 and 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
4 credits (3-3-4)
Prerequisite: Acceptance into Respiratory Care Program
Corequisites: RST 100 and 102
Introduces 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
1 credit (0-6-1)
Prerequisite: Acceptance into Respiratory Care Program
Corequisites: RST 100 and 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
2 credits (2-0-2)
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
3 credits (2-3-3)
Prerequisites: RST 208 and 211
Corequisite: RST 202
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
2 credits (2-0-2)
Prerequisite: RST 103
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
2 credits (1-0-1)
Prerequisite: 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
4 credits (3-3-4)
Prerequisite: RST 101
Corequisite: RST 209
Introduces 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
2 credits (0-12-0)
Prerequisites: RST 101 and RST 102
Corequisite: 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
2 credits (2-2)
Prerequisite: 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

2 credits (2-3-3)
Prerequisite: RST 208
Corequisite: 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

2 credits (2-2)
Analysis of 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

2 credits (0-12-0)
Prerequisites: RST 208 and RST 209
Corequisite: 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).

SCIENCE

SCI 108 GE SCI
- NATURAL HISTORY OF NEW JERSEY

3 credits (2-2)
Exposes 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

4 credits (2-2-2)
Prerequisite: One year of high school chemistry or CHM 010
Introduces 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 carbohydrates, proteins, and lipids. This fulfills the science requirement for the A.S. Degree in Nursing.

SCI 155 GE SCI
- INTRODUCTION TO GEOLOGY AND OCEANOGRAPHY

4 credits (3-2)
Prerequisite: MAT 014 or apropriate score on the College's Placement Test
A one-semester course dealing predominately with Geology and with the physical aspects of the ocean. Topics include a discussion and identification of rocks and minerals, volcanism, the geologic time scale, earthquakes, and their origin. Introduces important topics in Physical Oceanography and the Geology of New Jersey and environs. Students are required to go on an all day field trip. Provides appropriate laboratory exercises.

SCI 156 GE SCI
- INTRODUCTION TO ASTRONOMY

4 credits (3-2)
Prerequisites: One year of high school laboratory science, MAT 014 or apropriate score on the College's Placement Test
Introduces descriptive space science covering the historical development of astronomy and planetology. Basic physical laws are introduced to help explain the tools used in the investigation of the solar system and the galaxy. Topics include stellar and solar systems, evolution and cosmology. The possibility of extraterrestrial life and communication with it is included as a necessary part of the subject. Laboratory experience included.

SCI 157 GE SCI
- INTRODUCTION TO METEOROLOGY

4 credits (3-2)
Prerequisites: One year of laboratory science, MAT 014 or appropriate score on the College's Placement Test
Introduces meteorology providing an overview of the atmosphere, temperature, measurements and energy balance as it pertains to air masses, clouds, precipitation, wind, storms, and fronts. Weather predictions and forecasting instrumentation are integral parts of the course, including Internet sources and weather satellite transmissions. How human actions, whether intentional or unintentional, may influence the atmosphere will be discussed. Appropriate laboratory experience is provided.

SCI 204 GE SCI
- CONCEPTS OF PHYSICAL SCIENCE

3 credits (2-2)
Direct scientific experiences through an investigation of natural laws. A one-semester laboratory science course for non-science majors.

SCI 206 GE SCI
- INTRODUCTION TO FORENSIC SCIENCE

3 credits (2-2)
Prerequisite: MAT 013 or appropriate score on the College's Placement Test
Introduces the science of forensics in which basic scientific principles will be applied to the methods used to investigate and solve crimes. Focuses on principles and methods utilized in the traditional sciences of biology, chemistry and physics. The laboratory component covers many types of evidence that require chemical and physical analysis, using microscopy, Gas Chromatography, High Pressure Liquid Chromatography, and Atomic Absorption Spectrophotometry as well as drug and toxicological analysis. Laboratory techniques used in blood and DNA analysis will also be examined.

SCI 208
- LABORATORY INSTRUMENTATION
  3 credits (2-3)
  Prerequisites: CHM 118 and MAT 108 or equivalent
  Introduces the theory and practical operation of common analytical instruments and techniques. Emphasis is on spectrophotometry (visible, UV, and IR) and chromatography (thin layer and GC).

SMALL BUSINESS MANAGEMENT

SBM 110
- ACCOUNTING FOR SMALL BUSINESS
  4 credits (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
  3 credits (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
  3 credits (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
  3 credits (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
  3 credits (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
  3 credits (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
  3 credits (1-12)
  Prerequisite: Senior status in Small Business Management curriculum 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
  3 credits (3-0)
  Prerequisites: BUS 101, SBM 110, SBM 120, SBM 130, SBM 210 or permission of Department Chairperson.
  Corequisites: SBM 230
  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 business.

SOCIAL SCIENCE

SSC 131 GE SS
- COMPARATIVE POLITICAL AND CULTURAL SYSTEMS
  3 credits (3-0)
  The cultural and political systems of the major European powers, developing nations, and Hispanic nations are compared. Specific emphasis is placed on the different types of political and cultural systems that are found in capitalistic, socialistic, and communistic nations with different cultures, languages, and business environments. Emphasis on the relationship of the political and cultural influences on the business environment in these various nations.

SSH 010
- FRESHMAN SEMINAR
  3 credit equivalents (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.

SOCIOLOGY

SOC 121 GE SS
- INTRODUCTION TO SOCIOLOGY I
  3 credits (3-0)
  Examines concepts of role, status, community, and stratification with special emphasis on social and racial problems in contemporary America.

SOC 122 GE SS
■ INTRODUCTION TO SOCIOLOGY II
3 credits (3-0)
Prerequisite: SOC 121
Continues the basic concepts of Sociology 121 by focusing on the basic social institutions in America (e.g. religion, the economy, family politics, law, science, education), collective behavior, social movements, and social change.

SOC 123 GE SS
■ INTRODUCTION TO ANTHROPOLOGY
3 credits (3-0)
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 include: magic and religion, marriage and sex roles, political structure and subsistence patterns such as hunting and farming.

SOC 131 GE SS
■ CONTEMPORARY SOCIAL PROBLEMS
3 credits (3-0)
Surveys some contemporary social problems: physical disability, mental-emotional disability, drug abuse, crime and delinquency, poverty, discrimination, and unemployment.

SOC 140 GE SS
■ INTRODUCTION TO CRIMINOLOGY
3 credits (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
3 credits (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
■ MINORITY GROUPS IN U.S. SOCIETY
3 credits (3-0)
Introduces students to both the historical and the contemporary experiences, diverse cultural values, life styles and contributions of a cross-section of racial and ethnic groups, and other minority groups such as women and the aged.

SOC 210
■ METHODS OF SOCIAL CASEWORK AND COUNSELING
3 credits (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
3 credits (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
■ SOCIAL STRATIFICATION
3 credits (3-0)
Various theories concerning the origin and role of social stratification and attempts to analyze the bearing of class structure on current racial and ethnic tensions.

SOC 224 GE SS
■ MARRIAGE AND THE FAMILY
3 credits (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
3 credits (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
■ INDIANS OF THE AMERICAS
3 credits (3-0)
A comparative analysis of native Indian cultures of the Americas. Their traditions and mores are explored from an archeological and anthropological perspective. Topics discussed are origin of the Indians, subsistence patterns, religion, social systems, magic, medicine, architecture, art, and music.

SOC 234 GE SS
■ SOCIOLOGY OF WORK AND ORGANIZATIONS
3 credits (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
3 credits (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
■ PERSPECTIVES ON SEXUAL IDENTITY
3 credits (3-0)
Prerequisite: PSY 123 or SOC 121 or SOC 123 or permission of department chairperson
Examines the processes involved in the formation of sexual identity from psychological and anthropological perspectives, including contemporary, historical and cross - cultural viewpoints. Covers biological, cultural and psychological determinants of sex role behaviors and gender identification. Taught by psychology and/or anthropology/sociology faculty. May be taken to satisfy 3 credits in either psychology or sociology but not both.

SOC 260 GE SS

■ MULTI-CULTURAL LONDON-THE ANTHROPOLOGY OF THE CITY

3 credits (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

3 credits (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

3 credits (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 II

3 credits (3-0)

Prerequisite: SPA 121 or equivalent

A continuation of SPA 121.

SPA 124 GE HUM

■ CONVERSATIONAL SPANISH

3 credits (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

3 credits (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

3 credits (3-0)

Prerequisite: 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 II

3 credits (3-0)

Prerequisite: SPA 221 or equivalent

A continuation of SPA 221.

SPA 223 GE DIV GE HUM

■ MAIN CURRENTS IN HISPANIC LITERATURE

3 credits (3-0)

Prerequisite: SPA 222 or 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 DIV GE HUM

■ CONTEMPORARY HISPANIC LITERATURE

3 credits (3-0)

Prerequisite: SPA 221 or 210 or 222 or 226 or 228 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 DIV GE HUM

■ HISPANIC CIVILIZATION (IBERO-AMERICAN)

3 credits (3-0)

Prerequisite: SPA 221 or 210 or 222 or 226 or 228 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 DIV GE HUM

■ SPANISH CIVILIZATION AND CULTURE (IBERIAN)

3 credits (3-0)

Prerequisite: SPA 221 or 210 or 222 or 224 or 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

3 credits (3-0)

Prerequisites: 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

3 credits (3-0)

Prerequisite: SPA 231

A continuation of SPA 231.

SPA 242 GE DIV GE HUM

■ MASTERPIECES OF HISPANIC LITERATURE IN TRANSLATION (XX CENTURY)

3 credits (3-0)

Prerequisites: ENG 122 or 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

3 credits (3-0)

Introduces 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

3 credits (3-0)

A basic discussion and debate course that develops clear, logical and effective speech communication. Focuses on reasoned decision making in the context of a free society. Topics 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

3 credits (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.

TELECOMMUNICATION NETWORKING TECHNOLOGY

TCT 103

■ PRODUCT MAINTENANCE I (DIGITAL)

4 credits (3-3)

Corequisites: MCT 101, MAT 141, PHY 141, and ENG 131

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 interfaces 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)

4 credits (3-3)

Prerequisites: TCT 103 and MCT 101

Corequisites: MAT 142, PHY 142 and ENG 132

Introduces 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

3 credits (2-3)

Prerequisites: 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

4 credits (3-3)

Prerequisite: TCT 104

Corequisites: MAT 241 and PHY 241

Focuses on the hardware aspects of networking. Learn to upgrade, repair and trouble shoot workstation hardware through a series of hands-on objective coordinated projects. Learn the basics of networking and how to connect a workstation to a network. Concentrates on the hardware components and configurations of the personal computer. Topics include modems, their usage and set-up. Local area networking will expose the student to a variety of communication media as well as setting up print services.

TCT 221

■ WIDE-AREA NETWORKING I

4 credits (3-3)

Prerequisites: TCT 104 and TCT 122

Corequisites: MAT 241 and 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

4 credits (3-3)
Prerequisites: TCT 221 and TCT 201
Corequisites: MAT 242 and PHY 242
A hands-on hardware centered course continues the development of networking concepts begun in Wide-Area Networking I (TCT 221). Configure and troubleshoot TCP/IP networks and develop an understanding of network routing. Configure Cisco routers and establish a Videoconference over wide-area networks. Simulation of routered networks and protocol analyzers will be used to troubleshoot TCP/IP networks.

THEATRE

THE 105 GE HUM
- INTRODUCTION TO THEATRE

3 credits (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

3 credits (3-0)
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

3 credits (3-0)
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

3 credits (3-0)
Basic techniques of theatrical communication. Pantomime and improvisational exercises for perception and self-awareness. Use of the voice, 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

3 credits (3-0)
Prerequisite: 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

4 credits (3-2)
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

4 credits (3-2)
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

3 credits (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

3 credits (1-12)
Prerequisite: 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, on e-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.

MIDDLESEX COUNTY BOARD OF CHOSEN FREEHOLDERS

David B. Crabiel, *Freeholder Director*
Jane Z. Brady
Stephen J. Dalina
Camille Fernicola
H. James Polos
John A. Pulomena
Christopher D. Rafano

MIDDLESEX COUNTY COLLEGE BOARD OF TRUSTEES

Carole Kurtz, Chairman; *Former Director, The Crighton School*
Hank Bauer, *Former Vice President for Manufacturing Operations - USA, Bristol-Myers Squibb Company*
Howard Bellizio, *Vice Chairman; Former Treasurer, Fashion Institute of Technology*
Charles Figg, *Secretary; Former Principal, Freehold High School*
Mary Jean Guidette, *Middlesex County Superintendent of Schools*
Jerome F. Katcher, *Former Senior Vice President, Finance and Administrative Services, Supermarkets General Corporation*
Gerald Ostrov, Treasurer; *Company Group Chairman, Johnson & Johnson*
George J. Otlowksi, Jr., Esq., *Attorney-at-Law, Otlowski Law Offices*
Dorothy Power, *Former Deputy Director, Middlesex County Board of Chosen Freeholders*
Hector Ramon Villafane, *Principal, Roosevelt Elementary School*
Donald J. Wernik; *Former Director of Community Pharmacy Affairs, Rutgers University College of Pharmacy*
Jane Bevis, *Assistant Secretary*

MIDDLESEX COUNTY COLLEGE EXECUTIVE COUNCIL

John Bakum, *President*
Donald R. Drost, Jr. *Executive Director, Facilities Management*
Robert M. Fishco, *Vice President, Academic and Student Affairs*
Camille Mahon, *Executive Director, Planning and Development*
Neil S. Sachnoff, *Executive Director, Information Technology*
Susan K. Zahorsky, *Vice President, Finance and Administration*

FACULTY AND ADMINISTRATIVE STAFF

Jacquelyn Abromitis, *Assistant Professor; English; B.A., Rutgers, The State University; M.Ed., East Stroudsburg University*
Louis Adickes, *Associate Director; Corporate and Community Education; B.A., Rutgers, The State University; M.A., Rider University*
Ernest Albrecht, *Assistant Professor; English; B.S., Rutgers, The State University; M.A., Northwestern University*
Lucille Alfieri, *Assistant Professor; English; B.S., M.S., Brooklyn College*
Simon Aloff, *Professor; Mathematics; B.A., New York University; M.A., Princeton University; Ph.D., Rutgers, The State University*
Janice Aloi, *Assistant Professor; Joint Nursing Program, UMDNJ; Diploma, Charles E. Gregory School of Nursing; B.A., Kean College; M.S., Rutgers, The State University*
Susan Altman, *Instructor; Visual and Performing Arts; B.F.A., State University of Buffalo; M.F.A., Tyler School of Art of Temple University*
Elisabeth Altruda, *Associate Professor; English; A.A., B.A., College of Staten Island, City University of New York; M.A., Seton Hall University*
N. Alex Arauz, *Financial Aid Officer; B.S., Universidad de Panama*
Carol Avelsgaard, *Assistant Professor; Mathematics; B.A., M.A., University of Minnesota*
Agnes Azzolino, *Assistant Professor; Mathematics; B.A., M.A., Montclair State University*
Nancy Bailey, *Associate Professor; Chairperson, Business Administration and Management; B.A., M.A., New York University*
John Bakum, *Professor; President; A.A.S., Orange County Community College; B.S.E.E., M.S.E.E., Newark College of Engineering; Ed. D., Rutgers, The State University*
Xenia Balabkins, *Associate Professor; Business Administration and Management; B.A., Douglass College; M.B.A., Rutgers, The State University*
Ronald Balint, *Associate Director, Buildings and Grounds; B.S., Delaware Valley College*
Mark Banyacski, *Controller; B.A., Rutgers, The State University; M.S., Upsala College*
Nora Barrett, *Associate Professor; Program Director, Joint Psychosocial Rehabilitation and Treatment Program, UMDNJ; L.C.S.W., National Association of Social Workers; Registered Psychiatric Rehabilitation Practitioner; M.S.W., New York University*
Raymond Battaglia, *Programmer Analyst; A.A.S., Middlesex County College; B.S., Cook College*
Gina Bedoya, *Instructor; Counseling and Career Services; A.A., Middlesex County College; B.A., Ed.M., Rutgers, The State University*
James Bernarducci, *Associate Professor; English; B.A., Kean College; M.A., William Patterson College*
Jane C. Bevis, *Administrative Assistant to the President; B.A., St. Lawrence University*
Louise Beyer, *Assistant Professor; English as a Second Language; B.S., Washington University; M.A., Kean University*
Paul Bhatia, *Professor; Chairperson, Computer Science; AFIMA, B.A., J. and K. University; M.A., Delhi University; Post-graduate Diploma in Computer and Control Systems, Enfield College of Technology, London*
Joseph Birkman, *Assistant Clinical Professor; Joint Psychosocial Rehabilitation and Treatment Program, UMDNJ; B.A., Hunter College, City University of New York; M.S.W., Columbia University; M.P.A., Bernard Baruch College, City University of New York*
Sudipta Biswas, *Assistant Professor; English as a Second Language; B. Ed., St. Theresa's Institute of Education; B.A., Sophia College; M.A., Tennessee Technical University; M.A., Fairleigh Dickinson University*
Virgil H. Blanco, *Professor; Chairperson, Modern Languages and Director, Center for International Education; B.A., University of Miami; M.A.T., Fairleigh Dickinson University; Diploma, University of Salamanca (Spain); Doctorate, University of Madrid*
Karen Blyskal, *Director, Human Resources; B.Ed., University of Miami; M.S., Rutgers, The State University*
Mary Ann Bogar, *Assistant Professor; Performing Arts; B.A., M.A., The College of New Jersey*
Barbara Bogner, *Associate Professor; Biology; B.S., State University of New York at Stony Brook; M.S., Villanova University*
Claudine Bowers, *Assistant Instructor; Admissions; B.A., Douglass College, Rutgers, The State University*
James Brackenridge, *Associate Professor; Business Administration and Management; B.S., Case Institute of Technology; M.S., Stanford University; M.B.A. Harvard University; Ph.D., California Coast University*
Harvey Braverman, *Assistant Professor; Mathematics; B.S., M.A., Brooklyn College; Ph.D., City University of New York*
Desiree Brower, *Instructor; Admissions; B.A., Rutgers, The State University*
Francis Burke, *Associate Professor; Computer Science; B.S.M.E., General Motors Institute; M.S., Stevens Institute of Technology*
Rita Burton, *Instructor; Counseling and Career Services; B.A., St. Joseph's College India; M.A., Montclair University*
Santi V. Buscemi, *Professor; Chairperson, English; B.A., Saint Bonaventure University*
Andrew Butula, *Professor; Accounting and Legal Studies; B.A., M.A., Montclair State University; D.Ed., Pennsylvania State University*
Laura Cahill, *Administrative Assistant to Vice President for Finance and Administration; A.A.S., Middlesex County College*
Yolanda D.J. Calacat, *Administrative Assistant to Vice President for Academic and Student Affairs*
Zoraida Calvo-Scott, *Professor; Counseling and Career Services; B.A., Inca Garcilaso de la Vega University; M.A., Montclair State University; Ed.S., Seton Hall University; Ed.D., University of Sarasota*

Patricia Cardinale, *Director, Grant Accounting; A.A.S., Middlesex County College; B.S., Kean College*

Leslie A. Carter, *Assistant Professor; Counseling and Career Services; A.A., Brookdale Community College; B.A., Rutgers, The State University; M.Ed., The College of New Jersey*

Linda Chalakani, *Clinical Assistant Professor; Joint Psychosocial Rehabilitation and Treatment Program, UMDNJ; M.S., Rehabilitation Counseling, Boston University*

Judy Chen, *Instructor; Program Director, Dietetic Technology; B.S., University of Delaware; M.S., College of St. Elizabeth*

Erin A. Christensen, *Assistant Professor; Biology; B.S., Kean College of New Jersey, M.S., Wagner College*

Linda Christopher, *Assistant Professor; Chemistry and Physics; A.B., Barnard College; M.A., Clark University*

John Cielesz Jr., *Warehouse Supervisor*

William F. Clark, *Associate Professor; Program Director, Joint Respiratory Care Program, UMDNJ; R.R.T.; M.Ed., Temple University; Ph.D., Seton Hall University*

Wilson Class, *Assistant Professor; English; B.A., M.Ed., Rutgers, The State University*

Arnold Cohen, *Associate Professor; Mathematics; B.S., City College of New York; M.S.T., Union College*

Ilene Cohen, *Assistant Director, Athletics; B.S., M.Ed., The College of New Jersey*

Ricki J. Cohn, *Associate Professor; English; B.A., Drew University; M.A., University of Connecticut*

Robert W. Colburn, Jr., *Associate Professor; Biology; B.S., Monmouth University; M.S., Fairleigh Dickinson University*

Gertrude Coleman, *Associate Professor; English; B.A., State University of New York at Geneseo; M.S., Richmond College; M.A. College of Staten Island*

Richard A. Conley, *Assistant Professor; Chemistry and Physics; B.S., Moravian College; M.S., University of Delaware; Ph.D., Lehigh University; P.D., Princeton University*

Mary Ann Conners, *Dean, Corporate and Community Education; B.A., St. Louis University; M.A.T., Monmouth University*

David A. Crampton, *Assistant Professor; Library Services; B.A., M.A., Tufts University; M.L.S., Rutgers, The State University*

Jose L. Crespo, *Financial Aid Specialist; B.A., Rutgers, The State University*

Margaret Cullen, *Associate Professor; History and Social Behavior; B.A., M.A., University of Tennessee*

Barbara Daisak, *Information Technology Support Specialist, Help Desk/ Trainer; B.S., M.S., St. John's University; Professional Certificate in Business Education, New York University*

Jamie Daley, *Assistant Professor; English; B.A., Indiana University, M.A., Ph.D., University of Notre Dame*

Patricia Daly, *Assistant Director, Student Activities and College Center; B.S., M.Ed., The College of New Jersey*

Loretta Daniel, *Instructor; English; B.A., University of Rochester; M.S., Polytechnic University*

Audrey Davis, *Assistant Director, Student Activities and College Center; B.A., State University of New York at Albany; M.A., Cornell University*

William Davis, *Director, New Brunswick Center; B.A., Ed.M., Rutgers, The State University*

Dorothy DeFoe, *Assistant Professor; Dental Auxiliaries Education; B.S., Boston University; M.S., University of Michigan*

Maria DeLucia, *Chairperson; Mathematics; B.A., M.A., Jersey City State College; Ph.D., New York University*

Sallie DelVecchio, *Assistant Professor; English; B.S.E., Southern Arkansas University; M.A., University of Arkansas*

Brian de Uriarte, *Assistant Professor; Business Administration and Management; B.A., University of Pennsylvania; M.A., Rutgers, The State University*

Naresh Dhanda, *Instructor; Computer Science; B.A., B.S., B.Ed., Panjab University; M.S., University of London; M.S., Jackson State University*

Silvia Dias, *Buyer; Blue Colt Bookstore; A.A.S., Union County College*

Charles V. DiDomenico, *Assistant Professor; English; B.A., Villanova University; M.A., New York University*

Ellen Dikun, *Assistant Professor; Radiography Education; A.A., Brookdale Community College; B.S., Kean College; R.T.(R), Monmouth Medical School of Radiologic Technology*

Judy DiMaio, *Coordinator; Environmental Health and Safety; A.A.S., (Chemical Technology and Industrial Quality Assurance Technology); A.S., (Business Administration), Middlesex County College; B.S., Rutgers, The State University*

Emanuel diPasquale, *Assistant Professor; English; B.A., Adelphi University; M.A., New York University*

Ann Dobshinsky, *Assistant Professor; Mathematics; B.S., Boston University; M.A., Columbia University Teachers College*

Charles Dolan, *Assistant Professor; Learning Resources; B.A., M.L.S., Rutgers, The State University*

Patrick Donohue, *Assistant Professor; History and Social Behavior; B.A., Livingston College, Rutgers, The State University; M.A., Eagleton Institute of Politics and Government, Rutgers, The State University*

Robert Doughtery, *Supervisor; Custodial Services*

Louise Douros, *Director, Administrative Computing; B.A., Hunter College*

Barbara J. Drescher, *Professor; Chemistry and Physics; B.S., Molloy Catholic College; M.S., Ph.D., Fordham University*

Margarete K.M. Driver, *Professor; Modern Languages; B.A., Ruprecht-Karls-Universität Heidelberg; M.A., New York University; M.A., Ph.D., Rutgers, The State University*

Donald R. Drost, Jr., *Executive Director, Facilities Management; A.A.S., Middlesex County College; B.S., Trenton State College*

Keith Drumbore, *Assistant Professor; English; B.A., University of Iowa; M.A., Rutgers, The State University*

John Dunning, *Director, Minority Student Affairs; B.A., Montclair State University; M.A., Seton Hall University*

Jay Edelson, *Associate Professor; Mechanical and Civil/Construction Engineering Technology; B.E., M.S., New York University; P.E., New Jersey and New York*

Robert Edmonds, *Assistant Director, Athletics/Athletic Trainer; B.S., East Stroudsburg University*

John W. Errickson, *Associate Professor; Accounting and Legal Studies; B.S., Marshall University; M.B.A., Rutgers, The State University*

Kathy A. Fedorko, *Professor; English; B.A., University of Redlands; M.A., Ph.D., Rutgers, The State University*

Thomas Feehan, *Assistant Professor; Accounting and Legal Studies; B.S., M.A., Seton Hall University*

James Finne, *Instructor; Electrical Engineering; B.S.M.E., Lehigh University; M.S.E.E., Rutgers, The State University; P.E., New Jersey*

Robert M. Fishco, *Professor; Vice President, Academic and Student Affairs; B.A., The College of New Jersey; M.A., New York University Ed.D., Temple University*

Brenda Fisher, Director; *Career Training Center; B.A., Douglas College*

Jean Flakker, *Instructor; Mechanical and Civil/Construction Engineering Technology; A.A.S., Middlesex County College; B.S.C.E.T., M.S.C.E., New Jersey Institute of Technology; P.E., New Jersey*

Phyllis Fleming, *Assistant Professor; Computer Science; B.B.A., Pace University; M.S., Stevens Institute of Technology*

Steven Foster, *Associate Professor; Electrical Engineering Technology; B.E.E., Cooper Union; M.S.E.E., Massachusetts Institute of Technology; P.E., New Jersey*

John Frary, *Associate Professor; History and Social Behavior; B.A., University of Maine; M.A., Rutgers, The State University*

David Fricke, *Director, Purchasing and Inventory; B.A., Stockton State College, Certified Purchasing Manager; Registered Public Purchasing Official*

Daniel Fuchs, *Associate Director; Buildings and Systems*

Edward Fuller, *Supervisor, Custodial Services*

Shunfu Gao, *Associate Professor; Chemistry and Physics; B.S., Soochow University, China; M.A., Ph.D., City University of New York*

Trace Gerow, *Professor; Biology; B.S., University of Illinois; M.S., University of Massachusetts; Ed.D., Rutgers, The State University*

Anne M. Gilbert, *Director; The Institute; M.S.W., State University of New York at Stony Brook*

Angelina Gincel, *Associate Professor; Accounting and Legal Studies; B.B.A., University of the East; M.B.A., New York University*
Andre Gittens, *Assistant Professor; Library Services; B.A., Cook College; M.L.S. Rutgers, The State University*
Harold M. Gladstone, *Professor; Chemistry and Physics; B.S., Rensselaer Polytechnic Institute; M.S., Adelphi University; Ph.D., Polytechnic Institute of New York*
Barry Glazer, *Associate Chairperson; English; A.A., Middlesex County College; B.A., Rutgers, The State University; M.A., Montclair State University*
Ronald C. Goldfarb, *Professor; Dean, Business, Computer Science and Engineering Technologies; B.A., City University of New York; J.D., New York Law School*
Fannie Gordon, *Professor; Director, Educational Opportunity Fund; B.A., University of Maryland; M.A., University of Connecticut; Ed.D., Rutgers, The State University*
Margaret Gorlin, *Assistant Professor; Mathematics; B.A., Temple University; M.S., Drexel University*
Nanette Granuzzo, *Instructor; Modern Languages; B.A., M.A.H., State University of New York at Buffalo*
Brenda C. Gray, *Assistant Professor; History and Social Behavior; B.A., North Carolina Central University; M.A., Ph.D., University of Michigan*
Michelle Greenfield, *Assistant Professor; Mathematics; B.A., Brooklyn College; M.A., New York University*
Michael L. Greenhouse, *Associate Professor; History and Social Behavior; A.B., Rutgers, The State University; M.A., New School for Social Research*
Daine A. Grey, *Assistant Professor; Psychology and Education; M.A., Ph.D., Princeton University*
Edwin C. Griffith, *Assistant Professor; Counseling and Career Services; B.A., M.Ed., The College of New Jersey*
Barbara Gross, *Coordinator, Cooperative Education and Placement Services; B.S., State University of New York at Plattsburgh*
Lucy Gullo, *Assistant Professor; Mathematics; B.A., M.S.Ed., Queens College*
John J. Gutowski, *Associate Professor; Chairperson, Psychology and Education; B.A., M.A., Jersey City State College*
Thomas M. Handler, *Professor; Electrical Engineering Technology; B.E.E., City College of New York; M.S.E.E., Drexel Institute of Technology; P.E., New Jersey*
M. Eileen Hansen, *Professor; Chairperson, English as a Second Language; B.A., Syracuse University; M.A., San Jose State University; Ed.D., Rutgers, The State University*
Christine Harrington, *Instructor; Counseling and Career Services; B.A., M.A., Trenton State College; Ph.D., Lehigh University*
Gertrude Harris-Johnson, *Assistant Professor; Educational Opportunity Fund; B.S., Bowie State College; M.Ed., The College of New Jersey; Ed.D., Nova Southeastern University*
Janet Hartman Baker, *Assistant Professor; Biology; B.A., Georgian Court College; M.S., Rutgers, The State University*
John R. Herrling, *Professor; Director; Counseling and Career Services; B.A., M.Ed., Springfield College; Ed.D., Rutgers, The State University*
Robin Hetzko, *Assistant Manager; Printing and Communications Support*
Albert Heuer, *Assistant Professor; Joint Respiratory Care Program, UMDNJ; R.R.T.; M.B.A., Fairleigh Dickinson University*
Jeffrey Hochbaum, *Associate Professor; Biology; B.S., Delaware Valley College; M.S., Southern Illinois University*
Patricia Holland, *Assistant Professor; Joint Psychosocial Rehabilitation and Treatment Program, UMDNJ; B.S., Niagara University; M.S., Boston University*
Theresa T. Holt, *Professor; Psychology and Education; B.A., Hampton University; M.A., University of Illinois; Ed.M., Rutgers, The State University; Ed.D., Rutgers, The State University*
Patrick Honey, *Assistant Professor; Health, Physical Education, Recreation and Dance; B.S.,Seton Hall University; M.A., Montclair State University*
Dolly Hsu, *Instructor; Medical Laboratory Technology; B.S., Gwynedd-Mercy College M.S., Fairleigh Dickinson University*
Constance Hynes, *Program Assistant; Professional & Community Programs; B.A., Rutgers, The State University*
Vincent Ianuale, *Assistant Professor; History and Social Behavior; B.A., M.A., Jersey City State College; M.A., Seton Hall University*
Li Jin, *Director, Student Records and Communication Management; B.A., Beijing University; M.S., The University of Dayton*
Lori, Johnson, *MAPS Coordinator, Minority Student Affairs; A.A., Union County College, B.A., M.P.A., Kean College*
Vicki Kahn, *Assistant Professor; English as a Second Language; B.A., State University of New York at Stony Brook; M.A. Hunter College*
James A. Kahora, *Assistant Professor; Health, Physical Education, Recreation and Dance; B.S., West Chester State College; M.A., Seton Hall University*
Irwin H. Kantor, *Professor; History and Social Behavior; A.B., M.A., M. Phil., Ph.D., Rutgers, The State University*
Karen Katt, *Executive Director, Retail Services; B.S., Montclair State University*
Deborah Keenan Lynch, *Associate Professor; Hotel, Restaurant and Institution Management; A.A., Suffolk County Community College; B.S., State University of New York at Oneonta; M.A., New York University*
Saul B. Kelton, *Associate Professor; Psychology and Education; B.A., Rutgers, The State University; M.A., New School for Social Research*
Yvonne Kemp, *Assistant Professor; Mathematics; A.S., Mercer County Community College; B.S., M.A., The College of New Jersey*
Carl Kiesewetter, *Assistant Professor; Mechanical and Civil/ Construction Engineering Technology; B.S., City College of New York; Sc.M., Brown University*
Renu Kinkhabwala, *Communications Management Specialist; B.A., Xavier's College, Bombay*
Richard Klein, *Associate Professor; Mathematics; B.E.E., Cornell University; M.S., California Institute of Technology; M.B.A., Rutgers, The State University*
William Kleinelp, *Associate Professor; Biology; B.A., M.S., Fairleigh Dickinson University*
Kimberley Krapels, *Instructor; Radiography Education; A.A.S., Middlesex County College; B.S., Rutgers, The State University; R.T.(R)*
Sandra Kregeloh, *Assistant Professor; Joint Nursing Program, UMDNJ; B.S., M.S., Rutgers, The State University*
Francine Krimsky, *Instructor; Media Art and Design; A.A.S., Kingsborough Community College; A.A.S., Middlesex County College; M.A., Kean College*
John Kruszewski, *Assistant Director; Academic Advising Center and Open College; B.A., Georgetown University; M.A., Fordham University*
Mabel Lam, *Accounts Receivable Manager; Bursar; A.S. Los Angeles City College; B.S., California State University*
Josephine M. Lamela, *Associate Professor; Chemistry and Physics; B.A., Montclair State University; M.A.T., Harvard University; M.S., Iowa State University*
Michael Landers, *Assistant Professor; Accounting and Legal Studies; B.B.A., Niagara University; M.B.A., Pace College*
Stephen P. Larkin III, *Assistant Professor; Chairperson, Medical Laboratory Technology, Director, Health Technology Program; A.A.S., Middlesex County College; B.S., Fairleigh Dickinson University; Certificate, Medical Technology; Muhlenberg Hospital School of Medical Technology; M.H.S.A., St. Joseph's College*
Marilyn Laskowski-Sachnoff, *Professor; Chairperson, Hotel, Restaurant and Institution Management; B.S., College of Saint Elizabeth; M.A., New York University*
Jane Lasky-MacPherson, *Associate Professor; English; B.A.,Northeastern University; M.A., Montclair State College*
Gregory LeBlanc, *Instructor; Health, Physical Education, Recreation and Dance; A.A., A.A.S., Hudson Valley Community College; B.S.E., Cortland College; M.S., University of Wisconsin*
C. Merry LeBlond, *Assistant Professor; Chairperson, Dental Auxiliaries Education; B.S., Columbia University; M.S., Columbia University*
Lynn Lederer, *Director; Professional and Community Programs; B.S., State University of New York at Buffalo*
Diane Lemcoe, *Director, Admissions; B.A., M.P.A., University of Missouri*

Ruth D. Lewis, *Director, Marketing and Public Information; B.S., Pennsylvania State University; M.S., University of Tennessee*
Dennis Lick, *Associate Professor; Visual Arts; B.F.A., Miami University of Ohio; M.F.A., Rutgers, The State University*
Jane Liefert, *Assistant Professor; Computer Science; B.S., Kean College; M.S., Monmouth University*
Dorothy E. Loper, *Assistant Professor; Director, Academic Advising Center and Open College; B.A., Rutgers, The State University*
Maria Lopez Elshahawy, *Assistant Instructor; Admissions; B.A., University of Puerto Rico*
Louise Lord, *Assistant to Vice President for Academic and Student Affairs; B.A., City College of New York; M.A., Columbia University*
Elizabeth A. Lowe, *Director; Project Connections; B.A., Drew University; Ed.M., Rutgers, The State University*
Angela Lugo, *Associate Professor; English; B.A., M.A., University of Puerto Rico*
Reginald K. Luke, *Professor; Dean, Science, Mathematics and Health Technologies; B.S., Gonzaga University; M.S., Ph.D., Rutgers, The State University*
Mary Lynch, *Associate Professor; Office Administration; A.A., Middlesex County College; B.A., Montclair State University; M.Ed., The College of New Jersey; M.A., Kean University; M.A., Montclair State University*
JoAnn Lyons, *Director, Office and Systems Management; B.S., Kean College*
Dominic J. Macchia, *Professor; Chemistry and Physics; B.A., M.S., Adelphi University; Ph.D., Rutgers, The State University*
Camille Mahon, *Executive Director, Planning and Development; B.A., Jersey City State College; M.Ed., Rutgers, The State University*
Patricia Mahoney, *Assistant Professor; On-Site Faculty Administrator, Joint Nursing Program, UMDNJ; Diploma, Massachusetts General Hospital School of Nursing; B.S.N., Boston College; M.S.N., Seton Hall University*
Michael Maloney, *Systems Engineer; Information Technology*
Patricia Marrero, *Director Accounting; B.S., Rutgers, The State University*
Benjamin Marshall, *Associate Professor; English; B.A., Kean College; M.F.A., University of Massachusetts of Amherst*
Maria Marshall, *Instructor; media Arts and Design; B.A., Indiana University; M.F.A., Brooklyn College/City University of New York*
Roslyn Mass, *Professor; Psychology and Education; A.B., Temple University; Sc.M., Brown University; Ph.D., Rutgers, The State University*
Anthony Matagrano, *Assistant Professor; Mathematics; B.A., Rutgers, The State University; M.S., Ph.D., Stevens Institute of Technology*
Kenneth B. Maugle, *Professor; Counseling and Career Services; B.A., Barrington College; M.Ed., Ed.D, Rutgers, The State University*
Doris Mayner, *Associate Professor; Biology; B.S., M.S., Ohio State University*
Terry McGlincy, *Associate Professor; Director, Student Activities and the College Center; B.A., M.A., Montclair State University; M.S., Rutgers, The State University; J.D., Seton Hall University*
Ellen Measday, *Associate Professor; English as a Second Language; B.A., The George Washington University; M.A., University of Oregon*
Michele Menditto, *Financial Aid Officer; A.A., Staten Island Community College; B.A., College of Staten Island; M.S., Baruch College; M.L.S., Rutgers, The State University*
Michael Miniere, *Associate Professor; Mathematics; A.A., Hagerstown Junior College; B.S., Montclair State University; M.S., Ph.D., Stevens Institute of Technology*
Joseph J. Misuraca, *Assistant Professor; Mechanical and Civil/Construction Engineering Technology; B.S.M.E., Rutgers, The State University; P.E., New Jersey*
John Moetz, *Bursar; B.S., Trenton State College*
John Mondano, *Director, Facilities Maintenance*
Frederick Montana, *Professor; Chemistry and Physics; B.A., Montclair State University; Ph.D., University of Utah*
Maria Mora, *Director, Perth Amboy Center; B.S., University of Puerto Rico; M.S.W., Rutgers, The State University*
Doris Morgan, *Associate Professor; Biology; B.S., M.S., Fairleigh Dickinson University*
James F. Morgan, *Associate Professor; Performing Arts; B.A., Alfred University; M.F.A., Syracuse University*
RoseAnn Morgan, *Professor; English; B.A., University of California; M.A., Rutgers, The State University*
Jack Moskowitz, *Associate Professor; English; B.A. City College of New York; M.A., Brandeis University*
John J. Murray, *Professor; Chairperson; Chemistry and Physics; B.S., Manhattan College; Ph.D., Fordham University*
Karoly Nagy, *Professor; History and Social Behavior; B.A., Rutgers, The State University; M.A., Ph.D., New School for Social Research*
Denise Nash-Luckenbach, *Assistant Professor; Joint Nursing Program, UMDNJ; B.S., Trenton State College; M.S., Rutgers, The State University*
Millicent Nicholas, *Associate Professor; Radiography Education; B.S., Manhattan College; M.S.W., Rutgers, The State University*
Albert Nicolai, *Professor; English; A.B., Hope College; M.A., Temple University*
Frank O'Connor, *Director, Telecommunications and Correspondence Center; A.E., RCA Institute of Technology*
Michelle O'Leary, *Clinical Education Coordinator; Radiography Education; A.A.S., Middlesex County College*
Elisabeth Oliu, *Assistant Professor; Library Services; B.A., William and Mary College; M.L.S., Rutgers, The State University*
Jerome Olson, *Assistant Professor; English; B.A., M.A., State University of New York at Fredonia*
Olubayi Olubayi, *Assistant Professor; Biology; A.A.S., State University of New York; B.S. Florida Atlantic University; Ph.D., Rutgers, The State University*
Edwin R. Onyschak, *Associate Director, Networking and Technical Services; A.S., Middlesex County College; B.S., Newark College of Engineering*
Theresa Orosz, *Manager, Counseling and Career Services; A.A.S., Middlesex County College; B.S., M.A., Kean University*
Jeannette O'Rourke, *Assistant Professor; Mathematics; B.S., Fairleigh Dickinson University; M.A., New York University*
Jeanne Osborne, *Assistant Professor; Mathematics; B.A., M.A., State University of New York at Albany*
Lewis Ostar, *Director, Learning Resources; B.B.A., Hofstra University; M.L.S. Queens College*
J. Douglas Overstreet, *Director, Research; B.A., Central State University; Ph.D., University of Texas at Austin*
Robert M. Pajauis, *Colleague Systems Administrator; A.A.S., Middlesex County College*
Lauren Palladino, *Assistant Director, Purchasing and Inventory; A.A.S., Middlesex County College*
Carol Pam, *Professor; Chairperson, Office Administration; B.A., Hunter College; M.A., Rider University*
Theodora Pappas, *Assistant Professor; Joint Nursing Program, UMDNJ; B.S., Rutgers, The State University; B.A., Kean College; M.S., Columbia University*
Elliot L. Pasternack, *Assistant Professor; History and Social Behavior; B.A., M.A., Montclair State University*
Ellen Patrick, *Nursing Laboratory Facilitator, Joint Nursing Program, UMDNJ; B.S.N., Jersey City State College*
Patricia Payne, *Professor; History and Social Behavior; A.S., Middlesex County College; B.S., Jersey City State College; J.D., Ohio Northern University*
Claire A. Pean, *Associate Professor; Dental Auxiliaries Education; B.S., Fairleigh Dickinson University; M.A., Jersey City State College; M.L.S., Rutgers, The State University*
David C. Pearce, *Associate Professor; Mechanical and Civil/Construction Engineering Technology; B.S., M.S., Newark College of Engineering; Ph.D., Stevens Institute of Technology*
Martin N. Pearlman, *Professor; Psychology and Education; A.B., Brooklyn College; M.A., University of Michigan; Ph.D., Rutgers, The State University*
Janet Peleg, *Assistant Professor; English as a Second Language; B.A., Queens College, City University of New York; M.A., Hunter College, City University of New York*
Nancy Yusko Peters, *Executive Director of Middlesex County College Foundation; B.A., Douglass College*
Arthur T. Peterson, *Professor; Business Administration and Management; A.B., Upsala College; M.S., Ed.D., Rutgers, The State University*

Alice Picardo, *Instructor; Counseling and Career Services; B.A., M.A., Seton Hall University*
Nicholas Picioccio, *Associate Professor; Computer Science; B.S., Montclair State University*
Alane Poirier, *Instructor; Media Art and Design; B.F.A., University of Houston; M.F.A., Rutgers, The State University*
George Popel, *Professor; Mathematics; B.I.E., Ohio State University; M.S., John Carroll University*
Norman Poppel, *Professor; Psychology and Education; B.A., M.S., City College of New York*
Bridget Porta, *Assistant Professor; Joint Nursing Program, UMDNJ; B.S., Seton Hall University; M.S., Rutgers, The State University*
Carlos Pratt, *Clinical Associate Professor; Joint Psychosocial Rehabilitation and Treatment Program, UMDNJ; Ph.D., Hofstra University*
Renee Price, *Assistant Professor; English; B.A., Douglass College; M.A., Kean College of New Jersey*
Margaret Przygoda, *Associate Professor; Chairperson, Biology; B.A., Georgian Court College; M.S., Rutgers, The State University*
Kenneth Rader, *Assistant Professor; English; B.A., M.A., Adelphi University*
Elena Rakova, *Instructor; Mathematics; B.S., M.S., St. Petersburg State University, Russia; Ph.D., St. Petersburg Electrotechnical University, Russia;*
Elliot J. Ramer, *Associate Professor; Modern Languages; B.A., M.A., State University of New York; M.A., New York University*
Iris Ramer, *Associate Professor; English as a Second Language; B.A., Inter-American University of Puerto Rico; M.A., New York University*
John Ramirez, *Assistant Registrar; A.A., Bronx Community College; B.A., Lehman College; M.A., M.Ed., Teachers College, Columbia University*
Edith S. Rehbein, *Associate Professor; English; B.A., Carleton College; M.A., Washington University; M.A., New York University*
Edwin Reid, *Director, Network Technical Services*
Ethel Reid, *Assistant Professor; Office Administration; B.S., Alabama State University; Ed.M., Rutgers, The State University*
Catherine Reilly, *Associate Professor; Dental Auxiliaries Education; A.A.S., Hudson Valley Community College; B.S., State University of New York at Cortland; M.S., Columbia University; M.S.W., Rutgers, The State University*
Peter Rice, *Associate Director, Admissions; B.A., M.A., Seton Hall University*
Brian Richards, *Instructional Designer, Learning Resources Center; B.S., University of Sussex; M.Ed., University of Bath; P.G.C.E., University of Reading*
Alan Rittman, *Director, Facilities Engineering; A.A.S., Middlesex County College; B.S., New Jersey Institute of Technology*
Joseph Roach, *Associate Professor; English; B.A., University of Texas; M.A., New York University; Ph.D., New York University*
Karen Rodriguez, *Assistant Professor; English as a Second Language; B.A., Queens College; M.A., New York University*
Lisa Rodriguez, *Assistant Director, Perth Amboy Center; A.A. Middlesex County College, B.A., Kean University*
Evelyn Rosa, *Assistant Director; New Brunswick Center; B.A., Rutgers, The State University*
Ronald R. Rose, *Manager; Printing and Communications Support*
Robert Roth, *Professor; English; B.S., Massachusetts Institute of Technology; A.M., Ed.D., Rutgers, The State University*
Steven P. Rowley, *Assistant Professor; Chemistry and Physics; B.A., Carleton College; Ph.D., University of California*
Frank J. Rubino, *Professor; Chairperson, Mechanical and Civil/ Construction Engineering Technology; A.A.S., Academy of Aeronautics; B.S., M.E., The Cooper Union, School of Engineering; P.E., New Jersey*
Neil S. Sachnoff, *Executive Director, Information Technology; A.A.S., Queensborough Community College; B.B.A., Bernard Baruch College, City University of New York*
Jay Sachs, *Assistant Professor; Mathematics; B.A., M.A., Brooklyn College*
Marian Sackrowitz, *Associate Professor; Computer Science; B.S., Brooklyn College; M.S., Ph.D., Rutgers, The State University*
Anna Sadowska, *Associate Professor; Accounting and Legal Studies; B.S., M.B.A., University of Rhode Island*
Marianne Santelli, *Associate Chairperson; English as a Second Language; B.A., M.A., Fairleigh Dickinson University*
Michael Scanlon, *Associate Chairperson; Mathematics; B.S., Saint Peter's College; M.S., Stevens Institute of Technology*
Naomi Schatz, *Associate Professor; Computer Science; B.A., M.A., Rutgers, The State University*
Irmgard Schrancz, *Associate Director, Retail Services; Text Manager, Blue Colt Bookstore*
Gail Scott-Bey, *Director, Financial Aid; B.A., William Patterson College; M.A., Temple University*
Thomas Seck, *M.D., College Physician; Family Practice - UMDNJ*
Kathleen B. Shay, *Associate Professor; Mathematics; A.B., Douglass College; Ed.M., M.S., Rutgers, The State University*
Alan Sherman, *Professor; Chemistry and Physics; B.A., Rutgers, The State University; M.S., Newark College of Engineering; Ed.D., Rutgers, The State University*
Jerome Shindelman, *Professor; Chairperson, History and Social Behavior; A.B., M.A., Rutgers, The State University*
Susan Shulman, *Assistant Professor; Mathematics; B.A., Brooklyn College; M.A., University of Minnesota*
Jay D. Siegfried, *Professor; Chairperson, Visual and Performing Arts; B.A., Yankton College; M.A., M.F.A., University of Iowa*
Beverly Simon, *Professor; Computer Science; B.A., Boston University, M.S., Fairleigh Dickinson University; Ph.D. Nova, Southeastern University*
Yvonne Sisko, *Assistant Professor; English; B.A., University of Michigan; M.A.L.S., Kean College*
Robert Smilek, *Captain of Police*
Adrienne Smith, *Director, Child Care Center; A.A., Virginia Intermount College; B.S., Auburn University; M.S., Northern Illinois University*
Lafayette N. Smith, *Associate Director, Educational Opportunity Fund; B.A., M.A., Upsala College*
Albert M. Snopek, *Assistant Professor; Chairperson, Radiography Education; B.S., Fairleigh Dickinson University; R.T.(R), New York Hospital/Cornell Medical Center Radiography*
Lynn Somers, *Manager, Academic Information Technology Support; B.A., Glassboro State College*
Cynthia Sorace, *Instructor; Health, Physical Education, Recreation and Dance; B.S., M.S., East Stroudsburg University*
Judith Spano, *Assistant Professor; Office Administration; B.S., Long Island University; M.S.Ed., Hunter College*
Mathew Spano, *Associate Professor; English; A.A., Middlesex County College; B.A., Rutgers, The State University; M.A., Drew University*
Jeffrey Spector, *Assistant Professor; Computer Science; B.S., Stockton State College; M.B.A., Rutgers, The State University*
Flor Sprinitis, *Financial Analyst; Grant Accounting; A.A.S. Middlesex County College; B.S., Thomas Edison College; B.A., Ricardo Palma University*
Joanne T. Stern, *Assistant Director, Public Information; B.S., Syracuse University; M.A., Columbia University*
Dorothy Steinsapir, *Associate Professor; Accounting and Legal Studies; B.A., Douglass College; M.A., Newark State College; M.B.A., Seton Hall University*
James B. Stewart, *Assistant Professor; Chairperson, Media Arts and Design; B.M.E., Cornell University; M.A., Kean College*
Neil Storm, *Assistant Professor; English as a Second Language; B.A., Rutgers, The State University; M.A., Seton Hall University*
Gwendolyn Strokus, *Coordinator, Health/Fire Safety; A.A.S. Middlesex County College*
Richard Strugala, *Professor; English; A.B., Ed.M., Ed.D., Rutgers, The State University*
Helena Swanicke, *Assistant Professor; English; B.S., Rutgers, The State University; M.A., Concordia College*
Aimee Szilagyi, *Assistant Professor; English; B.A., St. Peter's College; M.A., Montclair State University*
Ralph A. Tellone, *Associate Professor; Hotel, Restaurant and Institution Management; A.A.S., Middlesex County College; B.S., Fairleigh Dickinson University; M.B.A., Seton Hall University*
Ellen S. Thomas, *Director, Testing and Tutoring; B.A., Douglass College; M.A., Kean College*

Selina Thompson, *Assistant Professor; Mathematics; B.A., Bernard M. Beruch College; M.A., New York University*
Lucia Tillotson, *Assistant Professor; Biology; B.S., Indiana University; Ph.D., Rutgers, The State University*
Mary S.M. Tistler, *Assistant Professor; Joint Nursing Program, UMDNJ; B.S.N., Rutgers, The State University; M.A., New York University*
Diane Trainor, *Professor; Chemistry and Physics; B.A., Jersey City State College; M.S., University of Minnesota; M.A., Ph.D, New York University*
Marvetta Troop, *Assistant Director, Marketing Production*
Anne Duggan Ugrovics, *Director; Health and Safety; Diploma, St. Francis Hospital School of Nursing; B.S., Stockton State College; M.S.N., Seton Hall University*
Joseph F. Vastano, *Associate Professor; Hotel, Restaurant and Institution Management; A.A.S., New York City Community College; B.S., Oklahoma State University; M.S., Rutgers, The State University*
Victor Vega, *Associate Professor; Educational Opportunity Fund; B.S., Syracuse University; M.A., Fairleigh Dickinson University; M.A., Ph.D., Temple University*
Martha Velez, *Supervisor, Payroll; A.A.S., Middlesex County College; B.S., Kean University*
Gina Viafora, *Lead Programmer/Analyst; A.A.S., Middlesex County College*
Jean Volk, *Professor; Accounting and Legal Studies; B.A., Wagner College; J.D., Seton Hall University School of Law; M.B.A., Fairleigh Dickinson University*
Shirley Wachtel, *Associate Professor; English; B.A., Brooklyn College; M.A., Long Island University*
Richard J. Waidelich, *Assistant Professor; Hotel, Restaurant and Institution Management; A.A.S., Middlesex County College; B.S. and M.S., Florida International University*
Jack L. Waintraub, *Professor; Chairperson, Electrical Engineering Technology; A.A.S., Academy of Aeronautics; B.S.E.E., Polytechnic Institute of Brooklyn; M.S.E.E., Rutgers, The State University; P.E., New Jersey*
Thomas Walsh, *Director; Budget, A.S., County College of Morris; B.S., Kean University*
Frances Ward, *Professor; Dean, School of Nursing, UMDNJ; B.S.N., Rutgers, The State University; M.A., Ph.D., New York University*
Tia Washington, *Associate Director, Financial Aid; B.S., Bloomfield College*
Bennett Weber, *Associate Chairperson; Computer Science; B.S., Brooklyn College; M.S., Michigan State University*
Elaine Weir-Daidone, *Associate Professor; Counselor for Students with Disabilities, Counseling and Career Services; B.A., Fairleigh Dickinson University; M.Ed., Pennsylvania State University*
Diane Z. Wilhelm, *Professor; History and Social Behavior; A.B., Washington University; M.A., New York University, Ph.D., New School for Social Research*
Lynn Winik, *Assistant Professor; Performing Arts; B.S., Northwestern University; M.A., New York University*
Darlene Yoseloff, *Director, Office of School Relations; B.A., Hunter College*
Steven Zale, *Instructor; Computer Science; B.A., M.A., Kean University*
Robert Zifchak, *Professor; Chairperson, Health, Physical Education, Recreation and Dance; Director, Athletics and the Physical Education Center; B.S., Queens College; M.A., New York University*
Daniel Zimmerman, *Professor; English; B.A., M.A., Ph.D., State University of New York at Buffalo*
Susan K. Zahorsky, *Vice President; Finance and Administration, B.S., M.B.A., Rider University*

EMERITI

Elaine A. Buscemi, *Associate Professor; Chairperson, Dental Auxiliaries Education; B.S., Columbia University; M.Ed., Rutgers, The State University*
Frank M. Chambers, *President Emeritus; B.S., Saint Lawrence University; M.S.Ed., Cornell University, Ed.D., University of Florida*
Angelo H. Dalto, *Chairman of the Board Emeritus*
Rose Channing Danzis, *President Emeritus; B.S., New York University; M.A., Columbia University; Ed.D., Columbia University*
Sidney Danzis, *Professor Emeritus; Dental Hygiene; D.D.S., College of Dentistry, New York University*
John Dineen, *Professor Emeritus; Computer Science; B.S.E.E., Northeastern University*
Virginia Filardi, *Professor Emeritus; Chemistry; B.A., College of New Rochelle; M.S., Ph.D., Fordham University*
Patricia A. Graber, *Professor; Business Administration and Management; B.A., Montclair State University; M.A., Rider University*
Barbara L. Greene, *Professor; Dean, Academic Services and Urban Centers; A.B., M.Ed., Rutgers, The State University*
Eric Hepburn, *Professor; Modern Languages; B.A., Atlantic Union College; M.A., Professional Diploma, Columbia University*
Marilyn Keener, *Professor Emeritus; Health Technologies; B.S., Millikin University; M.S., Boston University; Ed.D., Columbia University*
Warren D. Kelemen, *Professor; Vice President, Advancement and Planning; A.B., Princeton University; M.S. University of Pennsylvania*
John C. Kenny, *Professor Emeritus; History and Social Behavior; B.A., Newark State College; A.M., Rutgers, The State University*
Joseph Klegman, *Chairman of the Board Emeritus*
Yetta Levine, *Professor Emeritus; Education Technology; B.A., M.A., Newark State College*
Charles F. Montross, *Professor Emeritus; Computer Science; B.A., New York University; B.Ch.E., The Cooper Union; M.Ch.E., Polytechnic Institute of Brooklyn*
Irene Figarotta Pearse, *Professor Emeritus; History and Social Behavior; A.B., Douglass College; M.A., University of California at Berkeley; M.A., Rutgers, The State University*
Thomas J. Regan, *Professor Emeritus; Accounting and Legal Studies; B.S., State Teacher's College at Salem (MA); M.A., Columbia University*
Francis A. Spano, *Professor Emeritus; Chemistry; B.S., City College of New York; Ph.D., Fordham University*
Alice J. Stuart, *Professor Emeritus; English; A.B., Virginia Union University; A.M., Columbia University*
David H. Tyrrell, *Professor Emeritus; Physics/Electrical Engineering Technology; B.S.E.E., M.S.E.E., Purdue University*
G. Nicholas Venezia, *Chairman of the Board Emeritus*
William R. Walsh, Jr., *Chairman of the Board Emeritus*
Harmon Zacune, *Professor Emeritus; Dental Auxiliaries Education; D.D.S., University of Buffalo*

SPONSORED PROGRAM PROFESSIONAL STAFF

At Least 2 Years of Service Through Spring 2001

Santos Balmaceda, *Career Training Center Teacher; B.A., De La Salle University*
Elaine Berlin, *Camp Coordinator; B.S., Rutgers, The State University*
Susan Conlon, *Learning Disability Specialist, Project Connections; B.A., M.A., Rutgers, The State University*
Dayle Franzyshen, *Career Training Center Teacher; B.A., Rutgers, The State University*
Janice Hamdan, *Learning Specialist; B.A., Ed.M., Rutgers, The State University*
Ruth Lapidow, *Coordinator, Job Placement Services, Career Training Center; B.S., Springfield College; M.S., Jersey City State College*
Paula Neves, *Publications Coordinator; B.A., Rutgers, The State University Arthur Okwemba, Coordinator/Teacher, Career Training Center; B.S., Jersey City State College*
Anjana Patel, *Career Training Center Teacher; B.A., South Gujarat University*
Delshonda Small, *Job Mentor*
Lafayette Smith, *Associate Director; Educational Opportunity Fund; B.A., M.S., Upsala College*
Tejal Telatti, *Trainer; B.A., M.S., Gujarat University*
Janet L. Thompson, *Job Coach; B.A., Caldwell College*
Linda Urbach, *Project Coordinator for Job Search; B.A., State University of New York, Plattsburgh*
Mary Jane Warshaw, *Professional Tutor, Project Connections; B.A., Seton Hall University*

Claudia Yurecko, *Coordinator, Project SPAN; B.A., Rutgers, The State University; M.A., Kean University*

ADJUNCT FACULTY

(Including Limited-Duration Full-Time Appointments and Coaches)
At Least 4 Semesters of Service Through Spring 2003

Donna Abrams, *B.A., Lincoln University; M.A., University of Maryland*
Lucy Achenbach, *B.S., Rutgers, The State University; M.A., Seton Hall University*
Fani Alexandropoulos, *B.A., M.A., Kean University*
George Allen, *B.S., Albright College; Ph.D., Syracuse University*
Constance Alongi, *B.A., Montclair State University; M.A., Rutgers, The State University*
Dominic Ambrose, *B.A., M.A., Hunter College*
Anne Anderson, *B.A., University of North Carolina*
Nathaniel C. Anderson, *B.S., Kean College*
Julio Arboleda, *B.A., Rutgers, The State University*
Charles Armstrong, *B.A., M.A., Newark State College*
Vivek Arora, *B.S., M.S., Pilani University, India*
Eloise Ascoli, *B.A., Notre Dame College of Staten Island, NY; M.S., C.W., Post College*
Kelly Atkinson, *A.A.S., Middlesex County College; B.S.E.T., New Jersey Institute of Technology*
James August, *B.S., M.S., State University of New York*
Paul Bachman, *B.S., Stevens Institute; M.S., Seton Hall University*
Daniel Baker, *B.A., William Paterson College; M.A., Montclair State University*
Peter Barra, *A.S., Middlesex County College; B.S., Rutgers, The State University*
Joseph Bartkowicz, *B.A., Rutgers, The State University; M.A., Montclair State University*
Ronald Batko, *B.A., Rutgers, The State University; M.S., Seton Hall University*
Joseph Beaumont, *B.A., Rutgers, The State University; M.A., Trenton State College*
Michael Beltranena, *A.A., Rider University; B.S., Rutgers, The State University; M.A., John Jay College of Criminal Justice*
Robert Berner, *B.S., M.A., Rider University*
Francine Benitz, *B.A., Montclair State University*
Louise Bernbaum, *B.A., Adelphi University; M.A., Fairleigh Dickinson University*
Michael Berns, *M.S.E.E., Power Institute*
Vinod Bhandari, *B.E., Birla Institute of Technology; M.S., Rutgers, The State University; Ph.D., Oklahoma State University*
Kim Bongiorno, *A.A.S., Middlesex County College; B.S., Rutgers, The State University*
Audrey Botnick, *B.A., Brooklyn College; M.A., Kean College of New Jersey*
Nagy Botros, *B.S.L., M.S., Ain Shams University*
Lampros Bourodimos, *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., Jersey City State College*
Louis Brown, *B.S., Northeastern University; M.S., Purdue University*
Daniel Buckwald, *B.A., University of Wisconsin; M.A., Columbia University*
Lillian Burke, *B.A., Pace University; M.A., New York University*
Rene Bush, *B.A., William Paterson College; M.A., Kean University*
Salvatore Calcaterra, *B.A., M.A., Jersey City State College*
James Cardillo, *B.S., N.Y. Institute of Technology; J.D., Brooklyn Law School*
Joseph Cardone, *B.S., Wilkes College; M.S., Temple University*
Frank Casey, *B.A., Providence College; M.B.A., Pace University*
Michael Cerchio, *B.S., Long Island University; M.S., Seton Hall University*
Marie Chen, *B.S., Providence College, Taiwan; M.S., State University of New York*
Leonard Chill, *B.A., Montclair State University; M.A., Rutgers, The State University*
Jerald Cilente, *B.A., St. Johns University; M.A., New School for Social Research*
Phyllis Cirbus, *A.A., Alphonsus Jr. College; B.A., M.A., Kean College*
Robert Cleffi, *B.S., Rowan College; B.S., Trenton State College*
Susan Cohen, *B.A., Brooklyn College*
Francisco Colon, *B.S., M.A., Jersey City State College; M.S., Stevens Institute of Technology*
Bernard Cooper, *A.A.S., New York City Tech; B.S., M.S., Brooklyn College*
Kathleen Cooper, *A.A., Middlesex County College; B.A., Rutgers, The State University*
Mark Corso, *B.S., Rutgers, The State University; M.Ed., Newark State College; Ph.D., Fordham University*
Kathleen Costanzo, *A.A.S., Middlesex County College; B.S. Rutgers, The State University*
Charles Costello, *B.A., University of Scranton; M.A., Immaculate Conception Seminary*
Marie Coté, *B.S., Bates College; M.S., Ph.D., Rutgers, The State University*
Edward Cullen, *B.A., Kean College; M.A., William Paterson College*
John Cullinen, *B.A., Rutgers, The State University*
Andrea Dalessandro, *B.A., M.A., Jersey City State College; M.B.A., Rutgers, The State University*
Gary Damiani, *B.S., St. Peters College; M.A., Stevens Institute of Technology*
Richard D'Arcangelo, *B.S., University of Scranton; M.B.A., Fairleigh Dickinson University*
David Darrar, *B.A., Rutgers, The State University College; M.A. Rutgers Graduate School*
Wellington Davis, *B.S., Saint Peters College*
Elliot DeBella, *B.A., Newark State College; M.A., Kean College of New Jersey; Ed.D., St. John's University*
Julie Delahunty, *B.A., M.A., Newark State College*
Mary Beth DeLisi, *A.A., Middlesex County College; B.A., Montclair State University; M.A., Kean University*
Louis Dell'Omo, *B.A., Monmouth University; M.A., Montclair State University*
Michael Denes, *B.S., Rider University; M.B.A., Seton Hall University*
Timothy Dey, *A.S., Middlesex County College; B.A. Rutgers, The State University; J.D., Rutgers University of Law Newark*
Marianne DiGrado, *B.M.E., Shenandoah Conservatory of Music; M.A., The College of New Jersey*
Donna Dingle, *B.S., The College of New Jersey*
Linda Donahue, *B.S., Northwestern University; M.Ed, Rutgers, The State University*
Alanna Doran, *B.S., Kean University*
Kenneth Dorflaufer, *B.S., M.B.A., Monmouth University*
Suzanne Dorflaufer, *B.S., Monmouth University; M.A., Kean College*
Marianne Dougherty, *B.S., M.A., Rider College*
Stephanie Duckworth, *B.A., Rutgers University; M.A., New School for Social Research*
Glenn Duncan, *A.A., Burlington Community College; B.A., Monmouth University; M.A., Western Carolina University*
Richard Ellison, *B.S., Rutgers, The State University; M.B.A., Fairleigh Dickinson University*
Philip Engel, *B.S., Vanderbilt University; M.S., University of Pennsylvania; D.M.D., University of Pennsylvania School of Dental Medicine*
Roberta Entner, *B.A., M.A., Herbert H. Lehman College*
John Evancho, *B.S., Trenton State College*
Mark Evans, *B.S.E.E., Drexel University; M.S.E.E.; New Jersey Institute of Technology*
William Fabiano, *B.A., St. John's University; M.A., Long Island University*
Maria Farina, *B.A., M.A., Ph.D., Rutgers, The State University*
Geraldine Fee, *B.S., Kean College; M.A., Seton Hall University*
Alan Feldman, *B.A., Fairleigh Dickinson University; M.S., Columbia University*
Robert Feldman, *B.S., Montclair State College*
Robert Fenkel, *A.S., B.S., Rutgers, The State University; M.A., John Jay College of Criminal Justice*
Freda Fink, *B.S.W., Kean College; M.S.W., Fordham University*
Darrell Fisher, *B.S., University of Michigan; M.S., Hahneman University*
Daniel Flatt, *B.A., University of Oklahoma*
William Flynn, *B.S., Rutgers, The State University; M.A., John Jay College of Criminal Justice*
Karen Fogas, *B.S., Montclair State University*

Beth Frank, *A.A.S., Middlesex County College; B.A., M.S., Brooklyn College*
Gerald Freed, *B.S.E.E., University of Rochester; M.S.E.E., New Jersey Institute of Technology*
Andrea Freiwald, *B.A., Montclair State University*
Richard Freiwald, *B.A., Montclair State University; M.F.A., Rutgers, The State University*
Sheila Galgan, *B.A., Marymount College; M.A., St. John's University*
Leonard Gallo, *B.A., Marist College; M.A., Rutgers, The State University*
John Gaspar, *B.A., M.A., Montclair State University*
Cynthia Geoffrey, *B.S., Westfield State College; M.S., University of South Carolina*
Azam Ghorashi, *B.S., M.A., Tehran University*
Dennis Gold, *B.A., The College of New Jersey; M.B.A., Fairleigh Dickinson University*
Donna Goldberg, *B.A., M.A., Montclair State University*
Edwin Goldberg, *B.S.E.E., Newark College of Engineering; M.S.E.E., Newark College of Engineering*
Theodore Goldfarb, *B.S., Thomas A. Edison College*
Marvin Goldstein, *B.S., City College of New York; M.B.A., Fairleigh Dickinson; M.S., Ph.D., New York University*
Janet Gorman, *B.S., M.S., Jersey City State College*
Cesar Grau, *B.A., Montenorelos University*
Donald Groninger, *B.A., Juniata College; M.A., Fairleigh Dickinson University; Ed.D., Nova Southeastern University*
John Gugliotta, *M.E., M.S., Stevens Institute of Technology*
Usha Gulati, *B.A., B. Ed., Delhi University*
Guy Gundanna, *B.S., Karnataka University; M.S., Stevens Institute of Technology*
Joseph Guterl, *J.D., Rutgers Law School; L.L.M., New York University Law School*
Gerhard Hagen, *B.A., Technical University; M.S., Ph.D., Stevens Institute of Technology*
William Halkiadakis, *B.E., M.E., Manhattan College; Eng.D., Stevens Institute of Technology*
Kenneth Hall, *B.S., Jackson State University; M.S., Howard University*
Lillien Hall, *B.S., Rutgers University; M.S., Stevens Institute of Technology*
Charles Halpern, *B.A., Queens College of New York; M. Eng., Cornell University*
Eugene Hannigan, *B.S., Rutgers, The State University; M.A., Seton Hall University*
Jenny Harko, *B.A., M.A., Babes-Bolyai University of Romania*
Tana Harvey, *B.S., Seton Hall University; M.A., Hunter College*
Kevin Hayes, *B.A., M.A., Rutgers, The State University*
Victor Heltzer, *B.S., M.S., City University of New York*
Ildiko Henni-Jones, *B.A., Brooklyn College; M.S.W., New York University*
Eric Hepburn, *B.A., Atlantic Union College; M.A. Professional Diplomacy, Columbia University*
Fred R. Hertrich, *B.S., M.P.A., Shippensburg State College*
Melvin Hinton, *B.S.E.E., M.S.E.M., New Jersey Institute of Technology*
Nika Hionis, *B.A., Rutgers, The State University; M.B.A., Fairleigh Dickinson University*
Roy Hirschfeld, *B.A., M.A., Montclair State University*
John Hostetter, *B.A., Hope College; M.A., Ph.D., Rutgers, The State University*
Roberta Hunter, *B.A., Trinity College*
Shamsul Huq, *B.A., M.A., Jahan Dirnadar University; M.A.S., M.S., John Hopkins University*
Hillary Hyman, *B.A., Washington College; M.A., Montclair State University*
Louis Ianuale, *B.A., Jersey City State College; M.A., Seton Hall University*
James Jahnke, *A.A.S., Middlesex County College; B.S., New Jersey Institute of Technology*
Victoria James, *A.A., Somerset County College; B.A., Ramapo College; M.F.A., Rutgers, The State University*
Diane Jarvi, *B.A., University of Missouri*
Dorothy Jennings, *A.A.S., Middlesex County College, B.A., Rutgers, The State University*
Kim Joho, *B.S., M.S., Wagner College*
James Jones, *M.B.A., Pace University*
James Josselyn, *A.A. Brookdale Community College; B.M., Mason Gross School of the Arts at Rutgers; M.M., Queens College*
David Kane, *B.S., Stevens Institute of Technology; B.A., M.A., The College of New Jersey*
Ronald Kanterman, *B.A., M.S., John Jay College of Criminal Justice*
Robert Kaplin, *B.S., New York University; M.A. Kean College*
Alida Karas, *B.S., M.S., Rutgers, The State University*
Rachel Karger, *B.A., Vanderbilt University; M.A., Rutgers, The State University*
Sunil Karnik, *M.B.A., Rutgers, The State University; B.E., University of Roorkee*
Fred Kellisch, *B.A., Newark State College; M.S., Florida International University*
James Keller, *B.A., Rutgers, The State University; M.A., Montclair State College*
Hui Kim, *M.Ed., Korea University; M.S., New York University; Ph.D., Pacific Western University*
Rita Kinkhabwala, *B.S., M.S., Gujarat University*
Frayda Kleiman, *A.A.S., Middlesex County College; B.S., Fairleigh Dickinson University; M.A., Kean University*
Donald Kluizenaar, *B.S., State University of New York; M.S.T., Rutgers, The State University*
Cheryl Kolber, *B.S. City College of New York; M.S., New York University*
Lorraine Koncz, *B.A., Newark State College; M.A., Seton Hall University*
Kieve Kortmansky, *B.A., M.A., Brooklyn College*
Jennifer Kosztko, *B.A., Moravian College; Ed.M., Rutgers University*
Kristyn Kressler, *A.A., Middlesex County College; B.S., Montclair State University*
Kewal Krishan, *B.S., Punjab University; M.A., Guro Nanak University*
Ronald Kuboski, *B.A., King's College; M.A., Fairleigh Dickinson University*
Gary Kulhanjian, *B.S., East Tennessee State University; M.A., William Paterson College; Ed.S., Rutgers, The State University*
Henry Lam, *A.A.S., Middlesex County College; B.A., Western Washington University; B.S., New Jersey Institute of Technology*
Jay Lander, *Professional Certificate; Newark School of Fine & Industrial Art*
Michelle LaPaglia, *B.M., Wheaton College; M.M., Temple University*
Nancy Lasek, *B.A., M.A., Jersey City State College*
Judith Lax, *B.A., Brooklyn College; M.A., University of Wisconsin; Ph.D., Syracuse University*
Susan Leckart, *B.A., Hunter College; M.S., Lehman College*
Walter Leffler, *A.A.S., Johnson & Wales University*
John Liefert, *A.A.S., Middlesex County College; B.S., Monmouth University*
Marc Lipman, *B.S.E.E., Rutgers, The State University; M.S., Stevens Institute of Technology*
Stanley Lipper, *B.S., New York Institute of Technology; M.B.A., St. John's University*
Joan Litt, *B.A., Hofstra University*
Janet Loewenstein, *B.A., Adelphi University; M.A., Kean University*
Michael Lepore, *B.S., Montclair State*
Harold Luithle, *A.A., Middlesex County College ; A.S., Brookdale Community College; B.A., Kean University; M.S., Georgian Court College*
Nancy Luyando, *B.S., Fordham University*
Costas Lymberis, *B.S., UCLA; M.S., California State University*
Edward Lynskey, *B.A., William Paterson College; M.A., Seton Hall University*
Mary-Pat Maciolek, *B.S., College Misericordia; M.B.A., Georgian Court College*
Beatrice Mady, *B.F.A., University of Dayton; M.F.A., Pratt University*
Robert Mahoney, *B.S., Kean College; M.S., Stevens Institute of Technology*
Evelyn Mamman, *B.A., Ahmader Bello University; M.A., New York University*
Paul Maioriello, *B.B.A., Pace University; M.S., City University of New York*
Caroline Marchitto, *B.A., Drew University; J.D., Seton Hall University*
Richard Marden, *B.S.E.E., M.S.E.E., Monmouth University*
George Marotta, *B.S., M.Ed., Ed.D., Rutgers, The State University*
Rouky Martin, *B.S., City College of New York.*
Anton Massopust, *B.S., Villanova University; M.S., Monmouth University*
John Masters, *B.A., St. Peters University; M.A., Jersey City State College*
Joseph McCluskey, *B.A., City University of New York, College of Staten Island*
Carolyn McGarigle-Riad, *B.A., Georgian Court College*
Frank Mento, *B.A., M.A., Montclair State University*
Ronald Messenger, *B.S., Kings College; M.A., Montclair State College*

Barbara Migden, *B.A., Queens College; M.S. Ed., Lehman College*
Peter Miglec, *B.A., Jersey City State College; M.Ed., The College of New Jersey*
David Miller, *B.S., City College of New York; M.S., State University of New York at Stony Brook*
Marilyn Miller, *B.A., Fairfield University; M.A., Kean College of New Jersey*
Johanna Minucci, *B.A, Lady Cliff College; M.A., College of Staten Island; M.S. Kean University*
Doris Morazan, *B.A., Douglass College; M.A., Rutgers, The State University*
Michael J. Munley, *B.S., Kean College; M.S., Ph.D., Seton Hall University*
Jon Murphy, *B.A., Queens College; B.S., New Jersey Institute of Technology; M.S. Ed., Lehman College; Cert., North Jersey Industrial Drafting School*
Connie Murray, *B.A., Monmouth College; M.A., Rutgers, The State University*
Michael Musante, *B.A., St. Frances College; M.A., New York University, M.S., Fordham University*
John Muth, *B.A., M.A., Rutgers, The State University*
Sterling Nakasian, B.A., Old Dominion University; M.B.A., University of Maryland; Ed.M., Rutgers, The State University
Pamela Nazareth, *B.S., College of William & Mary; M.S., Seton Hall University*
Harold Neutuch, *B.S., New York University; M.B.A., Baruch College*
Anita Nguyen, *B.A., Seton Hall University; M.A., Rutgers, The State University*
Lisa Nocks, *B.A., Montclair State University; M.A., The School of Visual Arts*
Marisa Noe, *B.A., Hunter College*
Majid Noori, *A.S., Tehran Institute of Technology; B.S.C., Tehran University; Ph.D., University of Maine*
Josephine Novellino, *B.A., Rutgers, The State University Christina Glacobbe-Nuzzolo, B.S., St. John's University; M.S., Fordham University*
Susan O'Brien, *A.B., Princeton University*
Dermot O'Grady, *B.S., John Jay College; J.D., Brooklyn Law School*
Jane Ostacher, *B.A., Barnard College Columbia University; M.S., Hunter College*
Harriet Osview, *B.A., Douglass College*
Edmund Palmieri, *B.A., Rutgers, The State University; M.B.A., Wagner College*
Edward Palushock, *B.S., Bloomsburg University; Ed.M., Rutgers, The State University*
Charles Paolino, *M.A., Pennsylvania State University; B.A. Seton Hall University*
Michael Parker, *B.S., University of Maine*
Christina Pastor, *D.C., New York Chiropractic College*
Enzo Paterno, *E.E.T., DeVry Technical Institute; B.S.E.E., M.S.E.E., Polytechnic Institute*
Laxman Phadke, *B.S., Wilson College; M.S., Institute of Science; M.S., Ph.D., University of Miami*
Anthony Pellicane, *B.A., Monmouth University; M.A., Rider University*
Raymond Perez, *B.S., M.Ed., The College of New Jersey*
Joseph Perry, *B.S., M.S., Fairleigh Dickinson University*
Arnold Peters, *B.A., Grinnell College; M.B.A., New York University*
Lawrence Petersen, *B.S., Kean College; M.B.A., Fairleigh Dickinson University*
Louis Petralia, *B.S., New York Institute of Technology*
Otto Picard, *B.S., Ed.M., Ed.Sp., Rutgers, The State University*
Christine Pipitone, *B.A., Brigham Young University; Ed.M., Rutgers, The State University*
Berardo Pirrone, *B.B.A., John Cabot National College; Ph.D., L.U.I.S.S. University*
Richard Plant, *B.A., M.A., Montclair State University*
Dennis Pope, *B.A., M.A., Ph.D., Rutgers, The State University*
Darin Portnoy, *B.S., Rutgers, The State University; J.D., Thomas M. Cooley Law School*
Barry Prag, *B.A., Rutgers, The State University*
MaryAnn Puccio, *B.A., Rutgers, The State University*
Derrick Pugh, *B.S., Southern University; M.S., Stevens Institute of Technology*
Natalie Rapacki, *B.A., M.A., Kean College*
Himanshu Raval, *B.S., M.S., University of Baroda; M.S., University of North Carolina*
Allan Rebold, *B.S., Brooklyn College; M.A., New York University*
Kathleen Reilly, *B.A., College of Staten Island; M.A.,Columbia University*
John Reitmann, *B.A., Marist College; M.S., North Dakota State*
Susan Richman, *B.A., The College of New Jersey; M.Ed., Rutgers, The State University*
Angelina Riemann, *B.S., Rider University; M.Ed., Rutgers, The State University*
John Riordan, *B.E., Stevens Institute of Technology; M.S.E.E., Drexel University; M.B.A., Rutgers, The State University*
Susan Rivera, *B.A., M.A., Kean College*
Richard Rizzo, *A.S., College of Staten Island; B.A., Saint Peters College; M.A., Rutgers, The State University*
Allan Robinson, *B.M., Westminister Choir College; M.M., Rutgers University*
Robert Rodgers, *B.S., Clarion University; Ed.M., Rutgers, The State University*
Michelle Rosen, *B.S.I.E., Newark College of Engineering; M.A., Monmouth University*
Roberta Rosen, *B.S., New York University; M.S., Brooklyn College*
Lipika Roychowdhury, *B.S., M.S., Christ Church College; Ph.D., Kapur University*
Edward Ruhno, *B.S., Widener College*
Karen Ryan, *B.A., Monmouth College; M.Ed., Rutgers, The State University*
Reza Saba, *A.A.S., Middlesex County College*
Juan M. Saborido, *B.S., Universidad Compostelana; B.A., Jersey City State College; M.A., St. John's University*
John Sacchi, *B.S., Ithaca College; M.S., University of Montana*
Denese Sanders, *B.A., Kean College; M.A., Rutgers, The State University*
Peter Santarpia, *B.S., Ph.D., State University New York at Stony Brook*
Richard Santoro, *B.S.E.E., M.S.E.E., New Jersey Institute of Technology*
Mukund Satwalekar, *B.S., College of Engineering, India; M.S.I.E., West Virginia University*
Walter Sautter, *B.A., M.A., Montclair State University*
Fakhry Saymeh, *B.S., Alexandria University*
Alvin Schneider, *B.M.E., City University of New York; M.S.E.M., Drexel University*
Carol Schwartz, *B.A., University of Pennsylvania; J.D., Rutgers University School of Law Newark*
Sharon Seppi, *B.A., St. Joseph's University of Philadelphia; M.A., New York University*
Stephanie Serrano-Vera, *B.A., M.Ed., Rutgers, The State University*
Karen Severyn, *A.A.S., Middlesex County College; B.A., Purdue University*
Daniel Shaffer, *B.A., Brooklyn College; M.Ed., Rutgers, The State University*
Jean Shafranski, *B.A., The College of New Jersey*
Nadia Shenouda, *B.A., M.S., Ain Shams University*
Thomas Sherman, *B.S., St. John's University*
Matthew Shoban, *B.A., M.A., Adams State College*
Ellen Shur, *B.A., Beaver College; M.A., Jersey City State College*
Mary Sillup, *B.A., William Paterson College; M.S., Wright State University; Ed.S., Seton Hall University*
Robert Silva, *B.A., Montclair State College*
Ellen Simonetti, *B.A., St. Francis College; M.S., St. John's University*
Irving Sinai, *B.S., City College of New York; D.D.S., New York University College of Dentistry*
Vaishali Singhal, *B.S., Rutgers, The State University; D.M.D., New Jersey Dental School*
Susan Skelly, *B.A., Douglass College; Ph.D., University of Rochester*
Amy Smith, *A.A., Middlesex County College; B.A., Rider College*
Richard Spadavecchia, *B.F.A., William Paterson College; M.F.A., School of Visual Arts, New York*
Vernon Spencer, *B.A., Seton Hall; M.B.A., Rutgers, The State University*
Linda Stefaniak, *B.S., M.S., The College of New Jersey*
Robert Stetler, *B.A., University of New York*
Frances Stevens, *B.A., Douglass College; M.A., Rutgers, The State University*
Laura Strachan, *B.A., Rutgers, The State University; M.A., New York University*
Venkataraman Subrahmanyam, *B.S., National College; M.S., Resselaer Polytech Institute*
Robert Sulley, *A.A.S., Middlesex County College; B.S.E.E., Purdue University; M.S.B.E., New Jersey Institute of Technology*

Maria Szalontay, *B.S., Seton Hall University; A.B.D., New York University; M.A., St. John's University*
Padma Talisetti, *B.A. University of California; M.A. San Francisco State; M.A., University of Sheffield*
Joseph Telinbacco, *B.A., Pace University*
Robert Terelle, *B.A., Catholic University of America; M.S., Richmond College; M.S., Hunter College*
Ann Topping, *B.S., M.S., Polytechnic Institute of New York*
Carol Trapp, *B.A., Fairleigh Dickinson University; M.A., Kean College*
Nicholas Trasente, *B.S., M.P.A., Rutgers, The State University*
Richard Trimarco, *B.A., Rutgers, The State University; M.A., New York University*
Priscilla Tucker, *B.A., Montclair State University; M.S., New Jersey Institute of Technology Lehman College; Ed.D., Rutgers, The State University*
Claudia Tyska, *B.A., Douglass College; M.B.A., Rutgers, The State University*
Claire Vassiliadis, *B.S., M.S., New Jersey Institute of Technology*
Georgina Vastola, *B.A., Caldwell College; M.A., Jersey City State University*
Gerald Vis, *B.F.A., State University of New York at New Paltz; M.F.A., Rutgers, The State University*
Ismael Vicens, *B.A., InterAmerican University; M.B.A., University of Mississippi*
Kathrin Wagner, *B.A., M.A., Ph.D., University of Witwatersrand, South Africa*
Aaron Walter, *B.B.A., City University of New York*
Roger Weber, *B.S., St. Peter's College; M.S., University of Wisconsin; M.Ed., Rutgers, The State University*
Barbara Weill, *A.A.S., Middlesex County College; B.A., City College of New York; M.A., Ph.D., New School of Social Research*
Mark Wiener, *A.S., County College of Morris, B.A., Cornell University; M.S., Montclair State University; J.D., Syracuse University*
Alecia Wells, *A.B., University of California; M.S., Stevens Institute of Technology*
Timothy Wenzell, *B.A., Temple University; M.A., Rutgers, The State University*
Marc Williams, *B.A., Trenton State College*
Scot Wittman, *B.F.A., Mason Gross School of the Arts, Rutgers, The State University; M.F.A., Cranbrook Academy*
John Wolf, *A.B., Vassar College; J.D., Emory University*
Thomas Wood, *B.A., Jersey City State College*
Stanley Yacker, *B.A., Rutgers, The State University; L.L.B., Rutgers University of Law Newark*
Thomas Yip, *B.E.E., Manhattan College; M.S.E.E., M.B.A., New York University*
Andrew Zangrillo, *B.B.A., Pace University; M.B.A., Bernard Baruch University*
Anne Zaun, *B.S., Fordham University; J.D., Seton Hall Law*
Josephine Zifchak, *B.A., Queens College of City University of New York*
Karen Zumbrunn, *B.A., M.A., Ohio State University; M.A.T./Ed.M., Harvard University; Ph.D., University of California*

Index

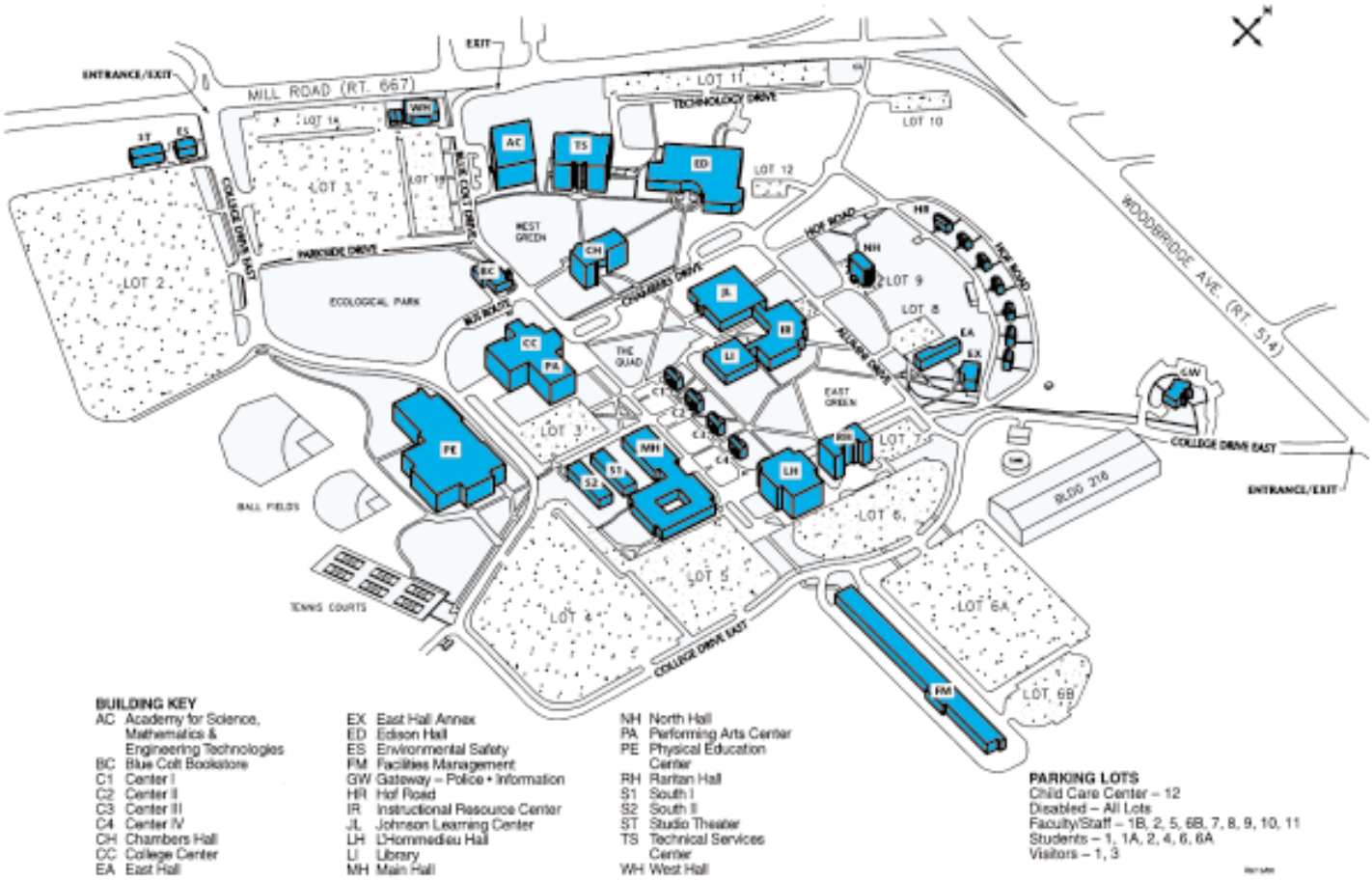
Academic
Advising ... 10
Amnesty Appeals ... 23
Appeals ... 23
Calendar ... 2
Dismissal ... 23
Integrity Policy ... 21
Probation ... 23
Programs Index ... 28
Restriction ... 23
Standards and Regulations ... 17
Statuses ... 23
Suspension ... 23
Warning ... 23
Access to Student Records ... 24
Accounting
AAS Degree ... 30
Course Descriptions ... 98
Technical Certificate ... 30
Accreditation ... 2
Address of the College ... 3
Adjunct Instructors ... 166
Administrative
Dismissal ... 23
Suspension ... 26
Withdrawal ... 23
Admissions
Readmission ... 10
Advanced Placement Exams ...
Advanced Standing ... 18
Advertising Graphics Design
AAS Degree ... 81
Course Descriptions ... 99
Affirmative Action Statement ... 3
African American Studies – Course Descriptions ... 100
Alumni Association ... 5
Animals on Campus ... 24
Anthropology (see Sociology Course Descriptions) ... 156
Application
Graduation ... 20
Art-Course Descriptions ... 100
Assistant In
Early Childhood Education (AAS Degree) ... 83
Special Education (AAS Degree) ... 83
Associate in Applied Science Degree ... 20
Associate in Arts Degree ... 20
Associate in Science Degree ... 20
Athletic Activities ... 11
Attendance
Absence Policy ... 21
Grading Procedure ... 21
Auditing Courses ... 12
Automotive Technology
AAS Degree ... 31
Course Descriptions ... 102
Biological Laboratory Technology (AAS Degree) ... 32
Biology
Course Descriptions ... 103
Science Transfer Option (AS Degree) ... 33
Board of Freeholders ... 161
Board of Trustees ... 161
Books and Supplies ... 7
Business
Administration Transfer (AS Degree) ... 34
Course Descriptions ... 104
Liberal Arts Option (AA Degree) ... 67
Business Software Applications
Certificate Program ... 35
Course Descriptions ... 142
Calendar ... 2
Campus Map ... 175
Campus Traffic ... 24
Career Training Center ... 15
Center for International Education ... 15
Center for the Study of Prejudice, Genocide, and the Holocaust ... 15
Certificate of Achievement Requirements ... 20
Certification of Enrollment ... 12
Certified Professional Secretary Certificate ... 19
Change of Major ... 10
Chargeback ... 6
Chemical Technology
AAS Degree ... 36
Certificate Program ... 36
Chemistry
Course Descriptions ... 105
Science Transfer Option (AS Degree) ... 37
Child Care Services ... 10
Civil/Construction Engineering Technology
AAS Degree ... 38
Certificate Program ... 38
Course Descriptions ... 107
Code of Student Conduct ... 25
College and Division Hours ... 5
College
Assembly ... 5
Center Programming Board ... 10
Credit by Examination ... 19
Governance ... 5
In Brief ... 5
Judicial Board ... 27
Level Examination Program (CLEP) ... 19
Placement Test ... 18
College Center ... 10
Coltnet ... 10
Communications
Course Descriptions ... 108
Liberal Arts Option (AA Degree) ... 67
Community Scholars Corps ... 10
Community Outreach ... 15
Complaints ... 26
Computer Aided Drafting – Certificate Program ... 40
Computer Electronics – Course Descriptions ... 116
Computer Facilities ... 24
Computer Programming – Certificate Program ... 42
Computer Science
Computer & Information Systems (AAS Degree) ... 41
Course Descriptions ... 109
Network Administration & Support Option ... 41
Network Administration Certificate ... 43
Science Transfer Option (AS Degree) ... 44
Windows NT/Novell Netware Administration – Technical Certificate ... 43
Conduct ... 24
Cooperative Education & Internships ... 11
Corporate College ... 16
Correction Administration
AS Degree ... 45
Certificate Program ... 45
Course Descriptions ... 109
Counseling & Placement Service – Course Descriptions ... 112
Course
Descriptions ... 98
Fees ... 7
Load ... 13
Repeat Limitation ... 23
Time Limits ... 19
Credit & Financial Management (AAS Degree) ... 72
Credit
by Examination ... 19
Equivalent ... 22
for Educational Experiences in the Armed Services ... 19
for Noncollegiate Educational Programs ... 19

Criminal Justice
AS Degree ... 45
Certificate Program ... 45
Course Descriptions ... 113
Culinary Arts Certificate Program ... 61
Curriculum Suspension and Dismissal ... 23
Customized Training Program ... 16
Dance
Course Descriptions ... 113
Liberal Arts Option (AA Degree) ... 68
Dantes Test ... 19
Dean's List ... 22
Dean's Letter of Commendation ... 22
Degree Requirements ... 20
Dental Hygiene
AAS Degree ... 47
Course Descriptions ... 113
Developmental Courses ... 22
Dietetic Technology
AAS Degree ... 48
Course Descriptions ... 114
Directories ... 161
Directory Information ... 3, 24
Disabled Students ... 3
Disciplinary Procedures ... 26
Dismissal ... 23
Distribution – Course Descriptions ... 115
Dress ... 24
Economics – Course Descriptions ... 115
Education
Course Descriptions ... 115
Liberal Arts Option (AA Degree) ... 68
Educational Opportunity Fund Program (EOF) ... 11
Educational Practitioner (AAS Degree) ... 49
Electronic & Computer Engineering Technology
AAS Degree ... 50
Certificate Program ... 50
Course Desciptions ... 116
Emeriti ... 166
Encumbrance Policy ... 6
Engineering Science (AS Degree) ... 51
English
Course Descriptions ... 118
Liberal Arts Option (AA Degree) ... 68
English as a Second Language
Course Descriptions ... 121
Program ... 52
Environmental Technology
AAS Degree ... 53
Certificate Program ... 53
Course Descriptions ... 123
Expenses ... 7
Expenses & Financial Aid ... 6
Faculty & Administrative Staff ... 161
Fall II ... 13
Family Education Rights & Privacy Act ... 24
Fashion Merchandising & Retail Management
AAS Degree ... 54
Course Descriptions ... 124
Fees ... 7
Finance – Course Descriptions ... 124
Financial Aid
Programs ... 8
Refund Policy ... 8
Financial Appeals ... 8
Fine Arts (AFA Degreee) ... 55
Fire Science Technology
AAS Degree ... 57
Certificate Program ... 57
Course Descriptions ... 125
Fitness Club Rates ... 7
Food Industry Management
AAS Degree ... 73
Course Descriptions ... 126
Foreign Students - (see International Students) ... 6
Foreword ... 2
Frank M. Chambers Award ... 20
French – Course Descriptions ... 126
General
Education at the College ... 17
Expenses ... 7
Information ... 2
German – Course Descriptions ... 126
Governance ... 5
Grade
Changes ... 22
Point Average Computation ... 22
Reports ... 13
Grading System ... 21
Graduation ... 20
Graduation Honors ... 21
Graphics for Digital Media ... 58
Grievance Procedure ... 25
Health - Course Descriptions ... 127
Health Science Degree ... 59
Heating, Ventilating & Air Condition Design Technology
AAS Degree ... 60
Certificate Program ... 60
Course Descriptions ... 127
High School Scholars Program ... 11
History
Course Descriptions ... 128
Liberal Arts Option (AA Degree) ... 68
Honor Societies ... 11
Honors ... 20, 22
Honors at Graduation ... 22
Hotel-Motel Management AAS Degree ... 62
Hotel Operations – Technical Certificate ... 62
Hotel, Restaurant & Institution Management
AAS Degree ... 61
Course Descriptions ... 129
Humanities & Social Science Electives ...
Identification ... 24
Imposition of Sanctions ... 25
Independent Studies Program ... 11
Industrial Technology
AAS Degree ... 64
Certificate Program ... 64
Course Descriptions ... 131
Information Hearings ... 26
Institute for Management & Technical Development ... 16
Insurance ... 7
Intercollegiate Athletics ... 11
International Students ... 6
Internet/Web Page Development ... 65
Intramural Activities ... 11
Italian – Course Descriptions ... 131
Joint Nursing Program UMDNJ/MCC (AS Degree) ... 83
Journalism – Liberal Arts Option (AS Degree) ... 69
Judicial Board Hearings ... 26
Land Surveying Technology
AAS Degree ... 39
Course Descriptions ... 131
Leave of Absence ... 10
Legal Assistant/Technology – see Paralegal Studies ... 86
Liberal Arts

AA Degree 66
Curriculum Requirements 66
Elective Requirements 66
Options 67-71
Library & Media Resource Center 11
Living Accommodations 24
Majors (see Academic Program Index) 28
Make-up Examinations 21
Management
AAS Degree 72
Course Descriptions 131
Options 72-73
Support Services Certificate Program 73
Marketing
AAS Degree 74
Course Descriptions 132
Materials Management
AAS Degree 75
Certificate Program 75
Course Descriptions 133
Mathematics
Course Descriptions 133
Science Transfer Option (AS Degree) 77
MCC Foundation 5
Mechanical/Manufacturing Engineering Technology
AAS Degree 78
Course Descriptions 137
Mecomtronics Engineering Technology
AAS Degree 79
Course Descriptions 138
Media Art and Design
AAS Degree 80
Course Descriptions 139
Medical Laboratory Technology
AAS Degree 82
Course Descriptions 140
Minority Students Affairs (MAPS) 12
Mission Goals & Objectives 4
Modern Language – Liberal Arts Option (AA Degree) 69
Music
Course Descriptions 140
Liberal Arts Option (AA Degree) 69
New Brunswick Center 15
Nursing
AS Degree 83
Course Descriptions 142
Off Campus Centers 12
Office Administration
AAS Degree 84
Certificate 85
Course Descriptions 142
Office of the President 161
Paralegal Studies
AAS Degree 86
Certificate of Achievement 87
Course Descriptions 144
Technical Certificate 88
Parking 24
Payment Policy 6
Peer Guidance Organization 12
Pending Criminal Proceedings 26
Permission to Enroll in more than 20 Credits (Course Load) 13
Perth Amboy Center 15
Pharmacy Assistant
Certificate Program 89
Course Descriptions 145
Philosophy – Course Descriptions 145
Photography – Course Descriptions 145
Physical Education Center 12
Physical Education/Recreation
Course Descriptions 146
Liberal Arts Option (AA Degree) 69
Physics
Course Descriptions 147
Science Transfer Option (AS Degree) 90
Placement Test Remediation Policies 18
Police (College) 24
Police Science
AS Degree 46
Course Descriptions 149
Political Science
Course Descriptions 149
Liberal Arts Option (AA Degree) 70
Pre-Chiropractic 33, 37, 90
Dental 33, 37, 90
Medicine 33, 37, 90
Occupational Therapy 33, 37, 90
Pharmacy 33, 37, 90
Veterinarian 33, 37, 90
Prerequisite Courses 19
Privacy of Student Records 24
Probation 25
Professional Commercial Photography
AAS Degree 81
Course Descriptions 145
Professional Staff 166
Programs and Services 15
Programs of Study 28
Project Connections 12
Project SPAN 16
Promissory Note Procedure 9
Psychology
Course Descriptions 150
Liberal Arts Option (AA Degree) 70
Psychosocial Rehabilitation & Treatment
AAS Degree 91
Course Descriptions 149
Purchasing – Course Descriptions 151
Radiography Education
AAS Degree 92
Course Descriptions 151
Reading – Course Descriptions 153
Real Estate – Course Descriptions 153
Recreation – Course Description 154
Refund Policy 8
Registration 12
Remediation Policies 18
Repeated Courses 22
Residency Policy 6
Respiratory Care
AS Degree 93
Course Descriptions 154
Restaurant Food Service Management (AAS Degree) 63
Restaurant Operations Technical Certificate 63
ROTC (Reserve Officers Training Corps) 14
Sanctions 25
Scholastic Standing 22
Science – Course Descriptions 155
Science Transfer (AS Degree)
Biology Option 33
Biology Pre-Professional Option 33
Chemistry Option 37
Computer Science 44
Mathematics Option 77
Physics Option 90
Second Associate Degree 20
Senior Citizens Tuition Waiver (County Residents) 6
Sexual Harassment Policy 27
Skills Assessment & Placement 17
Small Business Management/Entrepreneurial Studies

AAS Degree *94*
Certificate of Achievement *94*
Course Descriptions *156*
Technical Certificate *95*
Social and Rehabilitation Services
Course Descriptions *156*
Liberal Arts Option (AA Degree) *70*
Social Science
Liberal Arts Option (AA Degree) *70*
Sociology
Course Descriptions *156*
Liberal Arts Option (AA Degree) *70*
Spanish – Course Descriptions *158*
Spanish/English Counseling *13*
Special Fees *7*
Speech – Course Descriptions *159*
Spring II *13*
Standards of Progress *22*
Student
Conduct *24*
Rights & Responsibilities *24*
Students with Disabilities *13*
Summer
Sessions *13*
Study Abroad Program *14*
Suspension *23*
Table of Contents *1*
Task Forces *5*
Teacher Aide Certificate Program *96*
Telecommunication Networking Technology
AAS Degree *97*
Course Descriptions *159*
Telephone Directories *3*
Theatre
Course Descriptions *160*
Liberal Arts Option (AA Degree) *71*
Transcripts (see also Privacy of Student Records) *21*
Transfer Agreements
Credit *19*
Services *14*
Transportation and Distribution
AAS Degree *76*
Certificate Program *76*
Course Descriptions *115*
Tuition *7*
Tuition and Fees
Waivers *6*
Tutoring Centers *14*
Veterans and Military Applicants *14*
Visitors *2*
Visual Arts
Course Descriptions *100*
Liberal Arts Option (AA Degree) *71*
Volunteer Tuition Waiver *6*
Wintersession *13*
Withdrawal
from a Course *13*
from the College *13*
Workforce Development Program – WDP/TRA *14*
Young People, Activities for *16*

Campus Map



BUILDING KEY

AC Academy for Science, Mathematics & Engineering Technologies
BC Blue Colt Bookstore
C1 Center I
C2 Center II
C3 Center III
C4 Center IV
CH Chambers Hall
CC College Center
EA East Hall
EX East Hall Annex
ED Edison Hall
ES Environmental Safety
FM Facilities Management
GW Gateway – Police + Information
HR Hof Road
IR Instructional Resource Center
JL Johnson Learning Center
LH L'Hommedieu Hall
LI Library
MH Main Hall
NH North Hall
PA Performing Arts Center
PE Physical Education Center
RH Raritan Hall
S1 South I
S2 South II
ST Studio Theater
TS Technical Services Center
WH West Hall

PARKING LOTS

Child Care Center – 12
Disabled – All Lots
Faculty/Staff – 1B, 2, 5, 6B, 7, 8, 9, 10, 11
Students – 1, 1A, 2, 4, 6, 6A
Visitors – 1, 3

HOW TO GET TO MIDDLESEX COUNTY COLLEGE

1. **U.S. Highway 1 North.** Use the "Fords" exit for County Highway Route 514 East *(first exit after bridge)*. On Route 514 East *(Woodbridge Avenue)*, proceed approximately two miles and turn right at 5th traffic light onto College Drive East: College main entrance.

2. **U.S. Highway 1 South (Edison).** Take "Bonhamtown" exit for County Highway Route 531 South. Proceed to traffic light, turn right. 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)*, take signs for County Highway Route 514 West onto Woodbridge Avenue. Proceed approximately two and one-half miles to the 5th traffic light and turn left onto College Drive East: College main entrance.

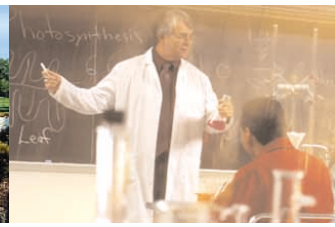
4. **Garden State Parkway South.** Take Exit 130 to U.S. Highway 1 South. Follow directions for No. 2 above.

5. **N.J. Turnpike North and South.** Take Exit 10. Follow signs to Highland Park. These signs provide a direct route to Woodbridge Avenue *(also County Highway Route 514)*. 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.



MIDDLESEX
COUNTY COLLEGE

2600 Woodbridge Avenue
PO Box 3050
Edison, New Jersey 08818-3050
732-548-6000

www.middlesex.cc.nj.us