
ESSEX COUNTY COLLEGE CATALOG 2002-2005

www.essex.edu



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(973) 877-3100

West Essex Campus
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West Caldwell, NJ 07006
(973) 403-2560

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This catalog and updates of information it contains can be found on the ECC web site: www.essex.edu

Essex County College is sponsored by the residents of Essex County through their Board of Chosen Freeholders. It is governed by a Board of Trustees with financial support derived from county, state, and federal sources.

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Accreditation and Licensure

Essex County College is accredited by the Middle States Association of Colleges and Schools. It is licensed by the New Jersey Commission on Higher Education to operate and award associate degrees and certificates. All professional licensure programs offered by the College are accredited by their appropriate accrediting agencies.

Affirmative Action Statement

It is the policy of Essex County College not to discriminate on the basis of race, creed, color, national origin, ancestry, age, marital status, affectional or sexual orientation, disability, gender, religion, or liability for military service. This policy applies to all terms, conditions, and privileges of student enrollment and staff employment. Further, the College conforms to all federal and state statutes, orders, regulations, and guidelines concerning equal opportunities.

THE PRESIDENT'S MESSAGE

Thirty-four years ago, Essex County College embarked on a mission – to make the American Dream real, especially for those for whom the dream had been deferred. Today our credo is “Access with Excellence.” Education for us is about empowering our students, preparing them for success in a rapidly changing global workplace.

Whatever your reason for attending a college, we have the programs and resources that will help you fulfill your dreams. You can earn an associate degree for transfer to a four-year institution or an applied associate degree that will help you secure immediate employment. You may also gain a certificate to boost your career or just take courses for personal enrichment. We are constantly updating our programs and services to prepare you for the demands of the 21st century. Essex County College's setting in the greater Newark area and its close proximity to New York City provide our students with exceptional social, cultural, and educational opportunities.

ECC is a rich tapestry of peoples of many lands, speaking many languages, holding many faiths, opinions, and perspectives. Our diversity has been our hallmark since our founding. As one of our graduates noted, “I will always treasure the multicultural experience I have had at Essex. The experience has helped me with my current job where I need to relate to diverse groups.”

At ECC, you will be a person, not a number. Our classes are generally small, usually no more than 25 to 30 students. Professors will know you by your name, respect your needs, and care about your success. Over half of our faculty have earned doctorates or multiple master's degrees. Many have years of experience as educators, consultants, and practitioners in their subject specialties. Our counselors, tutors, librarians, lab coordinators, computer specialists, and a host of other personnel are there to work with you one-on-one as you learn. It is thus no secret that our students score well above the state and national averages on state licensure exams and, upon graduation, transfer to outstanding four-year institutions throughout the country.

ECC has made a difference in the lives of countless individuals. Our successful alumni – business people, health care professionals, teachers, engineers, architects, social workers, and other professionals – are testimony to the quality of education you will receive.

Best of all, ECC is affordable. Our financial aid counselors stand ready to help you gain the financial aid to which you are entitled.

Join with us at ECC and let us prepare you for educational fulfillment, for meaningful careers, and for life. Find out all there is to know about ECC from this catalog and from our web site at www.essex.edu.



*“ECC
will prepare
you for
educational
fulfillment, for
meaningful
careers...
for life.”*

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ECC • CHANGING LIVES •

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ACCESS *with Excellence*

Mission

Essex County College, an open access community college, serves the dynamic needs of diverse constituencies through comprehensive educational programs and services.

Values Statement

Essex County College reaffirms the following principles, values, and beliefs:

Teaching and Learning: We affirm teaching and learning as our primary purpose. The College seeks to instill in students general and specialized knowledge, an ability to think critically, a commitment to civic responsibility, and an appreciation of complex, ethical, and scholarly traditions. We value academic freedom and support the open exchange of ideas and experiences.

Excellence and Accountability: We believe in creating a learning environment that fosters high expectations for achievement. The College is committed to rigorous academic standards, faculty excellence, and responsive support services that enable students to reach their full potential. We provide excellent programs that utilize technology, demonstrate innovation, and undergo evaluation to ensure consistent and outstanding performance.

Community: We support programs that enhance the economic and social development of Essex County. The College welcomes its role as a vital community resource and is dedicated to forging effective linkages with its many constituencies. We take pride in our outreach and continually strive to enhance life-long learning opportunities for personal and professional growth.

Diversity and Access: We embrace the rich diversity of our student population and our employees. We recognize the historical, intellectual, and artistic contributions of all people, and promote an atmosphere in which distinct cultural viewpoints are accepted and encouraged. We believe all people should have access to affordable, quality higher education that will prepare them to succeed in an ever-changing world.

Legacy: We honor our history and valued traditions. We also welcome progress and change. Building upon our past achievements, we eagerly embrace the future by pursuing innovations in teaching, administration, and student services.

Why Essex County College?

Essex Facts

ECC was established in 1966 as the public, two-year, open access community college of Essex County, admitted its first students in temporary quarters in downtown Newark in 1968, and moved to its current permanent site in the heart of the University Heights district of the city in 1976. Newark is New Jersey's largest city, 10 miles west of New York City.

◆ Approximately 25,000 people enroll each year in ECC's various degree and non-degree programs, including students from more than 40 foreign countries.

◆ The curriculum features close to 70 majors and 564 courses as part of a wide range of transfer and career programs.

◆ ECC is adjacent to Rutgers University-Newark and the New Jersey Institute of Technology, and within walking distance of the University of Medicine and Dentistry of New Jersey.

◆ ECC sends more transfer students to Rutgers-Newark than any other two-year college in New Jersey.

◆ Tuition and fees for an ECC student are significantly lower than at a state college or state university in New Jersey.

Outstanding Facilities

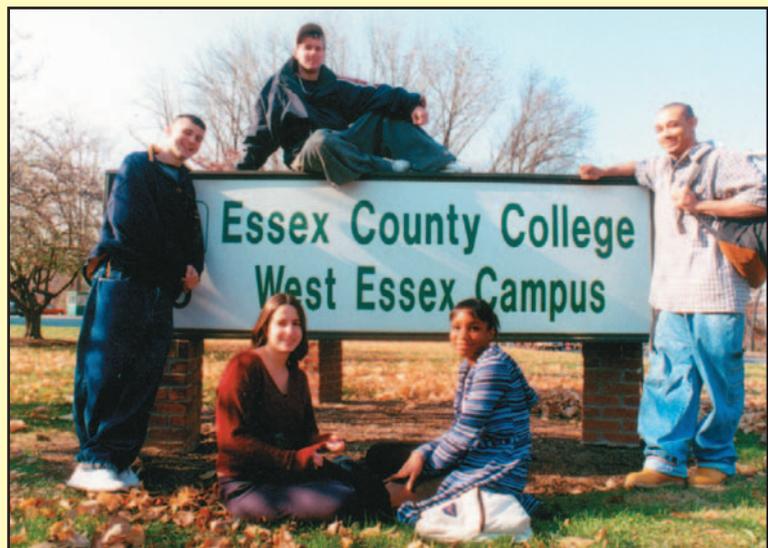
The 22-acre main campus in Newark features a multilevel megastructure covering three city blocks, a two-level multi-purpose Physical Education Building/Child Development Center complex, the Center for Technology, and the Clara E. Dasher Student Center. Among the resources of the 502,000 square foot megastructure are state-of-the-art laboratories, high tech classrooms with advanced teaching modalities, the Mary B. Burch Theater for the Performing Arts, and a newly renovated library equipped with online public access catalog stations, a computer lab offering instruction in information literacy, and extensive resource materials.

The West Essex Campus of ECC in West Caldwell meets the education and training needs of people who live and

work in the western part of Essex County. The facility includes state-of-the-art computer labs, science labs, a library, a student center, and the same student support services that are offered at the main campus. The campus is also the site of the NJ Department of Labor Professional Services Group which assists students and area residents with job searches. Ample on-site parking and access to public transportation make the campus an ideal location for students.

Small Classes

At ECC, most of the classes are small, usually with no more than 25 to 30 students, ensuring that students receive personal attention. Faculty not only have outstanding mastery of their subject areas but are also known for their personal commitment to their students.



Wide Range of Transfer and Career Programs

At ECC, students can earn Associate in Arts (A.A.) and Associate in Science (A.S.) degrees for transfer to four-year colleges, or they can pursue Associate in Applied Science (A.A.S.) degrees and certificates to prepare for immediate employment. Some A.A.S. programs also transfer; academic advisors can provide additional information on the transfer process. Transfer/articulation agreements exist with many institutions; these ensure that all approved courses students take at ECC will transfer to the four-year colleges of their choice. Special joint and/or dual admission agreements have been implemented through which freshmen at ECC are simultaneously admitted to Rutgers University, New Jersey Institute of Technology, New Jersey City University, Kean University, or Thomas Edison State College. The transfer coordinator in the Career Resource Center can provide additional information.

Continuing Education Opportunities

Community and continuing education programs include intensive basic skills training, multilingual outreach programs, customized corporate training programs, career advancement and personal enrichment courses, youth programs, seminars, workshops, and public forums on diverse topics of interest to local residents.

Convenient Schedules and Academic Support

Working adults, recent high school graduates, and others can pursue full or part-time study for educational or career advancement or personal enrichment. ECC offers convenient day, evening, and Saturday classes and a compre-

hensive support system that includes counseling, tutoring, computer services, financial assistance, bilingual classes, and career planning. Developmental programs are offered to students who require remediation before taking college-level courses. The academic year is divided into two 15-week semesters (fall and spring) and two summer terms.

Athletics and Other Extracurricular Activities

ECC student athletes excel in the classroom as well as in intercollegiate competition. Many ECC teams have been ranked nationally and routinely win distinct championships. Several ECC athletes have become Olympians in their respective sports. Students may also choose to participate in a variety of student clubs and

organizations, the Student Government Association, and the ECCO student newspaper.

Africana Institute

The Africana Institute opened on May 22, 2001 at the main campus and serves as a research, education, and communication center for the study of the history and life of people of African, African-American, and Caribbean descent. Its focus is on the historical and contemporary experiences of Black people. The institute's educational and cultural programs and resources are designed to raise the awareness of students and the greater community about the African diaspora, and to increase and improve intra and interracial dialogue and relations.

Sample of institutions to which recent ECC graduates have transferred to pursue baccalaureate and graduate studies:

Bard College	Norfolk State University
Bloomfield College	Ohio State University
Caldwell College	Pace University
Carnegie-Mellon University	Parsons – New School
Centenary College	Penn State University
City University of New York	Pratt Institute
College of New Jersey	Ramapo College
College of Saint Elizabeth	Rider University
Columbia University	Rowan University
Cornell University	Rutgers University
Drew University	Saint Peter's College
Drexel University	Seton Hall University
East Stroudsburg University	Smith College
Fairleigh Dickinson University	Stevens Institute of Technology
Felician College	Temple University
George Washington University	Thomas Edison State College
Georgia Tech University	University of California at Berkeley
Hofstra University	University of Medicine and Dentistry of New Jersey
Howard University	University of Nevada at Las Vegas
Hunter College	University of North Carolina at Chapel Hill
Johns Hopkins University	University of Pennsylvania
John Jay College of Criminal Justice	University of Pittsburgh
Kean University	University of Texas
Kent State University	University of Virginia
Louisiana State University	Westminster Choir College at Rider University
Massachusetts Institute of Technology	William Paterson University
Montclair State University	Yale University
New Jersey City University	
New Jersey Institute of Technology	
New York University	

What they're saying ...

Students of ECC have a sense of belonging and successful alumni have made themselves a part of ECC's extended family.

“I will not forget how much of a blessing it has been in my life to step into the doors of Essex County College ... I crossed paths with the most beautiful, committed, hardworking, dedicated, culturally secure, and diverse group of people I have ever seen under one roof. I know ECC has prepared me to meet the challenges of Columbia University and beyond.”



SUSAN STEPNEY

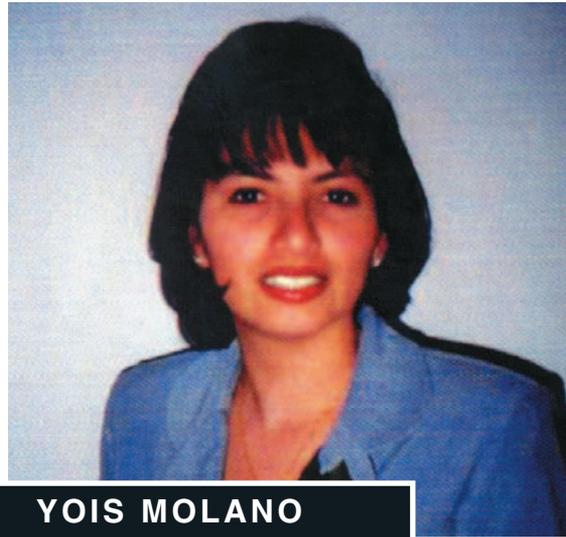
Susan Stepney graduated at the top of her class. The 2001 Valedictorian not only earned two associate degrees but had the distinction of being the first student in ECC history to be recognized on the *All-USA Academic First Team for Community College Students*. Susan was the president of ECC's Phi Theta Kappa chapter and also served as a literacy volunteer and a mentor to local teens. She is now an English major at Columbia University and aspires to a teaching career.



CHRISTIAN DELMOTTE

“Essex broadened my horizon and developed my confidence. Its rich diversity of students, small classes, faculty with high energy levels, and caring support staff were just what I needed. Faculty are very approachable. They love what they're doing. They developed my leadership capabilities. This is the right place for you, especially if you want a caring, supportive, collegiate experience.”

Christian Delmotte, president of ECC's acclaimed PTK honor society for 2001-2002, graduated with highest honors and an A.A. in Liberal Arts. Named a national Distinguished PTK Chapter President, he has transferred to Seton Hall University to pursue baccalaureate and graduate study. He hopes to one day return to his first alma mater as a member of its faculty.

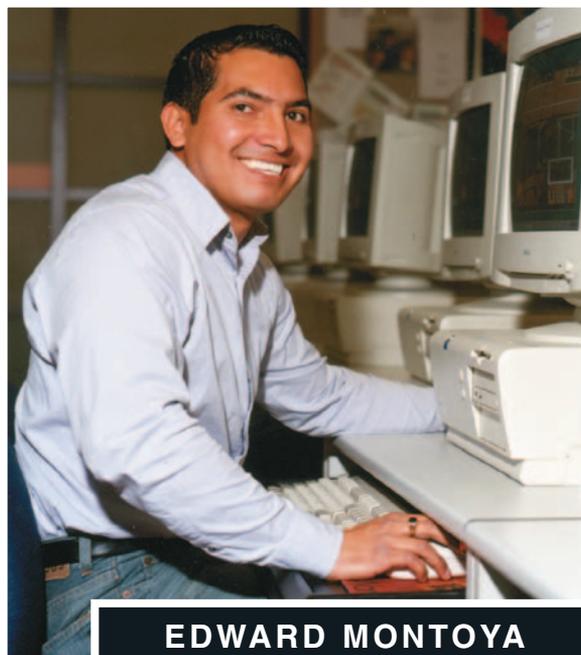


YOISS MOLANO

“I came to this country six years ago from Colombia and could speak very little English. At Essex, I received the individualized education and support I needed to rapidly gain proficiency in the English language and culture and do very well in my major in accounting. I owe my success at Rutgers and in my current job to the preparation I received at Essex.”

Yoiss Molano, who started as an ESL student, graduated from ECC in 1999. She excelled in her studies and won several scholarships while at Essex for her outstanding academic achievements. She received her baccalaureate degree in Accounting from Rutgers University in May 2002 and is currently employed as a financial officer with a non-profit agency.

“My goal is to be a doctor. As an ESL student at ECC, I quickly overcame my difficulties with the English language and did well academically, thanks to the support and encouragement of remarkable professors, tutors, and counselors. I continue to do well academically because of the preparation I received at Essex.”



EDWARD MONTOYA

Edward Montoya graduated from ECC with high honors in 1999, earning an A.S. in Biology/Pre-Med. He transferred to Kean University where he continued to excel academically. He has found time in the midst of baccalaureate studies and preparation for MCATs to tutor ESL students at Essex. As he put it, “I love this college. That’s why I am still here.”



CAROL MAUERMEYER

Carol Mauermeyer graduated from ECC in 1976. She went on to earn her bachelor's from Montclair State University and her master's and Ed.D. from Rutgers University. She specialized in Special Education and Human Resource Administration, and is currently Professor of Office Administration in the Department of Computer Information

Systems at Raritan Valley Community College. She has been a professor in the field of office administration for the last nineteen years.

“The faculty at Essex County College were caring and nurturing. They inspired me to seek a teaching career. Twenty-six years later, I am convinced I made the right career choice.”

Robert Okojie came to the U.S. from Nigeria. He majored in Electronic Engineering Technology at ECC in 1987-88. He then transferred to NJIT where he obtained his B.S., M.S., and Ph.D. in Electronic Engineering. He is currently an Electronic Engineer conducting research at the NASA Glenn Research Center in Ohio.

“ECC allowed me to pursue my studies at a comfortable pace. This is especially helpful for people coming from overseas, who may need to be eased into the rigors of academia. Four-year institutions do not generally provide the kind of academic support that you can get at a community college.”



ROBERT OKOJIE



BERNADO HENRY

“Essex is like family to me. The professors I have had here continue to inspire me. They eased me into the rigors of higher education, they motivated me, and opened my mind to challenges I had not considered. They are still my friends. It is better to start here than anywhere else for the individualized attention you receive.”

Bernado Henry graduated from ECC in 1993 with a degree in Accounting. He then transferred to Pace University in New York City and earned his baccalaureate in Accounting. Most recently, he earned a juris doctorate (JD) from Seton Hall Law School and has passed the bar in both New York and New Jersey.

Nidhi George Chabora graduated from ECC in 1992. Today she is an Advanced Practice Nurse in Adult Psychiatric/Mental Health with a master’s in Nursing from Pace University. She is also a member of a multidisciplinary team of psychiatrists, psychiatric rehabilitation specialists, and advanced practice nurses from the University of Medicine and Dentistry of New Jersey that have a consulting affiliation with Greystone Park State Psychiatric Hospital. She is also an adjunct faculty member at UMDNJ’s School of Nursing.



NIDHI GEORGE CHABORA

“My memories of ECC are those of being supported at every step of the way. I had very good instructors who provided one-on-one attention. They explained why we were doing what we were doing and how to do it well. The direction they provided changed the course of my life. My experiences at ECC and the career guidance I received there are pivotal to my success.”

ESSEX COUNTY COLLEGE

“At ECC I found a lot of people like me who came from financially difficult backgrounds. Several of the faculty who taught me could have taught in elite institutions, but they chose to teach at Essex. Thomas Kuhn’s The Structure of Scientific Revolutions was first introduced to me at ECC. The faculty in my doctoral program were surprised at how much I had learned about Kuhn as an undergraduate. My success academically is directly tied to the preparation I received at Essex.”



MARY TASKER

Mary Tasker graduated from ECC in 1979 with an Associate in Arts degree. She went on to Seton Hall University for her bachelor’s degree in social work. She then received her master’s from Rutgers University and is now working on her doctorate in social work at Hunter College in New York. She is the author of several books.



GAIL R. HILLMAN

“ECC was more than an academic institution. It was a community ... and we were instilled with important concepts like interdependence ... the value of concern for each other ... and dedication to the larger community. These values helped strengthen my commitment to pursue a career in social work.”

Gail R. Hillman graduated in 1979 with a degree in the Social Sciences. She went on to Rutgers University where she obtained her baccalaureate degree, a juris doctorate (JD) from Rutgers Law School, and an MSW from Rutgers – New Brunswick. She is now a practicing attorney and a licensed clinical social worker.

Opening the door to your future!

E S S E X C O U N T Y C O L L E G E

Overview of Academic Programs

ECC offers a wide range of associate degree and certificate programs through the following academic divisions and departments:



Division of Allied Health
Department of Bilingual Education
Division of Biology and Chemistry
Division of Business
Division of Engineering Technologies and Computer Sciences

Division of Humanities
Division of Mathematics and Physics
Department of Nursing
Division of Social Sciences

The **Associate in Arts (A.A.)** and **Associate in Science (A.S.)** degree programs are specifically designed to prepare students for transfer to four-year colleges and universities.

The **Associate in Applied Science (A.A.S.)** degree program is designed to prepare students for immediate employment upon completion, although students in some majors may be able to transfer



Employers of ECC Graduates

Recent survey findings indicate that many ECC graduates found professional positions in New Jersey with such employers as: Hoffmann-La Roche, Nabisco, Cellular One, Kessler Institute, Bell Atlantic, Prudential, Price Waterhouse, IDT, Nextel, PNC, Comcast, Chubb Group, MBNA, First Union Bancorp, Summit Bank, the Port Authority of New York & New Jersey, NJ TRANSIT, The Star-Ledger, and the New Jersey Law Journal.

most or all of their credits to baccalaureate programs.

The **certificate programs** are designed to provide employment skills in one year or less of full-time study. They enhance or supplement existing skills or offer preparation for a new career path. Certificate programs include those that are offered through the College's Division of Community and Continuing Education.

The following lists the programs available through the various divisions. For detailed information on specific degree and certificate programs, refer to the Academic Programs Index in the Degree and Certificate Programs section of this catalog, which will direct you to the relevant pages.



Great careers begin at **ECC**

Division of Allied Health

Location: Level II, Blue Area

Director: John Wescott

Coordinators:

Massage Therapy: Jonanathan Dobias

Ophthalmic Dispensing: Richard Palumbo

Physical Therapist Assistant:

Christine Stutz-Doyle

Radiography: Ronald Kopec

Faculty: Charles Harrison, Mary Malone,
Herta Georgia-Pace

Staff: Barbara Fogler

Counselors: Kathlyn Battle, Linda Sallee

The Division offers A.S. degree programs designed to prepare students to transfer to four-year institutions, and A.A.S. and certificate programs designed to prepare students for health careers immediately upon graduation. The faculty are licensed to practice in their respective fields and have diverse academic and professional backgrounds. Most hold advanced practice credentials in their professional field. The programs utilize state-of-the-art on-campus laboratories to facilitate student learning.

Choose from the following degree and certificate programs:

- Dental Assisting (Certificate)
- Dental Hygiene (A.A.S.)
- Health Science (A.S.)
- Massage Therapy (Certificate)
- Ophthalmic Dispensing (A.A.S.)
- Physical Therapist Assistant (A.A.S.)
- Radiography (A.A.S.)
- Respiratory Care (A.S.)

All applicants to Allied Health programs must meet special admission requirements. Students who do not meet the requirements for direct program admission will be admitted to one of

the following pre-major codes and will complete a prescribed program of study:

6001 Pre-Radiography

6002 Pre-Physical Therapist Assistant

6005 Pre-Dental Assistant

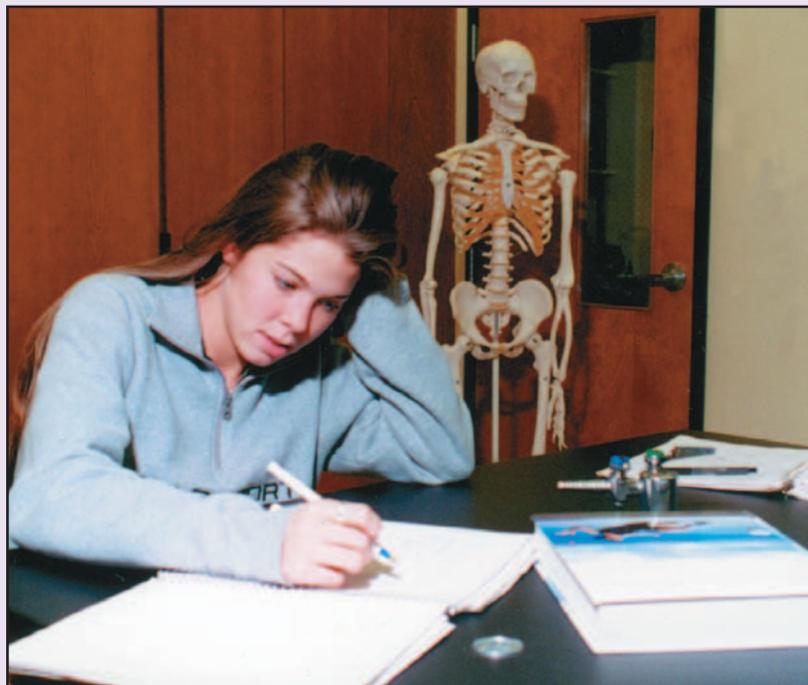
6006 Pre-Dental Hygiene

6008 Pre-Ophthalmic Dispensing

6012 Pre-Respiratory Care

While waiting for admission, students are urged to begin taking core curriculum requirements. Contact the divisional counselor or faculty advisor for details.

Admission to programs in this Division is competitive. Completion of the admission requirements does not guarantee program admission. Refer to the Degree and Certificate Programs section of this catalog for information on admission requirements, application deadline, and application procedures for the program of your choice. Students are advised to consult the program handbook for specific information on licensure requirements. Information is also available from the divisional counselor, faculty advisor, and/or Admissions (Enrollment Services Express).





Department of Bilingual Education

Location: Level I, Red Area

Chairperson: Michael Pekarofski

Faculty: Mila Bruan, John Hills,
Maria Ibanez-Polixa, Evelyn Cline Marquéz,
Angel Millán, Milena Rubinstein,
Luis J. Salgado, Nicola Wills-Espinosa

Counselors: Luz Class, Laura Cruz

The Department offers an A.A. degree program in Spanish designed to prepare students for transfer to four-year institutions, and non-degree programs in English as a Second Language (ESL). The Department also offers courses in world languages. To supplement the classroom experience, the Bilingual Education faculty participate in, develop, and support cultural events, organizations, and activities designed to promote feelings of positive cultural awareness among students and the bilingual communities of Essex County. Counseling, tutoring, computer-assisted language learning, and other support services are also available to students.

Degree Program:

- Liberal Arts: Spanish Language Option (A.A.)

ESL Programs

The following are designed for students whose first language is not English:

- English As a Second Language (ESL) Academic Program
- Accelerated English as a Second Language
- ESL Intensive Experience

English as a Second Language (ESL)

Academic Program

Students work on improving their proficiency in English through a series of three courses:

- ESL 095/096 ESL Reading & Writing I 6 credits
ESL 103/104 ESL Reading & Writing II 6 credits

ESL 105/106 ESL Reading & Writing III 6 credits

Students may register for a limited number of additional courses taught in their native language or English while they are taking ESL courses. The idea is to allow students to improve their proficiency in English while fulfilling college requirements and electives. The program is only available through placement by the Department of Bilingual Education.

Accelerated English as a Second Language

This is an intensive 15-credit, one-semester immersion program for students who possess a high degree of literacy in their primary language as well as high or intermediate level of proficiency in English. It builds on skills students already possess in reading, writing, speaking, and listening.

Program Requirements: 15 credits

ESL 108	Accelerated ESL – Writing	3 credits
ESL 109	Accelerated ESL – Reading	3 credits
ESL 110	Accelerated ESL – Speaking	3 credits
ESL 111	Accelerated ESL – Listening	3 credits
ESL 112	American Culture and Diversity	3 credits

In many cases, students in this program are professionals or college graduates seeking to improve their English as rapidly as possible. A variety of cultural and educational activities serve to enhance and reinforce the learning experience. The goal is to prepare students to enter college-level courses directly or to successfully compete in the job market. This program is only available through placement by the Department of Bilingual Education.

ESL – Intensive Experience

This program is intended for students who demonstrate some literacy in their first language and some prior exposure to English. The program meets fifteen hours a week and all classes are conducted in English. Lab work and participation in off-campus activities are required.

Program Requirements: 15 credits

ESL 073	ESL Inten. Exp. – Culture	3 credits
ESL 074	ESL Inten. Exp. – List./Comp.	3 credits
ESL 075	ESL Inten. Exp. – Speaking	3 credits
ESL 076	ESL Inten. Exp. – Reading	3 credits
ESL 077	ESL Inten. Exp. – Writing	3 credits



The program develops language skills as well as academic and study skills. Topics and themes related to American culture and cultural diversity are explored. The program is only available through placement by the Department of Bilingual Education.

World Language Courses

Through courses in Spanish, French, Arabic and Italian, native speakers of English are able to fulfill foreign language requirements, earn transfer credits, and foster their personal growth and development. While learning a foreign language, students also have the opportunity to develop cultural awareness and sensitivity to meet the demands of an increasingly global and culturally diverse society.

Division of Biology and Chemistry

Location: Level II, Blue Area

Chairperson: Jeffrey N. Lee

Faculty: Martin Asobayire, Bagher Bagheri, Jose Chestnut, Brendan M. Doyle, Frank Duroy, David Eaton, Michael E. Frank, Donald B. Fraser, Byron M. Johnson, Rudolph B. Jones, Eunice Kamunge, Donald J. McDermott, Lawrence R. Pitts, Norman Scherzer, Jill Stein Thierman, Natalie Toran, David L. Williams, Anthony Zuppari

Laboratory Assistants: Ezdehar Abu-Hatab, Alberta Burgess, John Kozic, Lynn Wilson

Counselors: Kathlyn Battle, Linda Sallee

The Division offers A.S. degree programs designed to prepare students to transfer to four-year institutions, and A.A.S. and certificate programs designed to prepare students for employment immediately upon graduation as chemical technicians in the chemical

and pharmaceutical industries. The faculty hold advanced degrees in biology and chemistry and are experienced teachers. In addition, most faculty have extensive research experience in their fields. The programs utilize state-of-the-art biology and chemistry laboratories and students have access to multi-media computer laboratories with Internet access.

Choose from the following degree and certificate programs:

- Biology, Pre-Medicine (A.S.)
- Chemical Technology (A.A.S.)
- Chemical Technology (Certificate)
- Chemistry (A.S.)





Essex County College

Division of Business

Location: Level III, Green Area

Chairperson: Michael C. King

Faculty: Matilda Abavana, Harry V. Bernstein, Richard M. Downs, Shelby Hawkins, Nathan Himelstein, Joseph C. Santora, Gerald Savage, Paul B. Tandoh, Doris Tori, Ladylease Goodridge White

Counselor: Arthur Heno

The Division offers A.S. degree programs designed to prepare students to transfer to four-year institutions, and A.A.S. and certificate programs designed to prepare students for business careers immediately upon graduation or to develop technical skills in specialized areas. The faculty have diverse academic and professional background including years of practical experience in the business field.

Choose from the following degree and certificate programs:

- Accounting (A.A.S.)
- Accounting (A.S.)
- Business Administration (A.A.S.)
- Business Administration (A.S.)
- Business Administration: Hospitality Management Option (A.A.S.)
- Business Administration: Office Systems Technology and Management Option (A.A.S.)
- Business Career Development (Certificate)
- Information Systems Office Operations (Certificate)
- Internet – Web Page Design Specialist (Certificate)
- Legal Assistant (Certificate)
- Legal Assistant Studies (A.S.)
- Legal Nurse (Certificate)
- Legal Specialist (Certificate)
- Microcomputer Systems Applications (A.A.S.)
- Office Assistant Program (Certificate)
- Word Processing Program (Certificate)



Division of Engineering Technologies and Computer Science

Location: Center for Technology

Chairperson: John Gribbin

Faculty: Theophilus Acquaye, Hossein Assadipour, John Enriquez, Mark Galit, Charles Jones, Karen Scuorzo, Kenneth Tekel, Alvin Williams, Ned M. Wilson, Jianping Yue, Bernard Zivotofsky

Laboratory Coordinator: Stacy Outerbridge

Counselors: Kathlyn Battle, Linda Sallee

The Division offers A.S. degree programs designed to prepare students to transfer to four-year institutions to pursue advanced degrees in science and technology, and A.A.S. and certificate programs designed to prepare students to enter the workforce immediately upon graduation. The Center for Technology has 30,000 square feet of classrooms, laboratories, and office space on two levels. It houses the existing programs and has space for new programs in emerging technologies. The courses utilize cutting-edge equipment in spacious laboratories designed for training the next generation of engineers, technicians, and scientists. The

faculty have diverse backgrounds in the applied sciences in both educational and industrial settings. Most have earned doctorates or professional engineering licenses in their field of specialty.

Choose from the following degree and certificate programs:

- Applied Computer Science (A.S.)
- Architectural Technology (A.A.S.)
- Civil Construction Engineering Technology (A.A.S.)
- Civil Construction Engineering Technology: Land Surveying Option (A.A.S.)
- Computer-Aided Design Technology (Certificate)
- Computer Information Systems (A.S.)
- Computer Science (A.S.)
- Electronic Engineering Technology (A.A.S.)
- Engineering (A.S.)
- Internetworking Technology (Certificate)
- Manufacturing Engineering Technology (A.A.S.)
- Manufacturing Engineering Technology: Mechanical Engineering Technology Option (A.A.S.)
- Network Technology (Certificate)

Division of Humanities

Location: Level I, Red Area

Chairperson: Mark B. Schuman

Coordinators:

Art: Barbara Pogue

Communications: Curtis Green

English: William MacPherson

History: Mark B. Schuman

Music: Richard Alston

Faculty: Richard Alston, Patricia A. Bartinique, Charles Bateman, David A. Berry, Richard Bogart, James H. Campbell, Niki Chukunta, Jeffrey Curtis, Enid Friedman, Gasem Ghazanfar, William Golden, Curtis Green, Barbara Grossman, Lenworth Gunther, Eileen Harkness, Ogretta Hawkins, Kevin Hayes, Rita Higgins, Nessie Hill, Lawrence J. Knapp, Carol Kushner, Earle Laing, Eugene Lieber, Paulette Longmore, Isa Tavares Maack, William MacPherson, Helen Muller, Alfred G. Olivi, Janet Pickett, Barbara Pogue, Elizabeth Porcelli, Herbert C. Schlager, Mark B. Schuman, Robert C. Spellman, Judith P. Ward

Counselors: Daphne Benyard, James F. Johnson

The Division encompasses art, cinema, communications, dance, drama, English composition, English literature, history, music, philosophy, and speech. The Division offers A.A. and A.S. degree programs transferable to four-year institutions, a certificate program in preparation for immediate employment upon graduation, general education courses in art, English, history, and music required for all degree programs, and also developmental courses in reading and writing to assist students who are not yet





fully prepared for college-level courses. The Writing Center provides computer workstations designed exclusively to support the needs of students composing and editing writing assignments. Each workstation provides access to the college's on-line library catalog, the Internet, and a variety of multimedia resources. The Center also offers a variety of workshops and seminars.

Choose from the following degree and certificate programs:

- Art (A.A.)
- Digital Media & Electronic Publishing (Certificate)
- Liberal Arts (A.A.)
- Liberal Arts: Communications Option (A.A.)
- Liberal Arts: Journalism Option (A.A.)
- Music (A.S.)

Division of Mathematics and Physics

Location: Level II, Blue Area

Chairperson: Timothy Stafford

Faculty: Norbert Aminzia, Shohreh Andresky, Ronald Bannon, Carlos Delatorre, Mark Galit, Helen Kuruc, Madan L. Maheshwari, Mingyon McCall, Naser Moheb, John Pace, Leonard W. Parrino, Kathleen Powell, Soraida Romero, Maria Cecilia Rozak, August Ruggiero, Mustapha Sandi, Barbara Satterwhite, Susan Schenk, Robert Schloming, Nadezhda Sukhorkova, Martin Weissman, Ram N. Yadav, Donald P. Yee, Raymond Zenere

Laboratory Assistant: George Skea

Counselors: Kathlyn Battle, Linda Sallee

The Division offers an A.S. degree program in mathematics, designed to prepare students to transfer to four-year institutions to pursue advanced degrees in math or physics, general

education courses in math required for all degree programs, and also developmental math courses which, upon completion, enable students to perform successfully in math and science courses required in their major area of study. Faculty of the Division are experienced educators with extensive scientific and mathematical backgrounds, who are well qualified to impart the knowledge necessary to prepare students for a wide variety of careers. Most mathematics and physics courses are sequential in nature and so care should be taken to register for courses in their proper order and without long time delay between courses. The College offers tutoring in mathematics and physics at each of its campuses.

Degree Program:

- Mathematics (A.S.)

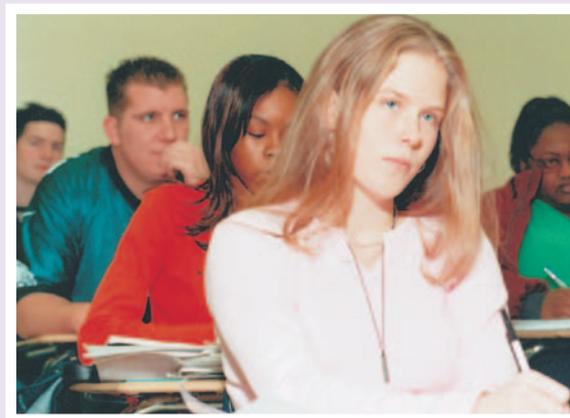
Department of Nursing

Location: Level II, Blue Area

Chairperson: Marlene Dey

Faculty: Janet Czermak, Gail Gage, Mariellen Hess-Christian, Barbara Kelly, Mary Lewis, Patricia Lowry, Chioma Ogunedo, Amini Simon

Counselors: Kathlyn Battle, Linda Sallee



The Department offers the A.A.S. degree program designed to prepare students for entry level positions in hospitals and other health care facilities immediately upon graduation. Upon completion of the program, students are eligible to take the certification exam (NCLEX) to be a registered nurse. The Department also offers the opportunity for Licensed Practical Nurses (LPNs) to gain credit for previous LPN education and license toward the completion of an A.A.S. degree in Nursing. The Nursing program utilizes state-of-the-art on-campus laboratories, including a nursing simulation laboratory and a multimedia computer laboratory, to facilitate student learning. Many colleges have upper division nursing programs which allow associate degree graduates to transfer most or all of their credits toward a Bachelor of Science degree program in nursing (B.S.N.). Currently Essex County College has such articulation agreements with New York University, New Jersey City University, St. Peter's College, Felician College, Kean University, Rutgers University, Seton Hall University, and William Paterson University.

Choose from the following programs:

- Nursing (A.A.S.)
- Nursing: LPN Articulation Option (A.A.S.)

All nursing applicants are admitted to the College in Pre-Nursing (6000 code) and will complete a prescribed program of study. Admission to the nursing program is competitive. Specific admissions criteria must be met to qualify. Completion of the admission requirements does not



guarantee program admission. Refer to the Nursing programs detailed in the Degree and Certificate Programs section of this catalog for information on admission standards, application deadlines, and application procedures. Students are advised to consult the program handbook for specific information on licensure requirements. Also contact the departmental counselor, faculty advisor, and/or the Admission Office for details.

Division of Social Sciences

Location: Level III, Yellow Area

Chairperson: Mamie Bridgeforth

Faculty: David Barnes, Thomas Coleman, Gerald Freedman, Frederic Halper, Linda Harvest, Peter Myers, Leonid Polyakov, Charles Reid, Margarita Roig, Arzelia Said, Martin Schulman, Roberto Socas

Counselor: Elizabeth Luongo

The Division offers A.S. degree and A.A. degree programs designed to prepare students to transfer to four-year institutions, and A.A.S. degree and certification programs designed to prepare students for careers in the social sciences immediately upon graduation. For students pursuing the A.A.S. degree, there is a mandatory internship experience required as part of the curricula. Students who wish to take specific career courses for employment advancement are encouraged to meet with the chairperson of the Division or coordinators of respective programs for assistance in selecting courses that will meet their special needs. The faculty hold advanced degrees, are professionally active, and are also involved in research and publication. They serve on numerous boards and committees, and many are leaders in human service fields, frequently organizing training events for agency networks in the region.

Choose from the following programs:

- Childhood Development Associate Certification Program
- Criminal Justice (A.S.)
- Early Childhood Education (A.A.)
- Human and Social Services (A.A.S.) – (offering specializations in mental health, alcohol and substance abuse, and social work)
- Physical Education (A.S.)
- Social Science (A.S.)

Community and Continuing Education

Locations: Main Campus and West Essex Campus

Dean: Charles G. Lovallo

Associate Dean: Diane FitzSimmons

Associate Dean: Gretchen Brown

Director of Academic Programs,

West Essex Campus: Phil Linfante

The Division of Community and Continuing Education offers a wide range of non-credit and credit courses and programs, including certificate programs to enhance the professional and vocational needs of area residents. Four such certificate programs are those pertaining

to the New Jersey Uniform Construction Code. The regulations for the Uniform Construction Code, adopted by the New Jersey Department of Community Affairs, require candidates for licensure to complete specified educational programs to prepare them to administer and interpret the code's standards. ECC's West Essex Campus in West Caldwell offers four educational programs in Uniform Construction Code that meet the inspector licensing requirements regulated by the New Jersey State Uniform Construction Code.

Choose from the following programs:

- Building Code Technology (Certificate)
- Electrical Code Technology (Certificate)
- Fire Code Technology (Certificate)
- Plumbing Code Technology (Certificate)



Joint Admission and Transfer Agreements

Essex County College has entered into joint and/or dual admission agreements with Rutgers, the State University, New Jersey Institute of Technology (NJIT), New Jersey City University, Kean University, Montclair State University, and Thomas Edison State College. These admission agreements provide guaranteed admission with junior status to qualified students. To gain the full benefit of these agreements, students must graduate from their ECC degree program and continue their major course of study at the four-year institution. Students are urged to consult with ECC's transfer/articulation coordinator in the Career Resource Center to review specific requirements.

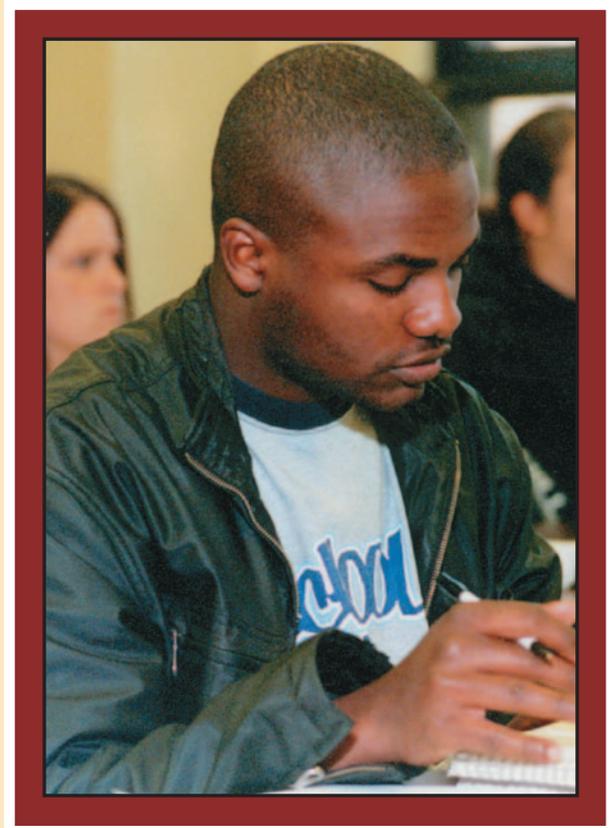
ECC also has joint admission agreements with the University of Medicine and Dentistry of New Jersey in selected allied health disciplines under which qualified students enroll at UMDNJ during the course of their associate degree program.

Transfer/articulation agreements with the colleges listed below allow students who complete their associate degrees to transfer with full junior standing:

Bloomfield College
Centenary College
Drexel University
Fairleigh Dickinson University
Felician College
John Jay College of Criminal Justice
Kean University
Montclair State University
New Jersey City University
New Jersey Institute of Technology
New York University
Palmer College of Chiropractic
Rutgers, the State University
 Camden College of Arts and Sciences
 College of Engineering
 Cook College
 Douglass College
 Livingston College
 Newark College of Arts and Sciences

Rutgers College
School of Business–Camden
School of Management-Newark
School of Business-New Brunswick
School of Communication/Information and Library Studies
University College-Camden
University College-Newark
University College-New Brunswick
St. Peter's College
Thomas Edison State College
William Paterson University

Joint admission and transfer agreements are frequently updated. Students should consult with the transfer/articulation coordinator in the Career Resource Center and/or appropriate faculty advisors.



Academic Calendar 2002-2003

FALL 2002

August

27-29 Tues-Thurs Advisement & Registration

September

2 Monday Labor Day-College Closed
3 Tuesday First Day of Fall Classes
3-6 Tues-Fri Late Registration & Add/Drop

October

4 Friday Last Day to Withdraw from
First Half Term Courses
14 Monday Columbus Day – No Classes

November

15 Friday Last Day to Withdraw from
Full Term Courses
28-29 Thurs-Fri Thanksgiving Holiday –
College Closed
30 Saturday No Classes

December

2-5 Mon-Thurs Advisement & Registration
for Spring 2003
5 Thursday New Student Advisement &
Registration
16 Monday Last Day of Classes
20-31 Fri-Tues Winter Break –
No Classes

SPRING 2003

January

6-9 Mon-Thurs Advisement & Registration
for Spring 2003
13 Monday First Day of Spring Classes
13-16 Mon-Thurs Late Registration & Add/Drop
20 Monday Martin Luther King Jr.
Birthday – College Closed

February

14 Friday Last Day to Withdraw from
First Half Term Courses
17 Monday Presidents' Day –
College Closed

March

21 Friday Last Day to Withdraw from
Full Term Courses

April

7-10 Mon-Thurs Advisement & Registration
for Summer I, II, & Fall 2003
18-19 Fri-Sat Spring Holiday – No Classes
28 Monday Last Day of Classes

SUMMER I 2003

May

2 & 5 Fri & Mon Advisement & Registration
for Summer I, II, & Fall 2003
6 Tuesday First Day of Summer I Classes
6-9 Tues-Fri Late Registration Su I only &
Add/Drop
26 Monday Memorial Day – College Closed

June

1 Sunday Commencement
6 Friday Last Day to Withdraw from
Classes
24 Tuesday Last Day of Classes
30-July 3 Mon-Thurs Summer Recess – No Classes

SUMMER II 2003

July

4 Friday Independence Day –
College Closed
7-8 Mon-Tues Advisement & Registration
for Summer II & Fall 2003
9 Wednesday First Day of Summer II Classes
9-10 Wed-Thurs Late Registration Su II only &
Add/Drop
31 Thursday Last Day to Withdraw from
Classes

August

6 Wednesday Early Advisement &
Registration for Fall 2003
19 Tuesday Last Day of Classes

For a more detailed 2002-2003 academic calendar, see
www.essex.edu/academic/calendars

Academic Calendar 2003-2004

FALL 2003

August

26-28 Tues-Thurs Advisement & Registration

September

1 Monday Labor Day-College Closed
2 Tuesday First Day of Fall Classes
2-5 Tues-Fri Late Registration & Add/Drop

October

3 Friday Last Day to Withdraw from First Half Term Courses
13 Monday Columbus Day – No Classes

November

14 Friday Last Day to Withdraw from Full Term Courses
27-28 Thurs-Fri Thanksgiving Holiday – College Closed
29 Saturday No Classes

December

1-4 Mon-Thurs Advisement & Registration for Spring 2004
4 Thursday New Student Advisement & Registration
15 Monday Last Day of Classes
19-31 Fri-Wed Winter Break – No Classes

SPRING 2004

January

5-8 Mon-Thurs Advisement & Registration for Spring 2004
12 Monday First Day of Spring Classes
12-15 Mon-Thurs Late Registration & Add/Drop
19 Monday Martin Luther King Jr. Birthday – College Closed

February

13 Friday Last Day to Withdraw from First Half Term Courses
16 Monday Presidents' Day – College Closed

March

19 Friday Last Day to Withdraw from Full Term Courses

April

5-8 Mon-Thurs Advisement & Registration for Summer I, II, & Fall 2004
9-10 Fri-Sat Spring Holiday – No Classes
26 Monday Last Day of Classes

SUMMER I 2004

May

3-4 Mon-Tues Advisement & Registration for Summer I, II, & Fall 2004
5 Wednesday First Day of Summer I Classes
5-7 Wed-Fri Late Registration Su I only & Add/Drop
31 Monday Memorial Day – College Closed

June

3 Thursday Last Day to Withdraw from Classes
6 Sunday Commencement
23 Wednesday Last Day of Classes
28-July 3 Mon-Sat Summer Recess – No Classes

SUMMER II 2004

July

6-8 Tues-Thurs Advisement & Registration for Summer II & Fall 2004
12 Monday First Day of Summer II Classes
12-13 Mon-Tues Late Registration Su II only & Add/Drop
31 Saturday Last Day to Withdraw from Classes

August

5 Thursday Early Advisement & Registration for Fall 2004
19 Thursday Last Day of Classes

For a more detailed 2003-2004 academic calendar, see www.essex.edu/academic/calendars

Academic Calendar 2004-2005

FALL 2004

August

25, 26, 31 Wed, Thurs, Tues Advisement & Registration

September

1 & 2 Wed & Thurs Advisement & Registration
6 Monday Labor Day – College Closed
7 Tuesday First Day of Fall Classes
7-10 Tues-Fri Late Registration & Add/Drop

October

1 Friday Last Day to Withdraw from
First Half Term Courses
11 Monday Columbus Day – No Classes

November

19 Friday Last Day to Withdraw from
Full Term Courses
25-26 Thurs-Fri Thanksgiving Holiday –
College Closed
27 Saturday No Classes
29-30 Mon-Tues Advisement & Registration
for Spring 2005

December

1-2 Wed-Thurs Advisement & Registration
for Spring 2005
20 Monday Last Day of Classes
21-31 Tues-Fri Winter Break –
No Classes

SPRING 2005

January

4-7 Tues-Fri Advisement & Registration
for Spring 2005
10 Monday First Day of Spring Classes
11-14 Tues-Fri Late Registration & Add/Drop
17 Monday Martin Luther King Jr.
Birthday – College Closed

February

11 Friday Last Day to Withdraw from
First Half Term Courses
21 Monday Presidents' Day –
College Closed

March

18 Friday Last Day to Withdraw from
Full Term Courses
25-26 Fri-Sat Spring Holiday – No Classes

April

4-7 Mon-Thurs Advisement & Registration
for Summer I, II, & Fall 2005
25 Monday Last Day of Classes

SUMMER I 2005

May

2-3 Mon-Tues Advisement & Registration
for Summer I, II, & Fall 2005
4 Wednesday First Day of Summer I Classes
4-6 Wed-Fri Late Registration Su I only &
Add/Drop
30 Monday Memorial Day – College Closed

June

2 Thursday Last Day to Withdraw from
Classes
5 Sunday Commencement
22 Wednesday Last Day of Classes
27-July 2 Mon-Sat Summer Recess – No Classes

SUMMER II 2005

July

4 Monday Independence Day –
College Closed
6-7 Wed-Thurs Advisement & Registration
for Summer II & Fall 2005
11 Monday First Day of Summer II Classes
11-12 Mon-Tues Late Registration Su II only &
Add/Drop
30 Saturday Last Day to Withdraw from
Classes

August

4 Thursday Early Advisement &
Registration for Fall 2005
18 Thursday Last Day of Classes

For a more detailed 2004-2005 academic calendar, see
www.essex.edu/academic/calendars

Admission

Qualifications for Admission

Essex County College admits individuals who are at least 18 years of age or who have earned a high school diploma or General Education Development (GED) certificate. This open admissions policy does not apply to persons seeking degrees or certificates from the Nursing and Allied Health programs.

You can obtain an application by calling the main campus at (973) 877-1941, or the West Essex Campus at (973) 403-2560. Alternately, you can secure an application on-line at webservices.essex.edu

It is recommended, though not required, that students enrolling at Essex County College have taken the following course work during high school:

College-preparatory English	minimum 4 years
College-preparatory science	minimum 3 years
College-preparatory mathematics	minimum 3 years
Foreign language	minimum 2 years
Social studies	minimum 2 years

Application Procedure

Step 1

Complete the Essex County College application and submit it with the non-refundable \$25.00 fee. All applicants should submit a completed application by August 1 for the Fall semester, December 1 for the Spring semester, April 1 for Summer I, and June 1 for Summer II.

Step 2

Request that your high school and prior colleges send official transcripts to the Enrollment Services Express Center at the main campus or Enrollment Services at the West Essex Campus. If you earned a GED, submit official documentation to the Enrollment Services Express Center.

Step 3

All new students seeking a degree or certificate are required to complete a pre-enrollment placement test given by the Enrollment Services Express Center. This college placement test is used to determine placement in college-level or developmental courses. You will receive an appointment to take the test with your acceptance letter.

Exemptions from Placement Testing

- If you have already transferred in college-level credits in English composition and mathematics, with grades of “C” or better.
- If you have SAT scores of 500 or higher on both the verbal and mathematics sections, or ACT scores of 21 or higher in English/Reading and 21 or higher in Math.
- If you took a placement test at another New Jersey college in the last three years; the scores should be sent to the Enrollment Services Express Center.
- If you have already earned an associate or higher degree from a U.S. college; appropriate documentation must be provided to the Enrollment Services Express Center.

Step 4

If you are applying for financial aid, you need to complete the Free Application for Federal Student Aid (FAFSA). For assistance with filing the FAFSA on the Internet, students can visit the Assessment Lab located in Room 4191 at the main campus or the Enrollment Services Department at the West Essex Campus. Or you can log on to the website www.fafsa.ed.gov. Applicants for financial aid must have a high school diploma, GED, or demonstrate the ability to benefit from programs offered at Essex County College. For more information, contact the Financial Aid Office at (973) 877-3200.

Step 5

All full-time students are required to provide proof of immunization for measles, mumps, and rubella. Your official immunization record from your high school or health care provider should be mailed or faxed to the Health Services Office at (973) 877-3127. Be sure to include your name and Social Security number on all documents.

Step 6

Following placement testing, you will receive an appointment to attend an orientation/advisement session. You will meet with your advisor to develop a schedule and register for classes.

Transfer Student Admissions

Students who have completed courses at another accredited post-secondary institution and want to transfer credits to Essex County College must submit official transcripts from the other institution(s), a completed application, a \$25.00 non-refundable fee, and an official high school transcript or equivalent. **Please note that these documents become the property of ECC and will not be released to a third party or to the**

student. Any transfer student who has not taken the required placement examination in the last three years and does not transfer credits for college level mathematics and English composition must take the placement examination. Credit may be granted provided that the course is comparable to a course required in the applicant's chosen major field of study. A minimum grade of "C" is required for a course to be transferable.

As transcripts are received, credits are evaluated on a course by course basis. Students will be notified in writing as to the specific courses and credits that were accepted. To graduate, transfer students must complete at least half their major course requirements and half their total credits at Essex County College.

Readmission

A student previously enrolled at Essex County College who has not been in attendance for three or more years must apply for readmission. The student must complete and return an application for readmission to the Enrollment Services Express Center at the main campus or Enrollment Services at the West Essex Campus. A \$25.00 non-refundable readmission fee is required. The student may be required to re-submit an official copy of high school transcript showing receipt of high school diploma or official documentation that a GED has been received. A re-admitted student who has not completed developmental courses is recommended to re-take the college placement test.

International Student Admissions

International students are admitted to the College through the Enrollment Services Express Center. Applicants interested in obtaining an F-1 (full-time student) visa must complete an application for a Form I-20 in addition to the application for admission.

For students applying from outside the United States, the application deadlines are as follows:

- Completed applications filed before June 1 are accepted for Fall Semester.
- Completed applications filed after June 1, but before October 1, are accepted for Spring Semester.

International students who wish to transfer to ECC from another U.S. college must meet the following deadlines:

Fall Semester	July 15
Spring Semester	November 15

Supporting Documents (International Students)

All international student applicants must submit to the Essex County College Enrollment Services Express Center the following documents in addition to the application for admission:

- Application for Form I-20.
- Educational credentials, which indicate the equivalence of high school degree in the United States.
- Affidavit(s) of financial support and required financial evidence.
- Affidavit of room & board (if applicable) and required evidence.
- All documents must be current and in English.

International students transferring from another U.S. institution must submit the following additional documents:

- International Student Advisor's Report Form
- Passport, visa, and Form I-94
- All previously issued Form I-20s
- Official college transcript

For more information, contact the Enrollment Services Express Center or International Student Advisor Office or visit our Web site at www.essex.edu

Declaration of a Major

Students declare their major by indicating the appropriate curriculum code for their major field of interest on the application for admission. Only students pursuing a degree or certificate are required to declare a major. Students interested in Nursing and Allied Health may indicate a pre-major curriculum code on their application for admission. Any student requiring remedial or bilingual instruction as a result of the College Placement Examination must complete all required courses prior to being advised for their major field of interest.

Admission to Nursing and Allied Health Programs

Admission to the following specialized programs is subject to additional criteria.

- Dental Assisting
- Dental Hygiene
- Massage Therapy
- Nursing
- Ophthalmic Dispensing
- Physical Therapist Assistant
- Radiography
- Respiratory Care

Applicants to these Allied Health and Nursing programs must meet special admissions requirements. Students are admitted to the Nursing and Allied Health programs only on the approval of program admissions committees and after satisfactorily completing specified pre-major requirements. For information on the requirements, refer to the Degree and Certificate Programs section of this catalog; use the Academic Programs Index in this section to locate the individual programs and find detailed information on them.

Enrollment Status and Student Categories

The College recognizes the following categories of students as either full-time (registered for 12 or more credits per semester) or part-time (registered for less than 12 credits per semester).

Matriculated Students:

Students officially enrolled in programs of study leading to a degree or certificate.

Non-matriculated Students:

Students taking credit courses for personal interest, career advancement, enrichment, or transfer to another college where they are matriculated. **Non-matriculated students are not eligible for financial aid.** It is recommended that non-matriculated students enroll in no more than two courses a semester and that at the completion of 12 credits they change their status. If a non-matriculated student wishes to apply for matriculation, the student must meet with an academic counselor to review the requirements and complete the necessary paperwork for matriculation.

Registration

Registration dates will be announced in advance by the College. Returning students can register on-line at webservices.essex.edu or in-person at designated registration sites. Newly admitted students must attend orientation/registration sessions on campus.

Holds

A “Hold” may be placed against the records of any student who does not provide a valid address, pay all bills by specified deadlines, return library books, complete immunization requirements, return athletic equipment or other College property, respond to official College correspondence, or comply with other College regulations. A “Hold” prevents a student from registering for classes or receiving grades or a transcript.

Course Schedule

A schedule of classes listing the days and times for each course will be published and are generally available prior to registration. The course schedule can also be viewed on-line through the College website.

The College reserves the right to change or cancel any course or courses if this is deemed necessary by departmental or College needs.

Registration Procedures

New Students

1. Apply to the College by completing and submitting an application for admission and complete the pre-enrollment test (college placement test).
2. Attend new students orientation and complete the advisement and registration process.
3. Make payment to the Bursar’s Office.

Non-matriculating Students

1. Apply to the College by completing and submitting an application for admission. Non-matric students must bring a college transcript or written permission from the home school to verify course prerequisites.
2. Report to the academic division/department where the course is being offered.
3. Take the completed, signed advisement/registration form to a designated registration site.
4. Make payment to the Bursar’s Office.

Returning Students

1. Report to your major academic division/department at the main campus or the multipurpose room at the West Essex Campus for advisement on any of the schedule registration dates.
2. Register on-line at webservices.essex.edu or in-person at designated registration sites.
3. Make payment to the Bursar's Office.

Adding and/or Dropping Courses

Registered students can drop or add courses on-line at webservices.essex.edu anytime during the registration and add/drop period. Courses dropped during the add/drop period will not appear on the student's permanent transcript.

Cross Registration

Students may register under certain conditions for a course at Rutgers-Newark or New Jersey Institute of Technology through the cross registration process. Students must complete an exchange registration form, obtain prior approval from the division chairperson of their major, and report to the host school Registrar to complete the registration process. Tuition will be charged at the Essex County College rate and is payable to the home school. Cross registration is not available during the summer terms. Students must adhere to the registration, add/drop, and withdrawal procedures of both the home and the host school.

Auditing a Course

Auditing a course provides students with the opportunity to explore academic areas of interest. Students must declare intent to audit a class by the specified deadline date. Once a student declares intent to audit, the audit grade cannot be changed to a letter grade. No credit is granted for audited courses and a grade of "Audit" cannot be used to fulfill graduation requirements.

Enrollment Services Express Center

The Enrollment Services Express (ESX) Center, located on the 4th floor of the main campus, was established to provide quality customer service to current and prospective students. The Center provides a one-stop service in admissions, testing, registration, graduation, grades, transcripts, and general financial aid inquiries. The tests administered at the Center are: Placement test, College Level Examination Program (CLEP), and the General Education Development (GED) test. The Center is staffed by caring and qualified staff to assist students. The Center operates Monday through Thursday from 9:00 a.m. to 6:30 p.m., and Friday, from 11:30 a.m. to 4:30 p.m. To contact the Center, please write or call:

Essex County College
Enrollment Services Express Center
303 University Avenue
Newark, NJ 07102
Phone: (973) 877-3100. Email: ESX@essex.edu

FINANCIAL REQUIREMENTS AND FINANCIAL SERVICES

Tuition and Fees

Tuition and fees at Essex County College are established by the College's Board of Trustees. Those presented here are for the 2002-2003 academic year only.

Students should also consider other expenses (meals, books, transportation, etc.) which will vary widely from student to student. Book charges for some full-time students may be as high as \$500 per semester. A student whose funds are limited must plan carefully for a workable budget.

The College recognizes that many students need financial assistance in order to attend college. To help them, the Financial Aid Office administers various types of federal and state aid. Counselors also have information and can give advice concerning employment opportunities and methods of handling personal finances.

Essex County College reserves the right, with no prior notice, to restructure tuition and fee rates.

Tuition

Tuition is based on the total number of credit hours or instructional hours for which a student registers.

Category	Out of County & Out of State Residents	
	In County Residents	Out of State Residents
Tuition per credit hour	\$73.50	\$147.00
Non-credit tuition per instructional hour	6.50	6.50

Tuition and Fees Schedule

Item	In County	Out Of County
Application Fee	\$25.00	\$25.00
Audit Fee Per Credit Hour	73.50	147.00
CEU Certificate Fee	8.00	8.00
CLEP Fee Per Session	12.00	12.00
Course Change Fee Per Transaction	15.00	15.00
Deferred Payment Default Fee	100.00	100.00
Deferred Payment Plan (Enrollment Fee)	35.00	35.00
Degree Audit Fee (Initial Degree or Certificate)	35.00	35.00
Degree Audit Fee (Additional Degree or Certificate)	20.00	20.00
Dishonored Check Fee	35.00	35.00
General Fee per Credit Hour	20.00	20.00
ID Card Replacement fee	5.00	5.00
Late Payment Fee	25.00	25.00
Late Registration Fee	25.00	25.00
Medical Insurance Fee Per Year	38.00	38.00
Medical Insurance Fee - Spring Only	29.50	29.50
Non-Credit Computer Lab Fee Per Instructional Hour	1.00	1.00
Non-Credit Tuition Per Instructional Hour	6.50	6.50
Off-Campus Registration Fee Per Course	5.00	5.00
Readmission Fee (Non-Refundable)	25.00	25.00
Student Activity Fee Per Credit Hour	5.00	5.00
Testing-Out Fee Per Credit Hour-Letter Grade	73.50	147.00
Testing-Out Fee Per Credit Hour	50.00	100.00
Transcript Fee - Official Copy	5.00	5.00
Transcript Fee - Unofficial Copy	5.00	5.00
Tuition Per Credit Hour	73.50	147.00

Laboratory Fees

A laboratory fee is charged in addition to tuition for specific courses identified in the course descriptions section of the catalog. This fee helps defray the costs

of additional class hours, special instruction, special equipment and materials, special facilities, and/or expendable supplies required in the indicated course. The fee varies depending on the course.

Essex County Residents

To qualify for the in county tuition rate, students must have continuously resided in the State of New Jersey for at least one year and must have established permanent residency in Essex County for at least one day before the first day of the semester. Students who have established permanent residency in Essex County before the first day of the semester, but have resided in the State of New Jersey for less than a year, will be charged the out of county tuition rate. Students moving from out of county to in county, and in county residents who have met the one year state residency requirement, must submit a Change of Address form and a Tuition Rate Adjustment Request form with supporting documents to the Enrollment Services Express Center before the first day of the semester.

Out of County Residents

All other students who have not established permanent residency in Essex County are charged at the “Out of County Resident” tuition rate. These include students with F-1, H-1, or J-1 Visa, Temporary Residents, and those with Employment Authorized status. Please note that in accordance with N.J.S.A. 18A:64A-23, pursuant to the Chargeback Laws of 1968, out of county residents who are eligible for chargeback assistance must apply to their home County College and home County Treasurer for a tuition chargeback. The chargeback forms should be presented to the ECC Bursar’s office by the end of the second week of class to obtain a 50% credit against tuition.

Tuition Payment Methods

Full Payment

Full payment of registration bills may be made in cash, by check (certified or personal), by money order, by credit card (Visa/Master Card), or via web services (webservices.essex.edu). Any student who has previously presented a dishonored check to the College cannot pay tuition with a personal check. Full payment by cash or credit card will be accepted at the Cashier window at the Fourth Level in the main campus and at the Bursar’s Office in the West Essex Campus.

Tuition Payment Mail Drop System

If you are paying your bill by money order, cashier check, certified check, or personal check, it is not

necessary to wait on line. You can mail your full payment to the Bursar’s Office or use the tuition payment mail drop system available for your convenience in Room 4121 (Bursar’s Office) at the main campus and at the Bursar’s Office window at the West Essex Campus. Simply follow the instructions imprinted on the envelopes provided to ensure proper payment. If any of your previous personal checks were returned to the College for insufficient funds, you can still use the tuition payment mail drop system, but you must pay by money order, cashier check, or certified check.

Tuition Payment by Telephone

You may call the Bursar’s Office at (973) 877-3099 to make payments by Visa or Master Card. The student service representative will take your payment information over the phone, process your transaction, post the payment to your student account immediately, and mail your receipt within one business day.

Deferred Payment Option

For students who are unable to pay the full amount of their bill at registration, the College makes available a deferred payment plan. The plan allows the student to pay the tuition bill in a number of installments. Contact the Bursar’s Office at (973) 877-3099 to obtain a detailed description of the plan.

Tuition Refund Policy

All cash paying students (non-financial aid) who officially withdraw from the College (by completing and submitting a withdrawal form to the Enrollment Services Express Center), or officially drop a course or courses, may receive a tuition refund based on a refund schedule available at the Bursar’s Office. Students who withdraw after the dates listed in the schedule will be responsible for payment of the entire bill. Students who are on a deferred payment plan must also follow the schedule and arrange to pay any outstanding balance if the recalculation of tuition and fees is larger than the amount already paid.

To be eligible for a refund or adjustment, a student must officially drop or withdraw from the class.

Non-attendance does not constitute an official withdrawal and is not covered by the refund policy. A withdrawal becomes effective the day the individual gives written notice to his/her academic division counselor. Written notice by mail becomes effective the day after the letter is postmarked. The processing of refunds takes approximately 30 days. Refund checks are made available through the Bursar’s Office.

Note: Fees are non-refundable except for course

cancellations and for withdrawals prior to the first day of the semester.

Consequences of Not Meeting Payment Obligations to ECC

- Students who do not make the required payment by the scheduled due date will have their registration canceled.
- Students who enrolled in the deferred payment plan will be charged a \$100.00 deferred payment default fee if their account is not paid in full by the end of the semester. This fee is in addition to any late fee assessments.
- ECC's collection policy is to forward past due accounts to a designated collection agency. If your account is forwarded, it may have a detrimental effect on your ability to obtain credit in the future.

Tuition Waivers

Senior Citizens

Tuition and fees will be waived in credit courses for senior citizens under certain conditions. In order to qualify, individuals must be:

1. Residents of Essex County;
2. Sixty (60) years of age or older; and
3. Registered in courses on a space available basis, subsequent to the determination that the minimum enrollment of tuition-paying students has been met.

Unemployment

Tuition and fees may be waived for students who are unemployed. Students must be referred by their local unemployment office.

New Jersey National Guard Members

Tuition of up to 15 credits per semester will be waived for qualifying national guard members. For eligibility requirements, contact ECC's VA Certifying Officer/ Recruiter at the Enrollment Services Express Center at (973) 877-3154.

Firefighters

Tuition of up to \$600 per year will be waived for qualifying volunteer firefighters and their immediate family members. To qualify, the member or member's spouse or child must do the following:

- Present to the Bursar's Office a letter of eligibility or Certificate of Authorization/Voucher from the

appropriate municipality/organization. This voucher is valid for one year from the date of issuance.

- Be registered in courses on a space available basis, subsequent to the determination that the minimum enrollment of tuition paying students has been met.

Student Health Insurance

The State of New Jersey requires health insurance for all full-time students (12 or more credits). All Essex County College full-time students will automatically be charged for health insurance once each academic year, either during the Fall or Spring semesters. Students are responsible for filing any insurance claims.

Students who produce documentation indicating existing health coverage can complete a waiver card to drop the College plan and receive a credit equal to the premium charged on their bill. Waiver cards must be completed by the second week of classes and submitted to the Bursar's Office.

Financial Aid

The Financial Aid Office administers funds from federal and state sources in the form of grants, scholarships, and employment, or a combination of all three. ECC's financial aid program is designed to assist students who seek an education but lack the means to finance it. Applicant eligibility and program guidelines are determined by federal and state regulations. Students interested in applying for financial aid must file the Free Application for Federal Student Aid (FAFSA) which is used to determine eligibility for all federal and state funds. This form can be obtained in the Financial Aid Office and is also available in public libraries and high school guidance offices. Students can also file the FAFSA via the Internet by logging on to the website www.fafsa.ed.gov or by visiting the Assessment Lab located in Room 4191 (main campus) where staff will assist them with the process.

Applicants for financial aid must demonstrate the ability to benefit from the programs offered at ECC by having either a high school diploma or GED, or by successfully passing a test approved by the U.S. Department of Education. Essex County College participates in the following financial aid programs:

- Federal Pell Grant
- Federal supplemental Educational Opportunity Grants (SEOG)
- Tuition Aid Grant (TAG)
- Educational Opportunity Fund Grant (EOF)
- Garden State Scholarship (GSS)

- Edward J. Bloustein Distinguished Scholars Program
- Federal Work-Study Program
- New Jersey Class Loan Program.

All students interested in applying for these financial aid programs should review the Financial Aid Information Booklet for eligibility requirements and procedures. The booklet can be obtained at the Enrollment Services Express Center or the Financial Aid Office.

Financial Aid Checklist

To ensure your aid is processed on time, please use this checklist as your guide for completing the financial aid process.

New Students – (Check all items that apply to you)

- ___ 1. Applied and accepted for admission to ECC.
- ___ 2. Taken the College’s Placement Test.
- ___ 3. Taken the Ability to Benefit Test, if a Non-High School graduate.
- ___ 4. Submitted all required documents and forms to complete your application for aid by **July 1** for Summer II Term and Fall Semester or by **October 1** for Spring Semester and Summer I Term.
- ___ 5. Registered for 12 or more credits, if you want to receive State Aid (TAG and EOF).
- ___ 6. Received an Award Letter from the ECC Financial Aid Office.
- ___ 7. Picked up a Book Voucher from the Financial Aid Office, if you have funds remaining after tuition and fee charges were deducted from your financial aid award.
- ___ 8. If you answered “No” to number 6 above, have you signed up with the College’s Deferred Payment Plan to maintain your class enrollment?

Returning Students: (Check all items that apply to you)

- ___ 1. Taken and passed the Ability to Benefit Test, if a Non-High School graduate.
- ___ 2. Registered for 12 or more credits, if you want to receive State Aid (TAG and EOF).
- ___ 3. Submitted all required documents and forms to complete your application for aid by **May 1** for Summer II Term and Fall Semester or by **September 1** for Spring Semester and Summer I Term.
- ___ 4. Received an Award Letter from the ECC Financial Aid Office.
- ___ 5. Picked up a Book Voucher from the Financial Aid Office, if you have funds remaining after tuition and fee charges were deducted from your financial aid award.

- ___ 6. If your answer is “No” to number 3, have you signed up with the College’s Deferred Payment Plan to maintain your class enrollment?

Satisfactory Academic Progress

Federal and state regulations require students receiving financial aid to maintain satisfactory academic progress. Satisfactory academic progress is evaluated once per year. Please see your financial aid officer for specific information.

Financial Aid Tuition Adjustment

The U.S. Department of Education has established a regulation for the Return of Title IV Funds to students who totally withdraw from all their classes. This policy applies to students receiving funds from the Pell and Supplemental Educational Opportunity Grant Programs. Awards will be adjusted for students who totally withdraw from all classes during an academic semester. Students are required to complete 60% of the semester to earn all aid awards. If the amount disbursed is greater than the amount the student has earned, unearned funds must be returned to the Department of Education by the College and/or the student. Please see your Financial Aid officer for specific information.

Financial Aid Refund Policy

Students receiving financial aid who totally withdraw or are reported for not attending classes will be subject to a refund of tuition established by the financial aid programs. Refunds are determined from the adjustment schedule published in the Financial Aid Information Booklet. This may result in all or part of the refund being returned to the student financial aid programs.

Scholarships

Essex County College awards many scholarships to both returning and graduating students. There are three types of scholarships for returning students: presidential, international, and external donor scholarships.

Returning students may apply for international or external donor scholarships. Presidential scholarships are awarded by the President of Essex County College. International scholarships are open to students with F1 visa status. Eligibility criteria for external donor scholarships vary. Students receiving financial aid are not eligible for international or presidential scholarships. External donor scholarships may be awarded based on a student’s unmet financial need. Students must apply for scholarships 15 days prior to the last day of classes. Application forms for Fall are available during the first week of April and those for Spring are available during the first week of October.

Graduating students may apply for transfer scholarships. Every year, over 20 organizations provide scholarships to graduating students from Essex County College who have been accepted as transfer students at four-year colleges and universities. This category of scholarships does not exclude students on financial aid. Applications are mailed to all students eligible for graduation during the first week of February.

The college also offers a limited number of book scholarships every semester to returning students. Details of the criteria, application procedures, and deadlines are available in the Office of the Dean of Student Affairs, Room 5105.

Academic Policies

Academic Calendar and Course Load

Semesters and Summer Terms

The fall and spring semesters are 14 -16 weeks long. The two summer terms are seven and six weeks long, respectively. Students must enroll in at least one academic semester or term within a three-year period to maintain active enrollment.

Academic Program Course Load

A normal course load for full-time students is 12 to 16 credits during a semester and six to nine credits during a summer term. Foreign students and students receiving state financial aid must be enrolled full-time, i.e., 12 or more credits per semester. A student who wishes to take 16.5-18 credits in a given semester must have a grade point average of 3.0 or higher. A student who wishes to take 19-21 credits in a given semester must have a grade point average of 3.5 or higher; any such course load must be approved by a divisional chairperson. An academic dean must approve requests in excess of 21 credits.

Academic Standing

Transfer Credit

Credits transferred from other regionally accredited colleges and universities will be included in the total number of credits earned at ECC. In order to transfer, such credits must relate to courses and programs offered by ECC. Courses transferred from other institutions of higher learning must carry grades of “C” or higher. Transfer students must complete at least half their major course requirements and half their total credits at ECC. Credits from institutions not accredited by

regionally accredited agencies (e.g., Middle States) will not be accepted; however, credit may be granted to students who “test out” (i.e., demonstrate mastery of subject content via examination), when such tests are available. The same guidelines pertain to students who wish to transfer courses into the College’s certificate programs; half of the credits for such programs must be completed at ECC.

Testing Out – Letter Grade

The College has initiated a “testing out” procedure in some courses to allow students to receive credit for a course when they can demonstrate the level of proficiency necessary to satisfy the requirements for the course. Students must register and pay for the course. Students must consult with the academic division where the course is offered.

Credit by Examination

ECC’s Credit by Examination Program enables students with appropriate knowledge and experience to secure college credit. Credit will be granted to students admitted to ECC who pass examinations approved by Enrollment Services and appropriate academic departments. In some instances it may not be possible to offer credit by examination because no relevant test exists in certain disciplines. When granted, a grade of “CR” will be entered as transfer credit on each student’s transcript.

Credit by examination may be granted for the Defense Activity for Non-traditional Educational Support (DANTES) and the College Level Examination Program (CLEP).

Students interested in applying for credit by examination should contact either the Enrollment Services Express Center or the appropriate academic division.

Change of Major

To change a major or to add a second major, a student should discuss the proposed change with a counselor or faculty advisor, complete a Change of Major form, and return the signed form to the Enrollment Services Express Center. Graduation requirements will be those in effect on the date the student matriculates in the new major.

Repeating a Course

When a student earns a “D” or “F,” he or she may repeat the course in an attempt to earn a higher grade. Although the “D” or “F” remains on the transcript, the higher of the two grades will be counted in the cumulative grade point average. When a student earns a “D”

or “F” in a remedial/developmental course (i.e., a course below the 100-level), the student must repeat the course before enrolling in the next course in the sequence. A student may not repeat a course more than once except with the written permission of a counselor.

Academic Progress

Guidelines for academic progress and good academic standing include the following:

- Good Academic Standing is defined as a cumulative grade point average (GPA) of 2.0 or above. Students are advised that they must attain an overall GPA of 2.0 or above to graduate from ECC’s degree or certificate programs.
- Probation is defined as a cumulative combined GPA of less than 2.0. A student whose cumulative combined GPA goes below 2.0 is placed on probation.
- Suspension (for one academic period) occurs when a student with a cumulative combined GPA of less than 2.0 earns a GPA of less than 2.0 in a successive term.
 - A. A student who is suspended from the College may appeal for reinstatement or may remain suspended for one semester before applying for reinstatement.
 - B. A student who is reinstated after suspension must complete a minimum of nine credits with a GPA of 2.0 or higher to be considered as making satisfactory academic progress.
 - C. A previously suspended student who is readmitted and who attains a cumulative GPA of less than 2.0 two terms after being readmitted will be dismissed.
- Dismissal from the College for two years occurs when a student who has been reinstated after suspension receives an academic period GPA of less than 2.0. Students returning after dismissal are not eligible for financial aid until they have successfully completed nine credits with grades of “C” or above.
- Academic probation is defined as a cumulative combined GPA of less than 2.0 followed immediately by a semester GPA of 2.0.

Students are responsible for ensuring that they complete all requirements for their degrees and certificates listed in departmental handouts and the College catalog.

Appeal Process

A student suspended or dismissed from the College may appeal for reinstatement through the Academic Review Committee (ARC) by submitting an appeal letter to the Dean of Student Affairs. The Review

Committee will meet with the student and review the appeal. A reinstated student will not be eligible for financial aid until he or she has successfully completed nine credits with grades of “C” or higher.

Attendance

Regular and prompt attendance is essential for academic success. Faculty members take attendance at each scheduled class session. Students are expected to attend and be on time for all classes. Individual faculty members may establish specific attendance policies. It is the responsibility of the student to know and follow the attendance policy as required for each course. Students with excessive absences may be referred to a counselor. Insufficient attendance at regularly scheduled classes may result in failure or removal.

A student who is absent from all classes during the first ten class days of the fall and spring semesters will be recorded as a “No Show.” A withdrawal will appear on the student’s record and the student will be notified of the “No Show” status by the Registrar’s Office. Students are advised that “No Show” status in one or more courses may affect their eligibility for financial aid and veterans’ benefits.

Students who stop attending classes and do not formally withdraw will be recorded as “not in attendance” and will receive grades of “F.” This status may also affect their eligibility for financial aid and veterans’ benefits.

Academic Forgiveness

The College’s academic forgiveness policy provides previously enrolled students who have been away from the college for at least three years and have successfully completed a minimum of 12 college level credits with grades of “C” and above with an opportunity to pursue a single “fresh start” at ECC. Under this policy, all courses together with grades earned prior to readmission will remain on the student’s transcript but will not be used in computing the student’s overall grade point average; neither can any of the previously taken courses be used to fulfill degree or certificate requirements.

Applications must be made through an academic counselor who will review and discuss it with the student before submitting it to the chairperson of the division or department in which the student intends to pursue a major. If approved by the chairperson, it is forwarded to the appropriate dean. The Financial Aid Office will in turn review the request to determine what, if any, financial aid implications exist, will apprise the student,

and will forward the approval to the Registrar for implementation.

Grades

Grading System

Letter Grade	Description	Grade Points Per Credit Hour
A	Superior	4.0
B+	Very Good	3.5
B	Good	3.0
C+	Above Average	2.5
C	Satisfactory	2.0
D	Passing	1.0
F	Failing	0.0
I	Incomplete	0.0
	Grade denotes student has completed 75% of assigned course work with a grade of "C" or better but did not complete all course requirements. The faculty member must attach a completed Essex County College "Incomplete Grade Form" to the final grade sheet. After six months, the original "I" will be recorded as an "F" unless it is changed by the instructor.	
W	Withdrawal	0.0
	Grade denotes official withdrawal from a course or from the college.	
AU	Audit	0.0
	Grade denotes student was not enrolled in the course for credit.	
CR	Credit	0.0
	Grade reserved for courses passed by examination or accepted as transfer credit and indicates satisfactory completion of a course.	

Grades of "D" may not fulfill certain course prerequisites and major course requirements and will not transfer to other institutions.

Grades of "W," "AU," "CR" and "I" are not counted in the computation of grade point averages.

Withdrawal

Students who wish to withdraw totally from the college must contact a counselor to discuss financial aid and other important implications. Failure to attend classes or merely notifying one's faculty member(s) is not an official notice of withdrawal. In cases of emergency, written notice may be mailed to the counselor. Such written notice becomes effective one day after the letter is postmarked.

Students may apply for and receive a grade of "W" up to the week following the mid-term grade reporting period. The last day for withdrawals shall be posted for each semester and term in the College calendar and schedule books.

Grade Point Average

Academic achievement during a semester or term is measured by a student's grade point average (GPA). The measure of academic achievement for all work completed is referred to as the Cumulative Grade Point Average (CGPA).

A semester GPA is determined in the following way:

1. Allowing 4 points for an "A," 3.5 points for a "B+," 3 points for a "B," 2.5 points for a "C+," 2 points for a "C," 1 point for a "D," and 0 points for an "F," multiply the number of points equivalent to the letter grade received in each course by the number of semester hours for the course, thus arriving at the grade points earned for each course.
2. Add the grade points in each course to obtain the sum of grade points for the semester's work.
3. Divide the total grade points by the total number of semester hours attempted. The result is the grade point average.

The following example illustrates the GPA of a student with grades in five courses.

Course	Grade	Semester Hours	Point Equivalents	Grade Points
Biology	B	4	x 3.0	12
Math	C	3	x 2.0	6
English	C+	3	x 2.5	7.5
Sociology	C	3	x 2.0	6.0
Business	B	<u>3</u>	x 3.0	<u>9</u>
		16		40.5

40.5 (total grade points) divided by 16 (semester hours attempted) = 2.53 GPA

The CGPA is calculated in the same way as the semester GPA except that all attempted semester hours are taken into account. The student's CGPA will include only those courses taken at Essex County College. The Degree GPA is calculated in the same way as the CGPA except only attempted college-level credits are included.

Grade Reports

Final grades are submitted to the Registrar's Office and recorded as part of each student's permanent record. The Registrar will mail grade reports to all students who do

not have outstanding obligations to the college. Students can view grades on-line at webservices.essex.edu.

Mid-term grade warnings are issued to all students whose work is unsatisfactory or failing. Mid-term grades are for advisory purposes only and are not included in students' records.

Grade Changes – Time Limit

All approved grade changes must be submitted to the Enrollment Services Express Center (Registrar's Office) within one year of the original grade assignment.

Class Standing

A freshman is defined as a matriculated student working toward a degree who has earned 29.5 or fewer college-level credits. A sophomore is defined as a matriculated student working toward a degree who has earned 30 or more college-level credits.

Dean's List

A Dean's List is published every semester. Full-time students named to this list must have earned a grade point average of 3.5 or higher in that semester and have no "I" grades or any grade lower than "C" for the semester in which the student is named. Only college-level courses are computed. Part-time students are also eligible. To qualify, part-time students must also have earned a 3.5 or higher grade point average, no grade of "I," no grade lower than "C," and at least 12 college-level credits within a given academic year (e.g., 2002-03, 2003-04).

Transcripts

A student may request an official copy of his or her permanent academic record by submitting a written request for a transcript to the Registrar's Office. The transcript becomes official when the College seal is affixed and the Registrar's signature is appended.

All requests for transcripts must be in writing. Transcripts will not be released until all outstanding obligations to the College are satisfied. A small administrative fee is charged current and former students for each transcript that is generated.

Graduation

Degree Audit

Upon completion of 45 college-level credits, all matriculated students receive degree audits to determine their compliance with requirements in their primary majors.

Students who are pursuing second majors should request such audits at the same time. The Registrar's Office will notify each student of his or her graduation status after the degree audit is conducted. Students in certificate programs should also apply for audits to determine completion of requirements.

Graduation Requirements

Students who have successfully completed all requirements for degrees and academic certificates (30 or more credits) will be graduated from the College. Students are governed by the graduation requirements in effect at the time of their matriculation.

In order to graduate, students must have cumulative GPAs of 2.0 or better. Additionally, students must earn grades of "C" or better in all major courses. Credits transferred from other regionally accredited colleges and universities or earned via examination or Advanced Placement will be included in the total number of credits earned. Credits transferred from other institutions of higher learning must be "C" or higher. Transfer students must complete at least half their major course requirements and half their total credits at ECC.

Additional Degrees and Certificates

Students may earn a second degree if certain conditions are met. Students interested in declaring an additional major should do so through their academic advisors using a college-provided form ("Application for Second Degree"), indicating which major is primary and which major is secondary. Students must submit this form before they have accumulated 45 college credits. All requirements in both majors must be met in full. Students may not earn two separate degrees in the same discipline – e.g., accounting (A.S., A.A.S.), manufacturing engineering technology/mechanical engineering technology option, computer science/applied computer science. Courses from one discipline may be used to meet the requirements of the second discipline; however, a minimum of 12 additional credits of approved major subject area credits must be earned in the second discipline at ECC that were not used to satisfy requirements for the primary discipline. The same guidelines pertain to students seeking third and other successive degrees. The "Application for Second Degree" form will be completed by the student and his or her advisor, approved by the chairperson or director, and then by an academic dean or vice president, who will forward it to the Registrar. The Registrar will notify the student of the status of the application. The most frequent application for a second degree is expected to be among students in computer science who also seek to major in mathematics;

however, there are various combinations that might apply throughout the institution.

Students may also earn multiple certificates – academic certificates (30 or more credits) and/or certificates of completion (less than 30 credits). Courses used to satisfy the requirements for one certificate can be used to satisfy requirements for other certificate programs and degrees. However, it should be noted that a student who earns a degree in a given program cannot subsequently earn a certificate in that same program without taking additional course work.

Only students who have completed degrees and certificates with 30 or more credits will be invited to participate in annual commencement (graduation) ceremonies.

Graduation with Honors

Students will be graduated with honors as follows:

Highest Honors	CGPA	3.85 to 4.00
High Honors	CGPA	3.65 to 3.84
Honors	CGPA	3.50 to 3.64

These honors will be noted on students' transcripts.

Commencement

An annual commencement (graduation) ceremony is held in June. All students certified to graduate in degree and academic certificate programs are expected to participate in the graduation exercises. Students who are completing their requirements during the first summer term will be permitted to participate in graduation exercises.

Academic Integrity

Essex County College's trustees, faculty, and administrators are dedicated to mutual respect and the free exchange of ideas in classroom, laboratory, and other academic settings. Students who enroll at ECC join with these other individuals to observe guidelines regarding free inquiry, academic honesty, and civility in the classroom and related forums.

The College's administration recognizes the common interest of faculty and students in the pursuit of truth and understanding. This includes the right to present and the obligation to receive divergent views when legitimate intellectual differences exist.

Students are advised that their obligations in this respect include but are not limited to the following:

- To present only such homework assignments, term papers, examination papers, etc. that are the results of their own work;

- To honestly pursue research and scholarship by acknowledging sources used in term papers and other assignments;
- To refrain from fabricating sources and data;
- To practice fairness in competing with peers through recognition of others' rights to gain access to information and materials, respect for others' right of access to facilities and equipment, and adherence to rules governing their use;
- To accurately represent the results of experiments, surveys, and other findings; and
- To respect the rights of others to hold differing views based on reason, research, and recognized standards of evidence.

Moreover, any theft or alteration of academic materials, or the destruction of the academic work of others, constitutes a serious breach of academic integrity.

In the case of an alleged infraction, the appropriate divisional or departmental chairperson will handle the matter and if necessary initiate formal charges with an academic dean.

Student Right-to-Know

Students are advised that graduation rates and time to graduation by program are available from the Office of Institutional Research. Graduation rates for student athletes on scholarships are available from the Dean of Student Affairs' Office.

STUDENT SERVICES

Essex County College has qualified faculty and staff to help both day and evening students. We invite you to tour our megastructure or West Essex Campus, visit with faculty, and speak with an admissions officer. To schedule a tour or receive an application form from the main campus, write or call:

Essex County College
Enrollment Services Express Center
303 University Avenue
Newark, NJ 07102
(973) 877-3100 **or**

Essex County College
Office of Recruitment and Marketing
303 University Avenue
Newark, NJ 07102
(973) 877-1941

To schedule a tour or receive an application form from the West Essex campus, contact:

Essex County College
Enrollment Services
730 Bloomfield Ave.
West Caldwell, NJ 07006
(973) 403-2560

Parking

Parking is available for students at Essex County College when a valid parking decal is properly displayed on the student's vehicle. Decals can be purchased at the Bursar's Office for \$25.00 per semester. A parking decal is valid only during the semester for which it is purchased. Student parking privileges are on a first-come, first-served basis. Information on student parking can be obtained from the Public Safety Department, Room 2250 at the main campus, and the Campus Police at the West Essex Campus.

Food Services

ECC contracts for food services and provides a dining room with a variety of hot and cold meals, sandwiches, and desserts during day and evening hours at the main campus. Limited food services are provided at the West Essex Campus in the Student Lounge.

Bookstore

Essex County College has a bookstore on the main campus on the first level of the megastructure, and also one in the West Essex Campus. The stores carry textbooks and school supplies as well as paperbacks for supplementary classroom assignments and general reading pleasure. Software, computer disks, greeting cards, and many other items are available, as well as a large selection of gift items and apparel bearing the distinctive Essex County College crest.

Student Identification

All I.D. cards are issued free of charge to new students by the Public Safety Department. To obtain an I.D. card, all students must have two pieces of identification (a driver's license and a Social Security card are commonly used). Students must also present proof of tuition and fee payment for current registration. The student's I.D. card authorizes access to ECC and use of its facilities (e.g., library and computing labs); therefore, it must be retained by the student throughout the student's stay at ECC. Lost or mutilated cards may be replaced upon payment of a \$5.00 fee at the Public Safety Department. Further information regarding I.D. cards can be obtained from the Department.

Counseling

Counselors at Essex County College work with students to help them grow personally and academically. Students maximize their potential through the services of these professionally trained counselors. Counselors provide students information about College requirements and procedures, academic programs, financial services, and transfer and employment matters. Students who need assistance with self-improvement concerns, study and test-taking skills, time management, personal issues, and career decision making can find help through his or her counselor.

Counselors are assigned to students according to the academic major or program such as Educational Opportunity Fund (EOF) and Special Programs. Counselors are located throughout the College in divisional and departmental areas and also at West Essex, FOCUS, and Ironbound Extension Centers. This allows the counselor to meet students and consult with faculty members in the area in which the major or program is located. Counselors are available on both an appointment and a walk-in basis. Counselors serve on, and in some cases, chair College wide committees and teach Career Planning and Freshman Orientation courses.

Freshman Center

The Freshman Center is an office staffed by successful continuing students who help acclimate new students to college life. The Center offers personalized attention through mentoring and providing information and referral to the many resources and departments at ECC. Orientation activities, faculty and student mentoring, weekly open discussions, and drop-in services are also offered by the Center. Under the supervision of the Center, graduates of the College also serve as student support specialists assisting in advisement, registration, and mentoring activities.

Veterans Affairs

The Office of Veterans Affairs (OVA) provides assistance to the veteran population at Essex County College, both at the main and West Essex Campus locations. At the main campus, the office is located on the fourth level of the megastructure as a part of the Office of Recruitment and Marketing. The office provides certification services for qualifying veterans and their eligible dependents. Eligibility determination is made by the Veterans Administration. Veterans have ten years from their date of separation from active duty to use their entitlement. All of ECC's degree and certificate programs are approved by the New Jersey Department of Military and Veterans'

Affairs, the state approving agency under Title 38, U.S. Code, Section 1775, for veterans training. Students receiving VA educational benefits may not withdraw from the College without notification to the Veterans Certifying Officer. The date of withdrawal will be the determining date for benefits.

International Student Services

International students are assigned to a special advisor in the Recruitment/Marketing office. The International Student Advisor is available for direction concerning visas, travel to other countries, and communications from the Immigration and Naturalization Service. Every effort is made to bring international students into the life of the community and to make their stay in the United States a meaningful experience. International understanding is strengthened by the many contacts these students have in the social and cultural organizations of the College community. Housing facilities are not provided by the College.

Child Development Center

The Essex County College Child Development Center, located on the first level of the Physical Education Building, provides a full-day educational program for children between the ages of two and five. The Center is accredited by the National Academy of Early Childhood Programs. Services are available to children whose parents are enrolled or employed at Essex County College. The Center is also open to the Essex County community on a space available basis. The Center operates 52 weeks per year, Monday through Friday from 7:30 a.m. to 5:00 p.m. During the Fall and Spring Semesters, the Center also offers evening hours.

Career Resource Center

The Career Resource Center, located on the fourth floor of the megastructure, assists ECC students and alumni in all aspects of their career development by providing career counseling, vocational counseling, job search skills workshops, resume referral services, and placement opportunities. The Center maintains a resource library and periodically schedules job fairs and on-campus recruitment by area employers.

The Center also provides information and guidance on transfer to four-year institutions. The Center maintains a library of college catalogs and other information to facilitate the transfer process. Information available includes admission policies and procedures, application deadline dates, credit evaluation procedures, and direct transfer agreements.

Disability Support Services

The Office of Disability Support Services, located in the Career Resource Center, coordinates and implements services for disabled students. The College also networks with various agencies to complement its services.

Health Services

The Health Services Department provides basic health care to ECC students for minor illnesses and injuries. Other services include immunizations, vision and hearing screenings, counseling on health related problems, referrals to agencies or physicians for evaluation and treatment, health information, and alcohol and substance abuse services. Health Services is located in Room 2103 and is open Monday through Friday, 8:30 a.m. to 4:30 p.m.

Alcohol and Substance Abuse Services

Alcohol and substance abuse services are provided for all members of the College community. For those who require treatment at a specialized agency, referral through the Student and Employee Assistance Program is made to the appropriate detoxification/rehabilitation or outpatient facility and self-help program. Pre-counseling, case management, follow-up, and recovery support are also provided. A comprehensive prevention, education, and outreach program is available and includes seminars and workshops, classroom modules, prevention training, information tables, special events, informal discussions, and a newsletter for concerned students, parents, and community groups. The services are available through the Health Services Office.

Student Records

Essex County College maintains academic and health records of all students enrolled in the College. Additionally, financial records are maintained on all students who receive financial assistance through the College.

Access to Student Records

The Family Educational Rights and Privacy Act (FERPA) of 1974 affords students certain rights with respect to their education records. They are:

1. *The right to inspect and review the student's education records within 45 days of the day the College receives a request for access.*

Students should submit to the Dean of Student Affairs, or other appropriate officials, written

requests that identify the record(s) they wish to inspect. The College official will make arrangements for access and notify the student of the time and place where the records may be inspected. If the records are not maintained by the College official to whom the request was submitted, that official shall advise the student of the correct official to whom the request should be addressed.

2. *The right to request the amendment of the student's education records that the student believes are inaccurate or misleading.*

Students may ask the College to amend a record that they believe is inaccurate or misleading. They should write the College official responsible for the record, clearly identify the part of the record they want changed, and specify why it is inaccurate or misleading.

FERPA was not intended to provide a process to be used to question substantive judgments which are correctly recorded. The rights of challenge are not intended to allow students to contest, for example, a grade in a course because they felt a higher grade should have been assigned.

If the College decides not to amend the record as requested by the student, the College will notify the student of the decision and advise the student of his or her right to a hearing regarding the request for amendment. Additional information regarding the hearing procedures will be provided to the student when notified of the right to a hearing.

3. *The right to consent to disclosures of personally identifiable information contained in the student's education records, except to the extent that FERPA authorizes disclosure without consent.*

One exception which permits disclosure without consent is disclosure to school officials with legitimate educational interests. A school official is a person employed by the College in an administrative, supervisory, academic, research, or support staff position (including law enforcement unit personnel and health staff); a person or company with whom the College has contracted (such as an attorney, auditor, collection agent, or official of the National Student Clearinghouse); a person serving on the Board of Trustees; or a student serving on an official committee, such as a disciplinary or grievance committee, or assisting another school official in performing his or her tasks.

A school official has a legitimate educational interest if the official needs to review an education record in order to fulfill his or her professional responsibility. The College may disclose

education records in certain other circumstances:

- to appropriate parties to comply with a judicial order or a lawfully issued subpoena;
- to appropriate parties in a health or safety emergency;
- to officials of another school, upon request, in which a student seeks or intends to enroll;
- to college officials in connection with a student's request for or receipt of financial aid, to determine the eligibility, amount, or conditions of the financial aid, or to enforce the terms and conditions of the aid;
- to certain officials of the U.S. Department of Education, the Comptroller General's office, or to state and local educational authorities, in connection with certain state or federally supported education programs;
- to accrediting organizations to carry out their functions;
- to organizations conducting certain studies for or on behalf of the College;
- to the alleged victim of a crime of violence when the crime was allegedly committed by the student; the College may disclose the results of an institutional disciplinary proceeding with respect to the crime.

4. *The right to file a complaint with the U.S. Department of Education concerning alleged failures by the College to comply with the requirements of FERPA.*

The name and address of the Office that administers FERPA is: Family Policy Compliance Office, U.S. Department of Education, 400 Maryland Avenue, SW., Washington, DC, 20202-4605.

Directory Information

The College may disclose the following categories of student information, designated as public information: the student's name, address, major field of study, degree sought, expected date of completion of degree requirements and graduation, degrees and awards received, dates of attendance, full or part time enrollment status, the previous educational agency or institution attended, participation in officially recognized activities and sports, weight and height of athletic team members, and other similar information and photographs.

Students may restrict the release of public information, except to school officials with legitimate educational interests. To do so, a student must make the request in writing to the Dean of Student Affairs. Once filed, this request becomes a permanent part of the student's record until the student instructs the College, in writing, to have the request removed.

For purposes of compliance with FERPA, the College considers all students independent.

STUDENT LIFE AND ACTIVITIES

Essex County College is committed to providing a well-rounded experience for our students through imaginative and interrelated projects. The Student Life and Activities (SL&A) Office heightens and enhances student life by planning and coordinating a variety of social, cultural, intellectual, and recreational programs. SL&A publishes and distributes the *LIFELINE* student handbook, the *ECCO* student newspaper, the *ECCOLOG* yearbook, and other promotional publications. It also coordinates the sales of discount tickets to area cultural and sporting events, maintains a directory of off-campus housing listings, handles judicial affairs, and operates the Clara E. Dasher Student Center. The Student Life and Activities Office is located in the Dasher Student Center at the main campus and in the Student Lounge at the West Essex Campus.

Clara E. Dasher Student Center

The Clara E. Dasher Student Center provides students with an environment that promotes a sense of community and fosters intellectual, social, and recreational development through a variety of programs and services. Facilities include a game room, TV lounge, meeting rooms, study lounge, multi-purpose area, offices for the Student Government Association and the *ECCO* student newspaper, and an area for student clubs and organizations.

Student Government Association

The Student Government Association provides representation in the planning, execution, and evaluation of actions affecting the ECC student body, serves as a means whereby student opinions, views, suggestions, and aspirations may be properly discussed and acted upon, and provides guidance and financial assistance to student clubs and organizations.

The SGA Executive Board consists of matriculated students who have earned at least a 2.5 GPA. It functions under a constitution approved by the student body. The officers are elected each year.

The Student Government Association is located on the Second Level of the Clara E. Dasher Student Center and in the Student Lounge at the West Essex Campus.

Student Clubs and Organizations

Essex County College offers opportunities for leadership development and civic responsibility through its many clubs and organizations. The purposes and activities of the clubs/organizations shall be clearly related to the mission and goals of the College.

Clubs encompassing cultural, academic, and social issues are recognized by the institution and receive partial funding from the Student Government Association. Complete procedures are outlined in the *LIFELINE* Student Handbook and in the Clubs/Organizations Procedures Manual.

Student Conduct

ECC students are expected to conduct themselves in a manner that promotes and maintains an educational environment conducive to learning and collegiality. The College has established reasonable standards of behavior for students and reserves the right to take action, including suspension or expulsion, against any student whose conduct is deemed unacceptable.

The College Judicial Committee, comprised of students, faculty, and staff, reviews behavioral grievances brought by a member of the College community against a student and renders a recommendation of action to the Dean of Student Affairs.

Detailed information about the College Code of Student Conduct may be found in the *LIFELINE* Student Handbook.

Athletics

Essex County College offers a varied program of intercollegiate athletics for men and women. The program includes men and women's soccer, basketball, indoor and outdoor track.

Known as the "Wolverines," Essex County College teams are represented in the Garden State Athletic Conference (GSAC) and in Region 19 of the National Junior College Athletic Association. The College's teams have produced All-Americans in soccer, men's and women's basketball, and indoor and outdoor track. In the last eleven seasons (1990-2001), Essex has won the following championships:

Men's Soccer

1992	Region 19 Champions
1992	NJCAA Division I, National Participants
1993	Region 19 Champions
1993	2nd Place finish in NJCAA Division I National Championship
1993	GSAC Champions

1994	GSAC Division I Champions
1994	NJCAA Division I Runners-up
1999	Region 19 & District Champions 6th Place finish in NJCAA Division I National Championship
2000	Region 19 & District Champions 6th Place finish in NJCAA Championship
2001	Region 19 Participants

Men's Basketball

1992	Division I/II GSAX Co-Champions
1993/4	Blue Division GSAC Champions
1993/4	Division I/II GSAC Co-Champions
1994/5	Blue Division I Champions
1997/8	Blue Division I Champions
1998/9	Blue Division I Champions
1999	District Division I Champions
1999	NJCAA Division I Participants
2000	Region 19 Participants

Men's Indoor Track

1990	2nd Place Region 15/19
1991	District Champions
1992	Region 15/19 Champions
1993	District Champions
1999	NJCAA 3rd Place
1999	Millrose Champions

Men's Outdoor Track

1991	District Champions
1992	Region 15/19 Champions
1992	Division I/II GSAC Co-Champions
1993/4	Blue Division GSAC Champions
1993/4	Division I/II GSAC Co-Champions
1994/5	Blue Division I Champions
1997/8	Blue Division I Champions
1998/9	Blue Division I Champions
1999	District Division I Champions
1999	NJCAA Division I Participants

Women's Indoor Track

1992	District Champions
1993	District Champions
1994	District Champions
1995	District Champions
1996	NJCAA Runners-Up
1996	District Champions
1997	District Champions
1997	National Champions
1998	NJCAA 3rd Place
1999	NJCAA 3rd Place
1999	District Champions
2000	District Champions
2000	2nd Place finish in NJCAA Championship
2001	2nd Place finish in NJCAA Championship

Women's Outdoor Track

1990	District Champions
1992	District Champions
1996	NJCAA 3rd Place
1998	Penn Relays Shuttle Hurdle Champions
1998	District Champions
1999	District Champions

Women's Basketball

1993/4	Blue Division Champions
1994/5	Blue Division Champions
2000	Region 19 Runners-Up

Women's Soccer

2000	Region 19 Participants
2001	Region 19 Participants

The College has had 11 student-athletes participate in the Olympics, and a number of junior college, national, and world records have been set by ECC track athletes.

Academic Support Services

Academic Advisement

Before the beginning of each semester or term, each matriculated student should meet with a faculty advisor or counselor in his/her major area to select appropriate courses. Students are urged to meet with their advisor or counselor during each semester, as well, in order to review their academic plans and progress-to-date, as well as course load and schedule. Curriculum check sheets (list of required courses for each program) are available in the academic departments. Students are responsible for ensuring that they complete all requirements for their degrees and certificates listed in departmental handouts and the official College catalog.

Tutoring Center

The Tutoring Center at ECC provides students with academic support in the areas of accounting, biology, chemistry, math, physics, English, English as a second language, and computer science. Assistance is available to students on an individual basis or in small groups, Monday through Saturday. Schedules are posted in each area to accommodate the needs of both full- and part-time students. The goal of the Tutoring Center is to assist students in acquiring and maintaining superior skills and an understanding of their area of study. To achieve this goal, the tutors not only provide a new perspective on course material, but they also instill the

study habits needed to succeed. For more information, contact the Tutoring Center.

- English and ESL Tutoring: Level I, Red Area
- Math and Physics Tutoring: Level II, Blue Area, Math Department
- Biology and Chemistry Tutoring: Level II, Blue Area, Biology Department
- Accounting Tutoring: Level III, Green Area, Accounting Department
- Computer Science Tutoring: Center for Technology

College Libraries

The newly renovated Martin Luther King, Jr. Library is located on the main campus in a two-level facility in the center of the megastructure and maintains a collection of more than 90,000 volumes, over 400 periodicals, thousands of microfilms, as well as hundreds of videocassettes, filmstrips, slide/cassettes, and 16mm film programs. The West Essex Campus library has more than 11,000 volumes and a comparable collection of non-print media programs. The holdings of both libraries are accessed via automated online public-access catalog stations. The collection is designed to meet the academic, informational, cultural, and recreational needs of Essex County College students and the community. Professional librarians are available at both facilities. They teach students the rudiments of general research and the use of special indexes and databases. The main library includes a computer laboratory for teaching students information literacy.

The many services of the libraries include access to all books and periodicals via open stacks, photocopying, audiovisual hardware for individual use, and CD-ROM periodicals databases. The library is a member of and active participant in ReBL, the Reciprocal Borrowing Libraries of Essex County, INFOLINK, and the Library Cooperative of the Council of Higher Education in Newark (CHEN).

Media Production and Technology Center

The Media Production and Technology Center, commonly referred to as MPT, provides access and support to faculty and students of Essex County College in the use of instructional media resources. Located on the 3rd level of the megastructure, the MPT Center maintains and distributes an inventory of audiovisual equipment for use on campus. Staff and assistants reserve and schedule equipment for pick-up and delivery in response to faculty and student requests. MPT personnel will also set-up and operate equipment as well as provide demonstrations and training in equipment operation. The available audiovisual equipment includes

videocassette players/recorders, television monitors, slide/film/overhead projectors, video camcorders, phonographs, audiotape players/recorders, public address equipment, and video/audio duplication equipment. MPT also oversees the College's interactive television rooms, which facilitate simultaneous instruction between both campuses and the College's new multimedia classrooms, which permit faculty to use the latest in audiovisual technology. The MPT Center is also the home of TV49, Cablevision of Newark/South Orange's public access educational channel. ECC's 24-hour station provides a college/community bulletin board, advertising events and activities along with educational programs. The channel is viewed by more than 45,000 cable subscribers.

Department of Evening and Weekend Services

The Department provides and supports diverse programs and services to enhance the social, cultural, and educational growth of evening and weekend students by promoting learning and development outside of the classroom. These programs are designed to promote interaction among and between students, faculty, and staff. Students are encouraged to participate in a variety of activities, special events, and leadership opportunities.

Special Programs

The Department of Special Programs offers a wide range of opportunities and services to eligible individuals. To be eligible, students must be of low-income, first generation college students (neither mother nor father has a bachelor's degree), veterans, or disabled students. Students who meet the eligibility criteria qualify for tuition-free courses and academic assistance sponsored by the Department of Special Programs. The Special Programs course offerings are limited to the main campus. The following special programs, known as TRIO Programs, are funded by the U.S. Department of Education and the New Jersey Commission on Higher Education. Inquiries regarding course offerings and special support services should be addressed to the Department of Special Programs.

• *Student Support Services*

Student Support Services provides students with support designed to encourage them to develop their potential through higher education. These services may include tuition-free developmental courses, tutoring, counseling, transfer assistance, and enrichment activities. Students interested in participating should contact the Special Programs Department immediately upon admission.

- ***Veterans Upward Bound***

Veterans Upward Bound is designed for veterans who have been unable to advance to a higher economic level because they lack the necessary scholastic credentials or have a disability, low income, or related disadvantage. This program provides veterans with academic course offerings designed to ensure future enrollment in courses leading to a degree. In some cases, tuition-free courses are available. Veterans who lack adequate high school credits may earn a GED certificate while studying for an academic degree, and high school graduates in need of refresher courses prior to college entry can take advantage of the Veterans Upward Bound programs. Special services for all veterans include counseling, tutoring, career exploration, financial aid assistance, and enrichment activities.

- ***Talent Search***

Talent Search identifies and counsels eligible pre-college students, from sixth grade and up, regarding postsecondary education opportunities. The services are designed to provide opportunities for participants to explore available educational and vocational options. Nationwide college placement assistance, financial aid application assistance, and tutoring are provided.

- ***Upward Bound***

Upward Bound provides pre-college and postsecondary services for high school students. The program helps students develop the motivation and academic skills necessary for success in higher education. Services include supplementary instruction, tutoring, vocational counseling, and college placement.

Educational Opportunity Fund Program

The Educational Opportunity Fund (EOF) program provides support services and financial assistance to enhance the educational process of its participants. The EOF program offers counseling and tutorial services, workshops, seminars, cultural activities, and financial grant assistance for educational expenses. To be eligible for program participation, students must be residents of New Jersey for at least 12 months, be enrolled full-time as matriculated students, must demonstrate potential and motivation, and must exhibit a willingness to actively participate in the educational process. Students must also meet financial aid eligibility requirements.



DEGREE AND CERTIFICATE PROGRAMS

General Education Requirements

In addition to courses in their majors, all students enrolled in degree programs must complete the College's general education requirements. The general education requirements are designed to expose students to courses of study beyond those that are normally associated with their major subject areas. Faculty and administrators periodically review the general education requirements to ensure that they meet the highest standards of academic excellence. The goals of the general education program are as follows:

1. To enable students to become more aware of the different perspectives emanating from a culturally diverse population;
2. To emphasize critical thinking and problem solving skills; to the extent possible, courses should emphasize quantitative reasoning and research skills, including accessing information from a variety of sources and media;
3. To enable students to increase their proficiencies in reading, writing, speaking, and listening;
4. To require students to prepare and present information using computers; and
5. To be consistent with the College mission statement and to have such courses recognized for transfer by four-year colleges and universities.

The following is the listing of general education requirements:

	A.A.	A.S.	A.A.S.
Communications ^A	9	6	6
Social Science ^B	6	6	6
Lab Science ^C /Math ^D	10-12 ^E	10-12 ^E	3-4 ^F
Physical Education/Health ^G	2-3	2-3	2-3
Humanities Requirement:	18	9	3
Literature ^H	(6)	(3)	--
History ^I	(6)	(3)	(3)
Fine or Performing Arts ^J	(3)	(3)	--
Free Humanities Elective ^K	(3)	--	--

^A ENG 101, ENG 102 (or ENG 105 in selected A.S. or A.A.S. programs) plus (in the A.A. programs) one of the following English courses: ENG 105, ENG 108, ENG 109, ENG 141, ENG 142, ENG 151, ENG 169. Note: English courses not used as a communications elective requirement by students

enrolled in A.A. programs may be used to fulfill the Free Humanities Elective requirement.

^B One of the following: ANT 101, POL 104, PSY 101, SOC 101; also any ANT, POL, PSY, or SOC course (or ECO 101 only for students enrolled in the Engineering program).

^C For students taking two lab science courses, such courses should be taken in a sequence: BIO 101-102, BIO 103-104, BIO 121-122, CHM 101-102, CHM 103-104, PHY 101-102, or PHY 103-104. Note: Certain programs have specific sequences that must be followed; consult the individual program listing section for specific requirements.

^D All students must be proficient in MTH 092/093 or its equivalent. Core MTH courses must be MTH 100 or higher. Additionally, if a specific mathematics course is part of a major requirement for a program, students may elect to take higher level courses to fulfill their General Education requirement. Course substitutions are as follows:

Required	Substitution Course
MTH 100	MTH 113 or 119
MTH 109	MTH 113
MTH 113	MTH 119 or 120
MTH 119	MTH 120 or 121
MTH 120	MTH 121 or 122
MTH 114	MTH 121
MTH 213	MTH 122
MTH 119 and 120	MTH 119 and 121
	MTH 120 and 121
	MTH 121 and 122

^E Two lab science courses (listed in C, above) and one math course (listed in D, above), totaling 11-12 credits **or** two math courses and one lab science course for 10-12 credits.

^F Any lab science course (listed in C, above) or math course (see D, above).

^G PHE 119 or HLT 101. Note: Neither PHE 115 nor two one-credit PHE courses will substitute for PHE 119.

^H 200-level English literature course(s). Note: At this time no Spanish language literature course fulfills this requirement.

^I HST 101-102, HST 111-112, HST 121-122, HST 131-132, HST 214, HST 219-220, HST 221-222, or HST 234-235. Note: Two individual (unrelated)

DEGREE AND CERTIFICATE PROGRAMS

history courses are not acceptable for programs that require a history sequence. Check requirements in the individual program listing section.

- J** ART 100, ART 101, ART 102, ART 200, MUS 100, MUS 108, MUS 109, or MUS 117. Note: Studio art and music performance courses do not fulfill this requirement.
- K** The Free Humanities Elective may be a literature course (ENG), a Fine and Performing Arts course (ART, MUS, DRA, DAN), a History (HST), Cinema (CIN), or Philosophy (PHI) course, or ENG 105 (Technical Writing), ENG 108 (Voice and Diction), ENG 169 (Creative Writing), ENG 141 (Journalism I), ENG 142 (Journalism II), or ENG 151 (Mass Communication & Popular Culture). In addition, the following world languages courses fulfill this requirement: ARB 101, ARB 102, FRN 101, FRN 102, FRN 201, FRN 202, ITL 101, ITL 102, SPN 100, SPN 101, SPN 102, SPN 201, SPN 202.



Major Areas of Study: Academic Programs Index

*This index will assist you in picking the right major to achieve your career and educational goals. First, find below the area that interests you under **AREA OF INTEREST**. Next to it, in the column under **MAJOR**, you will find the major(s) or specialization(s) that Essex County College offers in your area of interest. You will find that in some cases the major is broken down into **OPTIONS**. For example, the Business Administration major (in the Division of Business) offers you the opportunity to choose as your specialty one of the following: Hospitality Management Option or Office Systems Technology and Management Option. In the column **LOCATION (LOC)**, the campus(es) at which programs are offered are listed. **M** refers to the main Newark Campus and **W** refers to the West Essex Campus in West Caldwell. To learn more about a program, go to the page listed in the column on the far right. For a listing of ECC programs by academic division, see “Overview of Academic Programs.”*

AREA OF INTEREST	MAJOR	LOC	PAGE
ACCOUNTING	Accounting (A.A.S. Degree)	M W	48
	Accounting (A.S. Degree)	M W	50
ALCOHOLISM/ SUBSTANCE ABUSE	Human and Social Services (A.A.S. Degree)	M W	106
ARCHITECTURE	Architectural Technology (A.A.S. Degree)	M	54
	Civil Construction Engineering Technology (A.A.S. Degree)	M	78
	Computer-Aided Design Technology (Certificate)	M W	82
ART	Art (A.A. Degree)	M W	56
	Digital Media and Electronic Publishing (Certificate)	M W	94
BIOLOGY	Biology, Pre-Medicine (A.S. Degree)	M W	58
BUSINESS	Accounting (A.A.S. Degree)	M W	48
	Accounting (A.S. Degree)	M W	50
	Business Administration (A.A.S. Degree)	M W	60
	Business Administration (A.S. Degree)	M W	62
	Business Administration: Hospitality Management Option (A.A.S. Degree)	M	64
	Business Administration: Office Systems Technology and Management Option (A.A.S. Degree)	M	66
	Business Career Development (Certificate)	M W	68
	Computer Information Systems (A.S. Degree)	M W	84
	Information Systems Office Operations (Certificate)	M	108
	Internet – Web Page Design Specialist (Certificate)	M W	110
	Legal Assistant Studies (A.S. Degree)	M W	116
	Legal Assistant (Certificate)	M W	114
	Legal Nurse (Certificate)	M W	118
	Legal Specialist (Certificate) – Secretarial	M W	120
Microcomputer Systems Applications (A.A.S. Degree)	M	138	
Office Assistant (Certificate)	M	148	
Word Processing (Certificate)	M	166	
CHEMICAL TECHNOLOGY	Chemical Technology (A.A.S. Degree)	M	70
	Chemical Technology (Certificate)	M	72
CHEMISTRY	Chemistry (A.S. Degree)	M	74
	Chemical Technology (A.A.S. Degree)	M	70
CHILDREN/YOUTH	Childhood Development Associate Certification	M W	76
	Early Childhood Education (A.A. Degree)	M W	96
CIVIL ENGINEERING	Civil Construction Engineering Technology (A.A.S. Degree)	M	78
	Civil Construction Engineering Technology: Land Surveying Option (A.A.S. Degree)	M	80
COMMUNICATION	Digital Media and Electronic Publishing (Certificate)	M W	94
	Liberal Arts: Communications Option (A.A. Degree)	M W	124
	Liberal Arts: Journalism Option (A.A. Degree)	M W	126

COMPUTERS	Applied Computer Science (A.S. Degree)	M	52
	Business Administration: Office Systems Technology and Management Option (A.A.S. Degree)	M	66
	Computer-Aided Design Technology (Certificate)	M W	82
	Computer Information Systems (A.S. Degree)	M W	84
	Computer Science (A.S. Degree)	M	86
	Information Systems Office Operations (Certificate)	M	108
	Internet – Web Page Design Specialist (Certificate)	M W	110
	Internetworking Technology (Certificate)	M	112
	Network Technology (Certificate)	M	142
	Word Processing (Certificate)	M W	166
CONSTRUCTION	Architectural Technology (A.A.S. Degree)	M	54
	Civil Construction Engineering Technology (A.A.S. Degree)	M	78
	Civil Construction Engineering Technology: Land Surveying Option (A.A.S. Degree)	M	80
	Engineering (A.S. Degree)	M	102
	Uniform Construction Code Certificate in Building Code Technology (Certificate)*	W	162
	Uniform Construction Code Certificate in Electrical Code Technology (Certificate)*	W	162
	Uniform Construction Code Certificate in Fire Code Technology (Certificate)*	W	164
	Uniform Construction Code Certificate in Plumbing Code Technology (Certificate)*	W	164
CRIMINAL JUSTICE	Criminal Justice (A.S. Degree)	M W	88
DENTAL	Dental Assisting (Certificate)*	M	90
	Dental Hygiene (A.A.S. Degree)*	M	92
EDUCATION	Childhood Development Associate Certification	M W	76
	Early Childhood Education (A.A. Degree)	M W	96
	Music (A.S. Degree)	M W	140
	Physical Education (A.S. Degree)	M	152
ELECTRICAL CODE	Uniform Construction Code Certificate in Electrical Code Technology (Certificate)*	W	162
ELECTRONICS	Electronic Engineering Technology (A.A.S. Degree)	M	98
ENGINEERING	Architectural Technology (A.A.S. Degree)	M	54
	Civil Construction Engineering Technology (A.A.S. Degree)	M	78
	Civil Construction Engineering Technology: Land Surveying Option (A.A.S. Degree)	M	80
	Computer-Aided Design Technology (Certificate)	M W	82
	Electronic Engineering Technology (A.A.S. Degree)	M	98
	Engineering (A.S. Degree)	M	102
	Manufacturing Engineering Technology (A.A.S. Degree)	M	130
	Manufacturing Engineering Technology: Mechanical Engineering Technology Option (A.A.S. Degree)	M	132
ENGLISH	Liberal Arts (A.A. Degree)	M W	122
	Liberal Arts: Communications Option (A.A. Degree)	M W	124
	Liberal Arts: Journalism Option (A.A. Degree)	M W	126
EYE CARE	Ophthalmic Dispensing (A.A.S. Degree)*	M	150
FILM	Liberal Arts: Communications Option (A.A. Degree)	M W	124
FINE ARTS	Art (A.A. Degree)	M W	56
	Music (A.S. Degree)	M W	140
FIRE CODE	Uniform Construction Code Certificate in Fire Code Technology (Certificate)*	W	164
HEALTH	Dental Assisting (Certificate)*	M	90
	Dental Hygiene (A.A.S. Degree)*	M	92
	Emergency Medical Technology – Paramedic (A.A.S. Degree)**	M	100
	Health Science (A.S. Degree)	M	104

HEALTH (Cont'd.)	Human and Social Services (A.A.S. Degree)	M W	106
	Massage Therapy (Certificate)	M	134
	Nursing (A.A.S. Degree)*	M	144
	Nursing: LPN Articulation Option (A.A.S Degree)*	M	146
	Ophthalmic Dispensing (A.A.S. Degree)*	M	150
	Physical Education (A.S. Degree)	M	152
	Physical Therapist Assistant (A.A.S. Degree)*	M	154
	Radiography (A.A.S. Degree)*	M	156
Respiratory Care (A.S. Degree)*	M	158	
HISTORY	Liberal Arts (A.A. Degree)	M W	122
HOSPITALITY SERVICES	Business Administration: Hospitality Management Option (A.A.S. Degree)	M	64
HUMANITIES	Art (A.A. Degree)	M W	56
	Digital Media and Electronic Publishing (Certificate)	M W	94
	Liberal Arts (A.A. Degree)	M W	122
	Liberal Arts: Communications Option (A.A. Degree)	M W	124
	Liberal Arts: Journalism Option (A.A. Degree)	M W	126
	Liberal Arts: Spanish Language Option (A.A. Degree)	M W	128
	Music (A.S. Degree)	M W	140
INTERNET	Internet – Web Page Design Specialist (Certificate)	M W	110
	Internetworking Technology (Certificate)	M	112
INFORMATION SYSTEMS	Computer Information Systems (A.S. Degree)	M W	84
	Information Systems Office Operations (Certificate)	M	108
JOURNALISM	Liberal Arts: Journalism Option (A.A. Degree)	M W	126
LAND SURVEYING	Civil Construction Engineering Technology: Land Surveying Option (A.A.S. Degree)	M	80
LANGUAGES	Liberal Arts (A.A. Degree)	M W	122
	Liberal Arts: Spanish Language Option (A.A. Degree)	M W	128
LAW ENFORCEMENT	Criminal Justice (A.S. Degree)	M W	88
LEGAL ASSISTANT	Legal Assistant Studies (A.S. Degree)	M W	116
	Legal Assistant (Certificate)	M W	114
	Legal Nurse (Certificate)	M W	118
	Legal Specialist (Certificate) – Secretarial	M W	120
LIBERAL ARTS	Liberal Arts (A.A. Degree)	M W	122
	Liberal Arts: Communications Option (A.A. Degree)	M W	124
	Liberal Arts: Journalism Option (A.A. Degree)	M W	126
	Liberal Arts: Spanish Language Option (A.A. Degree)	M W	128
MANAGEMENT	Business Administration (A.S. Degree)	M W	62
	Business Administration (A.A.S. Degree)	M W	60
	Business Administration: Hospitality Management Option (A.A.S. Degree)	M	64
	Business Administration: Office Systems Technology and Management Option (A.A.S. Degree)	M	66
MANUFACTURING	Manufacturing Engineering Technology (A.A.S. Degree)	M	130
	Manufacturing Engineering Technology: Mechanical Engineering Technology Option (A.A.S. Degree)	M	132
MASSAGE THERAPY	Massage Therapy (Certificate)	M	134
MATHEMATICS	Mathematics (A.S. Degree)	M	136
MEDIA	Digital Media and Electronic Publishing (Certificate)	M W	94
MEDICAL-RELATED	Dental Assisting (Certificate)*	M	90
	Dental Hygiene (A.A.S. Degree)*	M	92
	Emergency Medical Technology – Paramedic (A.A.S. Degree)**	M	100
	Health Science (A.S. Degree)	M	104
	Massage Therapy (Certificate)	M	134
	Nursing (A.A.S. Degree)*	M	144

MEDICAL-RELATED (Cont'd.)	Nursing: LPN Articulation Option (A.A.S Degree)*	M	146
	Physical Therapist Assistant (A.A.S. Degree)*	M	154
	Radiography (A.A.S. Degree)*	M	156
	Respiratory Care (A.S. Degree)*	M	158
MENTAL HEALTH	Human and Social Services (A.A.S. Degree)	M W	106
MUSIC	Music (A.S. Degree)	M W	140
NETWORK TECHNOLOGY	Network Technology (Certificate)	M	142
NURSING	Nursing (A.A.S. Degree)*	M	144
	Nursing: LPN Articulation Option (A.A.S Degree)*	M	146
OFFICE ADMINISTRATION	Business Administration: Office Systems Technology & Management Option (A.A.S. Degree)	M W	66
	Legal Specialist (Certificate) – Secretarial	M W	120
OFFICE ASSISTANCE	Office Assistant (Certificate)	M	148
	Legal Specialist (Certificate) – Secretarial	M W	120
OPTICIANRY	Ophthalmic Dispensing (A.A.S. Degree)*	M	150
PARALEGAL	Legal Assistant Studies (A.S. Degree)	M W	116
	Legal Assistant (Certificate)	M W	114
	Legal Nurse (Certificate)	M W	118
	Legal Specialist (Certificate) – Secretarial	M W	120
PHYSICAL EDUCATION	Physical Education (A.S. Degree)	M	152
PHYSICAL THERAPY	Physical Therapist Assistant (A.A.S. Degree)*	M	154
PHYSICS	Mathematics (A.S. Degree)	M	136
PLUMBING CODE	Uniform Construction Code Certificate in Plumbing Code Technology (Certificate)*	W	164
PRE-MEDICAL	Biology, Pre-Medicine (A.S. Degree)	M W	58
PSYCHOLOGY	Social Sciences (A.S. Degree)	M W	160
PUBLISHING	Digital Media and Electronic Publishing (Certificate)	M W	94
RADIOGRAPHY	Radiography (A.A.S. Degree)*	M	156
RESPIRATORY CARE	Respiratory Care (A.S. Degree)*	M	158
SECRETARIAL	Office Assistant (Certificate)	M	148
	Legal Specialist (Certificate) – Secretarial	M W	120
SOCIAL SCIENCES/ SOCIAL SERVICES	Criminal Justice (A.S. Degree)	M W	88
	Human and Social Services (A.A.S. Degree)	M W	106
	Social Sciences (A.S. Degree)	M W	160
SOCIAL WORK	Human and Social Services (A.A.S. Degree)	M W	106
	Social Sciences (A.S. Degree)	M W	160
SOCIOLOGY	Social Sciences (A.S. Degree)	M W	160
SPANISH	Liberal Arts: Spanish Language Option (A.A. Degree)	M W	128
STRUCTURAL DESIGN	Civil Construction Engineering Technology (A.A.S. Degree)	M	78
	Civil Construction Engineering Technology: Land Surveying Option (A.A.S. Degree)	M	80
TECHNICAL GRAPHICS	Computer-Aided Design Technology (Certificate)	M W	82
	Manufacturing Engineering Technology: Mechanical Engineering Technology Option (A.A.S. Degree)	M	132
TELEVISION	Liberal Arts: Communications Option (A.A. Degree)	M W	124
WORD PROCESSING	Word Processing (Certificate)	M	166
WORLDWIDE WEB	Internet – Web Page Design Specialist (Certificate)	M W	110
	Internetworking Technology (Certificate)	M	112

*Special admissions requirements must be met. For details on the requirements, refer to the page relating to the major.

**This program is closed to new students.

PROGRAMS BY MAJOR

- ◆ Accounting (A.A.S.)
- ◆ Accounting (A.S.)
- ◆ Applied Computer Science (A.S.)
- ◆ Architectural Technology (A.A.S.)
- ◆ Art (A.A.)
- ◆ Biology/Pre-Medicine (A.S.)
- ◆ Business Administration (A.A.S.)
- ◆ Business Administration (A.S.)
- ◆ Business Administration: Hospitality Management Option (A.A.S.)
- ◆ Business Administration: Office Systems Technology & Management Option (A.A.S.)
- ◆ Business Career Development (Certificate)
- ◆ Chemical Technology (A.A.S.)
- ◆ Chemical Technology (Certificate)
- ◆ Chemistry (A.S.)
- ◆ Childhood Development Associate (Certification)
- ◆ Civil Construction Engineering Technology (A.A.S.)
- ◆ Civil Construction Engineering Technology: Land Surveying Option (A.A.S.)
- ◆ Computer Aided Design Technology (Certificate)
- ◆ Computer Information Systems (A.S.)
- ◆ Computer Science (A.S.)
- ◆ Criminal Justice (A.S.)
- ◆ Dental Assisting (Certificate)
- ◆ Dental Hygiene (A.A.S.)
- ◆ Digital Media and Electronic Publishing (Certificate)
- ◆ Early Childhood Education (A.A.)
- ◆ Electronic Engineering Technology (A.A.S.)
- ◆ Emergency Medical Technology-Paramedic (A.A.S.)
- ◆ Engineering (A.S.)
- ◆ Health Science (A.S.)
- ◆ Human and Social Services (A.A.S.)
- ◆ Information Systems Office Operations (Certificate)

PROGRAMS BY MAJOR

- ◆ Internet-Web Page Design Specialist (Certificate)
- ◆ Internetworking Technology (Certificate)
- ◆ Legal Assistant (Certificate)
- ◆ Legal Assistant Studies (A.S.)
- ◆ Legal Nurse (Certificate)
- ◆ Legal Specialist (Certificate)
- ◆ Liberal Arts (A.A.)
- ◆ Liberal Arts: Communications Option (A.A.)
- ◆ Liberal Arts: Journalism Option (A.A.)
- ◆ Liberal Arts: Spanish Language Option (A.A.)
- ◆ Manufacturing Engineering Technology (A.A.S.)
- ◆ Manufacturing Engineering Technology: Mechanical Engineering Technology Option (A.A.S.)
- ◆ Massage Therapy (Certificate)
- ◆ Mathematics (A.S.)
- ◆ Microcomputer Systems Applications (A.A.S.)
- ◆ Music (A.S.)
- ◆ Network Technology (Certificate)
- ◆ Nursing (A.A.S.)
- ◆ Nursing: LPN Articulation Option (A.A.S.)
- ◆ Office Assistant (Certificate)
- ◆ Ophthalmic Dispensing (A.A.S.)
- ◆ Physical Education (A.S.)
- ◆ Physical Therapist Assistant (A.A.S.)
- ◆ Radiography (A.A.S.)
- ◆ Respiratory Care (A.S.)
- ◆ Social Sciences (A.S.)
- Uniform Construction Code Technology Programs:
 - ◆ Building Code Technology (Certificate)
 - ◆ Electrical Code Technology (Certificate)
 - ◆ Fire Code Technology (Certificate)
 - ◆ Plumbing Code Technology (Certificate)
- ◆ Word Processing (Certificate)

Accounting Program

Division of Business — Curriculum Code: 2000

Will Earn Upon Program Completion: Associate in Applied Science (A.A.S.) Degree

Why major in Accounting?

This program prepares you to collect, analyze, and report financial data and communicate that information to both managers and outside agencies. Graduates can begin their careers as junior accountants, assistant auditors, bookkeepers, or accounting clerks. Such entry-level positions are found in accounting firms, industry, governmental agencies, small businesses, and non-profit organizations.

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

The major is job-oriented and not designed for transfer to a baccalaureate program. However, many colleges and universities will apply most or all the courses you have taken toward a bachelor's degree.

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

Based on your placement test scores, you may have to take developmental courses in reading, English, and/or mathematics before taking courses in your major.

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

If you do not need developmental course work and you register for an average of 17 credits each semester, you should be able to complete the degree in two years. You may shorten the amount of time by taking courses in the summer sessions.

Where should I direct specific questions about this program?

Contact the Division at (973) 877-3222 or Admissions at (973) 877-1941.

Upon completion of this program, graduates will be able to:

- ◆ Demonstrate knowledge of the underlying framework of accounting concepts and data;
- ◆ Use the language of accounting in writing and speaking;
- ◆ Prepare accounting documents both manually and using a computer;
- ◆ Demonstrate knowledge of budgeting principles;
- ◆ Demonstrate knowledge of business law including the Uniform Commercial Code and the law of contracts;
- ◆ Use accounting data in making managerial decisions;
- ◆ Apply general business concepts in a global context; and
- ◆ Prepare Federal and New Jersey individual and corporate tax returns.

Accounting — A.A.S. Degree Program

<p>GENERAL EDUCATION REQUIREMENTS: (20-22 credits)</p> <p>Communications (6 credits) ENG 101 College Composition I 3 ENG 102 College Composition II or ENG 105 Technical Writing 3</p> <p>Social Science (6 credits) ANT 101, POL 104, PSY 101, or SOC 101 3 Any ANT, POL, PSY, or SOC course (PSY 102 or SOC 108 recommended) 3</p> <p>Lab Science/Math (3-4 credits) MTH 100 or higher or a Lab Science course 3-4</p> <p>Physical Education (2-3 credits) PHE 119 or HLT 101 2-3</p> <p>Humanities (3 credits) Any History course 3</p> <p>MAJOR COURSE REQUIREMENTS: (28 credits)</p> <p>ACC 101 Principles of Accounting I - Financial 4 ACC 102 Principles of Accounting II - Managerial 4 ACC 121 Accounting Sys. & Microcomputers 4 ACC 201 Intermediate Accounting I 4 ACC 202 Intermediate Accounting II 4 ACC 211 Cost Accounting 4 ACC 231 Federal Taxation I 4</p> <p>ADDITIONAL COURSE REQUIREMENTS: (18 credits)</p> <p>BUS 101 Business Organization & Mgt. 3 BUS 141 Business Mathematics 3 BUS 251 Business Law I 3 ECO 101 Prin. of Economics (Macro) 3 ECO 102 Prin. of Economics II (Micro) 3 CIS 135 Microcomputer Spreadsheets 3</p> <p>Total Credits Required for Degree 66-68</p>	<p>RECOMMENDED SEQUENCE OF COURSES:*</p> <p><u>First Semester</u></p> <p>ACC 101 Principles of Accounting I - Financial 4 BUS 101 Business Organization & Mgt. 3 ENG 101 College Composition I 3 MTH 100 Introductory College Math 4 Social Science requirement 3</p> <p><u>Second Semester</u></p> <p>ACC 102 Principles of Accounting II - Managerial 4 ACC 121 Accounting Sys. & Microcomputers 4 BUS 141 Business Mathematics 3 ENG 102 College Composition II or ENG 105 Technical Writing 3 Social Science requirement 3</p> <p><u>Third Semester</u></p> <p>ACC 201 Intermediate Accounting I 4 ACC 211 Cost Accounting 4 BUS 251 Business Law I 3 ECO 101 Prin. of Economics (Macro) 3 Physical Education/Health requirement 2-3</p> <p><u>Fourth Semester</u></p> <p>ACC 202 Intermediate Accounting II 4 ACC 231 Federal Taxation I 4 CIS 135 Microcomputer Spreadsheets 3 ECO 102 Prin. of Economics II (Micro) 3 Humanities/History requirement 3</p>
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***NOTE:** This plan assumes the completion of all required developmental courses in reading, writing, and mathematics as well as other pre- and co-requisites for some of the courses, as listed in the Course Descriptions section of the catalog.

Accounting Program

A Dual Admissions Program with Rutgers-Newark and Kean University

Division of Business — Curriculum Code: 2001

Will Earn Upon Program Completion: Associate in Science (A.S.) Degree

Why major in Accounting?

This major is best suited for the student who wishes to pursue, upon completing his/her associate degree, a bachelor's degree in Accounting and also work toward becoming a CPA. With advanced degrees/certifications and relevant job experience, you can secure rewarding positions such as accounting manager, internal auditor, financial analyst, tax accountant, or controller in accounting firms, industry, governmental agencies, and non-profit organizations.

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

The Associate in Science degree in Accounting prepares you to transfer to upper division colleges and universities to complete your bachelor's degree. You may choose to participate in the Dual Admissions Program with Rutgers-Newark and Kean University.

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

Based on your placement test scores, you may have to take developmental courses in reading, English, and/or mathematics before taking courses in your major.

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

If you do not need developmental course work and you register for an average of 17 credits each semester, you should be able to complete the degree in two years. You may shorten the amount of time by taking courses in the summer sessions.

Where should I direct specific questions about this program?

Contact the Division at (973) 877-3222 or Admissions at (973) 877-1941.

Upon completion of this program, graduates will be able to:

- ◆ Demonstrate knowledge of the underlying framework of accounting concepts and data;
- ◆ Demonstrate knowledge of all segments of the accounting cycle and how they interrelate with each other;
- ◆ Prepare a set of books and records (both manually and computerized) from the beginning analysis of transactions through the completion of financial statements;
- ◆ Prepare Federal and New Jersey State individual and corporate tax returns;
- ◆ Prepare sales and payroll tax returns;
- ◆ Apply accounting data for managerial applications;
- ◆ Apply generally accepted accounting principles as well as principles of corporate accounting;
- ◆ Prepare a statement of cash flow;
- ◆ Apply the principles of Job Order and Process Cost Accounting;
- ◆ Demonstrate knowledge of principles of budgeting;
- ◆ Demonstrate knowledge of the basics of business law, including Contracts and the Uniform Commercial Code; and
- ◆ Apply general business concepts in a global context.

Accounting – A.S. Degree Program

<p>GENERAL EDUCATION REQUIREMENTS: (34-36 credits)</p> <p>Communications (6 credits) ENG 101 College Composition I 3 ENG 102 College Composition II 3</p> <p>Social Science (6 credits) ANT 101, POL 104, PSY 101, or SOC 101 3 Any ANT, POL, PSY, or SOC course (PSY 102 or SOC 108 recommended) 3</p> <p>Lab Science/Math (11-12 credits) Two Math courses: (MTH 100, 113, 114, 117, 119, or 120) 7-8 One Lab Science course 4</p> <p>Physical Education (2-3 credits) PHE 119 or HLT 101 2-3</p> <p>Humanities (9 credits) Any History course 3 Any 200-level English literature course 3 ART 100, 101, 102, or 200 or MUS 100, 108, 109, or 117 3</p> <p>MAJOR COURSE REQUIREMENTS: (16 credits)</p> <p>ACC 101 Prin. of Accounting I - Financial 4 ACC 102 Prin. of Accounting II - Managerial 4 Two courses from the following: 8 ACC 201 Intermediate Accounting I ACC 202 Intermediate Accounting II ACC 211 Cost Accounting ACC 231 Federal Taxation</p> <p>ADDITIONAL COURSE REQUIREMENTS: (15 credits)</p> <p>BUS 101 Business Organization & Mgt. 3 BUS 251 Business Law I 3 ECO 101 Prin. of Economics (Macro) 3 ECO 102 Prin. of Economics II (Micro) 3 CIS 135 Microcomputer Spreadsheets 3</p> <p>Total Credits Required for Degree 65-67</p>	<p>RECOMMENDED SEQUENCE OF COURSES:*</p> <p><u>First Semester</u></p> <p>ACC 101 Prin. of Accounting I - Financial 4 BUS 101 Business Organization & Mgt. 3 ENG 101 College Composition I 3 MTH 100 Introductory College Math 4 Social Science requirement 3</p> <p><u>Second Semester</u></p> <p>ACC 102 Prin. of Accounting II - Managerial 4 BUS 251 Business Law I 3 ENG 102 College Composition II 3 Math requirement 3-4 Social Science requirement 3</p> <p><u>Third Semester</u></p> <p>ACC 201 Intermediate Accounting I or ACC 211 Cost Accounting 4 CIS 135 Microcomputer Spreadsheets 3 ECO 101 Prin. of Economics (Macro) 3 PHE/HLT requirement 2-3 Lab Science requirement 4</p> <p><u>Fourth Semester</u></p> <p>ACC 202 Intermediate Accounting II or ACC 231 Federal Taxation 4 ECO 102 Prin. of Economics II (Micro) 3 200-level English literature course 3 History requirement 3 Art/Music requirement 3</p>
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***NOTE:** This plan assumes the completion of all required developmental courses in reading, writing, and mathematics as well as other pre- and co-requisites for some of the courses, as listed in the Course Descriptions section of the catalog.

Applied Computer Science Program

*Division of Engineering Technologies and Computer Sciences — Curriculum Code: 2303
Will Earn Upon Program Completion: Associate in Science (A.S.) Degree*

Why major in Applied Computer Science?

Students wishing to pursue management or other business oriented positions in the information technology field should consider Applied Computer Science. The computer science courses in the applied program are the same as those in the computer science program, but the science and mathematics requirements are less theoretical. Due to the rapid growth in computer technology, there are abundant employment opportunities for A.S. graduates. Typical entry-level positions include: Technical support specialist, network technician, database application specialist, PC technician and help desk technician. ECC's Applied Computer Science program is designed to prepare students to transfer to a four-year institution as well as to directly enter the Information Technology field.

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

Yes. The Applied Computer Science program prepares students to transfer to institutions offering a B.A. degree in Computer Science, a B.S. degree in a less theoretical computer science program, or a B.S. degree in Information Systems.

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

All new students must take a basic skills competency test. Based on the results of the test, you may be required to take developmental courses in reading, English, and/or mathematics.

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

If you do not need developmental coursework and you attend full time, you can complete the degree in two years. Part time students can complete the program in three or four years.

Where should I direct specific questions about this program?

Contact the Division at (973) 877-4400 or Admissions at (973) 877-1941.

Upon completion of this program, graduates will be able to:

- ◆ Design applications programs in an object-oriented language using a variety of dynamic and static data structures;
- ◆ Design digital circuitry;
- ◆ Utilize multitasking, pre-emptive scheduling, time sharing operating system concepts and associated communications, networking, and security issues;
- ◆ Design and implement a relational database with supporting applications;
- ◆ Demonstrate multi-user database processing on LANs in client-server systems;
- ◆ Demonstrate object-oriented design techniques utilizing encapsulation, abstraction, inheritance, and reusability; and
- ◆ Utilize computer software applications used in engineering such as spreadsheets, word processing, and basic programming.

Applied Computer Science – A.S. Degree Program

<p>GENERAL EDUCATION REQUIREMENTS: (35-36 credits)</p> <p>Communications (6 credits) ENG 101 College Composition I 3 ENG 102 College Composition II 3</p> <p>Social Science (6 credits) ANT 101, POL 104, PSY 101, or SOC 101 3 Any ANT, POL, PSY, or SOC course 3</p> <p>Lab Science/Math (12 credits) MTH 113 College Algebra with Trigonometry 4 PHY 101 College Physics I 4 PHY 102 College Physics II 4</p> <p>Physical Education (2-3 credits) PHE 119 or HLT 101 2-3</p> <p>Humanities (9 credits) Any History course 3 Any 200-level English literature course 3 ART 100, 101, 102, or 200 or MUS 100, 108, 109, or 117 3</p> <p>MAJOR COURSE REQUIREMENTS: (24 credits)</p> <p>CSC 121 Computer Science I 4 CSC 122 Computer Science II 4 CSC 221 Computer Systems & Architecture 4 CSC 225 Data Structures 4 CSC 228 Operating Systems 4 CSC 231 Database Design or CSC 235 Advanced Object-Oriented Prog. 4</p> <p>ADDITIONAL COURSE REQUIREMENTS: (9 credits)</p> <p>MTH 114 Unified Calculus I 3 MTH 136 Discrete Mathematics 3 MTH 213 Unified Calculus II 3</p> <p>Total Credits Required for Degree 68-69</p>	<p>RECOMMENDED SEQUENCE OF COURSES:*</p> <p><u>First Semester</u></p> <p>ENG 101 College Composition I 3 CSC 121 Computer Science I 4 MTH 113 College Algebra with Trigonometry 4 PHY 101 College Physics I 4 PHE 119 or HLT 101 2-3</p> <p><u>Second Semester</u></p> <p>ENG 102 College Composition II 3 CSC 122 Computer Science II 4 MTH 114 Unified Calculus I 3 PHY 102 College Physics II 4</p> <p><u>Summer</u></p> <p>Social Science requirement 3 History requirement 3</p> <p><u>Third Semester</u></p> <p>CSC 221 Computer Systems & Architecture 4 CSC 225 Data Structures 4 MTH 136 Discrete Mathematics 3 Any 200-level English literature course 3 Social Science requirement 3</p> <p><u>Fourth Semester</u></p> <p>CSC 228 Operating Systems 4 CSC 231 Database Design or CSC 235 Advanced Object-Oriented Prog. 4 MTH 213 Unified Calculus II 3 Art/Music requirement 3</p>
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***NOTE:** This plan assumes the completion of all required developmental courses in reading, writing, and mathematics as well as other pre- and co-requisites for some of the courses, as listed in the Course Descriptions section of the catalog.

Architectural Technology Program

*Division of Engineering Technologies and Computer Sciences — Curriculum Code: 2301
Will Earn Upon Program Completion: Associate in Applied Science (A.A.S.) Degree*

Why major in Architectural Technology?

The program prepares students for employment in the architectural profession. Instruction is offered in the architectural design studio, and students have the opportunity to express their ideas via conceptual and real-life architectural projects. Jobs in the field are typically found in architectural consulting firms, and in the architectural departments of corporations and state and federal agencies. Job titles range from construction site inspector to CAD operator.

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

Yes. The curriculum is designed to parallel the first two years of architectural study offered in the five year programs leading to the bachelor of architecture (B.Arch.) degree. Several area colleges and universities offer architecture programs including nearby New Jersey Institute of Technology. With the B.Arch. degree, you become eligible to sit for the architect's license exam.

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

All new students must take a basic skills competency test. Based on the results of the test, you may be required to take developmental courses in reading, English, and/or mathematics.

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

If you do not need developmental coursework and you attend full time, you can complete the degree in two years. Part time students can complete the program in three or four years.

Where should I direct specific questions about this program?

Contact the Division at (973) 877-4400 or Admissions at (973) 877-1941.

Upon completion of this program, graduates will be able to:

- ◆ Demonstrate knowledge of basic construction principles and materials, including concrete, steel and wood;
- ◆ Demonstrate understanding of architectural and engineering drawings including the concept of scale and orthographic projection;
- ◆ Design various architectural projects including site layout and building features;
- ◆ Design a structure utilizing functional as well as aesthetic considerations;
- ◆ Demonstrate knowledge of architectural history, especially in ways that it influences architectural design today; and
- ◆ Utilize computer software applications such as word processing, spreadsheets, basic programming, and mathematical computing.

Architectural Technology – A.A.S. Degree Program

<p>GENERAL EDUCATION REQUIREMENTS: (21-22 credits)</p> <p>Communications (6 credits) ENG 101 College Composition I 3 ENG 102 College Composition II or ENG 105 Technical Writing 3</p> <p>Social Science (6 credits) ANT 101, POL 104, PSY 101, or SOC 101 3 Any ANT, POL, PSY, or SOC course 3</p> <p>Math (4 credits) MTH 113 College Algebra with Trigonometry 4</p> <p>Physical Education (2-3 credits) PHE 119 or HLT 101 2-3</p> <p>Humanities (3 credits) Any History course 3</p> <p>MAJOR COURSE REQUIREMENTS: (28 credits)</p> <p>ARC 101 Architectural Design I 4 ARC 102 Architectural Design II 4 ARC 111 History of Architecture I 3 ARC 112 History of Architecture II 3 ARC 131 Construction Methods I 3 ARC 132 Construction Methods II 3 ARC 201 Architectural Design III 4 ARC 202 Architectural Design IV 4</p> <p>ADDITIONAL COURSE REQUIREMENTS: (21 credits)</p> <p>CSC 112 Computer Prog. for Engr. & Tech. 3 MTH 114 Unified Calculus I 3 ENR 103 Engineering Graphics 2 ENR 105 Applied Computer Aided Design 2 ENR 205 Advanced CAD 3 PHY 101 College Physics I 4 PHY 102 College Physics II 4</p> <p>Total Credits Required for Degree 70-71</p>	<p>RECOMMENDED SEQUENCE OF COURSES:*</p> <p><u>First Semester</u></p> <p>ENG 101 College Composition I 3 ARC 101 Architectural Design I 4 ARC 111 History of Architecture I 3 ENR 103 Engineering Graphics 2 MTH 113 College Algebra with Trigonometry 4</p> <p><u>Second Semester</u></p> <p>ENG 102 College Composition II or ENG 105 Technical Writing 3 ARC 102 Architectural Design II 4 ARC 112 History of Architecture II 3 ENR 105 Applied Computer Aided Design 2 MTH 114 Unified Calculus I 3</p> <p><u>Summer</u></p> <p>Social Science requirement 3 Humanities requirement 3</p> <p><u>Third Semester</u></p> <p>ARC 131 Construction Methods I 3 ARC 201 Architectural Design III 4 CSC 112 Computer Prog. for Engr. & Tech. 3 PHY 101 College Physics I 4 Physical Education/Health requirement 2-3</p> <p><u>Fourth Semester</u></p> <p>ARC 132 Construction Methods II 3 ARC 202 Architectural Design IV 4 ENR 205 Advanced CAD 3 PHY 102 College Physics II 4 Social Science requirement 3</p>
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***NOTE:** This plan assumes the completion of all required developmental courses in reading, writing, and mathematics as well as other pre- and co-requisites for some of the courses, as listed in the Course Descriptions section of the catalog.

Art Program

Division of Humanities — Curriculum Code: 0401

Will Earn Upon Program Completion: Associate in Arts (A.A.) Degree

Why major in Art?

ECC's Art majors take courses that ensure a strong technical and artistic foundation. The curriculum parallels the first two years of a baccalaureate degree (B. A.) in art at a four-year college or university and will also serve as preparation for careers such as freelance artist, graphic designer, interior decorator, advertising designer, museum assistant, curator, or teacher.

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

Under the articulation and joint enrollment agreements with area institutions, all the college credits earned at ECC will be accepted by these four-year institutions upon transfer. ECC has such agreements with the institutions our students most frequently attend: NJIT, Rutgers, New Jersey City University, Kean University, Montclair State University, Bloomfield College, Fairleigh Dickinson University and others. ECC Art graduates have also transferred to and completed baccalaureate degrees at Pratt Institute, the Parsons School of Design, the Fashion Institute of Technology, and the School of Visual Arts.

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

Based on your placement test scores, you may have to take developmental courses in reading, English, and/or mathematics before taking the core curriculum courses in your major. The Art studio courses may generally be taken at any time.

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

If you do not need developmental course work and you register for an average of 15-16 credits each semester, you can complete the degree in two years. You may shorten the amount of time by taking courses in the two summer sessions.

Where should I direct specific questions about this program?

Call the Division at (973) 877-3319/3320 or Admissions at (973) 877-1941.

Upon completion of this program, graduates will be able to:

- ◆ Demonstrate knowledge of the different artistic perspectives which come from a study of and interaction with a culturally diverse population;
- ◆ Demonstrate understanding of the influence of religion, geography, politics, economics, and social issues on the creation of art;
- ◆ Recognize seminal works of art in the major and minor arts from prehistoric times to the modern era;
- ◆ Demonstrate knowledge of the development of techniques, media, tools and styles in art throughout the world's cultures;
- ◆ Demonstrate in-depth knowledge, via a formal research report of a particular artist, period, style, work, or artistic trend;
- ◆ Develop facility in utilizing a variety of drawing and painting materials and styles;
- ◆ Create compositions in drawing, painting, and design which are expressive and attractive by utilizing the elements of design;
- ◆ Solve two-dimensional design problems;
- ◆ Create solutions to three-dimensional design assignments; and
- ◆ Demonstrate understanding of the influence of art on the daily lives of people.

Art — A.A. Degree Program

<p>GENERAL EDUCATION REQUIREMENTS: (45-48 credits)</p> <p>Communications (9 credits) ENG 101 College Composition I 3 ENG 102 College Composition II 3 ENG 105, 108, 109, 141, 142, 151 or 169 3</p> <p>Social Science (6 credits) ANT 101, POL 104, PSY 101, or SOC 101 3 Any ANT, POL, PSY, or SOC course 3</p> <p>Lab Science/Math (10-12 credits) A Lab Science sequence and a Math course (100 or higher) or two Math courses (100 or higher) and a Lab Science course: MTH (100 level or higher) 3-8 BIO 101-102, 103-104, or 121-122; CHM 101-102 or 103-104; PHY 101-102 or 103-104 4-8</p> <p>Physical Education (2-3 credits) PHE 119 or HLT 101 2-3</p> <p>Humanities (18 credits) Any two 200-level English literature courses 6 Any History sequence 6 ART 101, 102, or 200 3 ART 161, 167, or 168 3</p> <p>MAJOR COURSE REQUIREMENTS: (18 credits)</p> <p>ART 103 Fundamentals of Art I 3 ART 104 Fundamentals of Art II 3 ART 107 Drawing I 3 ART 111 Fundamentals of Painting I 3 ART 205 Two-Dimensional Design 3 ART 206 Three-Dimensional Design 3</p> <p>Total Credits Required for Degree 63-66</p>	<p>RECOMMENDED SEQUENCE OF COURSES:*</p> <p><u>First Semester</u></p> <p>ART 101 Art History I or ART 102 Art History II or ART 200 African-American Art 3 ART 103 Fundamentals of Art I 3 ENG 101 College Composition I 3 HST 101 World Civilization I 3 PSY 101 General Psychology I 3 Physical Education/Health requirement 2-3</p> <p><u>Second Semester</u></p> <p>ART 104 Fundamentals of Art II 3 ENG 102 College Composition II 3 HST 102 World Civilization II 3 MTH 100 Introductory College Math 4 SOC 101 Introduction to Sociology 3</p> <p><u>Third Semester</u></p> <p>ART 107 Drawing I 3 ART 205 Two-Dimensional Design 3 BIO 101 College Biology I 4 ENG 109 Effective Speech 3 ENG 205 The Western Literary Tradition 3</p> <p><u>Fourth Semester</u></p> <p>ART 111 Fundamentals of Painting I 3 ART 161 or ART 167 or ART 168 3 (Computer Graphic courses) ART 206 Three-Dimensional Design 3 BIO 102 College Biology II 4 ENG 215 Modern Literary Masterpieces 3</p>
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***NOTE:** This plan assumes the completion of all required developmental courses in reading, writing, and mathematics as well as other pre- and co-requisites for some of the courses, as listed in the Course Descriptions section of the catalog.

Biology/Pre-Medicine Program

Division of Biology & Chemistry — Curriculum Code: 0601
Will Earn Upon Program Completion: Associate in Science (A.S.) Degree

Why major in Biology/Pre-Medicine?

Biology is the primary life science from which students can enter specific fields of study as diverse as molecular biology, forestry, pathophysiology, neuroanatomy, and parasitology. Biology also provides the foundation for students who wish to become physicians, dentists, or other such medical professionals. The curriculum is equivalent to the first two years of a baccalaureate program in Biology. Emphasis is placed on scientific method and critical analysis that will enable you to be a contributor to any scientific or medical team.

If I major in Biology/Pre-Medicine, can I transfer to an upper division college or university?

The Associate in Science degree in Biology/Pre-Medicine prepares you for transfer to upper division colleges and universities to pursue a bachelor's degree. ECC's transfer/articulation agreements with area four-year institutions provide smooth transfer for our A.S. graduates.

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

The basic skills competency test is a requirement for all majors. Major course work can begin once you have completed all developmental courses. In addition, if you are at the final level of remediation in mathematics and English, you can take either BIO 100 or CHM 100. While neither of these courses count toward graduation in this major, they provide an introduction to basic biology and chemistry that will prepare you for this program.

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

If you do not need developmental courses and you take an average of 17 credits per semester, you should be able to complete the program in two years.

Where should I direct specific questions about this program?

Call the Division at (973) 877-3430/3364 or Admissions at (973) 877-1941.

Upon completion of this program, graduates will be able to:

- ◆ Utilize critical thinking and problem solving skills, including the scientific method and methods of scientific conversion;
- ◆ Demonstrate a mastery of the fundamental concepts of inorganic chemistry, organic chemistry and biochemistry;
- ◆ Demonstrate a mastery of the fundamental concepts of biology at the genetic, molecular, cellular, tissue, organ, and organismal level;
- ◆ Perform scientific investigations using proper scientific and laboratory safety protocols; and
- ◆ Successfully transfer to a four-year undergraduate degree program in Biology.

Biology/Pre-Medicine — A.S. Degree Program

<p>GENERAL EDUCATION REQUIREMENTS: (35-36 credits)</p> <p>Communications (6 credits) ENG 101 College Composition I 3 ENG 102 College Composition II 3</p> <p>Social Science (6 credits) ANT 101, POL 104, PSY 101, or SOC 101 3 Any ANT, POL, PSY, or SOC course 3</p> <p>Lab Science/Math (12 credits) BIO 103 General Biology I 4 BIO 104 General Biology II 4 MTH 119 Pre-Calculus I 4</p> <p>Physical Education (2-3 credits) PHE 119 or HLT 101 2-3</p> <p>Humanities (9 credits) Any History course 3 Any 200-level English literature course 3 (ENG 205, 215 or 223 suggested) ART 100, 101, 102, or 200 or MUS 100, 108, 109, or 117 3</p> <p>MAJOR COURSE REQUIREMENTS: (28 credits)</p> <p>CHM 103 General Chemistry I 4 CHM 104 General Chemistry II 4 MTH 120 Pre-Calculus II 4 PHY 101 College Physics I and 4 PHY 102 College Physics II 4 Or CHM203 Organic Chemistry I and 4 CHM204 Organic Chemistry II 4 Two Biology electives selected from the following courses: BIO 211 Microbiology 4 BIO 237 Genetics 4 Note: The sequence BIO 121-122 (8 cr.) may be substituted for one Biology elective.</p> <p>Total Credits Required for Degree 63-64</p> <p>The minimum passing grade for all courses designated BIO, CHM, MTH or PHY is “C.” If you earn a grade below “C,” you need to repeat that course.</p>	<p>RECOMMENDED SEQUENCE OF COURSES:*</p> <p><u>First Semester</u></p> <p>BIO 103 General Biology I 4 ENG 101 College Composition I 3 CHM 103 General Chemistry I 4 MTH 119 Pre-Calculus I 4 History requirement 3</p> <p><u>Second Semester</u></p> <p>BIO 104 General Biology II 4 CHM 104 General Chemistry II 4 ENG 102 College Composition II 3 MTH 120 Pre-Calculus II 4 Social Science requirement 3</p> <p><u>Third Semester</u></p> <p>CHM 203 Organic Chemistry I or PHY 101 College Physics I 4 Biology elective 4 Social Science requirement 3 Any 200-level English literature course 3</p> <p><u>Fourth Semester</u></p> <p>CHM 204 Organic Chemistry II or PHY 102 College Physics II 4 Biology elective 4 Art/Music requirement 3 PHE 119 or HLT 101 2-3</p>
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***NOTE:** This plan assumes the completion of all required developmental courses in reading, writing, and mathematics as well as other pre- and co-requisites for some of the courses, as listed in the Course Descriptions section of the catalog.

Business Administration Program

Division of Business — Curriculum Code: 2006

Will Earn Upon Program Completion: Associate in Applied Science (A.A.S.) Degree

Why major in Business Administration?

This program is designed to prepare students for entry-level positions in sales, marketing, administration, or management. It provides you sufficient knowledge of the business world to enable you to function effectively within large and small corporations, and also in non-profit organizations and government agencies.

If I major in Business Administration, can I transfer to an upper division college or university?

The major is job-oriented and not designed for transfer to a baccalaureate program. Although this program is not designed for transfer purposes, many colleges and universities will apply most or all the courses you have taken toward a bachelor's degree. Other A.A.S. degree options available at Essex for Business Administration majors are: Hospitality Management, and Office Systems Technology and Management.

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

Based on your placement test scores, you may have to take developmental courses in reading, English, and/or mathematics before taking courses in your major.

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

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

Where should I direct specific questions about this program?

Contact the Business Division at (973) 877-3222 or Admissions at (973) 877-1941.

Upon completion of this program, graduates will be able to:

- ◆ Demonstrate knowledge of the world of business;
- ◆ Use the language of business in writing and speaking;
- ◆ Use economic concepts in business to solve business problems;
- ◆ Use knowledge of the fundamentals of planning, organizing, and management to make business decisions;
- ◆ Apply motivational theories in employee management;
- ◆ Apply general business concepts in a global context;
- ◆ Sell ideas and products effectively;
- ◆ Conduct both quantitative and qualitative analysis.

Business Administration – A.A.S. Degree Program

<p>GENERAL EDUCATION REQUIREMENTS: (20-22 credits)</p> <p>Communications (6 credits) ENG 101 College Composition I 3 ENG 102 College Composition II or ENG 105 Technical Writing 3</p> <p>Social Science (6 credits) ANT 101, POL 104, PSY 101, or SOC 101 3 Any ANT, POL, PSY, or SOC course 3</p> <p>Lab Science/Math (3-4 credits) MTH 100 or higher or a Lab Science course 3-4</p> <p>Physical Education (2-3 credits) PHE 119 or HLT 101 2-3</p> <p>Humanities (3 credits) Any History course 3</p> <p>MAJOR COURSE REQUIREMENTS: (21 credits)</p> <p>BUS 101 Business Organization & Mgt. 3 BUS 141 Business Mathematics 3 BUS 201 Principles of Management 3 BUS 204 Introd. to Org. Behavior in Business 3 Three courses in Business Administration or Hospitality Management from the following: BUS 207, 211, 212, 213, 215, 221, 231, 251, 252, or any HMM course. 9</p> <p>ADDITIONAL COURSE REQUIREMENTS: (20 credits)</p> <p>ACC 101 Prin. of Accounting I - Financial 4 ACC 102 Prin. of Accounting II - Managerial 4 ECO 101 Prin. of Economics (Macro) 3 ECO 102 Prin. of Economics II (Micro) 3 CIS 131, 135, 137, or 139 3 Any BUS or CIS course 3</p> <p>Total Credits Required for Degree 61-63</p>	<p>RECOMMENDED SEQUENCE OF COURSES:*</p> <p><u>First Semester</u></p> <p>BUS 101 Business Organization & Mgt. 3 ACC 101 Prin. of Accounting I - Financial 4 MTH 100 Introductory College Math or MTH 117 Math for Mgmt. Science 3-4 ENG 101 College Composition I 3 Social Science requirement 3</p> <p><u>Second Semester</u></p> <p>ACC 102 Prin. of Accounting II - Managerial 4 BUS 201 Principles of Management 3 ECO 101 Prin. of Economics (Macro) 3 Social Science requirement 3 ENG 102 College Composition II or ENG 105 Technical Writing 3</p> <p><u>Third Semester</u></p> <p>Physical Education/Health requirement 2-3 BUS 204 Introd. to Org. Behavior in Business 3 CIS 131, 135, 137, or 139 3 BUS 141 Business Mathematics 3 ECO 102 Prin. of Economics II (Micro) 3</p> <p><u>Fourth Semester</u></p> <p>BUS or CIS Elective 3 BUS requirement 3 BUS requirement 3 BUS requirement 3 Humanities requirement 3</p>
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***NOTE:** This plan assumes the completion of all required developmental courses in reading, writing, and mathematics as well as other pre- and co-requisites for some of the courses, as listed in the Course Descriptions section of the catalog.

Business Administration Program

A Dual Admissions Program with Rutgers-Newark, NJIT, Montclair State University,

Kean University and College of Insurance

Division of Business — Curriculum Code: 2005

Will Earn Upon Program Completion: Associate in Science (A.S.) Degree

Why major in Business Administration?

This associate degree program builds your knowledge of general business principles and provides you with management skills that are applicable in a wide variety of settings. The major is best suited for the student who wishes to pursue, upon completing his/her associate degree, a bachelor's degree in Business Administration. With advanced degrees/certifications and relevant job experience, you can secure rewarding leadership positions as managers within industry, governmental agencies, and non-profit organizations.

If I major in Business Administration, can I transfer to an upper division college or university?

This program prepares you to transfer to an upper division college or university to complete your bachelor's degree. You may choose to participate in the dual admissions program with Rutgers-Newark, College of Insurance, NJIT, Montclair State University, or Kean University. These admissions agreements provide guaranteed admission with junior status to qualified students. Consult with ECC's transfer/articulation coordinator in the Career Resource Center to review specific requirements.

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

Based on your placement test scores, you may have to take developmental courses in reading, English, and/or mathematics before taking courses in your major.

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

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

Where should I direct specific questions about this program?

Contact the Business Division at (973) 877-3222 or Admissions at (973) 877-1941.

Upon completion of this program, graduates will be able to:

- ◆ Demonstrate knowledge of management theories and principles;
- ◆ Communicate effectively in speech and writing using the language of business;
- ◆ Demonstrate knowledge of the American economic system;
- ◆ Use knowledge of the fundamentals of planning, organizing, and management in decision-making;
- ◆ Motivate employees to fulfill the goals of their organization in an efficient and effective manner;
- ◆ Utilize management and marketing principles to accomplish organizational objectives; and
- ◆ Apply general business concepts in a global context.

Business Administration — A.S. Degree Program

<p>GENERAL EDUCATION REQUIREMENTS: (33-36 credits)</p> <p>Communications (6 credits) ENG 101 College Composition I 3 ENG 102 College Composition II 3</p> <p>Social Science (6 credits) ANT 101, POL 104, PSY 101, or SOC 101 3 Any ANT, POL, PSY, or SOC course (PSY 102 or SOC 108 recommended) 3</p> <p>Lab Science/Math (10-12 credits) A Lab Science sequence and a Math course (100 or higher) or two Math courses (100 or higher) and a Lab Science course. MTH (100 level or higher) 3-8 BIO 101-102, 103-104, or 121-122; CHM 101-102 or 103-104; PHY 101-102 or 103-104 4-8</p> <p>Physical Education (2-3 credits) PHE 119 or HLT 101 2-3</p> <p>Humanities (9 credits) Any History course 3 Any 200-level English literature course 3 ART 100, 101, 102, or 200, or MUS 100, 108, 109, or 117 3</p> <p>MAJOR COURSE REQUIREMENTS: (15 credits)</p> <p>BUS 101 Business Organization & Mgt 3 BUS 201 Principles of Management 3 Three courses from the following: 9 BUS 204 Intro. to Org. Behavior in Business BUS 207 Leadership and Supervision in Org. BUS 211 Principles of Marketing BUS 212 Principles of Retailing BUS 213 Principles of Selling BUS 215 Advertising Principles BUS 221 Human Resource Management BUS 231 Global Business BUS 251 Business Law I BUS 252 Business Law II</p> <p>ADDITIONAL COURSE REQUIREMENTS: (17 credits)</p> <p>ACC 101 Prin. of Accounting I - Financial 4 ACC 102 Prin. of Accounting II - Managerial 4 ECO 101 Prin. of Economics (Macro) 3 ECO 102 Prin. of Economics II (Micro) 3 CIS 131, 135, 137, or 139 3</p> <p>Total Credits Required for Degree 65-68</p>	<p>RECOMMENDED SEQUENCE OF COURSES:*</p> <p><u>First Semester</u></p> <p>ACC 101 Prin. of Accounting I - Financial 4 BUS 101 Business Organization & Mgt. 3 ENG 101 College Composition I 3 Math requirement 3-4 Social Science requirement 3</p> <p><u>Second Semester</u></p> <p>ACC 102 Prin. of Accounting II - Managerial 4 BUS 201 Principles of Management 3 ENG 102 College Composition II 3 Math requirement 3-4 Social Science requirement 3</p> <p><u>Third Semester</u></p> <p>BUS requirement (200-level BUS course) 3 CIS 131, 135, 137, or 139 3 ECO 101 Prin. of Economics (Macro) 3 Physical Education/Health requirement 2-3 Lab Science requirement 4</p> <p><u>Fourth Semester</u></p> <p>BUS requirement (Two 200-level BUS courses) 6 ECO 102 Prin. of Economics II (Micro) 3 English literature requirement (200-level course) 3 History requirement 3 Art or Music requirement 3</p>
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***NOTE:** This plan assumes the completion of all required developmental courses in reading, writing, and mathematics as well as other pre- and co-requisites for some of the courses, as listed in the Course Descriptions section of the catalog.

Business Administration: Hospitality Management Option

Division of Business — Curriculum Code: 200H

Will Earn Upon Program Completion: Associate in Applied Science (A.A.S.) Degree

Why major in Hospitality Management?

This program prepares you to pursue careers in resorts, hotels, motels, and other lodging and hospitality properties. Students will acquire knowledge that will enable them to work as unit managers, assistant managers, or food and beverage managers. They will also be able to advance to positions such as front office manager or sales and marketing manager.

If I major in Hospitality Management, can I transfer to an upper division college or university?

The major is job-oriented and not designed for transfer to a baccalaureate program. However, many colleges and universities will apply most or all the courses you have taken toward a bachelor's degree.

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

Based on your placement test scores, you may have to take developmental courses in reading, English, and/or mathematics before taking courses in your major.

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

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

Where should I direct specific questions about this program?

Contact the Business Division at (973) 877-3222 or Admissions at (973) 877-1941.

Upon completion of this program, graduates will be able to:

- ◆ Use the terms and concepts of the hospitality industry in oral and written communications;
- ◆ Demonstrate knowledge of management theory and practice;
- ◆ Demonstrate knowledge of the skills required for various positions in the industry;
- ◆ Coordinate and facilitate the many tasks associated with running the front office of a hotel or motel;
- ◆ Apply the basic principles of food and beverage management and merchandising;
- ◆ Plan and implement a housekeeping and laundry department for a hotel or motel;
- ◆ Demonstrate understanding of the laws pertaining to the operation of hotels and motels;
- ◆ Prepare basic accounting documents related to the front office of a hotel or motel; and
- ◆ Adhere to globally accepted standards in leadership and management.

Business Administration: Hospitality Management Option

A.A.S. Degree Program

<p>GENERAL EDUCATION REQUIREMENTS: (20-22 credits)</p> <p>Communications (6 credits) ENG 101 College Composition I 3 ENG 102 College Composition II or ENG 105 Technical Writing 3</p> <p>Social Science (6 credits) ANT 101, POL 104, PSY 101, or SOC 101 3 Any ANT, POL, PSY, or SOC course 3</p> <p>Lab Science/Math (3-4 credits) MTH 100 or higher or a Lab Science course 3-4</p> <p>Physical Education (2-3 credits) PHE 119 or HLT 101 2-3</p> <p>Humanities (3 credits) Any History course 3</p> <p>MAJOR COURSE REQUIREMENTS: (21 credits)</p> <p>BUS 101 Business Org. and Mgmt 3 BUS 141 Business Mathematics 3 HMM 103 Intro. To Hospitality Mgmt. 3 HMM 226 Super. Dev. In Hospitality Mgmt 3 HMM 261 Hospitality Housing Management 3 HMM 263 Hospitality Mgmt. Front Office Proc. 3 HMM 264 Food & Beverage Management 3</p> <p>ADDITIONAL COURSE REQUIREMENTS: (20 credits)</p> <p>ECO 101 Prin. of Economics (Macro) 3 ACC 101 Prin. of Accounting I - Financial 4 ACC 102 Prin. of Accounting II - Managerial 4 CIS 131, 135, 137, or 139 3 Free elective 3 HMM 256 Hospitality Management Law 3 (strongly recommended) or a 200-level BUS course or a CIS course.</p> <p>Total Credits Required for Degree 61-63</p>	<p>RECOMMENDED SEQUENCE OF COURSES:*</p> <p><u>First Semester</u></p> <p>BUS 101 Business Organization & Mgt. 3 ACC 101 Prin. of Accounting I - Financial 4 ENG 101 College Composition I 3 Lab Science/Math requirement 3-4 Social Science requirement 3</p> <p><u>Second Semester</u></p> <p>BUS 141 Business Mathematics 3 HMM 103 Intro. To Hospitality Mgmt. 3 ACC 102 Prin. of Accounting II - Managerial 4 ENG 102 College Composition II or ENG 105 Technical Writing 3 Social Science requirement 3</p> <p><u>Third Semester</u></p> <p>HMM 226 Super. Dev. In Hospitality Mgmt. 3 HMM 261 Hospitality Housing Management 3 ECO 101 Prin. of Economics (Macro) 3 CIS requirement 3 Physical Education/Health requirement 2-3</p> <p><u>Fourth Semester</u></p> <p>HMM 263 Hospitality Mgmt. Front Office Proc. 3 HMM 264 Food & Beverage Management 3 HMM 256 Hospitality Management Law or a 200-level BUS course or a CIS course 3 History requirement 3 Free elective 3</p>
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***NOTE:** This plan assumes the completion of all required developmental courses in reading, writing, and mathematics as well as other pre- and co-requisites for some of the courses, as listed in the Course Descriptions section of the catalog.

Business Administration: Office Systems Technology & Management Option

Division of Business — Curriculum Code: 200S

Will Earn Upon Program Completion: Associate in Applied Science (A.A.S.) Degree

Why major in Office Systems Technology & Management?

Technological advances are changing the office environment and office personnel need to keep pace to retain a professional edge. This program develops technical and organizational skills and provides a broad background in office management, business, communication, computer technology, and interpersonal skills. The program prepares students for a wide variety of positions such as administrative assistant, administrative office manager, administrative receptionist, executive assistant, office specialist, office coordinator, information specialist, administrative technology specialist, and related administrative support positions.

If I major in Office Systems Technology & Management, can I transfer to an upper division college or university?

The major is designed to prepare students to gain entry to administrative support positions. While the program is not designed for transfer to a baccalaureate program, many colleges and universities will apply most or all the courses you have taken toward a bachelor's degree.

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

Based on your placement test scores, you may have to take developmental courses in reading, English, and/or mathematics before taking courses in your major.

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

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

Where should I direct specific questions about this program?

Contact the Business Division at (973) 877-3222 or Admissions at (973) 877-1941.

Upon completion of this program, graduates will be able to:

- ◆ Competently undertake a variety of administrative and clerical responsibilities;
- ◆ Perform and coordinate an office's administrative activities and ensure that information is disseminated to staff and customers/clients through the use of traditional letters and memoranda, electronic mail, and interoffice mail;
- ◆ Demonstrate dependability, initiative, adherence to confidentiality requirements, enthusiasm for new tasks, and interest in keeping pace with new developments in the field;
- ◆ Use personal computers for word processing, spreadsheet applications, and professional presentations;
- ◆ Prepare a variety of business correspondence, handle travel arrangements, schedule appointments, and work with customers/clients;
- ◆ Conduct research on the Internet;
- ◆ Operate a variety of office equipment such as facsimile machines, photocopiers, and telephone systems;
- ◆ Organize and maintain paper and electronic files;
- ◆ Manage time effectively and establish priorities;
- ◆ Produce professional copy using correct document formatting procedures;
- ◆ Keyboard with accuracy and at acceptable speeds; and
- ◆ Quickly and effectively proofread a variety of business correspondence.

Business Administration: Office Systems Technology & Management Option — A.A.S. Degree Program

<p>GENERAL EDUCATION REQUIREMENTS: (20-22 credits)</p> <p>Communications (6 credits) ENG 101 College Composition I 3 ENG 102 College Composition II or ENG 105 Technical Writing 3</p> <p>Social Science (6 credits) ANT 101, POL 104, PSY 101, or SOC 101 3 Any ANT, POL, PSY, or SOC course 3</p> <p>Lab Science/Math (3-4 credits) MTH 100 or higher or a Lab Science course 3-4</p> <p>Physical Education (2-3 credits) PHE 119 or HLT 101 2-3</p> <p>Humanities (3 credits) Any History course 3</p> <p>MAJOR COURSE REQUIREMENTS: (17 credits)</p> <p>OST 106 Keyboarding and Formatting I 4 OST 121 Business Communication 3 OST 210 Office Systems Management 3 OST 250 Word/Information Processing Applications I 4 OST 251 Word/Information Processing Applications II or OST 290 OST Internship 3</p> <p>ADDITIONAL COURSE REQUIREMENTS: (23 credits)</p> <p>BUS 101 Business Organization & Mgt. 3 BUS 141 Business Math 3 ACC 101 Prin. of Accounting I - Financial 4 ACC 102 Prin. of Accounting II - Managerial 4 CIS 135 Microcomputer Spreadsheets 3 CIS 136 Desktop Publish. for IBM Compatibles 3 BUS, CIS, or OST Elective 3 (OST 107 Recommended)</p> <p>Total Credits Required for Degree 60-62</p>	<p>RECOMMENDED SEQUENCE OF COURSES:*</p> <p><u>First Semester</u></p> <p>OST 106 Keyboarding and Formatting I 4 OST 121 Business Communication 3 BUS 101 Business Organization & Mgt. 3 ENG 101 College Composition I 3 Social Science requirement 3</p> <p><u>Second Semester</u></p> <p>OST 210 Office Systems Management 3 BUS 141 Business Math 3 ENG 102 College Composition II or ENG 105 Technical Writing 3 Humanities requirement 3 Social Science requirement 3</p> <p><u>Third Semester</u></p> <p>ACC 101 Prin. of Accounting I - Financial 4 CIS 135 Microcomputer Spreadsheets 3 OST 250 Word/Information Processing Applications I 4 Lab Science/Math requirement 3-4 HLT/PHE requirement 2-3</p> <p><u>Fourth Semester</u></p> <p>ACC 102 Prin. of Accounting II - Managerial 4 BUS, CIS, or OST Elective 3 CIS 136 Desktop Publish. for IBM Compatibles 3 OST 251 Word/Information Processing Applications II or OST 290 OST Internship 3</p>
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***NOTE:** This plan assumes the completion of all required developmental courses in reading, writing, and mathematics as well as other pre- and co-requisites for some of the courses, as listed in the Course Descriptions section of the catalog.

Business Career Development Program

Division of Business — Curriculum Code: 3001

Will Earn Upon Program Completion: Certificate in Business Career Development

Why major in Business Career Development?

This program is designed to develop or refine technical and professional skills in business. The program is especially appropriate for employees who wish to upgrade job-related skills for the sake of career advancement. It is also designed to offer preparation for students seeking entry-level jobs in business and industry.

If I major in Business Career Development, can I transfer to an upper division college or university?

The major is job-oriented and not designed for transfer to a baccalaureate program. However, many of the courses you take may be applied toward an associate degree at Essex County College. Check with your faculty advisor for more information.

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

Based on your placement test scores, you may have to take developmental courses in reading, English, and/or mathematics before taking courses in your major.

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.

Where should I direct specific questions about this program?

Contact the Business Division at (973) 877-3222 or Admissions at (973) 877-1941.

Upon completion of this program, graduates will be able to:

- ◆ Demonstrate knowledge of basic business principles;
- ◆ Communicate effectively using business terms and concepts;
- ◆ Demonstrate proficiency in keyboarding and document processing;
- ◆ Explain and apply motivational theories in business;
- ◆ Demonstrate dependability and initiative in carrying out responsibilities;
- ◆ Demonstrate computer skills; and
- ◆ Demonstrate knowledge of global business standards.

Business Career Development – Certificate Program

<p>GENERAL EDUCATION REQUIREMENTS: (3 credits)</p> <p>Communications (3 credits) ENG 101 College Composition I 3</p> <p>MAJOR COURSE REQUIREMENTS: (24 credits)</p> <p>BUS 101 Business Organization & Mgt. 3 BUS 141 Business Mathematics 3 BUS 201 Principles of Management 3 BUS 204 Introd. to Org. Behavior in Business 3 Two courses in Advanced Business (at the 200-level) 6 CIS 131, 135, 137, or 139 3 OST 105 Microcomputer Keyboarding and Document Processing 3</p> <p>ADDITIONAL COURSE REQUIREMENTS: (3 credits)</p> <p>Free elective 3</p> <p>Total Credits Required for Certificate 30</p>	<p>RECOMMENDED SEQUENCE OF COURSES:*</p> <p><u>First Semester</u></p> <p>BUS 101 Business Organization & Mgt. 3 BUS 141 Business Mathematics 3 CIS elective 3 OST 105 Microcomputer Keyboarding and Document Processing 3 ENG 101 College Composition I 3</p> <p><u>Second Semester</u></p> <p>BUS 201 Principles of Management 3 BUS 204 Introd. to Org. Behavior in Business 3 BUS elective 3 BUS elective 3 Free elective 3</p>
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***NOTE:** This plan assumes the completion of all required developmental courses in reading, writing, and mathematics as well as other pre- and co-requisites for some of the courses, as listed in the Course Descriptions section of the catalog.

Chemical Technology Program

Division of Biology & Chemistry — Curriculum Code: 2306
Will Earn Upon Program Completion: Associate in Applied Science (A.A.S.) Degree

Why major in Chemical Technology?

This major prepares you for careers in the chemical, pharmaceutical, and health care industries as laboratory technicians, research assistants, or quality control analysts. With experience you may find positions in marketing, production, and consumer service. The program is offered jointly by Essex County College and the Technical Training Project Inc. (TTP), a privately funded agency; the institution has a strong cooperative education component. Program participants receive 6 weeks of internship experience. TTP graduates who are already employed may choose to pursue the associate degree for professional advancement purposes.

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

The major is job-oriented and not designed for transfer to a baccalaureate program. However, credits earned in this associate degree program are transferable to technology programs at Thomas Edison State College. Also, other colleges and universities will apply most or all of the courses you have taken towards a bachelor's degree, depending upon their program requirements.

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

All new students must take a basic skills competency test. Developmental courses can be taken while enrolled in the TTP Program with the permission of the director of the TTP Program.

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

If you do not need remedial courses and you can take an average of 17 credits per semester, you should be able to complete the program in two years. If you have enrolled after completing the TTP program, you can complete this degree in two regular (fall and spring) semesters.

Where should I direct specific questions about this program?

For answers to questions on the TTP program, contact the Program Director at (973) 624-1400. For answers to questions on the Chemical Technology A.A.S. degree program, call the Division at (973) 877-3430 or Admissions at (973) 877-1941.

Upon completion of this program, graduates will be able to:

- ◆ Demonstrate mastery of the fundamental concepts of chemistry and physics;
- ◆ Perform qualitative, quantitative, and instrumental analysis of raw and finished products using standard tools and equipment;
- ◆ Use the computer for collecting and assessing laboratory data and for preparing reports;
- ◆ Demonstrate knowledge of quality control standards;
- ◆ Offer operational assistance in solving technical problems; and
- ◆ Enhance employability in the chemical industry workforce.

Chemical Technology — A.A.S. Degree Program

<p>GENERAL EDUCATION REQUIREMENTS: (20-22 credits)</p> <p>ENG 101 College Composition I 3 ENG 102 College Composition II or ENG 105 Technical Writing 3</p> <p>Social Science (6 credits) ANT 101, POL 104, PSY 101, or SOC 101 3 Any ANT, POL, PSY, or SOC course 3</p> <p>Math (3-4 credits) MTH 100 or higher 3-4</p> <p>Physical Education (2-3 credits) PHE 119 or HLT 101 2-3</p> <p>Humanities (3 credits) Any History course 3</p> <p>MAJOR COURSE REQUIREMENTS: (18 credits)</p> <p>CHM 107 Technical Chemistry I* 3 CHM 108 Technical Chemistry II* 3 CHM 109 Technical Chemistry Lab* 2 CHM 111 Chemistry Seminar* 3 CHM 112 Chemical Calculations* 3 CHM 206 Instrumental Methods* 4</p> <p>ADDITIONAL COURSE REQUIREMENTS: (26 credits)</p> <p>MTH 109 Technical Math* 3 PHY 101 College Physics I 4 PHY 102 College Physics II 4 BIO 101 College Biology I 4 BIO 102 College Biology II 4 CIS 131 or higher level CIS course 3 Science elective: Select from BIO, CHM, CIS, PHY 4</p> <p>Total Credits Required for Degree 64-66</p> <p>* Courses taught by TTP for which college credit is awarded upon successful completion of the TTP Program.</p>	<p>RECOMMENDED SEQUENCE OF COURSES:**</p> <p><u>First Semester</u></p> <p>BIO 101 College Biology I 4 PHY 101 College Physics I 4 ENG 101 College Composition I 3 MTH 109 Technical Math* 3 Social Science requirement 3</p> <p><u>Second Semester</u></p> <p>BIO 102 College Biology II 4 PHY 102 College Physics II 4 ENG 102 College Composition II 3 Math requirement 3-4</p> <p><u>Third Semester</u></p> <p>CHM 107 Technical Chemistry I* 3 CHM 108 Technical Chemistry II* 3 CHM 109 Technical Chemistry Lab* 2 CHM 111 Chemistry Seminar* 3 CHM 112 Chemical Calculations* 3 CHM 206 Instrumental Methods* 4</p> <p><u>Fourth Semester</u></p> <p>PHE 119 or HLT 101 2-3 History requirement 3 CIS requirement 3 Social Science requirement 3 Science elective 4</p>
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****NOTE:** This plan assumes the completion of all required developmental courses in reading, writing, and mathematics as well as other pre- and co-requisites for some of the courses, as listed in the Course Descriptions section of the catalog.

Chemical Technology Certificate Program

Division of Biology & Chemistry — Curriculum Code: 3306
Will Earn Upon Program Completion: Certificate in Chemical Technology

Why should I participate in the Chemical Technology Certificate Program (also called the Technical Training Project Inc. Program or TTP)?

If you want to enter the scientific workforce as soon as possible, the TTP program may be for you. TTP is a private non-profit organization that prepares individuals for technical careers as laboratory technicians and analysts of raw and finished products. In this program, participants receive 20 weeks of academic instruction as well as internship experience. Courses are taught by TTP professionals and guest lecturers from the industry. Essex County College recognizes TTP graduates by awarding them a certificate in Chemical Technology.

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

The major is job-oriented and not designed for transfer to a baccalaureate program, but courses earned upon program completion can be applied to Essex County College's associate degree program in Chemical Technology. Also, credits earned in this program are transferable to degree programs at Thomas Edison State College.

Are there any requirements I must satisfy before I start the program?

You must have a high school diploma or GED.

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

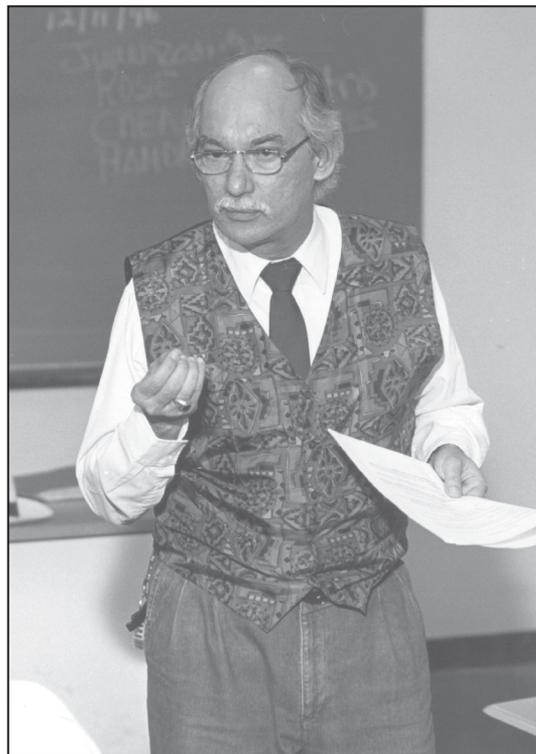
You should be able to complete the program in twenty weeks.

Where should I direct specific questions about this program?

For answers to questions on the TTP Program, contact the Program Director at (973) 624-1400.

Upon completion of this program, graduates will be able to:

- ◆ Demonstrate understanding of the basic principles of organic and inorganic chemistry;
- ◆ Make appropriate use of chemicals, materials, and lab equipment;
- ◆ Handle mathematical calculations;
- ◆ Maintain lab reports on experiments;
- ◆ Perform various techniques of wet and dry analysis; and
- ◆ Perform analysis of raw and finished products.



Chemical Technology – Certificate Program

<p>GENERAL EDUCATION REQUIREMENTS: None</p> <p>MAJOR COURSE REQUIREMENTS: (21 credits)</p> <table style="width: 100%; border-collapse: collapse;"> <tr><td>CHM 107</td><td>Technical Chemistry I*</td><td style="text-align: right;">3</td></tr> <tr><td>CHM 108</td><td>Technical Chemistry II*</td><td style="text-align: right;">3</td></tr> <tr><td>CHM 109</td><td>Technical Chemistry Lab*</td><td style="text-align: right;">2</td></tr> <tr><td>CHM 111</td><td>Chemistry Seminar*</td><td style="text-align: right;">3</td></tr> <tr><td>CHM 112</td><td>Chemical Calculations*</td><td style="text-align: right;">3</td></tr> <tr><td>CHM 206</td><td>Instrumental Methods*</td><td style="text-align: right;">4</td></tr> <tr><td>MTH 109</td><td>Technical Mathematics*</td><td style="text-align: right;">3</td></tr> </table> <p>ADDITIONAL COURSE REQUIREMENTS: None</p> <p>Total Credits Required for Certificate 21</p> <p>* Courses taught by TTP for which college credit is awarded upon successful completion of the TTP Program.</p>	CHM 107	Technical Chemistry I*	3	CHM 108	Technical Chemistry II*	3	CHM 109	Technical Chemistry Lab*	2	CHM 111	Chemistry Seminar*	3	CHM 112	Chemical Calculations*	3	CHM 206	Instrumental Methods*	4	MTH 109	Technical Mathematics*	3	<p>RECOMMENDED SEQUENCE OF COURSES:**</p> <table style="width: 100%; border-collapse: collapse;"> <tr><td>CHM 107</td><td>Technical Chemistry I*</td><td style="text-align: right;">3</td></tr> <tr><td>CHM 108</td><td>Technical Chemistry II*</td><td style="text-align: right;">3</td></tr> <tr><td>CHM 109</td><td>Technical Chemistry Lab*</td><td style="text-align: right;">2</td></tr> <tr><td>CHM 111</td><td>Chemistry Seminar*</td><td style="text-align: right;">3</td></tr> <tr><td>CHM 112</td><td>Chemical Calculations*</td><td style="text-align: right;">3</td></tr> <tr><td>CHM 206</td><td>Instrumental Methods*</td><td style="text-align: right;">4</td></tr> <tr><td>MTH 109</td><td>Technical Mathematics*</td><td style="text-align: right;">3</td></tr> </table>	CHM 107	Technical Chemistry I*	3	CHM 108	Technical Chemistry II*	3	CHM 109	Technical Chemistry Lab*	2	CHM 111	Chemistry Seminar*	3	CHM 112	Chemical Calculations*	3	CHM 206	Instrumental Methods*	4	MTH 109	Technical Mathematics*	3
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****NOTE:** This plan assumes the completion of all required developmental courses in reading, writing, and mathematics as well as other pre- and co-requisites for some of the courses, as listed in the Course Descriptions section of the catalogs.

Chemistry Program

Division of Biology & Chemistry — Curriculum Code: 0602

Will Earn Upon Program Completion: Associate in Science (A.S.) Degree

Why major in Chemistry?

Chemistry is essential to areas of study such as biology, medicine, dentistry, chemical engineering, pharmacology, forensics, and polymer science. In addition, chemists are in high demand and often go on to senior leadership levels in corporate America. The curriculum is equivalent to the first two years of a baccalaureate program in Chemistry. Emphasis is placed on scientific method and critical analysis that will enable you to solve chemical problems in areas of scientific endeavor.

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

The Associate in Science degree in Chemistry prepares you for transfer to upper division colleges and universities to pursue a bachelor's degree. ECC's transfer/articulation agreements with area four-year institutions provide smooth transfer for our A.S. graduates.

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

The basic skills competency test is a requirement for all majors. Major coursework can begin once you have completed all developmental courses. In addition, if you are at the final level of remediation in mathematics, English, and/or reading, you can take CHM 100. While this course does not count toward graduation in this major, it will provide an introduction to the basic chemical principles and theories that you will be learning in this program.

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

If you do not need remedial courses and you take an average of 17 credits per semester, you should be able to complete the program in two years.

Where should I direct specific questions about this program?

Contact the Division at (973) 877-3430/3364 or call Admissions at (973) 877-1941.

Upon completion of this program, graduates will be able to:

- ◆ Utilize critical thinking and problem solving skills, including the scientific method and methods of scientific conversion;
- ◆ Demonstrate a mastery of the fundamental concepts of thermochemistry, molecular geometry, states of matter, gas laws, quantum theory, chemical reactions, gases, and chemical calculations;
- ◆ Demonstrate a mastery of the fundamental concepts of stoichiometry, kinetics, chemical equilibrium, electrochemistry, nuclear chemistry, and acids and bases;
- ◆ Explain the importance of chemistry in everyday life;
- ◆ Write down synthetic pathways of organic molecules;
- ◆ Define functional groups and the reactions that they are involved in;
- ◆ Perform chemical experimentation in a safe and scientific manner, using proper scientific and laboratory safety procedures; and
- ◆ Successfully transfer to a four-year undergraduate degree program in chemistry.

Chemistry – A.S. Degree Program

<p>GENERAL EDUCATION REQUIREMENTS: (35-36 credits)</p> <p>Communications (6 credits) ENG 101 College Composition I 3 ENG 102 College Composition II or ENG 105 Technical Writing 3</p> <p>Social Science (6 credits) ANT 101, POL 104, PSY 101, or SOC 101 3 Any ANT, POL, PSY, or SOC course 3</p> <p>Lab Science/Math (12 credits) MTH 121 Calculus with Anal. Geometry I 4 MTH 122 Calculus with Anal. Geometry II 4 PHY 101 College Physics I 4</p> <p>Physical Education (2-3 credits) PHE 119 or HLT 101 2-3</p> <p>Humanities (9 credits) Any 200-level English literature course 3 Any History course 3 ART 100, 101, 102 or 200 or MUS 100, 108, 109, or 117 3</p> <p>MAJOR COURSE REQUIREMENTS: (24 credits)</p> <p>CHM 103 General Chemistry I 4 CHM 104 General Chemistry II 4 CHM 203 Organic Chemistry I 4 CHM 204 Organic Chemistry II 4 MTH 221 Calculus with Anal. Geometry III 4 PHY 102 College Physics II 4</p> <p>ADDITIONAL COURSE REQUIREMENTS: (3 credits)</p> <p>Free elective 3</p> <p>Total Credits Required for Degree 62-63</p> <p>The minimum passing grade for all courses designated BIO, CHM, MTH or PHY is “C.” If you earn a grade below “C,” you need to repeat that course.</p>	<p>RECOMMENDED SEQUENCE OF COURSES:*</p> <p><u>First Semester</u></p> <p>CHM 103 General Chemistry I 4 PHY 101 College Physics I 4 ENG 101 College Composition I 3 MTH 121 Calculus with Anal. Geometry I 4 History requirement 3</p> <p><u>Second Semester</u></p> <p>CHM 104 General Chemistry II 4 PHY 102 College Physics II 4 ENG 102 College Composition II 3 MTH 122 Calculus with Anal. Geometry II 4</p> <p><u>Third Semester</u></p> <p>CHM 203 Organic Chemistry I 4 MTH 221 Calculus with Anal. Geometry III 4 Social Science requirement 3 Any 200-level English literature course 3</p> <p><u>Fourth Semester</u></p> <p>CHM 204 Organic Chemistry II 4 Art/Music requirement 3 Social Science requirement 3 Free elective 3 PHE 119 or HLT 101 2-3</p>
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***NOTE:** This plan assumes the completion of all required developmental courses in reading, writing, and mathematics as well as other pre- and co-requisites for some of the courses, as listed in the Course Descriptions section of the catalog.

Childhood Development Associate Certification Program

Division of Social Sciences

Why enroll in the Childhood Development Associate Certification Program?

This program offers three courses that will prepare students to take the national Childhood Development Certification (CDA) exam. The courses provide the theoretical and practical foundation for obtaining a CDA certification. The certification is necessary for working as paraprofessional teachers in an early childhood classroom.

If I complete the Childhood Development Associate Certification Program, can I transfer to an upper division college or university?

This program is career oriented and not designed for transfer.

Are there any requirements I must satisfy before I start taking the program courses?

You must be a high school graduate or possess a GED. You also need to have accumulated, or be in the process of accumulating within five years, a total of 480 hours of experience working with children from infancy through five years of age in a group setting.

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

Depending upon your prior education and work experience, the program may be completed within one year.

Where should I direct specific questions about this program?

Contact the Division at (973) 877-3250 for referral to a faculty advisor, or call Admissions at (973) 877-1941.

Upon completion of this program, graduates will be able to:

- ◆ Demonstrate a thorough understanding of the principles of instruction in an early childhood setting;
- ◆ Apply practical skills necessary for successful completion of the certification process;
- ◆ Prepare and complete professional resource files; and
- ◆ Demonstrate an understanding of professional standards and practice skills in a professional setting.



Childhood Development Associate Certification Program

<p>GENERAL EDUCATION REQUIREMENTS: None</p> <p>COURSE REQUIREMENTS: (11 credits)</p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 10%;">ECE</td> <td style="width: 10%;">101</td> <td style="width: 70%;">Early Care and Education I</td> <td style="width: 10%; text-align: right;">4</td> </tr> <tr> <td>ECE</td> <td>102</td> <td>Early Care and Education II</td> <td style="text-align: right;">4</td> </tr> <tr> <td>ECE</td> <td>103</td> <td>Early Care and Education Fieldwork</td> <td style="text-align: right;">3</td> </tr> <tr> <td colspan="3">Total Credits Required</td> <td style="text-align: right;">11</td> </tr> </table>	ECE	101	Early Care and Education I	4	ECE	102	Early Care and Education II	4	ECE	103	Early Care and Education Fieldwork	3	Total Credits Required			11	<p>RECOMMENDED SEQUENCE OF COURSES:*</p> <p><u>First Semester</u></p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 10%;">ECE</td> <td style="width: 10%;">101</td> <td style="width: 70%;">Early Care and Education I</td> <td style="width: 10%; text-align: right;">4</td> </tr> </table> <p><u>Second Semester</u></p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 10%;">ECE</td> <td style="width: 10%;">102</td> <td style="width: 70%;">Early Care and Education II</td> <td style="width: 10%; text-align: right;">4</td> </tr> <tr> <td>ECE</td> <td>103</td> <td>Early Care and Education Fieldwork</td> <td style="text-align: right;">3</td> </tr> </table>	ECE	101	Early Care and Education I	4	ECE	102	Early Care and Education II	4	ECE	103	Early Care and Education Fieldwork	3
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Civil Construction Engineering Technology Program

A Dual Admissions Program with NJIT

Division of Engineering Technologies and Computer Sciences — Curriculum Code: 5309

Will Earn Upon Program Completion: Associate in Applied Science (A.A.S.) Degree

Why major in Civil Construction Engineering Technology?

The program prepares students for employment in the construction and civil engineering fields. Employment opportunities can be found with engineering firms, building contractors, utility companies, materials testing companies, or engineering departments of governmental agencies. The program is accredited by the Technology Accreditation Commission of the Accreditation Board for Engineering and Technology (ABET), 111 Market Place, Suite 1050, Baltimore, MD 21202, Telephone: (410) 347-7700.

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

Yes. You may choose to participate in the Dual Admissions program with New Jersey Institute of Technology and have all your credits applied to the first two years of the bachelor's degree program. Or you may transfer to one of many other colleges that will apply some or all of your credits toward a bachelor's degree in Civil Engineering Technology or Construction Management Technology. With the bachelor's degree, you become eligible to take the New Jersey professional engineer license exam.

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

All new students must take a basic skills competency test. Based on the results of the test, you may be required to take developmental courses in English, reading, and/or mathematics.

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

If you do not need developmental course work and you attend full time, you can complete the degree in two years. Part time students can complete the program in three or four years.

Where should I direct specific questions about this program?

Contact the Division at (973) 877-4400 or Admissions at (973) 877-1941.

Upon completion of this program, graduates will be able to:

- ◆ Demonstrate knowledge of basic construction principles and materials, including concrete, steel and wood;
- ◆ Analyze engineering drawings, demonstrating an understanding of the concept of scale and orthographic projection;
- ◆ Make precise measurements in the field using surveying instruments such as a theodolite, level, steel tape, and total station;
- ◆ Demonstrate knowledge of land surveying principles including traverse, level loop, topographic survey, construction stakeout, and road centerline design;
- ◆ Demonstrate knowledge of the fundamental principles of engineering mechanics, strength of materials, and structural systems;
- ◆ Perform soils tests and demonstrate knowledge of the underlying principles of soil mechanics;
- ◆ Design a simple culvert or storm sewer system and demonstrate knowledge of the underlying principles of hydraulics and hydrology; and
- ◆ Utilize computer software applications used in civil engineering and construction such as CAD, spreadsheets, word processing, and basic programming.

Note: To prepare for the civil/construction field, two distinct programs are available: Civil Construction Engineering Technology (Curr. Code 5309) and Engineering (Curr. Code 0399). Consult the program coordinator for a complete explanation.

Civil Construction Engineering Technology – A.A.S. Degree Program

<p>GENERAL EDUCATION REQUIREMENTS: (21-22 credits)</p> <p>Communications (6 credits) ENG 101 College Composition I 3 ENG 102 College Composition II or ENG 105 Technical Writing 3</p> <p>Social Science (6 credits) ANT 101, POL 104, PSY 101, or SOC 101 3 Any ANT, POL, PSY, or SOC course 3</p> <p>Math (4 credits) MTH 113 College Algebra with Trigonometry 4</p> <p>Physical Education (2-3 credits) PHE 119 or HLT 101 2-3</p> <p>Humanities (3 credits) Any History course 3</p> <p>MAJOR COURSE REQUIREMENTS: (32 credits)</p> <p>CET 111 Construction Methods & Materials 3 CET 211 Surveying I 3 CET 212 Surveying II 3 CET 221 Hydraulics and Drainage 4 CET 225 Soil Mechanics 3 CET 231 Structures 4 ENR 103 Engineering Graphics 2 ENR 105 Applied Computer Aided Design 2 ENR 110 Mechanics 3 ENR 220 Mechanics of Materials 4 CET 251 CET Seminar 1</p> <p>ADDITIONAL COURSE REQUIREMENTS: (14 credits)</p> <p>CSC 112 Computer Prog. for Engr. & Tech. 3 MTH 114 Unified Calculus I 3 PHY 101 College Physics I 4 PHY 102 College Physics II 4</p> <p>Total Credits Required for Degree 67-68</p>	<p>RECOMMENDED SEQUENCE OF COURSES:*</p> <p><u>First Semester</u></p> <p>ENG 101 College Composition I 3 CET 111 Construction Methods & Materials 3 ENR 103 Engineering Graphics 2 MTH 113 College Algebra with Trigonometry 4 PHY 101 College Physics I 4</p> <p><u>Second Semester</u></p> <p>ENG 102 College Composition II or ENG 105 Technical Writing 3 ENR 105 Applied Computer Aided Design 2 ENR 110 Mechanics 3 MTH 114 Unified Calculus I 3 PHY 102 College Physics II 4</p> <p><u>Summer</u></p> <p>Social Science requirement 3 Humanities requirement 3</p> <p><u>Third Semester</u></p> <p>CET 211 Surveying I 3 CSC 112 Computer Prog. for Engr. & Tech. 3 ENR 220 Mechanics of Materials 4 CET 225 Soil Mechanics 3 PHE 119 or HLT 101 2-3</p> <p><u>Fourth Semester</u></p> <p>CET 212 Surveying II 3 CET 221 Hydraulics and Drainage 4 CET 231 Structures 4 CET 251 CET Seminar 1 Social Science requirement 3</p>
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***NOTE:** This plan assumes the completion of all required developmental courses in reading, writing, and mathematics as well as other pre- and co-requisites for some of the courses, as listed in the Course Descriptions section of the catalog.

Civil Construction Engineering Technology: Land Surveying Option

A Dual Admissions Program with NJIT

Division of Engineering Technologies and Computer Sciences — Curriculum Code: 530S

Will Earn Upon Program Completion: Associate in Applied Science (A.A.S.) Degree

Why major in Land Surveying?

The program prepares students for employment in the land surveying field. Surveying involves mapping features of the land as well as property boundaries, and laying out construction lines and grades. It involves the use of computerized electronic equipment for land based as well as satellite assisted measurements, and the preparation of maps by computer aided design (CAD). Jobs in the field for those seeking immediate employment range from field crew member to CAD operator, and are typically found in surveying firms, consulting engineering firms, utility companies, and in the engineering departments of governmental agencies.

If I major in Land Surveying, can I transfer to an upper division college or university?

Yes. You may choose to participate in the Dual Admissions program with New Jersey Institute of Technology and have all your credits applied to the first two years of the bachelor's degree program in Surveying Engineering Technology. Or you may transfer to another college that applies most or all of your credits toward a bachelor's degree. With the bachelor's degree from NJIT, you become eligible to take the New Jersey land surveying license exam.

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

All new students must take a basic skills competency test. Based on the results of the test, you may be required to take developmental courses in reading, English, and/or mathematics.

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

If you do not need developmental course work and you attend full time, you can complete the degree in two years. Part time students can complete the program in three or four years.

Where should I direct specific questions about this program?

Contact the Division at (973) 877-4400 or Admissions at (973) 877-1941.

Upon completion of this program, graduates will be able to:

- ◆ Make precise measurements in the field using surveying instruments such as a theodolite, level, steel tape, and total station;
- ◆ Demonstrate knowledge of land surveying principles including traverse, level loop, topographic survey, and construction stakeout;
- ◆ Design a road centerline including horizontal and vertical alignments;
- ◆ Demonstrate understanding of engineering drawings including the concept of scale and orthographic projection;
- ◆ Assist in conducting a boundary survey including field measurements, calculations, and survey analysis;
- ◆ Design a simple storm sewer system and culvert and demonstrate knowledge of the underlying principles of hydraulics and hydrology;
- ◆ Demonstrate knowledge of the principles, rules and purposes of business law; and
- ◆ Utilize computer software applications used in the surveying field such as CAD, spreadsheets, word processing, and basic programming.

Civil Construction Engineering Technology: Land Surveying Option A.A.S. Degree Program

<p>GENERAL EDUCATION REQUIREMENTS: (21-22 credits)</p> <p>Communications (6 credits) ENG 101 College Composition I 3 ENG 102 College Composition II or ENG 105 Technical Writing 3</p> <p>Social Science (6 credits) ANT 101, POL 104, PSY 101, or SOC 101 3 Any ANT, POL, PSY, or SOC course 3</p> <p>Math (4 credits) MTH 113 College Algebra with Trigonometry 4</p> <p>Physical Education (2-3 credits) PHE 119 or HLT 101 2-3</p> <p>Humanities (3 credits) Any History course 3</p> <p>MAJOR COURSE REQUIREMENTS: (24 credits)</p> <p>CET 211 Surveying I 3 CET 212 Surveying II 3 CET 214 Evid. and Proc. for Bound. Location 3 CET 221 Hydraulics and Drainage 4 ENR 103 Engineering Graphics 2 ENR 105 Applied Computer Aided Design 2 BUS 251 Business Law I 3 BUS 252 Business Law II 3 CET 251 CET Seminar 1</p> <p>ADDITIONAL COURSE REQUIREMENTS: (20 credits)</p> <p>CSC 112 Computer Prog. for Engr. & Tech. 3 MTH 114 Unified Calculus I 3 MTH 141 Mathematical Statistics 3 PHY 101 College Physics I 4 PHY 102 College Physics II 4 CIS 137 Microcomputer Databases 3</p> <p>Total Credits Required for Degree 65-66</p>	<p>RECOMMENDED SEQUENCE OF COURSES:*</p> <p><u>First Semester</u></p> <p>ENG 101 College Composition I 3 ENR 103 Engineering Graphics 2 BUS 251 Business Law I 3 MTH 113 College Algebra with Trigonometry 4 PHY 101 College Physics I 4</p> <p><u>Second Semester</u></p> <p>ENG 102 College Composition II or ENG 105 Technical Writing 3 ENR 105 Applied Computer Aided Design 2 BUS 252 Business Law II 3 MTH 114 Unified Calculus I 3 PHY 102 College Physics II 4</p> <p><u>Summer</u></p> <p>Social Science requirement 3 Humanities requirement 3</p> <p><u>Third Semester</u></p> <p>CET 211 Surveying I 3 CSC 112 Computer Prog. for Engr. & Tech. 3 MTH 141 Mathematical Statistics 3 PHE 119 or HLT 101 2-3 Social Science requirement 3</p> <p><u>Fourth Semester</u></p> <p>CET 212 Surveying II 3 CET 214 Evid. and Proc. for Bound. Location 3 CET 221 Hydraulics and Drainage 4 CIS 137 Microcomputer Databases 3 CET 251 CET Seminar 1</p>
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***NOTE:** This plan assumes the completion of all required developmental courses in reading, writing, and mathematics as well as other pre- and co-requisites for some of the courses, as listed in the Course Descriptions section of the catalog.

Computer Aided Design Technology Program

*Division of Engineering Technologies and Computer Sciences — Curriculum Code: 3205
Will Earn Upon Program Completion: Certificate in Computer Aided Design Technology*

Why major in Computer Aided Design Technology?

Computer Aided Design (CAD) involves the preparation of engineering drawings using specialty computer software. In recent years, CAD has become the preferred means of drawing and illustrating in all engineering related fields. The Computer Aided Design Technology certificate program is designed to provide students with the knowledge and skills needed to effectively use CAD in any professional environment. Fields in which CAD is used as a basic tool include civil, mechanical, and manufacturing engineering, architecture, surveying, and construction.

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

The Computer Aided Design Technology Program is intended as a career oriented program. Courses completed as part of this certificate program can be applied toward associate degrees at ECC. Most or all credits earned in certificate programs that are applied to associate degree programs transfer to four-year institutions. See a divisional advisor for more information.

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

All new students must take a basic skills competency test. Based on the results of the test, you may be required to take developmental courses in reading, English, and/or mathematics.

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

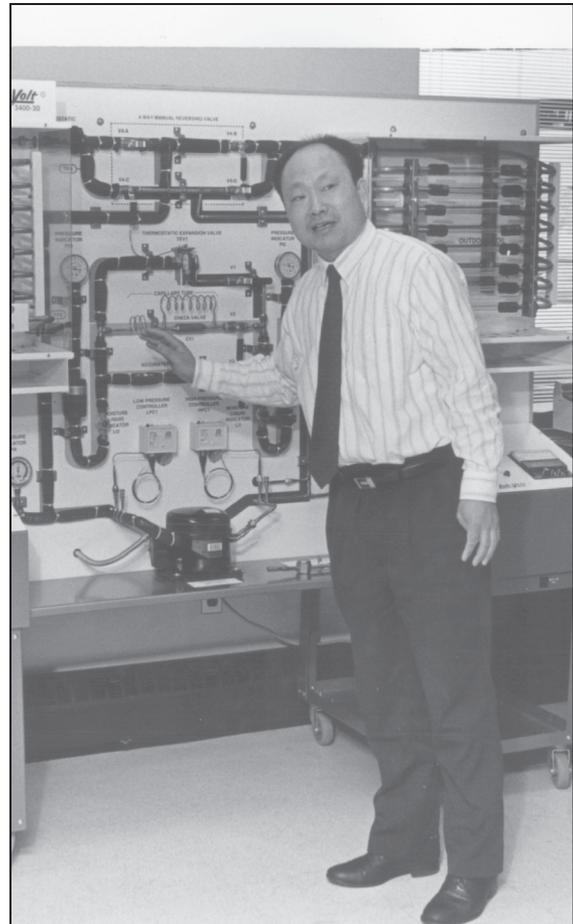
If you do not need developmental coursework and you attend full time, you can complete the certificate in two semesters. Part time students can complete the program in two years.

Where should I direct specific questions about this program?

Contact the Division at (973) 877-4400 or Admissions at (973) 877-1941.

Upon completion of this program, graduates will be able to:

- ◆ Apply principles of engineering graphics to prepare detailed drawings using CAD software;
- ◆ Demonstrate computer literacy in the use of various CAD systems;
- ◆ Use American National Standards Institute (ANSI) protocol for sizing and tolerancing of mating parts;
- ◆ Apply Geometric Dimension and Tolerancing (GD&T) techniques to engineering design; and
- ◆ Utilize 3D solid modeling CAD systems to create mechanical components and generate assembly designs.



Computer Aided Design Technology — Certificate Program

<p>GENERAL EDUCATION REQUIREMENTS: (10 credits)</p> <p>Communications (6 credits) ENG 101 College Composition I 3 ENG 102 College Composition II or ENG 105 Technical Writing 3</p> <p>Math (4 credits) MTH 100 Introductory College Mathematics 4</p> <p>MAJOR COURSE REQUIREMENTS: (14 credits)</p> ENR 100 Intro. to Engineering Tech. and Sci. 3 ENR 103 Engineering Graphics 2 ENR 105 Applied Computer Aided Design 2 ENR 106 Intermediate Computer Aided Design 2 ENR 205 Advanced Computer Aided Design 3 ENR 250 Computer Aided Design Project 2 <p>Total Credits Required for Certificate 24</p>	<p>RECOMMENDED SEQUENCE OF COURSES:*</p> <p><u>First Semester</u></p> ENG 101 College Composition I 3 ENR 100 Intro. to Engineering Tech. and Sci. 3 ENR 103 Engineering Graphics 2 MTH 100 Introductory College Mathematics 4 <p><u>Second Semester</u></p> ENG 102 College Composition II or ENG 105 Technical Writing 3 ENR 105 Applied Computer Aided Design 2 ENR 106 Intermediate Computer Aided Design 2 <p><u>Summer</u></p> ENR 205 Advanced Computer Aided Design 3 ENR 250 Computer Aided Design Project 2
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***NOTE:** This plan assumes the completion of all required developmental courses in reading, writing, and mathematics as well as other pre- and co-requisites for some of the courses, as listed in the Course Descriptions section of the catalog.



Computer Information Systems Program

A Dual Admissions Program with Kean University

Division of Engineering Technologies and Computer Sciences — Curriculum Code: 2002

Will Earn Upon Program Completion: Associate in Science (A.S.) Degree

Why major in Computer Information Systems?

This program prepares students to transfer upon graduation to four-year institutions to pursue baccalaureate degrees in Computer Information Systems or Management Information Services, or to enter the information technology field directly. With the rapid growth in information technology, demand has increased for qualified individuals to serve in such capacities as technical support specialist, network technician, database application specialist, PC technician, and Help Desk technician.

If I major in Computer Information Systems, can I transfer to an upper division college or university?

Yes. You may choose to participate in the Dual Admissions Program with Kean University and have all your credits applied to the first two years of Kean's bachelor's degree program, or you may transfer to one of many other four-year colleges and universities and apply most or all of your courses toward a bachelor's degree program.

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

All new students must take a basic skills competency test. Based on the results of the test, you may be required to take developmental courses in reading, English, and/or mathematics.

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

If you do not need developmental course work and you attend full time, you can complete the degree in two years. Part time students can complete the program in three or four years.

Where should I direct specific questions about this program?

Contact the Division at (973) 877-4400 or Admissions at (973) 877-1941.

Upon completion of this program, graduates will be able to:

- ◆ Design applications programs in an object-oriented language using a variety of dynamic and static data structures;
- ◆ Design and implement a relational database with supporting applications, and demonstrate understanding of multi-user database processing on LANs in client-server systems;
- ◆ Apply business organization and management concepts to information technology environments; and
- ◆ Demonstrate an understanding of the principles of financial accounting for inventories receivables, assets, liabilities, internal control, and corporate entities.

Depending on selection of major elective, graduates will be able to do one of the following in addition to the above program objectives:

- ◆ Design digital circuitry;
- ◆ Utilize multitasking, pre-emptive scheduling, and time sharing operating system concepts and associated communications, networking, and security; or
- ◆ Develop applications for a network environment and demonstrate an understanding of the advantages of object-oriented design techniques including encapsulation, abstraction, inheritance, and reusability.

Computer Information Systems — A.S. Degree Program

<p>GENERAL EDUCATION REQUIREMENTS: (34-35 credits)</p> <p>Communications (6 credits) ENG 101 College Composition I 3 ENG 102 College Composition II 3</p> <p>Social Science (6 credits) ANT 101, POL 104, PSY 101, or SOC 101 3 Any ANT, POL, PSY, or SOC course 3</p> <p>Lab Science/Math (11 credits) MTH 113 College Algebra with Trigonometry 4 MTH 114 Unified Calculus I 3 Laboratory Science course 4</p> <p>Physical Education (2-3 credits) PHE 119 or HLT 101 2-3</p> <p>Humanities (9 credits) Any History course 3 Any 200-level English literature course 3 ART 100, 101, 102, or 200 or MUS 100, 108, 109, or 117 3</p> <p>MAJOR COURSE REQUIREMENTS: (26 credits)</p> <p>CIS 212 Systems Analysis & Design 3 CIS 215 Data Communications 3 CSC 121 Computer Science I 4 CSC 122 Computer Science II 4 CSC 225 Data Structures 4 CSC 221 Computer Systems & Architec. or CSC 228 Operating Systems or CSC 235 Advanced Object-Oriented Prog. 4 CSC 231 Database Design 4</p> <p>ADDITIONAL COURSE REQUIREMENTS: (10 credits)</p> <p>ACC 101 Principles of Accounting I 4 BUS 101 Business Organ. & Management 3 MTH 136 Discrete Mathematics 3</p> <p>Total Credits Required for Degree 70-71</p>	<p>RECOMMENDED SEQUENCE OF COURSES:*</p> <p><u>First Semester</u></p> <p>ENG 101 College Composition I 3 CSC 121 Computer Science I 4 MTH 113 College Algebra with Trigonometry 4 History requirement 3 PHE 119 or HLT 101 2-3</p> <p><u>Second Semester</u></p> <p>ENG 102 College Composition II 3 CSC 122 Computer Science II 4 BUS 101 Business Organ. & Management 3 MTH 114 Unified Calculus I 3 Social Science requirement 3</p> <p><u>Summer</u></p> <p>Social Science requirement 3 Art/Music requirement 3</p> <p><u>Third Semester</u></p> <p>CIS 212 Systems Analysis & Design 3 CSC 225 Data Structures 4 ACC 101 Principles of Accounting I 4 MTH 136 Discrete Mathematics 3 Any 200-level English literature course 3</p> <p><u>Fourth Semester</u></p> <p>CIS 215 Data Communications 3 CSC 221 Computer Systems & Architec. or CSC 228 Operating Systems or CSC 235 Advanced Object-Oriented Prog. 4 CSC 231 Database Design 4 Lab Science requirement 4</p>
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***NOTE:** This plan assumes the completion of all required developmental courses in reading, writing, and mathematics as well as other pre- and co-requisites for some of the courses, as listed in the Course Descriptions section of the catalog.

Computer Science Program

A Dual Admissions Program with NJIT

Division of Engineering Technologies and Computer Sciences — Curriculum Code: 2302

Will Earn Upon Program Completion: Associate in Science (A.S.) Degree

Why major in Computer Science?

This program prepares students for transfer upon graduation to four-year institutions to pursue a baccalaureate degree in Computer Science or a related field, or to enter the computer technology job market directly. The program emphasizes mathematically-oriented computer applications. Employment opportunities for positions such as application programmer, systems programmer, systems analyst, and software engineer have traditionally been reserved for graduates with a B.S. or B.A. in Computer Science. However, due to the rapid growth in computer technology, there are now many job opportunities for A.S. graduates; typical entry level positions include technical support specialist, network technician, database application specialist, PC technician and Help Desk technician.

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

Yes. You may choose to participate in the Dual Admissions program with New Jersey Institute of Technology and have all your credits applied to the first two years of the bachelor's degree program in Computer Science. Or you may transfer to another four-year institution and apply most or all of your courses toward a bachelor's degree program.

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

All new students must take a basic skills competency test. Based on the results of the test, you may be required to take developmental courses in reading, English, and/or mathematics.

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

If you do not need developmental coursework and you attend full time, you can complete the degree in two years. Part time students can complete the program in three or four years.

Where should I direct specific questions about this program?

Contact the Division at (973) 877-4400 or Admissions at (973) 877-1941.

Upon completion of this program, graduates will be able to:

- ◆ Design applications programs in an object-oriented language using a variety of dynamic and static data structures;
- ◆ Design digital circuitry;
- ◆ Utilize multitasking, pre-emptive scheduling, time sharing operating system concepts and associated communications, networking, and security issues;
- ◆ Design and implement a relational database with supporting applications;
- ◆ Demonstrate multi-user database processing on LANs in client-server systems;
- ◆ Demonstrate object-oriented design techniques utilizing encapsulation, abstraction, inheritance, and reusability; and
- ◆ Work with computer software applications used in engineering such as spreadsheets, word processing and basic programming.

Computer Science — A.S. Degree Program

<p>GENERAL EDUCATION REQUIREMENTS: (35-36 credits)</p> <p>Communications (6 credits) ENG 101 College Composition I 3 ENG 102 College Composition II or ENG 105 Technical Writing 3</p> <p>Social Science (6 credits) ANT 101, POL 104, PSY 101, or SOC 101 3 Any ANT, POL, PSY, or SOC course 3</p> <p>Lab Science/Math (12 credits) PHY 103 General Physics I 4 MTH 121 Calculus with Analytic Geom. I 4 MTH 122 Calculus with Analytic Geom. II 4</p> <p>Physical Education (2-3 credits) PHE 119 or HLT 101 2-3</p> <p>Humanities (9 credits) Any History course 3 Any 200-level English literature course 3 ART 100, 101, 102, or 200 or MUS 101, 108, 109, or 117 3</p> <p>MAJOR COURSE REQUIREMENTS: (24 credits)</p> <p>CSC 121 Computer Science I 4 CSC 122 Computer Science II 4 CSC 221 Computer Systems & Architecture 4 CSC 225 Data Structures 4 CSC 228 Operating Systems 4 CSC 231 Database Design or CSC 235 Advanced Object-Oriented Prog. 4</p> <p>ADDITIONAL COURSE REQUIREMENTS: (10 credits)</p> <p>MTH 136 Discrete Mathematics 3 MTH 239 Intro. to Linear Algebra 3 PHY 104 General Physics II 4</p> <p>Total Credits Required for Degree 69-70</p>	<p>RECOMMENDED SEQUENCE OF COURSES:*</p> <p><u>First Semester</u></p> <p>ENG 101 College Composition I 3 CSC 121 Computer Science I 4 MTH 121 Calculus with Analytic Geom. I 4 PHY 103 General Physics I 4 Physical Education/Health requirement 2-3</p> <p><u>Second Semester</u></p> <p>ENG 102 College Composition II or ENG 105 Technical Writing 3 CSC 122 Computer Science II 4 MTH 122 Calculus with Analytic Geom. II 4 PHY 104 General Physics II 4</p> <p><u>Summer</u></p> <p>Social Science requirement 3 History requirement 3</p> <p><u>Third Semester</u></p> <p>CSC 221 Computer Systems & Architecture 4 CSC 225 Data Structures 4 MTH 136 Discrete Mathematics 3 Any 200-level English literature course 3 Social Science requirement 3</p> <p><u>Fourth Semester</u></p> <p>CSC 228 Operating Systems 4 CSC 231 Database Design or CSC 235 Advanced Object-Oriented Prog. 4 MTH 239 Intro. to Linear Algebra 3 Art/Music requirement 3</p>
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***NOTE:** This plan assumes the completion of all required developmental courses in reading, writing, and mathematics as well as other pre- and co-requisites for some of the courses, as listed in the Course Descriptions section of the catalog.

Criminal Justice Program

Division of Social Sciences — Curriculum Code: 0898
Will Earn Upon Program Completion: Associate in Science (A.S.) Degree

Why major in Criminal Justice?

The program is designed to prepare each student to transfer upon graduation to a four-year institution to pursue a bachelor's degree in criminal justice or a related field, or to enter the job market directly. The program offers students preparation to enter or progress in the fields of professional law enforcement, corrections, probation, parole, corporate security, juvenile youth services, and sky marshal.

If I major in Criminal Justice, can I transfer to an upper division college or university?

Yes. You may choose to transfer to one of the following area four-year institutions with which Essex County College has entered into transfer/articulation agreements: Rutgers, New Jersey State University, Rowan University, Kean University, and the John Jay College of Criminal Justice. Consult with your faculty advisor or transfer coordinator to review specific requirements you must meet for gaining full junior status when you transfer upon graduation from ECC.

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

New students are required to take the basic skills competency test. Based on the results of the test, you may be required to take developmental courses in reading, English, and/or mathematics.

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

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

Where should I direct specific questions about this program?

Contact the Division at (973) 877-3250 or Admissions at (973) 877-1941.

Upon completion of this program, graduates will be able to:

- ◆ Demonstrate knowledge of the basic theories that form the foundation of the criminal justice discipline;
- ◆ Demonstrate basic knowledge of criminal law and the rights of individual citizens;
- ◆ Demonstrate knowledge of the role of the criminal justice officer in the community, and the organization and administration of the various entities in the criminal justice system;
- ◆ Explain the correctional process;
- ◆ Analyze the nature of crime and criminal behavior based on major theories and current issues;
- ◆ Demonstrate knowledge of the procedures involved in criminal investigation;
- ◆ Recognize the application of physical and biological sciences to physical evidence;
- ◆ Recognize social and political trends within society that influence areas of criminal justice; and
- ◆ Demonstrate critical thinking skills within the context of evaluating the complexity of criminal justice issues.

Criminal Justice — A.S. Degree Program

<p>GENERAL EDUCATION REQUIREMENTS: (34-36 credits)</p> <p>Communications (6 credits) ENG 101 College Composition I 3 ENG 102 College Composition II 3</p> <p>Social Science (6 credits) POL 104 American Government 3 ANT 101, PSY 101, or SOC 101 3</p> <p>Lab Science/Math (11-12 credits) MTH 100 or higher 3-4 BIO 101 and 102 8</p> <p>Physical Education (2-3 credits) PHE 119 or HLT 101 2-3</p> <p>Humanities (9 credits) Any History course within a sequence 3 Any 200-level English literature course 3 ART 100, 101, 102, or 200 or MUS 100, 108, 109, or 117 3</p> <p>MAJOR COURSE REQUIREMENTS: (18 credits)</p> <p>CJI 101 Introduction to Criminal Justice 3 CJI 121 Introduction to Corrections 3 CJI 136 Criminology 3 CJI 202 Crime and Delinquency 3 Two courses selected from: CJI 102, 103, 111, 112, 120, 123, 203, 204, 205, 210, or 250 6</p> <p>ADDITIONAL COURSE REQUIREMENTS: (15-16 credits)</p> <p>Any English literature course 3 Any 100-level or higher Math course 3-4 Elementary Spanish I and II or Elementary French I and II 6 Complete the History sequence 3</p> <p>Total Credits Required for Degree 67-70</p>	<p>RECOMMENDED SEQUENCE OF COURSES:*</p> <p><u>First Semester</u></p> <p>BIO 101 College Biology I 4 CJI 101 Introduction to Criminal Justice 3 ENG 101 College Composition I 3 History course within a sequence 3 Spanish/French requirement 3</p> <p><u>Second Semester</u></p> <p>BIO 102 College Biology II 4 CJI 102 Police Role in the Community 3 ENG 102 College Composition II 3 Complete the History sequence 3 Spanish/French requirement 3</p> <p><u>Summer</u></p> <p>HLT/PHE requirement 2-3 ART/MUS requirement 3</p> <p><u>Third Semester</u></p> <p>Any 200-level English literature course 3 Math requirement 4 POL 104 American Government 3 CJI 136 Criminology 3 CJI 121 Introduction to Corrections 3</p> <p><u>Fourth Semester</u></p> <p>Any 200-level English literature course 3 CJI 202 Crime and Delinquency 3 Math requirement 3-4 Criminal Justice requirement 3 Social Science requirement 3</p>
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***NOTE:** This plan assumes the completion of all required developmental courses in reading, writing, and mathematics as well as other pre- and co-requisites for some of the courses, as listed in the Course Descriptions section of the catalog.

Dental Assisting Program

A Joint Admissions Program with the University of Medicine and Dentistry of NJ

Division of Allied Health — Curriculum Code: 6005

Will Earn Upon Program Completion: Certificate in Dental Assisting

Why major in Dental Assisting?

Dental Assistants help dentists in caring for patients. This certificate program, offered jointly by Essex County College and the University of Medicine and Dentistry of New Jersey, prepares students to take the licensing exam to qualify to work with dentists. Dental Assistants can earn a competitive salary, work in a professional environment, and enjoy the advantages of flexible work hours. The program is accredited by the American Dental Association/Council on Dental Education/Dental Assisting Section.

If I major in Dental Assisting, can I transfer to an upper division college or university?

The major is job-oriented and not designed for transfer to a baccalaureate program. However, credits earned upon program completion can be applied to Essex County College's associate degree program in Dental Hygiene. Also other colleges and universities, including Thomas Edison State College and the University of Medicine and Dentistry of New Jersey, will apply most or all of the courses you have taken toward a baccalaureate program.

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

Admission into the program is selective. Application deadline is April 30 for enrollment in the following spring semester. The following are the minimum requirements for admission:

- Have a "C" or better in high school biology and chemistry (or equivalent);
- Be at the college level in reading, English and/or mathematics, which may require the completion of appropriate developmental courses based on placement test scores.

Although not required as a prerequisite, it is recommended that candidates complete the following courses prior to admission into the program: BIO 121 Anatomy and Physiology, ENG 101 College Composition I, and PSY 101 General Psychology I. A "C" or better is required for each in order to meet the Dental Assisting program requirements.

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

The professional phase of the Dental Assisting Program can be completed within two (2) academic semesters as a full-time student. Should a part-time schedule be approved, the student will have a maximum of four semesters to complete the coursework (part-time option is granted on a case by case basis).

Where should I direct specific questions about this program?

Call the Division at (973) 877-3354/3496 or Admissions at (973) 877-1941.

Upon completion of this program, graduates will be able to:

- ◆ Take the National Board for Dental Assisting examination and the New Jersey Dental Radiology Exam to qualify to work with dentists; and
- ◆ Perform the following duties as a dental assistant:
 - Prepare patients for treatment
 - Sterilize and select instruments
 - Assemble materials and equipment
 - Organize the work area
 - Maintain the operative field
 - Expose, process, and mount dental radiographs
 - Fabricate mouthguards
 - Provide nutritional counseling and patient education in preventive dentistry
 - Carry out basic laboratory procedures
 - Prepare dental insurance claims
 - Arrange and confirm appointments
 - Perform a variety of intra-oral expanded functions.

Dental Assisting — Certificate Program

<p>GENERAL EDUCATION REQUIREMENTS: (10 credits)</p> <p>Communications (3 credits) ENG 101 College Composition I 3</p> <p>Social Science (3 credits) PSY 101 General Psychology I 3</p> <p>Lab Science (4 credits) BIO 121 Anatomy & Physiology I 4</p> <p>MAJOR COURSE REQUIREMENTS: (24 credits)</p> <p>DAS 103 Dental Materials 3 DAS 106 Dental Science* 2 DAS 107 Clinical Assisting* 4 DAS 108 Practice Management* 1 DAS 110 Internship* 1 DHY 101 Dental Head & Neck Anatomy* 3 DHY 102 Dental Radiology* 3 DHY 110 Medical Emerg. in the Dental Office* 1 DHY 112 Introduction to the Dental Professions* 4 DHY 113 Dental Health Education* 1 DHY 205 Dental Specialties I* 1</p> <p>Total Credits Required for Certificate 34</p> <p>*CORE COURSES: A grade of “C+” is required in core dental courses in order to utilize them in transfer to Dental Hygiene.</p> <p>The minimum passing grade for all courses is “C.” If you earn a grade below “C,” you need to repeat that course.</p>	<p>RECOMMENDED SEQUENCE OF COURSES:**</p> <p><u>First Semester</u></p> <p>BIO 121 Anatomy & Physiology I 4 ENG 101 College Composition I 3 DAS 103 Dental Materials 3 DHY 101 Dental Head & Neck Anatomy* 3 DHY 110 Medical Emerg. in the Dental Office* 1 DHY 112 Introduction to the Dental Professions* 4 DHY 205 Dental Specialties I* 1</p> <p><u>Second Semester</u></p> <p>PSY 101 General Psychology I 3 DAS 106 Dental Science* 2 DAS 107 Clinical Assisting* 4 DAS 108 Practice Management* 1 DAS 110 Internship* 1 DHY 102 Dental Radiology* 3 DHY 113 Dental Health Education* 1</p>
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****NOTE:** This plan assumes the completion of all required developmental courses in reading, writing, and mathematics as well as other pre- and co-requisites for some of the courses, as listed in the Course Descriptions section of the catalog.

Dental Hygiene Program

A Joint Admissions Program with the University of Medicine and Dentistry of NJ

Division of Allied Health — Curriculum Code: 2108

Will Earn Upon Program Completion: Associate in Applied Science (A.A.S.) Degree

Why major in Dental Hygiene?

This associate degree program, offered jointly by Essex County College and the University of Medicine and Dentistry of New Jersey, prepares you for a career as a registered dental hygienist. Dental hygienists perform services that detect, prevent, and treat diseases of the mouth, under the supervision of a dentist. The program is accredited by the American Dental Association/Council on Dental Education/Dental Hygiene Section. Graduates are qualified to take the National Board and the North East Regional Board examinations to secure licenses to practice. Dental hygienists can gain employment in private dental offices, community and school health education programs, hospital dental clinics, and private industrial employee clinics.

If I major in Dental Hygiene, can I transfer to an upper division college or university?

The major is job-oriented and not designed for transfer to a baccalaureate program. However, colleges and universities including Thomas Edison State College, the University of Medicine and Dentistry of New Jersey, and Montclair State University will apply most or all of the courses you have taken toward a bachelor's degree.

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

Admission into the professional component of the program is selective. Application deadline is April 30 for enrollment in the following spring semester. The following are the minimum requirements for admission:

- Be at the college level in reading, English, and mathematics, which may require the completion of developmental courses based on placement test scores
- Have a grade of "C" or better in each of the following prerequisite courses: BIO 121, ENG 101, CHM 101, PSY 101, and SOC 101, and a GPA of 2.5 or better
- Perform successfully on the Health Occupation Basic Entrance Test (HOBET)

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

If you do not need developmental courses and have completed the prerequisite courses for admission, you can complete the rest of the program (the professional phase) in four academic semesters as a full-time student.

Where should I direct specific questions about this program?

Call the Division at (973) 877-3354/3496 or Admissions at (973) 877-1941.

Upon completion of this program, graduates will be able to:

- ◆ Perform prophylaxis (clean teeth);
- ◆ Administer fluoride;
- ◆ Provide patient education and nutritional counseling;
- ◆ Expose, process, and mount radiographs;
- ◆ Place sealants, fabricate mouthguards, and polish amalgam restorations;
- ◆ Assist the dentist in performing oral examinations, scaling, tooth polishing, applying decay preventing agents, taking and processing oral X-rays, and oral cancer screening;
- ◆ Carry out basic laboratory procedures;
- ◆ Prepare dental insurance claims;
- ◆ Perform a variety of intra-oral expanded functions; and
- ◆ Chart disease and decay conditions for diagnosis and treatment by the dentist.

Dental Hygiene — A.A.S. Degree Program

<p>GENERAL EDUCATION REQUIREMENTS: (19 credits)</p> <p>Communications (6 credits) ENG 101 College Composition I 3 ENG 102 College Composition II 3</p> <p>Social Science (6 credits) PSY 101 General Psychology I 3 SOC 101 Introduction to Sociology 3</p> <p>Lab Science (4 credits) CHM 101 College Chemistry I 4</p> <p>Humanities (3 credits) Any History course 3</p> <p>MAJOR COURSE REQUIREMENTS: (52 credits)</p> <p>DAS 103 Dental Materials* 3 DAS 108 Practice Management* 1 DHY 100 Intro. to Clinical Dental Hygiene 4 DHY 101 Dental Head & Neck Anatomy* 3 DHY 102 Dental Radiology* 3 DHY 103 Clinical Dental Hygiene I 3 DHY 104 Clinical Services I 3 DHY 106 Nutrition 2 DHY 107 Oral Embryology & Histology 2 DHY 110 Medical Emerg. in the Dental Office* 1 DHY 112 Introduction to the Dental Professions* 4 DHY 113 Dental Health Education* 1 DHY 200 Oral Pathology 2 DHY 201 Periodontology I 2 DHY 202 Clinical Dental Hygiene II 2 DHY 203 Clinical Services II 3 DHY 204 Dental Health Edu./Comm. Dental Health 2 DHY 205 Dental Specialties I* 1 DHY 207 Clinical Services III 3 DHY 209 Pharmacology & Oral Medicine 1 DHY 210 Dental Specialities II 1 DHY 211 Periodontology II 2 DHY 213 DHE/CDH Capstone Seminar 2 DHY 215 Pain and Anxiety Control 1</p> <p>ADDITIONAL COURSE REQUIREMENTS: (15 credits)</p> <p>BIO 121 Anatomy & Physiology I 4 BIO 122 Anatomy & Physiology II 4 BIO 211 Microbiology 4 ENG 109 Effective Speech 3</p> <p>Total Credits Required for Degree 86</p> <p>*CORE COURSES: The minimum passing grade for all courses is "C." If you earn a grade below "C," you need to repeat that course.</p>	<p>RECOMMENDED SEQUENCE OF COURSES:**</p> <p>First Semester</p> <p>BIO 121 Anatomy & Physiology I 4 ENG 101 College Composition I 3 CHM 101 College Chemistry I 4 PSY 101 General Psychology I 3 SOC 101 Introduction to Sociology 3</p> <p>Second Semester</p> <p>BIO 122 Anatomy & Physiology II 4 ENG 102 College Composition II 3 DAS 103 Dental Materials* 3 DHY 100 Intro. to Clinical Dental Hygiene 4 DHY 101 Dental Head & Neck Anatomy* 3 DHY 110 Medical Emerg. in the Dental Office* 1 DHY 112 Introduction to the Dental Professions* 4</p> <p>Third Semester</p> <p>BIO 211 Microbiology 4 DHY 102 Dental Radiology* 3 DHY 103 Clinical Dental Hygiene I 3 DHY 104 Clinical Services I 3 DHY 107 Oral Embryology & Histology 2 DHY 113 Dental Health Education* 1</p> <p>Fourth Semester</p> <p>DHY 106 Nutrition 2 DHY 200 Oral Pathology 2 DHY 201 Periodontology I 2 DHY 202 Clinical Dental Hygiene II 2 DHY 203 Clinical Services II 3 DHY 204 Dental Health Edu./Comm. Dental Health 2 DHY 205 Dental Specialties I* 1 DHY 209 Pharmacology & Oral Medicine 1</p> <p>Fifth Semester</p> <p>ENG 109 Effective Speech 3 DAS 108 Practice Management* 1 DHY 207 Clinical Services III 3 DHY 210 Dental Specialities II 1 DHY 211 Periodontology II 2 DHY 213 DHE/CDH Capstone Seminar 2 DHY 215 Pain and Anxiety Control 1 History requirement 3</p>
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****NOTE:** This plan assumes the completion of all required developmental courses in reading, writing, and mathematics as well as other pre- and co-requisites for some of the courses, as listed in the Course Descriptions section of the catalog.

Digital Media and Electronic Publishing Program

Division of Humanities — Curriculum Code: 3071

Will Earn Upon Program Completion: Certificate in Digital Media and Electronic Publishing

Why major in Digital Media and Electronic Publishing?

This certificate program prepares individuals for employment in professional positions in desktop publishing, advertising graphics, video editing, and digital production. The skills developed in the courses prepare students for employment at specialized printing companies, multimedia production centers, and digital media companies. The program has been created in accordance with the standards established by the Electronic Imaging Printing Industry Association and also the National Voluntary Skills Standards for Pre-press/Imaging in the Graphics Communication Industry.

If I major in Digital Media and Electronic Publishing, can I transfer to an upper division college or university?

Courses earned as part of certificate programs can often be applied toward associate degrees at ECC. Most or all credits earned in certificate programs that are applied to associate degree programs transfer to four-year institutions. See a divisional counselor for more information.

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

No.

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

If you follow the recommended sequence of courses, it should take you three semesters, or two semesters and one summer term, to complete your requirements.

Where should I direct specific questions about this program?

Contact the Humanities Division at (973) 877-3319/3320 or Admissions at (973) 877-1941.

Upon completion of this program, graduates will be able to:

- ◆ Demonstrate understanding of visual design fundamentals and media technology;
- ◆ Demonstrate knowledge of the fundamental theories, practices, and computer application of presentation graphics;
- ◆ Use a variety of design software programs to produce graphic design for print and Web-based media;
- ◆ Design web sites which include texts and graphics;
- ◆ Design, lay out, and prepare a variety of graphic materials and text on the computer for print and/or publication and/or video presentation;
- ◆ Develop interpersonal skills; and
- ◆ Work independently or as part of a team.

Digital Media and Electronic Publishing – Certificate Program

<p>GENERAL EDUCATION REQUIREMENTS: None</p> <p>MAJOR COURSE REQUIREMENTS: (12 credits)</p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 10%;">ART</td> <td style="width: 10%;">161</td> <td style="width: 70%;">Computer Enhanced Layout & Design</td> <td style="width: 10%; text-align: right;">3</td> </tr> <tr> <td>ART</td> <td>167</td> <td>Introduction to Computer Art</td> <td style="text-align: right;">3</td> </tr> <tr> <td>ART</td> <td>168</td> <td>Desktop Pub. and Presen. Graphics</td> <td style="text-align: right;">3</td> </tr> <tr> <td>ART</td> <td>169</td> <td>Advanced Computer Graphics</td> <td style="text-align: right;">3</td> </tr> </table> <p>ADDITIONAL COURSE REQUIREMENTS: (6 credits)</p> <p>The following are the courses that emphasize Electronic Pre-Press Publishing:</p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 10%;">ART</td> <td style="width: 10%;">160</td> <td style="width: 70%;">Electronic Mechan./Pre-Press Prod.</td> <td style="width: 10%; text-align: right;">3</td> </tr> <tr> <td>ART</td> <td>170</td> <td>Basic Web Page Design</td> <td style="text-align: right;">3</td> </tr> </table> <p>The following are the courses that emphasize Digital Media:</p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 10%;">ART</td> <td style="width: 10%;">163</td> <td style="width: 70%;">Digital Video Graphic Design</td> <td style="width: 10%; text-align: right;">3</td> </tr> <tr> <td>ART</td> <td>171</td> <td>Cyberspace Graph. & Begin. Anima.</td> <td style="text-align: right;">3</td> </tr> </table> <p>Total Credits Required for Certificate 18</p>	ART	161	Computer Enhanced Layout & Design	3	ART	167	Introduction to Computer Art	3	ART	168	Desktop Pub. and Presen. Graphics	3	ART	169	Advanced Computer Graphics	3	ART	160	Electronic Mechan./Pre-Press Prod.	3	ART	170	Basic Web Page Design	3	ART	163	Digital Video Graphic Design	3	ART	171	Cyberspace Graph. & Begin. Anima.	3	<p>RECOMMENDED SEQUENCE OF COURSES:*</p> <p><u>First Semester</u></p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 10%;">ART</td> <td style="width: 10%;">167</td> <td style="width: 70%;">Introduction to Computer Art</td> <td style="width: 10%; text-align: right;">3</td> </tr> <tr> <td>ART</td> <td>168</td> <td>Desktop Pub. and Presen. Graphics</td> <td style="text-align: right;">3</td> </tr> </table> <p><u>Second Semester</u></p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 10%;">ART</td> <td style="width: 10%;">161</td> <td style="width: 70%;">Computer Enhanced Layout & Design</td> <td style="width: 10%; text-align: right;">3</td> </tr> <tr> <td colspan="3">Additional Course 1</td> <td style="text-align: right;">3</td> </tr> </table> <p><u>Summer or Third Semester</u></p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 10%;">ART</td> <td style="width: 10%;">169</td> <td style="width: 70%;">Advanced Computer Graphics</td> <td style="width: 10%; text-align: right;">3</td> </tr> <tr> <td colspan="3">Additional Course 2</td> <td style="text-align: right;">3</td> </tr> </table>	ART	167	Introduction to Computer Art	3	ART	168	Desktop Pub. and Presen. Graphics	3	ART	161	Computer Enhanced Layout & Design	3	Additional Course 1			3	ART	169	Advanced Computer Graphics	3	Additional Course 2			3
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***NOTE:** This plan assumes the completion of all required developmental courses in reading, writing, and mathematics as well as other pre- and co-requisites for some of the courses, as listed in the Course Descriptions section of the catalog.

Early Childhood Education Program

Division of Social Sciences — Curriculum Code: 0201
Will Earn Upon Program Completion: Associate in Arts (A.A.) Degree

Why major in Early Childhood Education?

This program is designed for students interested in pursuing a career as a professional or head teacher in an early childhood classroom. It prepares students to care for the physical and emotional needs of children and to supervise them in an early childhood setting. This program parallels the first two years of a four-year program in the field.

If I major in Early Childhood Education, can I transfer to an upper division college or university?

ECC's transfer/articulation agreements with area four-year institutions will allow students in this A.A. program to transfer to appropriate baccalaureate degree programs.

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

Based on your placement test scores, you may have to take developmental courses in mathematics, English, and/or reading before taking the core curriculum courses in your major.

How long will it take for me to complete the A.A. degree?

If you do not need developmental coursework and you register for an average of 15 credits per semester, you can complete the degree in two years.

After completing this A.A. degree program at ECC, how do I secure my teaching certificate?

You need to meet the following requirements for certification as a teacher of preschool through Grade 3, pursuant to the mandates of the New Jersey Department of Education.

- Possess a bachelor's degree from a regionally accredited college or university with a major in liberal arts of science;
- Achieve a baccalaureate grade point average of at least 2.75 when 4.0 equals an "A" grade;
- Pass a State test when identified;
- Complete a state-approved early childhood college teacher preparation program at a regionally accredited college or university that includes study in: Childhood development and learning; understanding family and community; and curriculum/assessment; and
- Complete field-based clinical and practical experiences including student teaching in a pre-school setting through an accredited four-year college/university program.

Where should I direct specific questions about this program?

Contact the Division at (973) 877-3250 for referral to a faculty advisor, or call Admissions at (973) 877-1941.

Upon completion of this program, graduates will be able to:

- ◆ Demonstrate knowledge of the basic principles of educational theory and practice;
- ◆ Exhibit a broad based knowledge of the disciplines necessary to prepare a student for completion of a teacher education program;
- ◆ Demonstrate an understanding and appreciation of the basic principles of the humanities and social sciences;
- ◆ Demonstrate a thorough knowledge of lab science and mathematics; and
- ◆ Express themselves in appropriate written and oral form.

Note: Early Childhood Education has been changing rapidly in New Jersey. Colleges at the two and four-year levels have been required to make curriculum adjustments to meet those changes. Students interested in careers in Early Childhood Education are strongly urged to seek ongoing academic advisement.

Early Childhood Education — A.A. Degree Program

<p>GENERAL EDUCATION REQUIREMENTS: (45-48 credits)</p> <p>Communications (9 credits) ENG 101 College Composition I 3 ENG 102 College Composition II 3 ENG 109 Effective Speech 3</p> <p>Social Science (6 credits) PSY 101 General Psychology I 3 PSY 220 or SOC 101 3</p> <p>Lab Science/Math (10-12 credits) A Lab Science sequence and a Math course (100 or higher) or two Math courses (100 or higher) and a Lab Science course: MTH (100 level or higher) 3-8 Select Lab Science courses from: BIO 101-102, CHM 103-104, & PHY 101-102, 4-8</p> <p>Physical Education (2-3 credits) PHE 119 or HLT 101 2-3</p> <p>Humanities (18 credits) Any History sequence 6 (Recommended: HST 101 and 102) Any two 200-level English Literature courses (Recommended: ENG 205 and 215) 6 ART 100, ART 101, MUS 100, or MUS 108 3 Free Humanities elective 3 (Recommended: A foreign language course)</p> <p>MAJOR COURSE REQUIREMENTS: (15 credits)</p> <p>EDU 101 Introduction to Education 3 PSY 219 Child Psychology and Development 3 Two courses selected from: EDU 201, 203, 233, or 234 6 ANT 101 3</p> <p>Total Credits Required for Degree 60-63</p>	<p>RECOMMENDED SEQUENCE OF COURSES:*</p> <p><u>First Semester</u></p> <p>EDU 101 Introduction to Education 3 ENG 101 College Composition I 3 HST 101 World Civilization I 3 PSY 101 General Psychology I 3 Physical Education/Health requirement 2-3</p> <p><u>Second Semester</u></p> <p>Art/Music requirement 3 ENG 102 College Composition II 3 HST 102 World Civilization II 3 MTH 100 Introductory College Mathematics 4 SOC 101 Introduction to Sociology 3</p> <p><u>Third Semester</u></p> <p>ANT 101 Cultural Anthropology 3 BIO 101 College Biology I 4 Free Humanities elective 3 ENG 109 Effective Speech 3 PSY 219 Child Psychology and Development 3</p> <p><u>Fourth Semester</u></p> <p>BIO 102 College Biology II 4 ENG 205 The Western Literary Tradition 3 ENG 215 Modern Literary Masterpieces 3 Select two from: EDU 201, 203, 233, or 234 6</p>
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***NOTE:** This plan assumes the completion of all required developmental courses in reading, writing, and mathematics as well as other pre- and co-requisites for some of the courses, as listed in the Course Descriptions section of the catalog.

Electronic Engineering Technology Program

A Dual Admissions Program with NJIT

Division of Engineering Technologies and Computer Sciences — Curriculum Code: 2307

Will Earn Upon Program Completion: Associate in Applied Science (A.A.S.) Degree

Why major in Electronic Engineering Technology?

Look inside any computer, TV, telephone, medical instrument, or household appliance and you will find electronic components, circuits, and systems. The same is true for traffic control systems, aircraft engines, cameras, automobiles, and other devices. All of these were designed and manufactured by engineers and technicians trained in the principles of electronic technology. ECC's program prepares students to work with engineers in the design, fabrication, installation, operation, maintenance, and repair of electronic and electrical instruments and machinery.

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

Yes. You may choose to participate in the Dual Admissions program with the New Jersey Institute of Technology and have all your credits applied to the first two years of NJIT's four-year bachelor's degree program. Or you may choose to transfer to another college that will apply most or all of your credits toward a bachelor's degree in Electronic Engineering Technology.

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

All new students must take a basic skills competency test. Based on the results of the test, you may be required to take developmental courses in reading, English, and/or mathematics.

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

If you do not need developmental coursework and you attend full time, you can complete the degree in two years. Part time students can complete the program in three or four years.

Where should I direct specific questions about this program?

Contact the Division at (973) 877-4400 or Admissions at (973) 877-1941.

Upon completion of this program, graduates will be able to:

- ◆ Use basic electronics test and measurement instruments including multimeters and oscilloscopes to troubleshoot electronics devices;
- ◆ Read schematic electronics diagrams for purposes of testing and development;
- ◆ Use software packages to analyze analog and digital electronics circuits with the aid of a digital computer;
- ◆ Analyze passive electric circuits to predict their behavior;
- ◆ Analyze active electronic circuits such as amplifiers;
- ◆ Demonstrate an understanding of digital circuits such as the type used in the construction of computers;
- ◆ Explain the physical principles involved in electro-mechanical energy conversion and describe the construction of electrical motors and generators; and
- ◆ Explain the principles of electronic communications including AM and FM generation and detection.

Note: To prepare for the electronics field, two distinct programs are available: Electronic Engineering Technology (Curr. Code 2307) and Engineering (Curr. Code 0399). Consult the program coordinator for a complete explanation.

Electronic Engineering Technology — A.A.S. Degree Program

<p>GENERAL EDUCATION REQUIREMENTS: (21-22 credits)</p> <p>Communications (6 credits) ENG 101 College Composition I 3 ENG 102 College Composition II or ENG 105 Technical Writing 3</p> <p>Social Science (6 credits) ANT 101, POL 104, PSY 101, or SOC 101 3 Any ANT, POL, PSY, or SOC course 3</p> <p>Math (4 credits) MTH 113 College Algebra with Trigonometry 4</p> <p>Physical Education (2-3 credits) PHE 119 or HLT 101 2-3</p> <p>Humanities (3 credits) Any History course 3</p> <p>MAJOR COURSE REQUIREMENTS: (29 credits)</p> <p>ELC 115 Electric Circuits: DC & AC 4 ELC 120 Electronics I - Semicond. Comp. 4 ELC 211 Electric Power 3 ELC 218 Pulse and Digital Circuits 3 ELC 221 Electronics II: Amplifiers 4 ELC 222 Electronics III: Commun. Systems 4 ELC 224 Linear Circuit Analysis 3 ELC 228 Intro. to Microprocessors 4</p> <p>ADDITIONAL COURSE REQUIREMENTS: (19 credits)</p> <p>CSC 112 Computer Prog. for Engr. & Tech. 3 ENR 103 Engineering Graphics 2 MTH 114 Unified Calculus I 3 MTH 213 Unified Calculus II 3 PHY 101 College Physics I 4 PHY 102 College Physics II 4</p> <p>Total Credits Required for Degree 69-70</p>	<p>RECOMMENDED SEQUENCE OF COURSES:*</p> <p><u>First Semester</u></p> <p>ENG 101 College Composition I 3 ELC 115 Electric Circuits: DC & AC 4 ENR 103 Engineering Graphics 2 MTH 113 College Algebra with Trigonometry 4 PHY 101 College Physics I 4</p> <p><u>Second Semester</u></p> <p>ENG 102 College Composition II or ENG 105 Technical Writing 3 ELC 120 Electronics I - Semicond. Comp. 4 ELC 218 Pulse and Digital Circuits 3 MTH 114 Unified Calculus I 3 PHY 102 College Physics II 4</p> <p><u>Summer</u></p> <p>Social Science requirement 3 Humanities requirement 3</p> <p><u>Third Semester</u></p> <p>CSC 112 Computer Prog. for Engr. & Tech. 3 ELC 211 Electric Power 3 ELC 221 Electronics II: Amplifiers 4 MTH 213 Unified Calculus II 3 Physical Education/Health requirement 2-3</p> <p><u>Fourth Semester</u></p> <p>ELC 222 Electronics III: Commun. Systems 4 ELC 224 Linear Circuit Analysis 3 ELC 228 Intro. to Microprocessors 4 Social Science requirement 3</p>
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***NOTE:** This plan assumes the completion of all required developmental courses in reading, writing, and mathematics as well as other pre- and co-requisites for some of the courses, as listed in the Course Descriptions section of the catalog.

Emergency Medical Technology-Paramedic Program*

A Joint Admissions Program with the University of Medicine and Dentistry

Division of Allied Health — Curriculum Code: 2109

Will Earn Upon Program Completion: Associate in Applied Science (A.A.S.) Degree

Why major in EMT-Paramedic?

The Emergency Medical Technology-Paramedic program is a joint program offered by Essex County College and the University of Medicine and Dentistry of New Jersey. The program prepares EMT students on a technical level by providing them with a combination of theoretical knowledge and practical/clinical experience. The technical skills that students develop through their clinical experience will enable them to carry out effective emergency aid under the supervision of a paramedic. The program is accredited by the Office of Emergency Medical Services (OEMS).

If I major in EMT-Paramedic, can I transfer to an upper division college or university?

The major is job-oriented and not designed for transfer to a baccalaureate program. However, colleges and universities including Thomas Edison State College and the University of Medicine and Dentistry of New Jersey will apply most or all of the courses you have taken toward a bachelor's degree.

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

Prior to being considered for acceptance into the EMT-Paramedic program, the applicant must meet the following conditions:

- At least 18 years of age
- A high school diploma or GED
- Current NJ certification as an EMT-B
- Current American Heart Association BLS for healthcare providers course completion status or equivalent
- Good general health documented by successfully passing a complete physical examination given by the applicant's physician
- Must possess and demonstrate college level skills in reading, English, and mathematics.

The minimum passing grade for all courses designated BIO, CHM, or EMT is "C." If you earn a grade below "C," you need to repeat the course.

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

Following admission into the EMT-Paramedic program, the course work is completed within four academic semesters and one summer session as a full-time student.

Where should I direct specific questions about this program?

Call the Division at (973) 877-3354/3496 or Admissions at (973) 877-1941.

Upon completion of this program, graduates will be able to:

- ◆ Take the National Registry EMT-P examination;
- ◆ Provide advanced airway management;
- ◆ Perform manual defibrillation;
- ◆ Administer medications;
- ◆ Perform phlebotomy and intravenous insertion;
- ◆ Acquire advanced patient assessment skills; and
- ◆ Administer advanced cardiac life support (ACLS).

***This program is closed to new students.**

Emergency Medical Technology-Paramedic — A.A.S. Degree Program

<p>GENERAL EDUCATION REQUIREMENTS: (19 credits)</p> <p>Communications (6 credits) ENG 101 College Composition I 3 ENG 102 College Composition II or ENG 105 Technical Writing 3</p> <p>Social Science (6 credits) PSY 101 General Psychology I 3 SOC 101 Introduction to Sociology 3</p> <p>Lab Science (4 credits) BIO 121 Anatomy & Physiology I 4</p> <p>Humanities (3 credits) Any History course 3</p> <p>MAJOR COURSE REQUIREMENTS: (38-39 credits)</p> <p>CHM 101 College Chemistry I 4 BIO 122 Anatomy & Physiology II 4 BIO 211 Microbiology or BIO 241 Pathophysiology 3-4 EMT 112 Paramedic Applications & Procedures 6 EMT 113 Pre-Hospital Emergency Care I 7 EMT 200 Pre-Hospital Emergency Care II 4 EMT 211 Adv. Concepts in Emergency Care I 4 EMT 212 Adv. Concepts in Emergency Care II 6</p> <p>ADDITIONAL COURSE REQUIREMENTS: (9 credits)</p> <p>PSY 209 Abnormal Psychology or SOC 207 Understanding Death and Dying 3 Two free electives 6</p> <p>Total Credits Required for Degree 66-67</p>	<p>RECOMMENDED SEQUENCE OF COURSES:*</p> <p><u>First Semester</u></p> <p>EMT 112 Paramedic Applications & Procedures 6 BIO 121 Anatomy & Physiology I 4 ENG 101 College Composition I 3 CHM 101 College Chemistry I 4</p> <p><u>Second Semester</u></p> <p>EMT 113 Pre-Hospital Emergency Care I 7 BIO 122 Anatomy & Physiology II 4 ENG 102 College Composition II 3 SOC 101 Introduction to Sociology 3</p> <p><u>Summer</u></p> <p>EMT 200 Pre-Hospital Emergency Care II 4</p> <p><u>Third Semester</u></p> <p>EMT 211 Adv. Concepts in Emergency Care I 4 BIO 211 Microbiology or BIO 241 Pathophysiology 3-4 PSY 101 General Psychology I 3 History requirement 3</p> <p><u>Fourth Semester</u></p> <p>EMT 212 Adv. Concepts in Emergency Care II 6 PSY 209 Abnormal Psychology or SOC 207 Understanding Death and Dying 3 Two free electives 6</p>
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***NOTE:** This plan assumes the completion of all required developmental courses in reading, writing, and mathematics as well as other pre- and co-requisites for some of the courses, as listed in the Course Descriptions section of the catalog.

Engineering Program

A Dual Admissions Program with NJIT

Division of Engineering Technologies and Computer Sciences — Curriculum Code: 0399

Will Earn Upon Program Completion: Associate in Science (A.S.) Degree

Why major in Engineering?

Engineers design processes and materials used to manufacture equipment, structures, devices, and systems of all types and sizes based on scientific and technological principles. The challenge is to continually improve these processes and materials to meet the needs of society with respect to health, safety, the environment, and energy while maintaining cost effectiveness. ECC's Engineering A.S. degree program closely matches the first two years of B.S. degree programs in Engineering offered at four-year colleges. Students select one of the following branches of engineering: electrical, computer, biomedical, chemical, industrial, civil, or mechanical.

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

Yes. The seven branches of engineering listed above are offered at the nearby New Jersey Institute of Technology with which Essex County College has a dual admissions agreement. Upon graduation from Essex, your credits will be applied to the first two years of the bachelor's degree program in any of those branches. Or you may choose to transfer your credits to one of five other colleges in New Jersey and numerous others in the New York metropolitan area that offer the baccalaureate in Engineering.

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

All new students must take a basic skills competency test. Based on the results of the test, you may be required to take developmental courses in reading, English, and/or mathematics.

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

If you do not need developmental course work and you attend full time, you can complete the degree in two years. Part time students can complete the program in three or four years.

Where should I direct specific questions about this program?

Contact the Division at (973) 877-4400 or Admissions at (973) 877-1941.

Upon completion of this program, graduates will be able to:

- ◆ Analyze engineering drawings, demonstrating an understanding of the concept of scale and orthographic projection;
- ◆ Assist engineers and technologists in performing tasks relevant to the chosen branch of engineering;
- ◆ Complete written engineering reports using skills acquired in ECC's science, engineering, and English courses;
- ◆ Write computer programs to solve engineering based problems using skills acquired in ECC's computer science and engineering courses;
- ◆ Complete computer aided design (CAD) drawings;
- ◆ For civil, industrial and mechanical engineering majors, demonstrate knowledge of fundamental principles of engineering mechanics and strength of materials;
- ◆ For electrical and computer engineering majors, demonstrate knowledge of electrical circuits;
- ◆ For biomedical or chemical engineering majors, demonstrate knowledge of biology or organic chemistry; and
- ◆ Utilize computer software applications used in engineering such as spreadsheets, word processing and basic programming.

Note: In addition to the engineering program, ECC offers engineering technology programs in the following branches: Civil, electrical, mechanical, and manufacturing. Consult the program coordinator for a complete explanation of the difference between engineering and engineering technology.

Engineering — A.S. Degree Program

<p>GENERAL EDUCATION REQUIREMENTS: (35 credits)</p> <p>Communications (6 credits) ENG 101 College Composition I 3 ENG 102 College Composition II or ENG 105 Technical Writing 3</p> <p>Social Science (6 credits) ANT 101, POL 104, PSY 101, or SOC 101 3 ECO 101 Principles of Economics (Macro) 3</p> <p>Lab Science/Math (12 credits) CHM 103 General Chemistry I 4 MTH 121 Calculus with Analytic Geom. I 4 MTH 122 Calculus with Analytic Geom. II 4</p> <p>Physical Education (2 credits) PHE 119 Concepts of Physical Education 2</p> <p>Humanities (9 credits) Any History course 3 Any 200-level English literature course 3 ART 100, 101, 102, or 200 or MUS 100, 108, 109, or 117 3</p> <p>MAJOR COURSE REQUIREMENTS: (11-16 credits)</p> <p>ENR 103 Engineering Graphics 2 ENR 105 Applied Computer Aided Design 2 ELC 230 or BIO 103 or CHM 203 or ENR 211¹ 3-4 Major requirement² 2-4 Major requirement² 2-4</p> <p>ADDITIONAL COURSE REQUIREMENTS: (23-24 credits)</p> <p>CSC 112 Comp. Prog. for Engr. & Tech.³ or CSC 121 Computer Science I³ 3-4 CHM 104 General Chemistry II⁴ or CSC 122 Computer Science II⁴ 4 MTH 221 Calculus with Analytic Geom. III 4 MTH 222 Differential Equations 4 PHY 103 General Physics I 4 PHY 104 General Physics II 4</p> <p>Total Credits Required for Degree 69-75</p>	<p>RECOMMENDED SEQUENCE OF COURSES:*</p> <p>First Semester</p> <p>ENG 101 College Composition I 3 CSC 112 Comp. Prog. for Engr. & Tech.³ or CSC 121 Computer Science I³ 3-4 MTH 121 Calculus with Analytic Geom. I 4 CHM 103 General Chemistry I 4 PHY 103 General Physics I 4</p> <p>Second Semester</p> <p>ENG 102 College Composition II or ENG 105 Technical Writing 3 ENR 103 Engineering Graphics 2 MTH 122 Calculus with Analytic Geom. II 4 CHM 104 General Chemistry II⁴ or CSC 122 Computer Science II⁴ 4 PHY 104 General Physics II 4</p> <p>Summer</p> <p>ANT 101, POL 104, PSY 101, or SOC 101 3 Any History course 3</p> <p>Third Semester</p> <p>ENR 105 Applied Computer Aided Design 2 MTH 221 Calculus with Analytic Geom. III 4 ELC 230 Circuits & Systems for Engr.¹ or BIO 103 General Biology I¹ or CHM 203 Organic Chemistry I¹ or ENR 211 Engr. Mechanics I¹ 3-4 PHE 119 Concepts of Physical Education 2 Major requirement² 2-4</p> <p>Fourth Semester</p> <p>ECO 101 Principles of Economics (Macro) 3 MTH 222 Differential Equations 4 Major requirement² 2-4 Any 200-level English literature course 3 Art/Music requirement 3</p>
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***NOTE:** This plan assumes the completion of all required developmental courses in reading, writing, and mathematics as well as other pre- and co-requisites for some of the courses, as listed in the Course Descriptions section of the catalog.

¹Computer Engineering and Electrical Engineering branches take ELC 230. Bio-Medical Engineering take BIO 103. Chemical Engineering take CHM 203. Industrial Engineering, Civil Engineering, and Mechanical Engineering take ENR 211.

²Select from ENR 211, ENR 212, BIO 104, CHM 204, MTH 239, or other applicable 200-level ECC or NJIT courses, depending on branch. See an ECC advisor for the full list of applicable courses and their prerequisites.

³Computer Engineering and Electrical Engineering branches take CSC 121. All other branches take CSC 112 or CSC 121.

⁴All take CHM 104 with the following exception: Computer Engineering take CSC 122.

Health Science Program

Division of Allied Health — Curriculum Code: 2114

Will Earn Upon Program Completion: Associate in Science (A.S.) Degree

Why major in Health Science?

The Health Science program provides an opportunity for health care personnel and allied health majors to complete a general health science associate degree. Students receive up to 24 credits for previous post-secondary professional educational or certificate training in an allied health profession. Completion of the degree requires a minimum of 33-36 additional college credits as prescribed in the curriculum. Bachelor's degree completion can lead to employment in health education or entry level health care administration positions.

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

The Associate in Science degree in Health Science may be transferred to the Bachelor of Science in Health Science degree program offered jointly by UMDNJ and New Jersey City University. Also, Thomas Edison State College will apply most or all the courses you have taken toward a Bachelor of Science degree program in Health Science or a Bachelor of Science degree program in Applied Science and Technology.

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

Complete an application to Essex County College and indicate Health Science as your desired major (code 2114). Complete any remedial or ESL course work indicated by placement testing. Submit a copy of your diploma or transcript from the post secondary educational institution from which you received your professional training and current certificate or licensure for evaluation.

Who should apply?

Any health care professional who holds licensure or certification in their specialty and who received their training in any accredited or state licensed post secondary allied health training program. This program is particularly useful for health care professions for which no specific degree is offered. In addition, any individual who completed college level coursework in nursing or any allied health discipline, but did not complete a specific degree, may apply their professional credits toward the completion of this degree.

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

If you do not need developmental course work, you can complete the degree in two years by taking 15 to 16 credits per semester. You may shorten the amount of time by taking courses in the summer sessions.

Where should I direct specific questions about this program?

Call the Division at (973) 877-3354/3496 or Admissions at (973) 877-1941.

Upon completion of this program, graduates will be able to:

- ◆ Advance to a baccalaureate program specializing in health education, health care informatics, or health care administration;
- ◆ Secure job promotions within health related fields for which no specific degree exists; and
- ◆ Prepare for employment based on the individualized curriculum that has been completed in fields such as health services administration, health computing, or health education.

Health Science — A.S. Degree Program

<p>GENERAL EDUCATION REQUIREMENTS: (33-36 credits)</p> <p>Communications (6 credits) ENG 101 College Composition I 3 ENG 102 College Composition II or ENG 105 Technical Writing 3</p> <p>Social Science (6 credits) ANT 101, POL 104, PSY 101, or SOC 101 3 Any ANT, POL, PSY, or SOC course 3</p> <p>Lab Science/Math (10-12 credits) A Lab Science sequence and a Math course (100 or higher) or two Math courses (100 or higher) and a Lab Science course 10-12</p> <p>Physical Education (2-3 credits) PHE 119 or HLT 101 2-3</p> <p>Humanities (9 credits) Any 200-level English literature course 3 Any History course 3 ART 100, 101, 102, or 200 or MUS 100, 108, 109, or 117 3</p> <p>MAJOR COURSE REQUIREMENTS: (3-24 credits)</p> <p>Credit from professional program to include, but not limited, to Nursing, Dental Assisting, Dental Hygiene, Health Service Management, Radiography, Respiratory Care, Paramedic, Physical Therapist Assistant, Ophthalmic Dispensing, Medical Laboratory Technician, Military Medic, Ultrasound, and/or any accredited or state licensed post high school allied health training program which is licensed or certified by examination. College credit will be transferred as a block; technical school or certificate credit will be weighted and awarded as a block.</p> <p>ADDITIONAL COURSE REQUIREMENTS: (Remaining credits)</p> <p>Additional courses selected should be based upon the intended major at the transferring institution or intended job function. Select from courses listed in the right column, in consultation with the Health Science advisor.</p> <p>Total Credits Required for Degree 60</p>	<p>ADDITIONAL COURSE REQUIREMENTS (Cont.):</p> <p>Select from the following:</p> <table style="width: 100%; border: none;"> <tr><td>ACC 101</td><td>Principles of Accounting I</td><td style="text-align: right;">4</td></tr> <tr><td>BIO 103/104</td><td>General Biology I/II</td><td style="text-align: right;">4/4</td></tr> <tr><td>BIO 121/122</td><td>Anatomy and Physiology I/II</td><td style="text-align: right;">4/4</td></tr> <tr><td>BIO 211</td><td>Microbiology</td><td style="text-align: right;">4</td></tr> <tr><td>BIO 241</td><td>Pathophysiology</td><td style="text-align: right;">3</td></tr> <tr><td>BIO 251</td><td>Pharmacology</td><td style="text-align: right;">3</td></tr> <tr><td>BUS 101</td><td>Business Organization & Mgmt.</td><td style="text-align: right;">3</td></tr> <tr><td>BUS 201</td><td>Principles of Management</td><td style="text-align: right;">3</td></tr> <tr><td>BUS 207</td><td>Leadership and Supervision in Orgs.</td><td style="text-align: right;">3</td></tr> <tr><td>BUS 221</td><td>Human Resource Mgmt.</td><td style="text-align: right;">3</td></tr> <tr><td>CIS 107</td><td>Computer Literacy</td><td style="text-align: right;">3</td></tr> <tr><td>CIS 131</td><td>Microcomputers in Business</td><td style="text-align: right;">3</td></tr> <tr><td>CSC 121/122</td><td>Computer Science I/II</td><td style="text-align: right;">4/4</td></tr> <tr><td>ENG 109</td><td>Effective Speech</td><td style="text-align: right;">3</td></tr> <tr><td>HSC 101</td><td>Introduction to Nutrition</td><td style="text-align: right;">3</td></tr> <tr><td>HSC 109</td><td>Intro. to Medical Terminology</td><td style="text-align: right;">3</td></tr> <tr><td>HSC</td><td>Any other course</td><td style="text-align: right;">3</td></tr> <tr><td>MTH 101/102</td><td>Statistics & Probability I/II</td><td style="text-align: right;">3/3</td></tr> <tr><td>MTH 116</td><td>Medical Mathematical Calculations</td><td style="text-align: right;">1</td></tr> <tr><td>SOC 199</td><td>Behavioral Science for Health Professions</td><td style="text-align: right;">3</td></tr> <tr><td>SOC 201</td><td>Social Gerontology</td><td style="text-align: right;">3</td></tr> <tr><td>SOC 207</td><td>Understanding Death & Dying</td><td style="text-align: right;">3</td></tr> <tr><td>SPN 100</td><td>Practical Spanish</td><td style="text-align: right;">3</td></tr> <tr><td>IDSTXXXX</td><td>UMDNJ courses in Interdisciplinary Studies</td><td style="text-align: right;">9 max.</td></tr> </table> <p>(Note: 5 IDST core courses required for the B.S. are available on the WEB. See the program advisor for details.)</p> <p>RECOMMENDED SEQUENCE OF COURSES:*</p> <p>Sequence of courses will be determined on an individualized basis. See the program advisor for details.</p>	ACC 101	Principles of Accounting I	4	BIO 103/104	General Biology I/II	4/4	BIO 121/122	Anatomy and Physiology I/II	4/4	BIO 211	Microbiology	4	BIO 241	Pathophysiology	3	BIO 251	Pharmacology	3	BUS 101	Business Organization & Mgmt.	3	BUS 201	Principles of Management	3	BUS 207	Leadership and Supervision in Orgs.	3	BUS 221	Human Resource Mgmt.	3	CIS 107	Computer Literacy	3	CIS 131	Microcomputers in Business	3	CSC 121/122	Computer Science I/II	4/4	ENG 109	Effective Speech	3	HSC 101	Introduction to Nutrition	3	HSC 109	Intro. to Medical Terminology	3	HSC	Any other course	3	MTH 101/102	Statistics & Probability I/II	3/3	MTH 116	Medical Mathematical Calculations	1	SOC 199	Behavioral Science for Health Professions	3	SOC 201	Social Gerontology	3	SOC 207	Understanding Death & Dying	3	SPN 100	Practical Spanish	3	IDSTXXXX	UMDNJ courses in Interdisciplinary Studies	9 max.
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***NOTE:** This plan assumes the completion of all required developmental courses in reading, writing, and mathematics as well as other pre- and co-requisites for some of the courses, as listed in the Course Descriptions section of the catalog.

Human and Social Services Program

Division of Social Sciences — Curriculum Code: 2202

Will Earn Upon Program Completion: Associate in Applied Science (A.A.S.) Degree

Why major in Human and Social Services?

- To obtain a broad-based professional education in preparation for a wide variety of jobs such as: Social services case aide, addiction counselor, youth services worker, gerontology worker, psychiatric technician, crisis counselor;
- To begin a career where you have the satisfaction of helping individuals and communities.

If I major in Human and Social Services, can I transfer to an upper division college or university?

This program is designed for immediate employment. However, four-year institutions will apply most or all of your courses toward a bachelor's degree, depending upon their program requirements. Consult your departmental advisor to obtain information about transferability.

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

Based on your placement test scores, you may have to take developmental courses in mathematics, English and/or reading before taking courses at the 100 level and above.

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

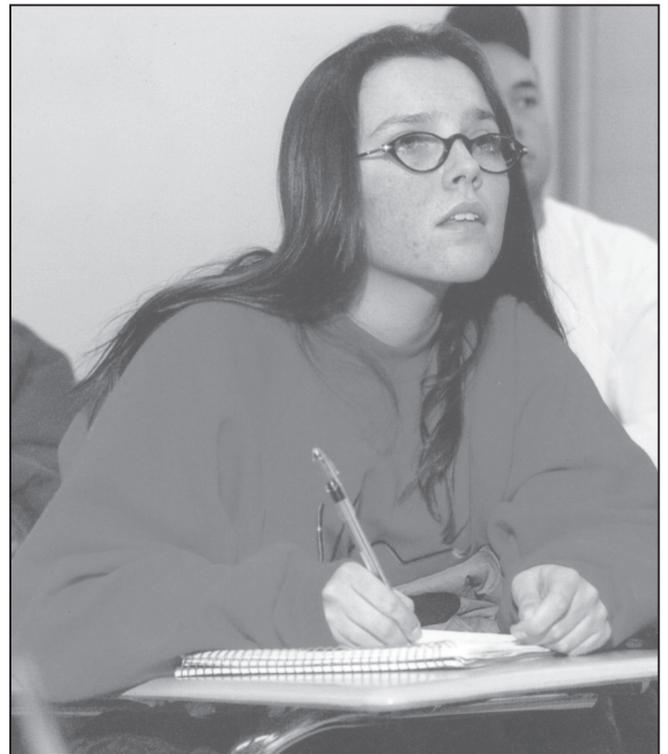
If you do not need developmental course work and you register for an average of 17 credits each semester, you can complete the degree in two years. You may shorten the amount of time by taking courses in the summer sessions.

Where should I direct specific questions about this program?

Contact the Division at (973) 877-3250 for referral to a faculty advisor or counselor, or call Admissions at (973) 877-1941.

Upon completion of this program, graduates will be able to:

- ◆ Demonstrate knowledge of the network of agencies and institutions that provide human and social services to individuals, families, and communities, and also their structure, policies, and procedures;
- ◆ Demonstrate knowledge of the scope, importance, and components of ethical and professional standards of the human services professions and service providers;
- ◆ Demonstrate familiarity with the basic knowledge, skills, and attitudes of professional practice in human services occupations;
- ◆ Demonstrate knowledge of the theoretical approaches that inform human services practice in social work, mental health counseling, and addictions counseling and treatment; and
- ◆ Demonstrate familiarity with the skills involved in engaging clients in a helping relationship and facilitating positive behavioral changes.



Human and Social Services — A.A.S. Degree Program

<p>GENERAL EDUCATION REQUIREMENTS: (20-22 credits)</p> <p>Communications (6 credits) ENG 101 College Composition I 3 ENG 102 College Composition II 3</p> <p>Social Science (6 credits) PSY 101 General Psychology I 3 SOC 111 Helper Theory 3</p> <p>Lab Science/Math (3-4 credits) MTH (100 level or higher) or a Lab science course 3-4</p> <p>Physical Education (2-3 credits) PHE 119 or HLT 101 2-3</p> <p>Humanities (3 credits) Any History course 3</p> <p>MAJOR COURSE REQUIREMENTS: (30 credits)</p> <p>PSY 209 Abnormal Psychology 3 PSY 250 Theory and Practice of Counseling and Psychotherapy 3 PSY 251 Counseling and Treatment of Addictions 3 SOC 121 Social Services Policies & Procedures I 3 SOC 207 Understanding Death & Dying 3 SOC 228 Human and Social Services Fieldwork I 3 SOC 229 Human and Social Services Internship Seminar I 3 SOC 230 Human and Social Services Fieldwork II 3 SOC 231 Human and Social Services Internship Seminar II 3 SOC 250 Alcohol & Drug Use in American Society 3</p> <p>ADDITIONAL COURSE REQUIREMENTS: (12 credits)</p> <p>Select three courses from: PSY 219, SOC 252, SOC 201, CJI 211, SOC 108, SOC 153* 9</p> <p>Free elective 3 (Recommended: CIS 107 or 131 or MTH 101)</p> <p>Total Credits Required for Degree 62-64</p> <p>*The Human and Social Services Program has concentrations in social work and gerontology, mental health counseling, and addictions counseling. Students in the social work/gerontology concentrations should select SOC 108 and SOC 201 and an additional 3 credits from “Additional Course Requirements.” Students in the mental health concentration should select PSY 219 and an additional 6 credits from “Additional Course Requirements.” Students in the addictions counseling concentration should select CJI 211, SOC 252, and SOC 153.</p>	<p>RECOMMENDED SEQUENCE OF COURSES:**</p> <p>First Semester</p> <p>ENG 101 College Composition I 3 PSY 101 General Psychology I 3 SOC 111 Helper Theory 3 PHE/HLT Requirement 2-3 Free elective 3</p> <p>Second Semester</p> <p>ENG 102 College Composition II 3 SOC 121 Social Services Policies & Procedures I 3 PSY 209 Abnormal Psychology 3 Lab science or Math requirement 3-4 Humanities requirement 3</p> <p>Third Semester</p> <p>PSY 250 Theory and Practice of Counseling and Psychotherapy 3 SOC 207 Understanding Death & Dying 3 SOC 228 Human and Social Services Fieldwork I 3 SOC 229 Human and Social Services Internship Seminar I 3 (SOC 228 and 229 must be taken together) Additional course requirement 3</p> <p>Fourth Semester</p> <p>PSY 251 Counseling and Treatment of Addictions 3 SOC 250 Alcohol & Drug Use in American Society 3 SOC 230 Human and Social Services Fieldwork II 3 SOC 231 Human and Social Services Internship Seminar II 3 (SOC 230 and 231 must be taken together) Additional course requirement 3 Additional course requirement 3</p>
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****NOTE:** This plan assumes the completion of all required developmental courses in reading, writing, and mathematics as well as other pre- and co-requisites for some of the courses, as listed in the Course Descriptions section of the catalog.

Information Systems Office Operations Program

Division of Business — Curriculum Code: 3301

Will Earn Upon Program Completion: Certificate in Information Systems Office Operations

Why major in Information Systems Office Operations?

This program prepares individuals for employment in designing, developing, implementing, and maintaining the systems necessary to deliver information to all levels of an organization. Students receive hands-on instruction in the use and development of databases and spreadsheets. Areas covered include desktop publishing, word processing, and the use of graphics, digital camera, and sound files to make PowerPoint presentations. Students learn to use the Internet to access information as well as to plan, create and maintain static and interactive web pages.

If I major in Information Systems Office Operations, can I transfer to an upper division college or university?

The major is designed to prepare students for entry-level employment in the microcomputer field, or to upgrade employees' professional knowledge for career advancement. While the program is not designed for transfer to a baccalaureate program, Essex County College will apply some or most of the courses you have taken toward an associate degree. Consult your faculty advisor for more information.

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

Based on your placement test scores, you may have to take developmental courses in reading, English, and/or mathematics before taking courses in your major.

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

If you do not need developmental course work and you register for an average of 15 credits each semester, you can complete the certificate in one year. You may shorten the amount of time by taking courses in the summer sessions.

Where should I direct specific questions about this program?

Contact the Business Division at (973) 877-3222 or Admissions at (973) 877-1941.

Upon completion of this program, graduates will be able to:

- ◆ Use microcomputer applications including Microsoft Word, Microsoft Excel, Microsoft Access, Microsoft Outlook, and Microsoft PowerPoint;
- ◆ Integrate the applications in a work environment;
- ◆ Customize major software applications packages found in the business world;
- ◆ Use the basic techniques of computer/keyboarding and formatting for preparing a wide range of business correspondence;
- ◆ Plan, create, and manipulate a database for typical business needs;
- ◆ Use PowerPoint to create presentations, present slide shows, create a self-running show using animation effects, and distribute presentations to remote audiences;
- ◆ Use desktop publishing software to create high-impact and effective marketing materials; and
- ◆ Create and maintain static and dynamic web pages integrating JavaScript and HTML.

Information Systems Office Operations – Certificate Program

<p>GENERAL EDUCATION REQUIREMENTS: (3 credits)</p> <p>Communications (3 credits) ENG 101 College Composition I 3</p> <p>MAJOR COURSE REQUIREMENTS: (27 credits)</p> <p>OST 105 Microcomputer Keyboarding and Document Processing 3 CIS 135 Microcomputer Spreadsheets 3 CIS 136 Desktop Publishing for IBM Compatibles 3 CIS 137 Microcomputer Databases 3 CIS 139 Introduction to Multimedia 3 CIS 152 Internet Concepts 3 CIS 153 Adv. Internet Concepts and Applications 3 CIS 235 Adv. Microcomputer Spreadsheets 3 CIS 237 Adv. Microcomputer Databases 3</p> <p>Total Credits Required for Certificate 30</p>	<p>RECOMMENDED SEQUENCE OF COURSES:*</p> <p><u>First Semester</u></p> <p>OST 105 Microcomputer Keyboarding and Document Processing 3 ENG 101 College Composition I 3 CIS 135 Microcomputer Spreadsheets 3 CIS 137 Microcomputer Databases 3 CIS 152 Internet Concepts 3</p> <p><u>Second Semester</u></p> <p>CIS 136 Desktop Publishing for IBM Compatibles 3 CIS 139 Introduction to Multimedia 3 CIS 153 Adv. Internet Concepts and Applications 3 CIS 235 Adv. Microcomputer Spreadsheets 3 CIS 237 Adv. Microcomputer Databases 3</p>
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***NOTE:** This plan assumes the completion of all required developmental courses in reading, writing, and mathematics as well as other pre- and co-requisites for some of the courses, as listed in the Course Descriptions section of the catalog.

Internet-Web Page Design Specialist Program

Division of Business — Curriculum Code: 3304

Will Earn Upon Program Completion: Certificate in Internet-Web Page Design Specialist

Why major in Internet-Web Page Design?

Individuals and businesses today are increasingly turning to the World Wide Web to advertise and sell products and services. The demand for individuals who can create Web sites is growing rapidly. This program prepares students to acquire the skills needed to create interactive and complex Web sites. The program enables students to design Web sites whose look and feel effectively communicate an organization's message to its intended audience.

If I major in Internet-Web Page Design, can I transfer to an upper division college or university?

The major is designed to prepare students for entry-level positions as Webmasters. While the program is not designed for transfer to a baccalaureate program, Essex County College will apply some or most of the courses you have taken toward an associate degree. Consult your faculty advisor for more information.

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

Based on your placement test scores, you may have to take developmental courses in reading, English, and/or mathematics before taking courses in your major.

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

If you do not need developmental course work, and you register for 15 credits, you may complete the certificate in one semester.

Where should I direct specific questions about this program?

Contact the Business Division at (973) 877-3222 or Admissions at (973) 877-1941.

Upon completion of this program, graduates will be able to:

- ◆ Conduct research using the Internet;
- ◆ Plan layouts and build and maintain Web pages;
- ◆ Use Hypertext Markup Language, the source code for creating Web pages;
- ◆ Develop advanced page layouts using tools such as nested tables, frames, and cascading style sheets;
- ◆ Use the principles of graphic design;
- ◆ Create interactive Web content with JavaScript, the most common scripting language used on the Internet;
- ◆ Create pop-up windows and scrolling messages; and
- ◆ Generate complex and dynamic Web pages and forms.

Internet-Web Page Design Specialist — Certificate Program

<p>GENERAL EDUCATION REQUIREMENTS: None</p> <p>MAJOR COURSE REQUIREMENTS: (15 credits)</p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 10%;">CIS</td> <td style="width: 10%;">136</td> <td style="width: 70%;">Desktop Publishing for IBM Compatibles</td> <td style="width: 10%; text-align: right;">3</td> </tr> <tr> <td>CIS</td> <td>139</td> <td>Introduction to Multimedia</td> <td style="text-align: right;">3</td> </tr> <tr> <td>CIS</td> <td>152</td> <td>Internet Concepts</td> <td style="text-align: right;">3</td> </tr> <tr> <td>CIS</td> <td>153</td> <td>Adv. Internet Concepts and Applications</td> <td style="text-align: right;">3</td> </tr> <tr> <td>ART</td> <td>161</td> <td>Computer Enhanced Layout and Design</td> <td style="text-align: right;">3</td> </tr> </table> <p>Total Credits Required for Certificate 15</p>	CIS	136	Desktop Publishing for IBM Compatibles	3	CIS	139	Introduction to Multimedia	3	CIS	152	Internet Concepts	3	CIS	153	Adv. Internet Concepts and Applications	3	ART	161	Computer Enhanced Layout and Design	3	<p>RECOMMENDED SEQUENCE OF COURSES:*</p> <p><u>First Semester</u></p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 10%;">CIS</td> <td style="width: 10%;">136</td> <td style="width: 70%;">Desktop Publishing for IBM Compatibles</td> <td style="width: 10%; text-align: right;">3</td> </tr> <tr> <td>CIS</td> <td>139</td> <td>Introduction to Multimedia</td> <td style="text-align: right;">3</td> </tr> <tr> <td>CIS</td> <td>152</td> <td>Internet Concepts</td> <td style="text-align: right;">3</td> </tr> <tr> <td>CIS</td> <td>153</td> <td>Adv. Internet Concepts and Applications</td> <td style="text-align: right;">3</td> </tr> <tr> <td>ART</td> <td>161</td> <td>Computer Enhanced Layout and Design</td> <td style="text-align: right;">3</td> </tr> </table>	CIS	136	Desktop Publishing for IBM Compatibles	3	CIS	139	Introduction to Multimedia	3	CIS	152	Internet Concepts	3	CIS	153	Adv. Internet Concepts and Applications	3	ART	161	Computer Enhanced Layout and Design	3
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***NOTE:** This plan assumes the completion of all required developmental courses in reading, writing, and mathematics as well as other pre- and co-requisites for some of the courses, as listed in the Course Descriptions section of the catalog.



Internetworking Technology Program

*Division of Engineering Technologies and Computer Science — Curriculum Code: 3204
Will Earn Upon Program Completion: Certificate in Internetworking Technology*

Why major in Internetworking Technology?

The Internetworking Technology program prepares students for entry-level positions in computer networking and to pass the Cisco Certified Network Associate (CCNA) certification examination. Typical positions for qualified graduates include: Network engineer, network administrator, network technician, technical support specialist, and LAN or network specialist. Duties may include working as part of a team that has the responsibility of maintaining, implementing, and managing corporate information and communications infrastructures.

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

The major is job-oriented and not designed for transfer to a baccalaureate program.

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

All new students must take a basic skills competency test. Based on the results of the test, you may be required to take developmental courses in reading, English, and/or mathematics.

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

If you do not need developmental course work and follow the suggested sequence, you can complete the program in one academic year.

Where should I direct specific questions about this program?

Contact the Division at (973) 877-4400 or Admissions at (973) 877-1941.

Upon completion of this program, graduates will be able to:

- ◆ Install and configure internetworking hardware such as routers and switches;
- ◆ Analyze and interpret performance statistics of network operations;
- ◆ Manage network operations in a LAN or WAN environment; and
- ◆ Pass Cisco Systems CCNA certification examination.

Internetworking Technology – Certificate Program

<p>GENERAL EDUCATION REQUIREMENTS: (7 credits)</p> <p>Communications (3 credits) ENG 101 College Composition I 3</p> <p>Math (4 credits) MTH 100 Introduction to College Mathematics 4</p> <p>MAJOR COURSE REQUIREMENTS: (16 credits)</p> <p>CSC 110 Routing & Switching Fund. 4 CSC 111 Routing & Switching WAN 4 CSC 211 Internetworking 4 CSC 212 Advanced Internetworking 4</p> <p>Total Credits Required for Certificate 23</p>	<p>RECOMMENDED SEQUENCE OF COURSES:*</p> <p><u>First Semester</u></p> <p>CSC 110 Routing & Switching Fund. 4 CSC 111 Routing & Switching WAN 4 ENG 101 College Composition I 3</p> <p><u>Second Semester</u></p> <p>MTH 100 Introduction to College Mathematics 4 CSC 211 Internetworking 4 CSC 212 Advanced Internetworking 4</p>
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***NOTE:** This plan assumes the completion of all required developmental courses in reading, writing, and mathematics as well as other pre- and co-requisites for some of the courses, as listed in the Course Descriptions section of the catalog.

Legal Assistant Program (Paralegal)

Division of Business — Curriculum Code: 3054
Will Earn Upon Program Completion: Certificate in Legal Assistant

Why major in Legal Assisting?

Law firms, corporations, government agencies, title companies, insurance companies, state and federal courts, and other entities are increasingly seeking qualified paralegals to assist with a wide variety of legal tasks. Duties of paralegals typically include conducting interviews, investigations, and legal research, preparing legal documents and memoranda, assisting with clients, and being involved in the daily operations of the law office.

If I major in Legal Assisting, can I transfer to an upper division college or university?

Students who enroll in the certificate program must already have at least an associate degree in any discipline. While the program is designed to prepare students for entry-level legal positions, the courses will transfer to four-year institutions based on existing transfer and articulation agreements with area institutions. Consult your faculty advisor for more information.

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

This program is open to those individuals who already possess at least an associate degree in any discipline.

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

You can complete the certificate program in one year by taking 2-3 courses in each of the fall, spring, and summer semesters.

Where should I direct specific questions about this program?

Contact the Business Division at (973) 877-3222 or Admissions at (973) 877-1941.

Upon completion of this program, graduates will be able to:

- ◆ Articulate the role of a legal assistant in today's legal system;
- ◆ Demonstrate a thorough knowledge of the American legal system;
- ◆ Demonstrate a thorough knowledge of the principles of legal ethics;
- ◆ Demonstrate a thorough knowledge of the substantive principles of law;
- ◆ Articulate legal principles in both oral and written form;
- ◆ Demonstrate the ability to access, locate, and research the law by both traditional and electronic methods; and
- ◆ Demonstrate a thorough understanding of the litigation process.

Legal Assistant (Paralegal) – Certificate Program

<p>GENERAL EDUCATION REQUIREMENTS: None</p> <p>MAJOR COURSE REQUIREMENTS: (21 credits)</p> <table style="width: 100%; border-collapse: collapse;"> <tr><td style="width: 10%;">LAS</td><td style="width: 10%;">101</td><td style="width: 70%;">Intro to Legal Assistant Studies</td><td style="width: 10%; text-align: right;">3</td></tr> <tr><td>LAS</td><td>102</td><td>Legal Research & Writing</td><td style="text-align: right;">3</td></tr> <tr><td>LAS</td><td>105</td><td>Torts</td><td style="text-align: right;">3</td></tr> <tr><td>LAS</td><td>107</td><td>Contracts</td><td style="text-align: right;">3</td></tr> <tr><td>LAS</td><td>202</td><td>Advanced Legal Research & Writing</td><td style="text-align: right;">3</td></tr> <tr><td>LAS</td><td>205</td><td>Administrative Law</td><td style="text-align: right;">3</td></tr> <tr><td>LAS</td><td>206</td><td>Litigation Procedures</td><td style="text-align: right;">3</td></tr> </table> <p>ADDITIONAL COURSE REQUIREMENTS:</p> <p>To enter this certificate program, you must possess at least an Associate Degree in any discipline and be able to demonstrate that you have met the general education requirements of Essex County College.</p> <p>Total Credits Required for Certificate 21</p>	LAS	101	Intro to Legal Assistant Studies	3	LAS	102	Legal Research & Writing	3	LAS	105	Torts	3	LAS	107	Contracts	3	LAS	202	Advanced Legal Research & Writing	3	LAS	205	Administrative Law	3	LAS	206	Litigation Procedures	3	<p>RECOMMENDED SEQUENCE OF COURSES:*</p> <table style="width: 100%; border-collapse: collapse;"> <tr><td style="width: 10%;">LAS</td><td style="width: 10%;">101</td><td style="width: 70%;">Intro to Legal Assistant Studies</td><td style="width: 10%; text-align: right;">3</td></tr> <tr><td>LAS</td><td>107</td><td>Contracts</td><td style="text-align: right;">3</td></tr> <tr><td>LAS</td><td>105</td><td>Torts</td><td style="text-align: right;">3</td></tr> <tr><td>LAS</td><td>102</td><td>Legal Research & Writing</td><td style="text-align: right;">3</td></tr> <tr><td>LAS</td><td>205</td><td>Administrative Law</td><td style="text-align: right;">3</td></tr> <tr><td>LAS</td><td>206</td><td>Litigation Procedures</td><td style="text-align: right;">3</td></tr> <tr><td>LAS</td><td>202</td><td>Advanced Legal Research & Writing</td><td style="text-align: right;">3</td></tr> </table>	LAS	101	Intro to Legal Assistant Studies	3	LAS	107	Contracts	3	LAS	105	Torts	3	LAS	102	Legal Research & Writing	3	LAS	205	Administrative Law	3	LAS	206	Litigation Procedures	3	LAS	202	Advanced Legal Research & Writing	3
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Legal Assistant Studies Program

Division of Business — Curriculum Code: 2013

Will Earn Upon Program Completion: Associate in Science (A.S.) Degree

Why major in Legal Assistant Studies?

This program prepares you to work in a variety of legal settings, such as law firms, corporations, and government entities. The legal assistant typically performs a wide variety of tasks including interviewing clients, investigating cases, preparing legal documents, performing legal research, writing legal memoranda, and assisting in trials and appeals. In addition to providing a thorough knowledge of legal principles, this program develops students' practical skills to prepare them to work effectively in any legal environment.

If I major in Legal Assistant Studies, can I transfer to an upper division college or university?

The Associate in Science degree in Legal Studies prepares you to transfer to upper division colleges and universities to complete your bachelor's degree. ECC's transfer/articulation agreements with area four-year institutions ensure a smooth transfer to our A.S. graduates.

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

Based on your placement test scores, you may have to take developmental courses in reading, English, and/or mathematics before taking courses in your major.

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

If you do not need developmental courses and you take an average of 17 credits per semester, you should be able to complete the program in two years.

Where should I direct specific questions about this program?

Call the Division at (973) 877-3222 or Admissions at (973) 877-1941.

Upon completion of this program, graduates will be able to:

- ◆ Demonstrate skills in critical thinking, problem-solving and effective communication;
- ◆ Articulate the role of a legal assistant in today's legal system;
- ◆ Demonstrate a thorough knowledge of the American legal system;
- ◆ Demonstrate a thorough knowledge of the principles of legal ethics;
- ◆ Demonstrate a thorough knowledge of the substantive principles of law;
- ◆ Articulate legal principles in both oral and written form;
- ◆ Demonstrate the ability to access, locate, and research the law by both traditional and electronic methods; and
- ◆ Demonstrate a thorough understanding of the litigation process.

Legal Assistant Studies — A.S. Degree Program

<p>GENERAL EDUCATION REQUIREMENTS: (33-36 credits)</p> <p>Communications (6 credits) ENG 101 College Composition I 3 ENG 102 College Composition II 3</p> <p>Social Science (6 credits) ANT 101, POL 104, PSY 101, or SOC 101 3 (POL 104 is recommended) Any ANT, POL, PSY, or SOC course 3</p> <p>Lab Science/Math (10-12 credits) Two Math courses (MTH 100, 113, 114, 117, 119, or 120) 6-8 Lab Science course 4</p> <p>Physical Education (2-3 credits) PHE 119 or HLT 101 2-3</p> <p>Humanities (9 credits) Any History course 3 Any 200-level English literature course 3 ART 100, 101, 102, or 200 or MUS 100, 108, 109, or 117 3</p> <p>MAJOR COURSE REQUIREMENTS: (24 credits)</p> <p>LAS 101 Intro to Legal Assistant Studies 3 LAS 102 Legal Research & Writing 3 LAS 105 Torts 3 LAS 107 Contracts 3 LAS 202 Advanced Legal Research & Writing 3 LAS 204 Business Organization, Government Regulation, and Bankruptcy 3 LAS 205 Administrative Law 3 LAS 206 Litigation Procedures 3</p> <p>ADDITIONAL COURSE REQUIREMENTS: (6 credits)</p> <p>LAS 225 Law Office Management and Field Experience and a legal elective or two legal electives 6</p> <p>Total Credits Required for Degree 63-66</p>	<p>RECOMMENDED SEQUENCE OF COURSES:*</p> <p><u>First Semester</u></p> <p>LAS 101 Intro to Legal Assistant Studies 3 LAS 107 Contracts 3 ENG 101 College Composition I 3 Social Science requirement 3 Math requirement 3-4</p> <p><u>Second Semester</u></p> <p>LAS 102 Legal Research & Writing 3 LAS 105 Torts 3 Math Requirement 3-4 ENG 102 College Composition II 3 Social Science requirement 3</p> <p><u>Third Semester</u></p> <p>LAS 202 Advanced Legal Research & Writing 3 LAS 204 Business Organization, Government Regulation, and Bankruptcy 3 LAS 206 Litigation Procedures 3 English literature requirement 3 History requirement 3 Physical Education/Health requirement 2-3</p> <p><u>Fourth Semester</u></p> <p>LAS 205 Administrative Law 3 Legal elective 3 LAS 225 Law Office Management and Field Experience or Legal elective 3 Art/Music requirement 3 Lab Science requirement 4</p>
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***NOTE:** This plan assumes the completion of all required developmental courses in reading, writing, and mathematics as well as other pre- and co-requisites for some of the courses, as listed in the Course Descriptions section of the catalog.

Legal Nurse Program

Division of Business — Curriculum Code: 3056
Will Earn Upon Program Completion: Certificate in Legal Nurse

Why become a Legal Nurse?

Corporations, law firms, insurance companies, HMOs, risk management groups, government agencies, and hospitals are seeking qualified personnel trained in medicine and the law. This program within the Center for Legal Education offers paralegal education and training to nurses who are RNs and who wish to be involved in the legal profession as legal nurse consultants or nurse paralegals.

Are there any requirements I must satisfy before I start taking courses in the program?

The program is open to registered nurses with an Associate Degree who have at least 2000 hours of nursing experience. Diploma school nurses may be admitted upon review of transcripts.

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

You can complete the certificate in one year by taking 2-3 courses in each of the fall, spring, and summer semesters.

Where should I direct specific questions about this program?

Contact the Division at (973) 877-3222 or Admissions at (973) 877-1941.

Upon completion of this program, graduates will be able to:

- ◆ Demonstrate knowledge of the history and evolution of the legal nurse profession;
- ◆ Explain the role of the legal nurse in the legal environment;
- ◆ Demonstrate knowledge of the American legal system;
- ◆ Demonstrate knowledge of medical/legal ethics;
- ◆ Demonstrate a thorough knowledge of the applicable substantive principles of law;
- ◆ Articulate legal principles in both oral and written form;
- ◆ Demonstrate the ability to access, locate, and research the law by both traditional and electronic methods;
- ◆ Demonstrate a thorough understanding of the litigation process and the role of the legal nurse therein; and
- ◆ Demonstrate knowledge of the business and marketing principles of an independent legal nurse practitioner.

Legal Nurse — Certificate Program

<p>GENERAL EDUCATION REQUIREMENTS: None</p> <p>MAJOR COURSE REQUIREMENTS: (21 credits)</p> <table style="width: 100%; border-collapse: collapse;"> <tr><td style="width: 10%;">LAS</td><td style="width: 10%;">102</td><td style="width: 70%;">Legal Research & Writing</td><td style="width: 10%; text-align: right;">3</td></tr> <tr><td>LAS</td><td>105</td><td>Torts</td><td style="text-align: right;">3</td></tr> <tr><td>LAS</td><td>106</td><td>Introduction to Law</td><td style="text-align: right;">3</td></tr> <tr><td>LAS</td><td>108</td><td>Introduction to Nurse Paralegalism</td><td style="text-align: right;">3</td></tr> <tr><td>LAS</td><td>205</td><td>Administrative Law</td><td style="text-align: right;">3</td></tr> <tr><td>LAS</td><td>206</td><td>Litigation Procedures</td><td style="text-align: right;">3</td></tr> <tr><td>LAS</td><td>211</td><td>Medical Legal Ethics</td><td style="text-align: right;">3</td></tr> </table> <p>ADDITIONAL REQUIREMENTS:</p> <p>To enter this program, you need at least an Associate Degree in Nursing and be able to demonstrate that you have met the general education requirements of Essex County College. You also need at least 2000 hours of nursing experience.</p> <p>Total Credits Required for Certificate 21</p>	LAS	102	Legal Research & Writing	3	LAS	105	Torts	3	LAS	106	Introduction to Law	3	LAS	108	Introduction to Nurse Paralegalism	3	LAS	205	Administrative Law	3	LAS	206	Litigation Procedures	3	LAS	211	Medical Legal Ethics	3	<p>RECOMMENDED SEQUENCE OF COURSES:*</p> <table style="width: 100%; border-collapse: collapse;"> <tr><td style="width: 10%;">LAS</td><td style="width: 10%;">108</td><td style="width: 70%;">Introduction to Nurse Paralegalism</td><td style="width: 10%; text-align: right;">3</td></tr> <tr><td>LAS</td><td>106</td><td>Introduction to Law</td><td style="text-align: right;">3</td></tr> <tr><td>LAS</td><td>105</td><td>Torts</td><td style="text-align: right;">3</td></tr> <tr><td>LAS</td><td>102</td><td>Legal Research & Writing</td><td style="text-align: right;">3</td></tr> <tr><td>LAS</td><td>205</td><td>Administrative Law</td><td style="text-align: right;">3</td></tr> <tr><td>LAS</td><td>211</td><td>Medical Legal Ethics</td><td style="text-align: right;">3</td></tr> <tr><td>LAS</td><td>206</td><td>Litigation Procedures</td><td style="text-align: right;">3</td></tr> </table>	LAS	108	Introduction to Nurse Paralegalism	3	LAS	106	Introduction to Law	3	LAS	105	Torts	3	LAS	102	Legal Research & Writing	3	LAS	205	Administrative Law	3	LAS	211	Medical Legal Ethics	3	LAS	206	Litigation Procedures	3
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Legal Specialist Program (Secretarial)

Division of Business — Curriculum Code: 3055
Will Earn Upon Program Completion: Certificate in Legal Specialist

Why become a Legal Specialist?

This certificate program prepares students for employment opportunities as legal secretaries in law firms, corporate legal departments, government agencies, banks, legal aid societies, and federal and state courts. The program, offered within the Center for Legal Education at ECC, teaches students basic legal principles, legal terminology, and business writing, and provides a broad background in legal office management. Students also develop skills in clerical, technical, and administrative areas.

Are there any requirements I must satisfy before I start taking courses in the program?

Based on your placement test scores, you may have to take developmental courses in reading, English, and/or mathematics before taking courses in your major.

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

If you do not need developmental course work, you can complete the Certificate in three semesters.

Where should I direct specific questions about this program?

Contact the Division at (973) 877-3222 or Admissions at (973) 877-1941.

Upon completion of this program, graduates will be able to:

- ◆ Demonstrate knowledge of the structure of the American legal system;
- ◆ Explain and apply the concepts of civil and criminal law, substantive and procedural law and jurisdiction;
- ◆ Demonstrate knowledge of the basic substantive areas of law including contracts, property, torts, and family law;
- ◆ Demonstrate knowledge of the ethical practices of the legal profession;
- ◆ Demonstrate competence in carrying out a variety of administrative and clerical responsibilities necessary to run an organization effectively;
- ◆ Coordinate a legal office's administrative activities and ensure that information is disseminated to staff and clients through the use of electronic mail, interoffice mail, or the postal service;
- ◆ Demonstrate dependability, initiative, adherence to confidentiality standards, and interest in keeping pace with developments in the field;
- ◆ Use personal computers to run software applications;
- ◆ Prepare a variety of correspondences, prepare legal documents, schedule appointments, and handle client contact in a professional manner;
- ◆ Demonstrate the ability to manage time effectively;
- ◆ Operate a variety of office equipment; and
- ◆ Demonstrate the ability to keyboard at acceptable speeds, organize files and proofread.

Legal Specialist (Secretarial) – Certificate Program

<p>GENERAL EDUCATION REQUIREMENTS: (3 credits)</p> <p>Communications (3 credits) ENG 101 College Composition I 3</p> <p>MAJOR COURSE REQUIREMENTS: (33 credits)</p> <p>OST 106 Keyboarding and Formatting I 4 OST 107 Keyboarding and Formatting II 4 OST 121 Business Communication 3 OST 215 Specialized Machine Transcription 3 OST 230 Legal Office Procedures 3 OST 250 Word/Information Processing Applications I 4 OST 251 Word/Information Processing Applications II 3 LAS 106 Introduction to Law 3 CIS 131 Microcomputers in Business 3 CIS 152 Internet Concepts 3</p> <p>Total Credits Required for Certificate 36</p>	<p>RECOMMENDED SEQUENCE OF COURSES:*</p> <p><u>First Semester</u></p> <p>OST 106 Keyboarding and Formatting I 4 LAS 106 Introduction to Law 3 ENG 101 College Composition I 3 CIS 131 Microcomputers in Business 3</p> <p><u>Second Semester</u></p> <p>OST 107 Keyboarding and Formatting II 4 OST 121 Business Communication 3 OST 250 Word/Information Processing I 4 CIS 152 Internet Concepts 3</p> <p><u>Third Semester</u></p> <p>OST 215 Specialized Machine Transcription 3 OST 230 Legal Office Procedures 3 OST 251 Word/Information Processing Applications II 3</p>
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***NOTE:** This plan assumes the completion of all required developmental courses in reading, writing, and mathematics as well as other pre- and co-requisites for some of the courses, as listed in the Course Descriptions section of the catalog.

Liberal Arts Program

Division of Humanities — Curriculum Code: 0199
Will Earn Upon Program Completion: Associate in Arts (A.A.) Degree

Why major in Liberal Arts?

The program provides a broad foundation in languages and literature, the social sciences, humanities, mathematics, and the sciences. Teaching, law, publishing, government service, and business are only a few of the many possibilities open to Liberal Arts majors; indeed many employers like to hire Liberal Arts graduates for having received a solid and comprehensive education — in effect a well rounded education in the classical sense. The program is also recommended to students without a definite vocational goal who wish to explore opportunities offered by many fields before deciding upon a career.

If I major in Liberal Arts, can I transfer to an upper division college or university?

The Associate in Arts degree in Liberal Arts prepares you to transfer to upper division colleges and universities to pursue a bachelor's degree. You may be able to take advantage of our articulation agreements with a large number of New Jersey colleges and universities.

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

There are no specific requirements if you score at the college level on the basic skills competency test.

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

If you do not need developmental course work, you can complete the degree in two years by taking 16 to 18 credits per semester. Enrolling in the summer sessions can shorten this time.

Where should I direct specific questions about this program?

Call the Division at (973) 877-3319/3320 or Admissions at (973) 877-1941.

Upon completion of this program, graduates will be able to:

- ◆ Demonstrate skills in critical thinking, problem-solving, and effective communication;
- ◆ Demonstrate knowledge and appreciation of world cultures across history;
- ◆ Prepare research projects utilizing the Modern Language Association guidelines;
- ◆ Utilize the research library, the Internet, and other electronic sources for preparing research projects;
- ◆ Apply the principles of effective rhetoric in oral presentations and in writing assignments such as expository essays, creative writing, and persuasive arguments;
- ◆ Demonstrate critical understanding of a variety of literary works of different genres;
- ◆ Utilize word processing in the preparation of papers;
- ◆ Demonstrate an understanding of the visual and/or musical arts and/or drama reflecting various periods, styles and backgrounds of artists, composers, and performers; and
- ◆ Apply various techniques in the creation of artistic work.

Liberal Arts — A.A. Degree Program

<p>GENERAL EDUCATION REQUIREMENTS: (45-48 credits)</p> <p>Communications (9 credits) ENG 101 College Composition I 3 ENG 102 College Composition II 3 ENG 105, 108, 109, 141, 142, 151, or 169 3</p> <p>Social Science (6 credits) ANT 101, POL 104, PSY 101, or SOC 101 3 Any ANT, POL, PSY, or SOC course 3</p> <p>Lab Science/Math (10-12 credits) A Lab Science sequence and a Math course (100 or higher) or two Math courses (100 or higher) and a Lab Science course: MTH (100 level or higher) 3-8 BIO 101-102, 103-104, or 121-122; CHM 101-102 or 103-104; PHY 101-102 or 103-104 4-8</p> <p>Physical Education (2-3 credits) PHE 119 or HLT 101 2-3</p> <p>Humanities (18 credits) Any two 200-level English literature courses 6 Any History sequence 6 ART 100, 101, 102, or 200 or MUS 100, 108, 109, or 117 3 Any one of the following as Humanities elective: ART, CIN, DAN, DRA, ENG (Literature) MUS or PHI course; ENG 105, 108, 141, 142, 151, 169; ARB 101, 102; FRN 101, 102, 201, 202; ITL 101, 102, 201; SPN 100, 101, 102, 201, 202. 3</p> <p>MAJOR COURSE REQUIREMENTS: (9 credits)</p> <p>Humanities elective 3 Humanities or Social Science elective 3 Social Science elective 3</p> <p>ADDITIONAL COURSE REQUIREMENTS: (6-9 credits)</p> <p>Free electives 6-9</p> <p>Total Credits Required for Degree 60-66</p>	<p>RECOMMENDED SEQUENCE OF COURSES:*</p> <p><u>First Semester</u></p> <p>ENG 101 College Composition I 3 PSY 101 General Psychology I 3 ART 100 Art Appreciation 3 Physical Education/Health requirement 2-3 HST 101 World Civilization I 3</p> <p><u>Second Semester</u></p> <p>ENG 102 College Composition II 3 Social Science requirement 3 MTH 100 Introductory College Math 4 HST 102 World Civilization II 3 Humanities elective 3</p> <p><u>Third Semester</u></p> <p>ENG 109 Effective Speech 3 ENG 205 The Western Literary Tradition 3 BIO 101 College Biology I 4 Humanities or Social Science elective 3 Free elective 3</p> <p><u>Fourth Semester</u></p> <p>ENG 215 Modern Literary Masterpieces 3 BIO 102 College Biology II 4 Humanities elective 3 Social Science elective 3 Free elective 3</p>
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***NOTE:** This plan assumes the completion of all required developmental courses in reading, writing, and mathematics as well as other pre- and co-requisites for some of the courses, as listed in the Course Descriptions section of the catalog.

Liberal Arts: Communications Option

Division of Humanities — Curriculum Code: 019C
Will Earn Upon Program Completion: Associate in Arts (A.A.) Degree

Why major in Communications?

The program is designed for students interested in gaining a general working knowledge of the media and communications industry or who intend to transfer to a four-year college to complete a bachelor's degree in this rapidly expanding field. Communications and media related studies include television production, film production, radio production, and mass communication. Since Communications is technology driven, it involves working with applications and elements that are ever changing. At Essex, the program utilizes state-of-the-art broadcast equipment to provide students with knowledge in producing, writing, directing, editing, technical operations, and announcing. With advanced degrees and relevant job experience, students can secure rewarding positions in each of these areas. Administrative support and assistant positions are also available to qualified individuals.

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

The program prepares you for transfer to upper division colleges and universities to complete a bachelor's degree in the field. ECC's transfer/articulation agreements with area four-year institutions provide smooth transfer for our A.A. graduates.

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

Based on your placement test scores, you may have to take developmental courses in reading, English, and/or mathematics. You also need a grade of "C" or better in English 101 for taking most of the major courses.

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

If you do not need developmental course work and you register for an average of 15 credits each semester, you can complete the degree in two years. You may shorten the amount of time by taking courses in the summer sessions.

Where should I direct specific questions about this program?

Contact the Division at (973) 877-3319/3320 or Admissions at (973) 877-1941.

Upon completion of this program, graduates will be able to:

- ◆ Demonstrate knowledge of the techniques and principles of television or radio production;
- ◆ Explain the actual operation of a television or radio production;
- ◆ Identify the different genres and styles of films through observation and analysis;
- ◆ Demonstrate an understanding of the make-up of film content, including the make-up of African American film content;
- ◆ Demonstrate an appreciation of the art of filmmaking;
- ◆ Write in all the major script styles using industry standards in script formatting;
- ◆ Demonstrate an understanding of story structure;
- ◆ Analyze and critique a media script.
- ◆ Operate studio video and audio equipment and demonstrate proficiency in post-production editing;
- ◆ Explain the form and theory of electronic and print media including radio, television, Internet, film, newspapers, magazines, and books; and
- ◆ Evaluate the history, significance and importance of each media form through cross media analysis.

Liberal Arts: Communications Option A.A. Degree Program

<p>GENERAL EDUCATION REQUIREMENTS: (45-48 credits)</p> <p>Communications (9 credits) ENG 101 College Composition I 3 ENG 102 College Composition II 3 ENG 105, 108, 109, or 169 (Recommended: 109) 3</p> <p>Social Science (6 credits) ANT 101, POL 104, PSY 101, or SOC 101 3 Any ANT, POL, PSY, or SOC course 3</p> <p>Lab Science/Math (10-12 credits) Two Math courses (100 or higher) and a Lab Science course or one Math course (100 or higher) and a Lab Science sequence: MTH (any 100 level or higher) 3-8 BIO 101-102 or 121-122; CHM 101-102 or 103-104; PHY 101-102 or 103-104 3-8</p> <p>Physical Education (2-3 Credits) PHE 119 or HLT 101 2-3</p> <p>Humanities (18 credits) Any History sequence 6 Any two 200-level English literature courses 6 ART 100, 101, 102, or 200 or MUS 100,108, 109, or 117 3 Any one of the following as Humanities elective: ART, CIN, DAN, DRA, ENG (Literature) MUS, or PHI course; ENG 105, 108, 141, 142, 151, 169; ARB 101, 102; FRN 101, 102, 201, 202; ITL 101, 102, 201; SPN 100, 101, 102, 201, 202. 3</p> <p>MAJOR COURSE REQUIREMENTS: (12 credits)</p> <p>ENG 151 Mass Communications 3 Any three of the following: CIN 101 Introduction to the Art of Film 3 CIN 103 History of African American Film 3 CMS 110 Fundamentals of Television Production 3 CMS 113 Writing for Film & Television 3 CMS 121 Fundamentals of Filmmaking 3 CMS 136 Radio Broadcasting and Prod. 3 CMS 210 Television Production II 3 CMS 219 Video Production 3</p> <p>ADDITIONAL COURSE REQUIREMENTS: (3 credits) Free elective 3</p> <p>Total Credits Required for Degree: 60-63</p>	<p>RECOMMENDED SEQUENCE OF COURSES:*</p> <p><u>First Semester</u></p> <p>ENG 151 Mass Communications 3 ENG 101 College Composition I 3 Social Science requirement 3 Math requirement 3-4 History requirement 3</p> <p><u>Second Semester</u></p> <p>CMS or CIN course 3 ENG 102 College Composition II 3 Social Science requirement 3 Math requirement 3-4 History requirement 3</p> <p><u>Third Semester</u></p> <p>CMS or CIN course 3 Health or Physical Education 2-3 English literature course 3 ENG 109 Effective Speech 3 Lab Science requirement 4</p> <p><u>Fourth Semester</u></p> <p>CMS or CIN course 3 Free elective 3 English literature course 3 Performing Arts elective 3 Humanities elective 3</p>
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***NOTE:** This plan assumes the completion of all required developmental courses in reading, writing, and mathematics as well as other pre- and co-requisites for some of the courses, as listed in the Course Descriptions section of the catalog.

Liberal Arts: Journalism Option

Division of Humanities — Curriculum Code: 019J
Will Earn Upon Program Completion: Associate in Arts (A.A.) Degree

Why major in Journalism?

Whether you are interested in newspaper, magazine, book or electronic publishing, the field of journalism offers opportunities to discover more about the world and communicate your insights to others. At ECC, the program covers theory and practice of reporting, and writing news and features for print publications. Students are given the opportunity to do reporting on news, arts, entertainment, and sports. They can also publish their work in the *Essex County College Observer* as well as in other college publications.

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

Most or all of the credits earned at ECC toward an A.A. degree in Journalism will transfer to a four-year college or university depending on ECC's particular transfer/articulation agreements with area institutions. While studying at ECC, we encourage you to familiarize yourself with the degree requirements of any baccalaureate program to which you wish to transfer upon graduation.

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

Based on your placement test scores, you may need to take developmental courses in reading, English, and/or mathematics before taking the core curriculum courses for your major. Also, English 101 is a prerequisite for the journalism courses. However, students who have previous journalism experience may qualify for waiver of this requirement; writing samples must be submitted for approval.

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

If you do not need developmental course work and you register for an average of 15 to 17 credits each semester, you can complete the degree in two years. You may shorten the amount of time by taking courses in the two summer sessions.

Where should I direct specific questions about this program?

Contact the Division at (973) 877-3319/3320 or Admissions at (973) 877-1941.

Upon completion of this program, graduates will be able to:

- ◆ Communicate ideas verbally and in writing in a clear and effective manner, appropriate to college-level discourse;
- ◆ Demonstrate knowledge of the organization and content of a newspaper;
- ◆ Demonstrate competence in the basics of journalism — research, interviewing, revisions, editing, and proofreading;
- ◆ Develop leads, layouts, and design;
- ◆ Demonstrate knowledge of the printing process and photography;
- ◆ Demonstrate competence in key aspects of the news reporting process and prepare different types of news copy;
- ◆ Compose articles and headlines appropriate to style requirements for a variety of publications;
- ◆ Analyze newsmagazines, and television and radio productions; and
- ◆ Demonstrate proficiency in using the word processor, web browsers, and databases in the journalistic field.

Liberal Arts: Journalism Option — A.A. Degree Program

<p>GENERAL EDUCATION REQUIREMENTS: (45-48 credits)</p> <p>Communications (9 credits) ENG 101 College Composition I 3 ENG 102 College Composition II 3 ENG 105, 108, 109, 151, or 169 3</p> <p>Social Science (6 credits) ANT 101, POL 104, PSY 101, or SOC 101 3 Any ANT, POL, PSY, or SOC course 3</p> <p>Lab Science/Math (10-12 credits) Two Math courses (100 or higher) and a lab science course or one Math course (100 or higher) and a lab science sequence: MTH (100 level or higher) 3-8 BIO 101-102, 103-104, or 121-122; CHM 101-102 or 103-104; PHY 101-102 or 103-104 4-8</p> <p>Physical Education (2-3 credits) PHE 119 or HLT 101 2-3</p> <p>Humanities (18 credits) Any two 200-level English literature courses 6 Any History sequence 6 ART 100, 101, 102, or 200 or MUS 100, 108, 109, or 117 3 Any one of the following as Humanities elective: ART, CIN, DAN, DRA, ENG (Literature) MUS or PHI course; ENG 105, 108, 141, 142, 151, 169; ARB 101, 102; FRN 101, 102, 201, 202; ITL 101, 102, 201; SPN 100, 101, 102, 201, 202. 3</p> <p>MAJOR COURSE REQUIREMENTS: (13 credits)</p> <p>ENG 141 Introduction to Journalism 3 ENG 142 Journalism II 3 ENG 144 Journalism Workshop 1 ENG 151 Mass Communications 3 ENG 169 Creative Writing 3</p> <p>ADDITIONAL COURSE REQUIREMENTS: (6 credits)</p> <p>Select two from: ANT, EDU, HST, PHI, POL, PSY, SOC 6</p> <p>Total Credits Required for Degree 64-67</p>	<p>RECOMMENDED SEQUENCE OF COURSES:*</p> <p><u>First Semester</u></p> <p>ENG 101 College Composition I 3 Social Science requirement 3 ART 100 Art Appreciation 3 Physical Education/Health requirement 2-3 ENG 151 Mass Communications 3 Additional course requirement 3</p> <p><u>Second Semester</u></p> <p>ENG 102 College Composition II 3 ENG 141 Introduction to Journalism 3 Social Science requirement 3 MTH 100 Introduction to College Math 4 HST 101 World Civilization I 3</p> <p><u>Third Semester</u></p> <p>ENG 105 Technical Writing 3 ENG 142 Journalism II 3 ENG 205 Western Literary Tradition 3 BIO 101 College Biology I 4 HST 102 World Civilization II 3</p> <p><u>Fourth Semester</u></p> <p>ENG 215 Modern Literary Masterpieces 3 ENG 144 Journalism Workshop 1 ENG 169 Creative Writing 3 BIO 102 College Biology II 4 Additional course requirement 3 Humanities elective 3</p>
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***NOTE:** This plan assumes the completion of all required developmental courses in reading, writing, and mathematics as well as other pre- and co-requisites for some of the courses, as listed in the Course Descriptions section of the catalog.

Liberal Arts: Spanish Language Option

*Department of Bilingual Education — Curriculum Code: 019L
Will Earn Upon Program Completion: Associate in Arts (A.A.) Degree*

Why major in Spanish?

Whether you are planning to pursue a career in business, social work, education, law enforcement, or the health professions, competency in Spanish will help distinguish you from the competition. In fact, as the number of Spanish speakers continues to grow in the tri-state area, Spanish language proficiency is fast becoming an essential part of many occupations. Moreover, the implementation of new world language requirements in New Jersey public schools has created a strong demand for teachers of Spanish throughout the state.

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

Most or all of the credits earned at ECC toward an A.A. degree in Spanish will transfer to a 4-year college or university depending on ECC's particular transfer/articulation agreements with area institutions. You may choose to apply the credits toward a B.A. in Spanish, Education, or some other major.

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

Based on your placement test scores, you may have to take developmental courses in reading, English, and/or mathematics before taking the core curriculum courses in your major. However, you may enroll in Spanish courses, with departmental permission, while taking developmental courses.

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

If you do not need developmental course work and you register for 15 credits each semester, you can complete the degree in two years.

Where should I direct specific questions about this program?

Contact the Department at (973) 877-3450 or Admissions at (973) 877-1941.

Upon completion of this program, graduates will be able to:

- ◆ Speak and comprehend Spanish with proficiency;
- ◆ Read and write Spanish with proficiency;
- ◆ Demonstrate understanding of basic Spanish grammar;
- ◆ Demonstrate command of an expansive vocabulary in Spanish; and
- ◆ Demonstrate an understanding and appreciation of the literature and culture of Spanish-speaking peoples.

Liberal Arts: Spanish Language Option — A.A. Degree Program

<p>GENERAL EDUCATION REQUIREMENTS: (39-42 credits)</p> <p>Communications (6 credits) ENG 101 College Composition I 3 ENG 102 College Composition II 3</p> <p>Social Science (6 credits) ANT 101, POL 104, PSY 101 or SOC 101 3 Any ANT, POL, PSY or SOC course 3</p> <p>Lab Science/Math (10-12 credits) A Lab Science sequence and a Math course (100 or higher) or two Math courses (100 or higher) and a Lab Science course: MTH (100 level or higher) 3-8 BIO 101-102, 103-104, or 121-122; CHM 101-102 or 103-104; PHY 101-102 or 103-104 4-8</p> <p>Physical Education (2-3 credits) PHE 119 or HLT 101 2-3</p> <p>Humanities (15 credits) Any 200-level English literature course 3 Any History sequence 6 ART 100, 101, 102, or 200 or MUS 100, 108, 109, or 117 3 Any one of the following as Humanities elective: ART, CIN, DAN, DRA, ENG (Literature), MUS, or PHI course; ENG 105, 108, 141, 142, 151, 169; ARB 101, 102; FRN 101, 102, 201, 202; ITL 101, 102, 201; SPN 100, 101, 102, 201, 202.</p> <p>MAJOR COURSE REQUIREMENTS: (12 credits)</p> <p>Students can choose from the following: SPN 101 Elementary Spanish I 3 SPN 102 Elementary Spanish II 3 SPN 201 Intermediate Spanish I 3 SPN 202 Intermediate Spanish II 3 SPN 222 Latin American Literature 3 SPN 225 Caribbean Literature 3 SPN 227 US Latino Literature 3</p> <p>Note: Students with some proficiency in Spanish may place into advanced courses.</p> <p>ADDITIONAL COURSE REQUIREMENTS: (9 credits)</p> <p>Free electives 9</p> <p>Total Credits Required for Degree 60-63</p>	<p>RECOMMENDED SEQUENCE OF COURSES:*</p> <p><u>First Semester</u></p> <p>SPN 101 Elementary Spanish I 3 ENG 101 College Composition I 3 MTH 100 Introductory College Math 4 PHE 119 or HLT 101 2-3 Free elective 3</p> <p><u>Second Semester</u></p> <p>SPN 102 Elementary Spanish II 3 ENG 102 College Composition II 3 MTH 101 Statistics and Probability I 3 Lab Science (BIO 101 or BIO 102 recommended) 4 Free elective 3</p> <p><u>Third Semester</u></p> <p>SPN 201 Intermediate Spanish I 3 Social Science requirement 3 History requirement (must take sequence) 3 200-level English Literature requirement (ENG 237, 238 or 242 recommended) 3 Free elective 3</p> <p><u>Fourth Semester</u></p> <p>SPN 202 Intermediate Spanish II 3 History requirement (must take sequence) 3 Social Science requirement 3 Art/Music requirement 3 Humanities elective (SPN 222, 225, or 227 or HST 131 recommended) 3</p>
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***NOTE:** This plan assumes the completion of all required developmental courses in reading, writing, and mathematics as well as other pre- and co-requisites for some of the courses, as listed in the Course Descriptions section of the catalog.

Manufacturing Engineering Technology Program

A Dual Admissions Program with NJIT

Division of Engineering Technologies and Computer Sciences — Curriculum Code: 5301

Will Earn Upon Program Completion: Associate in Applied Science (A.A.S.) Degree

Why major in Manufacturing Engineering Technology?

This program is designed to prepare students for employment in the computer operated manufacturing facilities of existing and emerging industries. It enables students to develop a broad background which can be applied to such areas as mechanical design, quality control, materials testing, facilities design, automation, stress analysis, and sales. Courses emphasize the application of current knowledge and practices to the solution of specific problems. The program is accredited by the Technology Accreditation Commission of the Accreditation Board for Engineering and Technology (ABET), 111 Market Place, Suite 1050, Baltimore, MD 21202, Telephone: (410) 347-7700.

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

Yes. You may choose to participate in the Dual Admissions program with the New Jersey Institute of Technology and have all your credits applied to the first two years of NJIT's bachelor's degree program. Or you may choose to transfer to one of many other colleges which offer a baccalaureate in manufacturing engineering technology.

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

All new students must take a basic skills competency test. Based on the results of the test, you may be required to take developmental courses in reading, English, and/or mathematics.

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

If you do not need developmental course work and you attend full time, you can complete the degree in two years. Part time students can complete the program in three or four years.

Where should I direct specific questions about this program?

Contact the Division at (973) 877-4400 or Admissions at (973) 877-1941.

Upon completion of this program, graduates will be able to:

- ◆ Select and specify materials for manufacturing applications based on principles of engineering mechanics, strength of materials, weight, corrosion, finish, and cost;
- ◆ Demonstrate understanding of the principles and elements of automated controls, and the ability to select appropriate devices for manufacturing and various control processes;
- ◆ Apply basic principles of blueprint reading to prepare detailed working drawings using computer aided design (CAD) skills;
- ◆ Use American National Standards Institute (ANSI) protocol for sizing and tolerancing of mating parts, and apply geometric dimension and tolerancing (GD&T) techniques to engineering design;
- ◆ Utilize 3D solid modeling CAD systems to create mechanical components and generate assembly designs;
- ◆ Utilize CAD and computer aided manufacturing (CAM) software and hardware to integrate design, manufacturing, and production processes;
- ◆ Apply standard testing techniques approved by ANSI, and perform quality control and inspection of products; and
- ◆ Use computer numeric control (CNC), CAM, and coordinate measuring machines (CMM) in automated manufacturing and product inspection processes.

Note: To prepare for the manufacturing field, two distinct programs are available: Manufacturing Engineering Technology (Curr. Code 5301) and Engineering (Curr. Code 0399). Consult the program coordinator for a complete explanation.

Manufacturing Engineering Technology – A.A.S. Degree Program

<p>GENERAL EDUCATION REQUIREMENTS: (21-22 credits)</p> <p>Communications (6 credits) ENG 101 College Composition I 3 ENG 102 College Composition II or ENG 105 Technical Writing 3</p> <p>Social Science (6 credits) ANT 101, POL 104, PSY 101, or SOC 101 3 Any ANT, POL, PSY, or SOC course 3</p> <p>Math (4 credits) MTH 113 College Algebra with Trigonometry 4</p> <p>Physical Education (2-3 credits) PHE 119 or HLT 101 2-3</p> <p>Humanities (3 credits) Any History course 3</p> <p>MAJOR COURSE REQUIREMENTS: (25 credits)</p> <p>ENR 103 Engineering Graphics 2 ENR 105 Applied Computer Aided Design 2 ENR 110 Mechanics 3 MET 201 Manufacturing Proc. and Materials 3 MET 202 Modern Manuf. Sys. and Robotics 4 MET 211 Machines and Controls 3 MET 215 Fluid Mechanics 3 MET 225 Computer Numerical Control 4 MET 250 Manufacturing Engr. Tech. Project 1</p> <p>ADDITIONAL COURSE REQUIREMENTS: (21 credits)</p> <p>CSC 112 Computer Prog. for Engr. & Tech. 3 ELC 115 Electric Circuits: DC and AC 4 ELC 218 Pulse & Digital Circuits 3 MTH 114 Unified Calculus I 3 PHY 101 College Physics I 4 PHY 102 College Physics II 4</p> <p>Total Credits Required for Degree 67-68</p>	<p>RECOMMENDED SEQUENCE OF COURSES:*</p> <p><u>First Semester</u></p> <p>ENG 101 College Composition I 3 ELC 115 Electric Circuits: DC and AC 4 ENR 103 Engineering Graphics 2 MTH 113 College Algebra with Trigonometry 4 PHY 101 College Physics I 4</p> <p><u>Second Semester</u></p> <p>ENG 102 College Composition II or ENG 105 Technical Writing 3 ENR 105 Applied Computer Aided Design 2 CSC 112 Computer Prog. for Engr. & Tech. 3 MTH 114 Unified Calculus I 3 PHY 102 College Physics II 4</p> <p><u>Summer</u></p> <p>Social Science requirement 3 Humanities requirement 3</p> <p><u>Third Semester</u></p> <p>ENR 110 Mechanics 3 MET 201 Manufacturing Proc. and Materials 3 MET 215 Fluid Mechanics 3 MET 225 Computer Numerical Control 4 Physical Education/Health requirement 2-3</p> <p><u>Fourth Semester</u></p> <p>ELC 218 Pulse & Digital Circuits 3 MET 202 Modern Manuf. Sys. and Robotics 4 MET 211 Machines and Controls 3 MET 250 Manufacturing Engr. Tech. Project 1 Social Science requirement 3</p>
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***NOTE:** This plan assumes the completion of all required developmental courses in reading, writing, and mathematics as well as other pre- and co-requisites for some of the courses, as listed in the Course Descriptions section of the catalog.

Manufacturing Engineering Technology: Mechanical Engineering Technology Option

A Dual Admissions Program with NJIT

Division of Engineering Technologies and Computer Sciences — Curriculum Code: 530E

Will Earn Upon Program Completion: Associate in Applied Science (A.A.S.) Degree

Why major in Mechanical Engineering Technology?

This program is designed to provide a combination of theory and hands-on training in mechanical engineering fields. It enables students to develop a broad background which can be applied to such areas as mechanical design, quality control, material testing, facilities design, automation, stress analysis, and sales. Courses emphasize the application of current knowledge and practices to the solution of specific problems. The program is accredited by the Technology Accreditation Commission of the Accreditation Board for Engineering and Technology (ABET), 111 Market Place, Suite 1050, Baltimore, MD 21202, Telephone: (410) 347-7700.

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

Yes. You may choose to participate in the Dual Admissions program with the New Jersey Institute of Technology and have all your credits applied to the first two years of NJIT's bachelor's degree program. Or you may choose to transfer to one of many other colleges which offer a baccalaureate in mechanical engineering technology.

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

All new students must take a basic skills competency test. Based on the results of the test, you may be required to take developmental courses in reading, English, and/or mathematics.

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

If you do not need developmental course work and you attend full time, you can complete the degree in two years. Part time students can complete the program in three or four years.

Where should I direct specific questions about this program?

Contact the Division at (973) 877-4400 or Admissions at (973) 877-1941.

Upon completion of this program, graduates will be able to:

- ◆ Demonstrate knowledge of the fundamental principles of engineering mechanics and strength of materials;
- ◆ Select and specify materials for manufacturing applications based on principles of engineering mechanics, strength of materials, weight, corrosion, finish, and cost;
- ◆ Apply basic principles of blueprint reading to prepare detailed working drawings using computer aided design (CAD) skills;
- ◆ Use American National Standards Institute (ANSI) protocol for sizing and tolerancing of mating parts, and apply geometric dimension and tolerancing (GD&T) techniques to engineering design;
- ◆ Utilize 3D solid modeling CAD systems to create mechanical components and generate assembly designs;
- ◆ Apply standard testing techniques approved by ANSI, and perform quality control and inspection of products; and
- ◆ Utilize computer software applications used in engineering such as CAD, spreadsheets, word processing, and basic programming.

Note: To prepare for the mechanical engineering field, two distinct programs are available: Mechanical Engineering Technology (Curr. Code 530E) and Engineering (Curr. Code 0399). Consult the program coordinator for a complete explanation.

Manufacturing Engineering Technology: Mechanical Engineering Technology Option — A.A.S. Degree Program

<p>GENERAL EDUCATION REQUIREMENTS: (21-22 credits)</p> <p>Communications (6 credits) ENG 101 College Composition I 3 ENG 102 College Composition II or ENG 105 Technical Writing 3</p> <p>Social Science (6 credits) ANT 101, POL 104, PSY 101, or SOC 101 3 Any ANT, POL, PSY, or SOC course 3</p> <p>Math (4 credits) MTH 113 College Algebra with Trigonometry 4</p> <p>Physical Education (2-3 credits) PHE 119 or HLT 101 2-3</p> <p>Humanities (3 credits) Any History course 3</p> <p>MAJOR COURSE REQUIREMENTS: (27 credits)</p> <p>ENR 103 Engineering Graphics 2 ENR 105 Applied Computer Aided Design 2 ENR 110 Mechanics 3 ENR 220 Mechanics of Materials 4 MEC 210 Kinematics 3 MET 201 Manufacturing Proc. and Materials 3 MET 202 Modern Manuf. Sys. and Robotics 4 MET 211 Machines and Controls 3 MET 215 Fluid Mechanics 3</p> <p>ADDITIONAL COURSE REQUIREMENTS: (18 credits)</p> <p>CSC 112 Computer Prog. for Engr. & Tech. 3 ELC 115 Electric Circuits: DC and AC 4 MTH 114 Unified Calculus I 3 PHY 101 College Physics I 4 PHY 102 College Physics II 4</p> <p>Total Credits Required for Degree 66-67</p>	<p>RECOMMENDED SEQUENCE OF COURSES:*</p> <p><u>First Semester</u></p> <p>ENG 101 College Composition I 3 ELC 115 Electric Circuits: DC and AC 4 ENR 103 Engineering Graphics 2 MTH 113 College Algebra with Trigonometry 4 PHY 101 College Physics I 4</p> <p><u>Second Semester</u></p> <p>ENG 102 College Composition II or ENG 105 Technical Writing 3 ENR 105 Applied Computer Aided Design 2 ENR 110 Mechanics 3 MTH 114 Unified Calculus I 3 PHY 102 College Physics II 4</p> <p><u>Summer</u></p> <p>Social Science requirement 3 Humanities requirement 3</p> <p><u>Third Semester</u></p> <p>ENR 220 Mechanics of Materials 4 CSC 112 Computer Prog. for Engr. & Tech. 3 MET 215 Fluid Mechanics 3 MET 201 Manufacturing Proc. and Materials 3 Physical Education/Health requirement 2-3</p> <p><u>Fourth Semester</u></p> <p>MET 202 Modern Manuf. Sys. and Robotics 4 MET 211 Machines and Controls 3 MEC 210 Kinematics 3 Social Science requirement 3</p>
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***NOTE:** This plan assumes the completion of all required developmental courses in reading, writing, and mathematics as well as other pre- and co-requisites for some of the courses, as listed in the Course Descriptions section of the catalog.

Massage Therapy Program

Division of Allied Health — Curriculum Code: 6013
Will Earn Upon Program Completion: Certificate in Massage Therapy

Why major in Massage Therapy?

Massage therapists find their work of helping others personally satisfying and professionally rewarding. Massage involves using manual techniques and adjunctive therapies to relieve the effects of stress, ease tension, and promote health and well-being. Employment is available in a variety of settings including massage offices, medical offices, health clubs, and spas. The field is rapidly growing and many massage therapists choose to specialize in particular areas such as sports massage, Shiatsu, pregnancy massage, relaxation therapy, or onsite massage. Professional growth occurs continuously through the broadening and deepening of manual skills. A growing body of research on massage verifies its benefits. Massage therapists work in conjunction with health care professionals, making referrals as appropriate in response to clients' needs.

If I major in Massage Therapy, can I transfer to an upper division college or university?

The major is career oriented and not designed for transfer to a baccalaureate program. Credits earned in this program can be applied to the Associate of Science degree in the Health Sciences at ECC. Other colleges and universities will apply most or all of the courses you have taken toward a baccalaureate program, depending upon their program requirements.

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

All new students must take a basic skills competency test. Based on the results of the test, you may be required to take developmental courses in reading, English, and/or mathematics. A massage session with a professional massage therapist is strongly recommended prior to taking major courses.

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

This is a one-year program starting in the fall semester and finishing in the summer term.

Where should I direct specific questions about this program?

Call the Division at (973) 877-3354/3496 or Admissions at (973) 877-1941.

Upon completion of this program, graduates will be able to:

- ◆ Take the National Certification Examination to become certified as a professional massage therapist;
- ◆ Apply massage skills in massage therapy practice;
- ◆ Demonstrate Shiatsu and Swedish massage techniques;
- ◆ Address client needs by easing tensions in specific muscle groups;
- ◆ Work with the general population as well as special populations such as athletes, pregnant clients, and geriatrics for building and maintaining health;
- ◆ Demonstrate massage techniques used in medical settings to assist other care professionals in the healing process;
- ◆ Develop a vision of the ideal business plan and identify steps to achieve it;
- ◆ Prepare client records as well as financial records for success in business practice; and
- ◆ Apply holistic philosophy of massage therapy to complement medical practices.

Massage Therapy – Certificate Program

<p>GENERAL EDUCATION REQUIREMENTS: (11 Credits)</p> <p>Communications (3 credits) ENG 101 College Composition I 3</p> <p>Lab Science (8 credits) BIO 117 Fundamentals of Anat. and Phys. I 4 BIO 118 Fundamentals of Anat. and Phys. II 4 (BIO 121/122 can be substituted for BIO 117/118)</p> <p>MAJOR COURSE REQUIREMENTS: (24 credits)</p> <p>HSC 109 Medical Terminology 3 HSC 151 Massage Theory and Practice I 4 HSC 152 Massage Theory and Practice II 2 HSC 153 Massage Theory and Practice III 4 HSC 155 Profess. Devel. in Massage Ther. I 2 HSC 156 Profess. Devel. in Massage Ther. II 3 HSC 160 Massage Therapist Practicum I 2 HSC 161 Massage Therapist Practicum II 3 HSC 165 Self-Care for the Massage Therapist 1</p> <p>Total Credits Required for Certificate 35</p> <p>The minimum passing grade for all courses designated BIO or HSC is “C”. A grade below “C” requires that the course be repeated.</p>	<p>RECOMMENDED SEQUENCE OF COURSES:*</p> <p><u>First Semester</u></p> <p>HSC 151 Massage Theory and Practice I 4 BIO 117 Fundamentals of Anat. and Phys. I 4 HSC 155 Profess. Devel. in Massage Ther. I 2 HSC 165 Self-Care for the Massage Therapist 1 HSC 109 Medical Terminology 3</p> <p><u>Second Semester</u></p> <p>HSC 152 Massage Theory and Practice II 2 HSC 156 Profess. Devel. in Massage Ther. II 3 HSC 160 Massage Therapist Practicum I 2 ENG 101 College Composition I 3 BIO 118 Fundamentals of Anat. and Phys. II 4</p> <p><u>Summer Term</u></p> <p>HSC 153 Massage Theory and Practice III 4 HSC 161 Massage Therapist Practicum II 3</p>
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***NOTE:** This plan assumes the completion of all required developmental courses in reading, writing, and mathematics as well as other pre- and co-requisites for some of the courses, as listed in the Course Descriptions section of the catalog.

Mathematics Program

A Dual Admissions Program with Rutgers-Newark, Kean University and New Jersey City University

Division of Mathematics and Physics — Curriculum Code: 0604

Will Earn Upon Program Completion: Associate in Science (A.S.) Degree

Why major in Mathematics?

Mathematics encompasses logic and methodology of reasoning, and provides the tools for critical thinking and decision making. The program is designed for students who intend to pursue a baccalaureate degree in mathematics, mathematics education or a related field and emphasizes methodical problem-solving techniques. The program develops fundamental knowledge in proof and theory, applications, and algorithms. Developing an appreciation for and proficiency in using graphing utilities and other technological devices prepares you for success in mathematically rich courses.

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

You may choose to participate in the Dual Admissions program with Rutgers University-Newark, Kean University, or New Jersey City University. Essex County College's transfer/articulation agreements with other area four-year colleges provide smooth transfer for A.S. graduates.

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

A solid foundation in all aspects of precalculus mathematics is essential for success in advanced mathematics courses. A knowledge of college algebra, trigonometry, and geometry is necessary.

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

If you do not need developmental course work and you register for an average of 15-16 credits per semester, you can complete the degree in two years. You may shorten the time by taking courses in the summer sessions.

Where should I direct specific questions about this program?

Call the Division at (973) 877-3302/3303 or Admissions at (973) 877-1941.

Upon completion of this program, graduates will be able to:

- ◆ Demonstrate knowledge of the fundamental concepts of single variable and multivariable calculus. A student will be able to find limits and derivatives, determine continuity, find integrals, use derivatives to curve sketch, and do applications from diverse fields;
- ◆ Utilize various problem-solving and critical-thinking approaches to set up and solve problems as diverse as related rates, areas between curves, volume of solids, and related problems involving integration;
- ◆ Demonstrate an ability to determine whether an infinite series converges or diverges, express a function as a Taylor or MacLauren series, and evaluate first order and second order partial differential equations;
- ◆ Set up and solve a variety of problems involving ordinary differential equations with physical and geometrical applications; and
- ◆ Recognize and solve general problems using differential equations through various methods including undetermined coefficients, variations of parameters, power series, and Laplace transforms.

Mathematics — A.S. Degree Program

<p>GENERAL EDUCATION REQUIREMENTS: (35-36 Credits)</p> <p>Communications (6 credits) ENG 101 College Composition I 3 ENG 102 College Composition II 3</p> <p>Social Science (6 credits) ANT 101, POL 104, PSY 101, or SOC 101 3 Any ANT, POL, PSY, or SOC course 3</p> <p>Lab Science/Math (12 credits) MTH 121 Calculus with Analytical Geometry I 4 PHY 103 General Physics I 4 PHY 104 General Physics II 4</p> <p>Physical Education (2-3 credits) PHE 119 or HLT 101 2-3</p> <p>Humanities (9 credits) Any 200-level English literature course 3 Any History course 3 ART 100, 101, 102 or 200 or MUS 100, 108, 109 or 117 3</p> <p>MAJOR COURSE REQUIREMENTS: (22 credits)</p> <p>MTH 122 Calculus with Analy. Geometry II 4 MTH 221 Calculus with Analy. Geometry III 4 MTH 222 Differential Equations 4 MTH 136 Discrete Mathematics 3 MTH 239 Introduction to Linear Algebra 3 CSC 121 Computer Science I 4</p> <p>ADDITIONAL COURSE REQUIREMENTS: (7 credits)</p> <p>CSC 122 Computer Science II 4 Free Elective 3</p> <p>Total Credits Required for Degree 64-65</p>	<p>RECOMMENDED SEQUENCE OF COURSES:*</p> <p><u>First Semester</u></p> <p>MTH 121 Calculus with Analytical Geometry I 4 PHY 103 General Physics I 4 CSC 121 Computer Science I 4 ENG 101 College Composition I 3</p> <p><u>Second Semester</u></p> <p>MTH 122 Calculus with Analy. Geometry II 4 PHY 104 General Physics II 4 CSC 122 Computer Science II 4 ENG 102 College Composition II 3</p> <p><u>Summer</u></p> <p>History requirement 3</p> <p><u>Third Semester</u></p> <p>MTH 221 Calculus with Analy. Geometry III 4 MTH 136 Discrete Mathematics 3 200-level English literature requirement 3 ART/MUS requirement 3 Social Science requirement 3</p> <p><u>Fourth Semester</u></p> <p>MTH 222 Differential Equations 4 MTH 239 Introduction to Linear Algebra 3 PHE 119 or HLT 101 2-3 Social Science requirement 3 Free elective 3</p>
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***NOTE:** This plan assumes the completion of all required developmental courses in reading, writing, and mathematics as well as other pre- and co-requisites for some of the courses, as listed in the Course Descriptions section of the catalog.

Microcomputer Systems Applications Program

Division of Business — Curriculum Code: 2007

Will Earn Upon Program Completion: Associate in Applied Science (A.A.S.) Degree

Why major in Microcomputer Systems Applications?

This program prepares students for job opportunities that involve computer word processing, use of spreadsheets and databases for business solutions, desktop publishing, and other applications. The program also introduces students to Internet Web page design. The major is designed for students who are seeking to gain entry into the labor market and also for those who wish to upgrade their professional knowledge for career advancement in the area of microcomputer applications.

If I major in Microcomputer Systems Applications, can I transfer to an upper division college or university?

While this program is not designed for transfer purposes, New Jersey Institute of Technology will apply most of the courses you take in this program toward a B.S. in Engineering Technology. For specific guidelines regarding course sequence and requirements for transferability, consult your faculty advisor.

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

Based on your placement test scores, you may have to take developmental courses in reading, English, and/or mathematics before taking courses in your major.

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

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

Where should I direct specific questions about this program?

Contact the Division at (973) 877-3222 or Admissions at (973) 877-1941.

Upon completion of this program, graduates will be able to:

- ◆ Use the computer to carry out a variety of business tasks including mail merges, creating templates, and e-mailing;
- ◆ Create professional looking business documents including announcements, letters, indexes, tables of contents, on-line forms, newsletters, research papers, and reports;
- ◆ Select and apply software tools for business solutions;
- ◆ Customize major software packages commonly used in business;
- ◆ Plan, create, and manipulate databases for typical business needs using Microsoft Access;
- ◆ Use spreadsheet analysis packages such as Microsoft Excel;
- ◆ Use PowerPoint to create presentations, present slide shows, create a self-running show using animation effects, and distribute presentations to remote audiences;
- ◆ Use desktop publishing software to create effective marketing materials;
- ◆ Plan, create, and maintain static and dynamic Web pages;
- ◆ Perform simple hardware tasks;
- ◆ Provide support and training to other computer users; and
- ◆ Take the MOUS tests to be certified as a Microsoft Office User Specialist.

Microcomputer Systems Applications — A.A.S. Degree Program

<p>GENERAL EDUCATION REQUIREMENTS: (24-25 Credits)</p> <p>Communications (6 credits) ENG 101 College Composition I 3 ENG 102 College Composition II or ENG 105 Technical Writing 3</p> <p>Social Science (6 credits) ANT 101, POL 104, PSY 101, or SOC 101 3 Any ANT, POL, PSY, or SOC course 3</p> <p>Math (7 credits) MTH 100 Introductory College Math 4 MTH 117 Math for Management Science 3</p> <p>Physical Education (2-3 credits) PHE 119 or HLT 101 2-3</p> <p>Humanities (3 credits) Any History course 3</p> <p>MAJOR COURSE REQUIREMENTS: (30-32 credits)</p> <p>OST 105 Microcomputer Keyboarding and Document Processing 3 CIS 135 Microcomputer Spreadsheets 3 CIS 136 Desktop Publishing 3 CIS 137 Microcomputer Databases 3 CIS 139 Introduction to Multimedia 3 CIS 212 Systems Analysis and Design 3 CIS 235 Adv. Microcomputer Spreadsheets 3 CIS 237 Adv. Microcomputer Databases 3</p> <p>Select 2 courses (CIS electives) from below:</p> <p>CSC 100 Fund. of Computer Science 3 CIS 111 Information Processing I 4 CIS 114 Introduction to Visual Basic 4 CIS 152 Internet Concepts 3 CIS 153 Adv. Internet Concepts & Applications 3</p> <p>ADDITIONAL COURSE REQUIREMENTS: (7 credits)</p> <p>BUS 101 Business Organization & Mgt. 3 ACC 101 Principles of Accounting I 4</p> <p>Total Credits Required for Degree 61-64</p>	<p>RECOMMENDED SEQUENCE OF COURSES:*</p> <p><u>First Semester</u></p> <p>OST 105 Microcomputer Keyboarding and Document Processing 3 CIS 135 Microcomputer Spreadsheets 3 CIS 139 Introduction to Multimedia 3 MTH 100 Introductory College Math 4 ENG 101 College Composition I 3</p> <p><u>Second Semester</u></p> <p>CIS 136 Desktop Publish. for IBM Compatibles 3 CIS 137 Microcomputer Databases 3 ENG 102 College Composition II or ENG 105 Technical Writing 3 MTH 117 Math for Management Science 3 Social Science requirement 3</p> <p><u>Third Semester</u></p> <p>CIS 235 Adv. Microcomputer Spreadsheets 3 CIS 237 Adv. Microcomputer Databases 3 BUS 101 Business Organization & Mgt. 3 ACC 101 Principles of Accounting I 4 Physical Education/Health requirement 2-3</p> <p><u>Fourth Semester</u></p> <p>CIS 212 Systems Analysis and Design 3 CIS electives 6-8 Social Science requirement 3 Humanities requirement 3</p>
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***NOTE:** This plan assumes the completion of all required developmental courses in reading, writing, and mathematics as well as other pre- and co-requisites for some of the courses, as listed in the Course Descriptions section of the catalog.

Music Program

Division of Humanities — Curriculum Code: 0409

Will Earn Upon Program Completion: Associate in Science (A.S.) Degree

Why major in Music?

This program allows students to secure the first two years of a four-year program in music. Completion of this program is the first step toward gaining a position such as teacher, supervisor, or director of choral, instrumental, and/or theater production programs within middle schools, junior high and senior high schools, as well as in choral and instrumental organizations. Numerous full-time teaching positions exist in public and private schools for music education majors.

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

The Associate in Science degree in Music prepares you to transfer to upper division colleges and universities to pursue a bachelor's degree. Transfer students are generally required to take a music theory, keyboard skills, and pitch discrimination placement test at the four-year institutions to which they transfer.

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

Based on the results of your placement test, you may be required to take developmental courses in reading, English, and/or mathematics before taking courses in your major. It is not required but prior ability to read music and some performance skills on one instrument or voice is recommended. Some keyboard skills are also suggested.

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

If you do not need developmental course work, 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 sessions.

Where should I direct specific questions about this program?

Contact the Division at (973) 877-3319/3320 or Admissions at (973) 877-1941.

Upon completion of this program, graduates will be able to:

- ◆ Demonstrate ability to read music, transpose music, write harmonic patterns, provide simple melodic accompaniments, and compose music;
- ◆ Identify intervals, meters, rhythms, scales, and chords, and also sight read melodies and various rhythms;
- ◆ Apply all knowledge of music theory to the keyboard and have sufficient piano technique and facility;
- ◆ Recognize all the major styles and periods, major figures, and necessary terms in listening and written forms of classical music or jazz;
- ◆ Listen to recorded materials and intelligently discuss what is heard;
- ◆ Verbalize and write about the music heard using a newly acquired set of descriptive musical terms;
- ◆ Describe the rich cultural heritage of jazz which embraces African, European, and American values;
- ◆ Apply basic principles of breathing, tone production, diction, and interpretation to singing;
- ◆ Demonstrate the acquired skills used in ensemble playing;
- ◆ Compare musical literature and its relationship to other arts; and
- ◆ Apply the techniques involved in musical arrangements for any size performance group.

Music — A.S. Degree Program

<p>GENERAL EDUCATION REQUIREMENTS: (35-36 Credits)</p> <p>Communications (6 credits) ENG 101 College Composition I 3 ENG 102 College Composition II 3</p> <p>Social Science (6 credits) ANT 101, POL 104, PSY 101 or SOC 101 3 Any ANT, POL, PSY, or SOC course (PSY 102 and SOC 108 recommended) 3</p> <p>Lab Science/Math (10-12 credits) A Lab Science sequence and a Math course (100 or higher) or two Math courses (100 or higher) and a Lab Science course. MTH (100 level or higher) 3-8 BIO 101-102, 103-104, or 121-122; CHM 101-102 or 103-104; PHY 101-102 or 103-104 4-8</p> <p>Physical Education (2-3 Credits) PHE 119 or HLT 101 2-3</p> <p>Humanities (9 credits) Any History course 3 Any 200-level English literature course 3 MUS 100, 108, 109, or 117 3</p> <p>MAJOR COURSE REQUIREMENTS: (26 credits)</p> <p>MUS 105 Musicianship I 2 MUS 106 Musicianship II 2 MUS 115 Ear Training & Sight Singing I 3 MUS 116 Ear Training & Sight Singing II 3 MUS 121 Voice Class I or MUS 131 Keyboard Class I 2 MUS 122 Voice Class II or MUS 132 Keyboard Class II 2 MUS 141 College Choir I or MUS 153 Instrumental Workshop I 1 MUS 142 College Choir II or MUS 154 Instrumental Workshop II 1 MUS 205 Musicianship III 2 MUS 206 Musicianship IV 2 MUS 221 or MUS 231 2 MUS 222 or MUS 232 2 MUS 241 or MUS 253 1 MUS 242 or MUS 254 1</p> <p>ADDITIONAL COURSE REQUIREMENTS: (4 credits)</p> <p>Music elective 4 (Highly recommended: Applied Performance every semester)</p> <p>Total Credits Required for Degree 63-66</p>	<p>RECOMMENDED SEQUENCE OF COURSES:*</p> <p>First Semester</p> <p>MUS 105 Musicianship I 2 MUS 131 Keyboard Class I or 2 MUS 121 Voice Class I MUS 141 College Choir I or MUS 153 Instrumental Workshop I 1 ENG 101 College Composition I 3 MTH 100 Introductory College Math 4 Applied Performance 1</p> <p>Second Semester</p> <p>MUS 106 Musicianship II 2 MUS 115 Ear Training & Sight Singing I 3 MUS 122 Voice Class II or MUS 132 Keyboard Class II 2 MUS 142 College Choir II or MUS 154 Instrumental Workshop II 1 ENG 102 College Composition II 3 Math requirement 3-4 Social Science requirement 3 Applied Performance 1</p> <p>Third Semester</p> <p>MUS 116 Ear Training & Sight Singing II 3 MUS 205 Musicianship III 2 MUS 221 Voice Class III or 2 MUS 231 Keyboard Class III MUS 241 College Choir III or MUS 253 Instrumental Workshop III 1 Physical Education/Health requirement 2-3 Lab science requirement 4 Applied Performance 1</p> <p>Fourth Semester</p> <p>MUS 100 Music Appreciation 3 MUS 206 Musicianship IV 2 MUS 222 Voice Class IV or 2 MUS 232 Keyboard Class IV MUS 242 College Choir IV or MUS 254 Instrumental Workshop IV 1 English literature requirement 3 History requirement 3 Social Science requirement 3 Applied Performance 1</p> <p>Note: The coordinator may permit a student to substitute an applied performance course for a major course.</p>
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***NOTE:** This plan assumes the completion of all required developmental courses in reading, writing, and mathematics as well as other pre- and co-requisites for some of the courses, as listed in the Course Descriptions section of the catalog.

Network Technology Program

Division of Engineering Technologies and Computer Sciences — Curriculum Code: 3203
Will Earn Upon Program Completion: Certificate in Network Technology

Why major in Network Technology?

The Network Technology Program, housed at the Center for Technology, is a Microsoft IT Academy Program. The program is designed to prepare students for careers in computer network administration. It is specifically appropriate for people who have basic knowledge of computer hardware and software but would like to augment their knowledge of network administration. The courses in the Network Technology program help in preparing for the Microsoft professional certification examinations.

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

The Network Technology program is designed as a career-oriented program. Some of the courses completed as part of this certificate program can be applied toward associate degrees at ECC. Most or all credits earned in certificate programs that are applied to associate degree programs transfer to four-year institutions. See a divisional advisor for more information.

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

All new students must take a basic skills competency test. Based on the results of the test, you may be required to take developmental courses in reading, English, and/or mathematics.

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

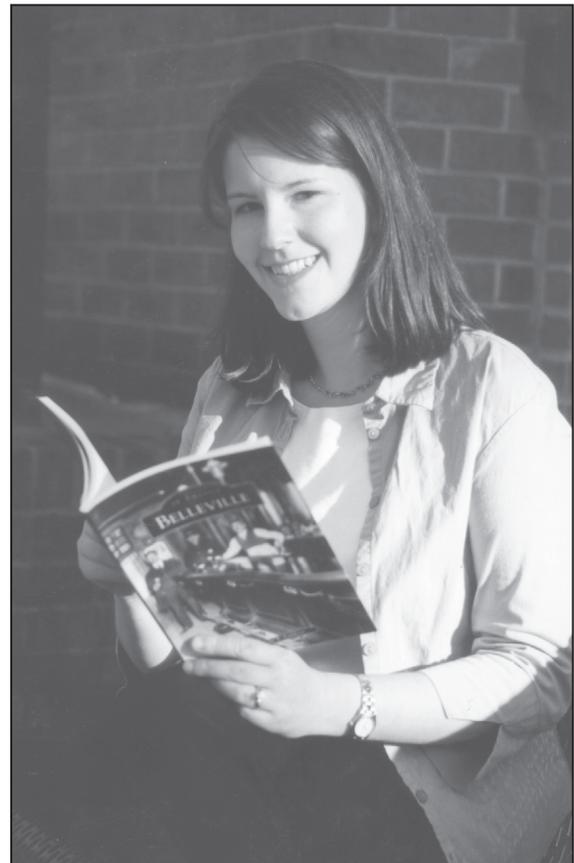
If you do not need developmental course work and you attend full time, you can complete the certificate in two semesters. Part time students can complete the program in two years.

Where should I direct specific questions about this program?

Contact the Division at (973) 877-4400 or Admissions at (973) 877-1941.

Upon completion of this program, graduates will be able to:

- ◆ Provide technical support for local area network operations;
- ◆ Manage security levels for a local area network and administer access rights to users;
- ◆ Implement network management strategies for an enterprise network;
- ◆ Monitor memory usage and optimize performance through the use of utilities;
- ◆ Construct and administer trust relationships in multiple domain networks;
- ◆ Install and configure client operating systems on network workstations;
- ◆ Administer client workstation access rights; and
- ◆ Manage overall system performance for all client workstations within a local area network.



Network Technology – Certificate Program

<p>GENERAL EDUCATION REQUIREMENTS: (7 Credits)</p> <p>Communications (3 credits) ENG 101 College Composition I 3</p> <p>Math (4 credits) MTH 100 Introductory College Math 4</p> <p>MAJOR COURSE REQUIREMENTS: (16 credits)</p> <p>CSC 105 Network Administration 4 CSC 108 Client Operating Systems 4 CSC 121 Computer Science I 4 CSC 210 Advanced Network Administration 4</p> <p>Total Credits Required for Certificate 23</p>	<p>RECOMMENDED SEQUENCE OF COURSES:*</p> <p><u>First Semester</u></p> <p>ENG 101 College Composition I 3 CSC 105 Network Administration 4 MTH 100 Introductory College Math 4</p> <p><u>Second Semester</u></p> <p>CSC 108 Client Operating Systems 4 CSC 121 Computer Science I 4 CSC 210 Advanced Network Administration 4</p>
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***NOTE:** This plan assumes the completion of all required developmental courses in reading, writing, and mathematics as well as other pre- and co-requisites for some of the courses, as listed in the Course Descriptions section of the catalog.



Nursing Program

Department of Nursing — Curriculum Code: 2104

Will Earn Upon Program Completion: Associate in Applied Science (A.A.S.) Degree

Why major in Nursing?

There is a growing demand for nurses nationwide. Nursing is a service-oriented profession that involves caring for and working with people. A state-of-the-art, well-equipped nursing simulation laboratory is available on campus to facilitate student learning. In addition, a multi-media computer laboratory is available for student use. The nursing program prepares the student for entry-level positions in hospitals and other health care facilities. Upon completion of the program, the student is eligible to sit for the NCLEX exam to qualify to become a registered nurse.

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

Many colleges have “upper division” nursing programs which allow associate degree graduates to earn a Bachelor of Science in Nursing (B.S.N.). Articulation agreements exist with New York University, New Jersey City University, St. Peter’s College, Felician College, Kean University, Rutgers University, William Paterson University, and Seton Hall University.

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

Apply to the college as a pre-nursing student (6000 code). The minimum standards for admission are:

- College level performance in English, reading and mathematics;
- High school diploma or GED;
- Completion of CHM 101 (or CHM 103), BIO 121, and ENG 101 with a “C” or better. BIO 121 must be completed within 5 years of admission. You can repeat a science course one time only;
- College GPA above 2.5;
- Filing an application for admission to the Nursing program by March 15. You must achieve a satisfactory score on the nursing admission exam. All requirements must be completed by the end of the spring semester to be considered. Application to the program is competitive. Qualified applicants are admitted on a “space available” basis.

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

The Nursing program is a full-time, day program that runs over a two-year period.

Where should I direct specific questions about this program?

Contact the Department at (973) 877-1868 or Admissions at (973) 877-1941

Upon completion of this program, graduates will be able to:

- ◆ Assess clients utilizing Maslow’s Hierarchy of Needs and Erikson’s developmental theory as a framework to contribute to the data base;
- ◆ Use critical thinking when applying the nursing process;
- ◆ Formulate nursing diagnoses when potential and/or actual unmet needs cause health alterations;
- ◆ Develop a plan of care for clients in collaboration with other members of the healthcare team which incorporates clinical decision making, short and long term client-centered goals, and appropriate nursing interventions which are based on scientific rationale;
- ◆ Implement caring interventions, complex nursing skills, and current technology in a safe and competent manner;
- ◆ Evaluate the effectiveness of nursing care based upon established outcome criteria and revise care plan as needed;
- ◆ Implement nursing care responsive to the clients’ cultural diversity and advocacy needs;
- ◆ Employ appropriate communication skills with clients, peers, and members of the health care team in the health care setting;
- ◆ Implement teaching plans to promote health in clients and their families;
- ◆ Practice nursing within the legal and ethical framework of the nursing profession;
- ◆ Demonstrate a commitment to one’s own professional and personal growth; and
- ◆ Manage nursing care for groups of clients within the scope of ADN nursing practice.

Nursing — A.A.S. Degree Program

<p>GENERAL EDUCATION REQUIREMENTS: (20 Credits)</p> <p>Communications (6 credits) ENG 101 College Composition I 3 ENG 102 College Composition II 3</p> <p>Social Science (6 credits) SOC 101 Introduction to Sociology 3 PSY 101 General Psychology I 3</p> <p>Lab Science/Math (5 credits) MTH 116 Medical Mathematics 1 BIO 121 Anatomy & Physiology I 4</p> <p>Humanities (3 credits) Any History course 3</p> <p>MAJOR COURSE REQUIREMENTS: (46 credits)</p> <p>BIO 122 Anatomy and Physiology II 4 CHM 101 College Chemistry I or CHM 103 General Chemistry I 4 BIO 211 Microbiology 4 NRS 107 Nursing I 6 NRS 108 Nursing II 8 NRS 233 Nursing III 9 NRS 234 Nursing IV 9 NRS 235 Nursing V (Nursing Seminar) 2</p> <p>Total Credits Required for Degree: 66</p> <p>The minimum passing grade for all courses designated BIO, CHM, MTH or NRS is “C.” If you earn a grade below “C,” you will need to repeat that course.</p> <p>Note: Consult the program handbook for specific information on licensure requirements.</p>	<p>RECOMMENDED SEQUENCE OF COURSES*</p> <p><u>Prerequisite Courses</u></p> <p>BIO 121 Anatomy and Physiology I 4 CHM 101 College Chemistry I or CHM 103 General Chemistry I 4 ENG 101 College Composition I 3</p> <p><u>First Semester — Fall</u></p> <p>BIO 122 Anatomy and Physiology II 4 NRS 107 Nursing I 6 MTH 116 Medical Mathematics 1 ENG 102 College Composition II 3</p> <p><u>Second Semester — Spring</u></p> <p>NRS 108 Nursing II 8 SOC 101 Introduction to Sociology 3 PSY 101 General Psychology I 3</p> <p><u>Third Semester — Fall</u></p> <p>NRS 233 Nursing III 9 BIO 211 Microbiology 4</p> <p><u>Fourth Semester — Spring</u></p> <p>NRS 234 Nursing IV 9 NRS 235 Nursing V (Nursing Seminar) 2 Any History course 3</p> <p>Note: Students planning to enter the program directly from high school should contact the Nursing Department for information on admission criteria.</p> <p>Note: This Nursing Program is approved by the New Jersey Board of Nursing, 124 Halsey Street, 6th Floor, Newark, New Jersey 07102 (Web address: www.state.nj.us/lps/ca/home.htm Tel: (973) 504-6430), and the National League for Nursing Accrediting Commission (NLNAC), Inc., 61 Broadway, 33rd Floor, New York, New York 10006 (Web address: www.nlnac.org Tel: (800) 669-1656 x153)</p>
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***NOTE:** This plan assumes the completion of all required developmental courses in reading, writing, and mathematics as well as other pre- and co-requisites for some of the courses, as listed in the Course Descriptions section of the catalog.

Nursing: LPN Articulation Option

Department of Nursing — Curriculum Code: 2104

Will Earn Upon Program Completion: Associate in Applied Science (A.A.S.) Degree

Why should I choose this Option?

The LPN Articulation Option of the Nursing program provides an opportunity for Licensed Practical Nurses to gain credit for previous LPN education and license toward completion of the Associate Degree Nursing Program.

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

The student must possess a current LPN/LVN license, a high school diploma or GED, and have the official transcript of state approved or NLN accredited Practical Nursing Program sent to the Nursing Department. Applicants should enter the college as a pre-nursing student (6000 code) and take the college placement test. Completion of any indicated remediation is necessary to proceed to prerequisite courses. The minimum standards for admission are:

- College level performance in English, reading and mathematics;
- College GPA of 2.5 or better;
- Completion of CHM 101 (or CHM 103), BIO 121, and ENG 101 with a “C” or better. BIO 121 must be completed within 5 years of admission. You can repeat a science course one time only;
- A satisfactory score on the Nursing admission exam;
- A minimum of 6 months of current medical-surgical clinical experience.

As the student nears completion of the prerequisites, he/she should apply for admission to the accelerated program. Application deadline is March 15 for admission in October.

How does this Option benefit the LPN?

The LPN can test-out of Nursing I and segments of Nursing II. Upon successful completion of two courses, LPN Mobility I (NRS 106) and LPN Mobility II (NRS 111), students enter Nursing III and can complete the Nursing Program by successfully completing Nursing III, Nursing IV and Nursing V in the generic track. Upon successful completion of the program, graduates are awarded the Associate in Applied Science degree with a major in Nursing and are eligible to sit for the NCLEX-RN. Upon successful completion of NRS 106 and NRS 111, the LPN will be awarded 6 credits of Nursing for their LPN education (NRS 999).

How long will it take me to complete this degree?

The LPN Articulation Option runs over a two-year period.

Where should I direct specific questions about this program?

Call the Department at (973) 877-1868 or Admissions at (973) 877-1941

Upon completion of this program, graduates will be able to:

- ◆ Assess clients utilizing Maslow’s Hierarchy of Needs and Erikson’s developmental theory as a framework to contribute to the data base;
- ◆ Use critical thinking when applying the nursing process;
- ◆ Formulate nursing diagnoses when potential and/or actual unmet needs cause health alterations;
- ◆ Develop a plan of care for clients in collaboration with other members of the healthcare team which incorporates clinical decision making, short and long term client-centered goals, and appropriate nursing interventions which are based on scientific rationale;
- ◆ Implement caring interventions, complex nursing skills, and current technology in a safe and competent manner;
- ◆ Evaluate the effectiveness of nursing care based upon established outcome criteria and revise care plan as needed;
- ◆ Implement nursing care responsive to the clients’ cultural diversity and advocacy needs;
- ◆ Employ appropriate communication skills with clients, peers, and members of the health care team in the health care setting;
- ◆ Implement teaching plans to promote health in clients and their families;
- ◆ Practice nursing within the legal and ethical framework of the nursing profession;
- ◆ Demonstrate a commitment to one’s own professional and personal growth; and
- ◆ Manage nursing care for groups of clients within the scope of ADN nursing practice.

Nursing: LPN Articulation Option — A.A.S. Degree Program

<p>GENERAL EDUCATION REQUIREMENTS: (20 Credits)</p> <p>Communications (6 credits) ENG 101 College Composition I 3 ENG 102 College Composition II 3</p> <p>Social Science (6 credits) SOC 101 Introduction to Sociology 3 PSY 101 General Psychology I 3</p> <p>Lab Science/Math (5 credits) MTH 116 Medical Mathematics 1 BIO 121 Anatomy & Physiology I 4</p> <p>Humanities (3 credits) Any History course 3</p> <p>MAJOR COURSE REQUIREMENTS: (46 credits)</p> <p>BIO 122 Anatomy and Physiology II 4 CHM 101 College Chemistry I or CHM 103 General Chemistry I 4 BIO 211 Microbiology 4 NRS 106 LPN Mobility I* 2 NRS 111 LPN Mobility II* 6 NRS 233 Nursing III 9 NRS 234 Nursing IV 9 NRS 235 Nursing V (Nursing Seminar) 2 NRS 999 LPN Education 6</p> <p>*Upon successful completion of NRS 106 and NRS 111, the LPN will be awarded 6 credits of Nursing for the LPN education (NRS 999).</p> <p>Total Credits Required for Degree: 66</p> <p>The minimum passing grade for all courses designated BIO, CHM, MTH or NRS is "C." If you earn a grade below "C," you will need to repeat that course.</p> <p>Note: Consult the program handbook for specific information on licensure requirements.</p>	<p>RECOMMENDED SEQUENCE OF COURSES**</p> <p><u>Prerequisite Courses</u></p> <p>BIO 121 Anatomy and Physiology I 4 CHM 101 College Chemistry I or CHM 103 General Chemistry I 4 ENG 101 College Composition I 3</p> <p><u>First Semester — Fall</u></p> <p>BIO 122 Anatomy and Physiology II 4 NRS 106 LPN Mobility I* 2 MTH 116 Medical Mathematics 1 ENG 102 College Composition II 3</p> <p><u>Second Semester — Spring</u></p> <p>NRS 111 LPN Mobility II* 6 SOC 101 Introduction to Sociology 3 PSY 101 General Psychology I 3</p> <p><u>Third Semester — Fall</u></p> <p>NRS 233 Nursing III 9 BIO 211 Microbiology 4 NRS 999 LPN Education 6</p> <p><u>Fourth Semester — Spring</u></p> <p>NRS 234 Nursing IV 9 NRS 235 Nursing V (Nursing Seminar) 2 Any History course 3</p> <p>***Note: This Nursing Program is approved by the New Jersey Board of Nursing, 124 Halsey Street, 6th Floor, Newark, New Jersey 07102 (Web address: www.state.nj.us/lps/ca/home.htm, Tel: (973) 504-6430), and the National League for Nursing Accrediting Commission (NLNAC), Inc., 61 Broadway, 33rd Floor, New York, New York 10006 (Web address: www.nlnac.org Tel: (800) 669-1656 x153)</p>
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****NOTE:** This plan assumes the completion of all required developmental courses in reading, writing, and mathematics as well as other pre- and co-requisites for some of the courses, as listed in the Course Descriptions section of the catalog.

Office Assistant Program

Division of Business — Curriculum Code: 3009
Will Earn Upon Program Completion: Certificate in Office Assistant

Why become an Office Assistant?

This major is designed for students who wish to gain proficiency in the use of computers, office equipment, and software packages used in modern office environments. Students are also taught organizational skills, time management, and how to work cooperatively with office personnel. Students may choose to apply the credits earned in this program toward the A.A.S. degree option in Business Administration: Office Systems Technology and Management option.

If I major in Office Assistant, can I transfer to an upper division college or university?

While the program is not designed to transfer to a baccalaureate program, Essex County College will apply some or most of the courses you have taken toward an associate degree. Consult your faculty advisor for more information.

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

Based on your placement test scores, you may have to take developmental courses in reading, English, and/or mathematics before taking courses in your major.

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

If you do not need developmental course work and take 14 credits in the first semester and 15 credits in the second semester, you can complete the certificate in two semesters.

Where should I direct specific questions about this program?

Contact the Division at (973) 877-3222 or Admissions at (973) 877-1941.

Upon completion of this program, graduates will be able to:

- ◆ Use state-of-the-art word processing software to prepare a wide range of business documents;
- ◆ Communicate effectively, orally and in writing, using business terms and concepts;
- ◆ Work in accordance with the expectations of supervisory managers;
- ◆ Design, create, and maintain spreadsheets utilizing Microsoft Excel; and
- ◆ Use desktop publishing software to develop presentations.

Office Assistant — Certificate Program

<p>GENERAL EDUCATION REQUIREMENTS: (3 credits)</p> <p>Communications (3 credits) ENG 101 College Composition I 3</p> <p>MAJOR COURSE REQUIREMENTS: (14 credits)</p> <p>OST 106 Keyboarding and Formatting I 4 OST 121 Business Communication 3 OST 210 Office Systems Management 3 OST 250 Word/Information Processing Applications I 4</p> <p>ADDITIONAL COURSE REQUIREMENTS: (12 credits)</p> <p>BUS 101 Business Organization & Management 3 BUS 141 Business Math 3 CIS 135 Microcomputer Spreadsheets 3 CIS 136 Desktop Publishing for IBM Compatibles 3</p> <p>Total Credits Required for Certificate: 29</p>	<p>RECOMMENDED SEQUENCE OF COURSES*</p> <p><u>First Semester</u></p> <p>BUS 101 Business Organization & Management 3 BUS 141 Business Math 3 ENG 101 College Composition I 3 OST 106 Keyboarding and Formatting I 4 CIS 135 Microcomputer Spreadsheets 3</p> <p><u>Second Semester</u></p> <p>OST 250 Word/Information Processing Applications I 4 OST 121 Business Communication 3 CIS 136 Desktop Publishing for IBM Compatibles 3 OST 210 Office Systems Management 3</p>
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***NOTE:** This plan assumes the completion of all required developmental courses in reading, writing, and mathematics as well as other pre- and co-requisites for some of the courses, as listed in the Course Descriptions section of the catalog.

Ophthalmic Dispensing Program

Division of Allied Health — Curriculum Code: 2120

Will Earn Upon Program Completion: Associate in Applied Science (A.A.S.) Degree

Why major in Ophthalmic Dispensing?

The program introduces students to the field of opticianry. Students receive training in the laboratory techniques of measuring and grinding eyeglasses to prescription, and in fitting and final adaptation of eyewear. The curriculum also prepares students for the business administration functions of the profession and to pass the state licensing examination for Ophthalmic Technician and Ophthalmic Dispenser. To be successful in the field, you must combine scientific and clinical skills with the ability to work well with patients. Job opportunities include owning or working in a retail optical dispensary, or sales and marketing of ophthalmic materials. Employment prospects are increasing in the profession with the growth in the elderly population and the trend toward high fashion eyewear. The program is accredited by the Commission on Opticianry Accreditation (COA).

If I major in Ophthalmic Dispensing, can I transfer to an upper division college or university?

The program is career-oriented, although students may choose to transfer their credits to four-year institutions in pursuit of a bachelor's degree in optometry, opticianry, or a related field.

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

All new students must take the basic skills competency tests. Based on the results of the test, you may be required to take developmental courses in reading, English and/or mathematics. Prior completion of trigonometry, biology and physics at the high school level is strongly recommended.

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

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

Where should I direct specific questions about this program?

Contact the Division at (973) 877-3354/3496 or Admissions at (973) 877-1941.

Upon completion of this program, graduates will be able to:

- ◆ Demonstrate understanding of the responsibilities of the practicing optician, optometrist, and ophthalmologist;
- ◆ Explain how glass and other optical materials are manufactured;
- ◆ Analyze the ophthalmic prescription and its parts;
- ◆ Demonstrate the use of the lens meter;
- ◆ Perform ophthalmic finishing techniques;
- ◆ Keep basic records;
- ◆ Apply laboratory workshop safety procedures;
- ◆ Demonstrate proper dispensing skills;
- ◆ Demonstrate knowledge of the refractive implications of accommodation and convergence;
- ◆ Explain how a refractionist may determine the "ADD" power;
- ◆ Use basic optical problem-solving techniques; and
- ◆ Use basic techniques in bifocal height measurements.

Ophthalmic Dispensing — A.A.S. Degree Program

<p>GENERAL EDUCATION REQUIREMENTS: (18-19 credits)</p> <p>Communications (6 credits) ENG 101 College Composition I 3 ENG 102 College Composition II or ENG 105 Technical Writing 3</p> <p>Social Science (6 credits) ANT 101, POL 104, PSY 101, or SOC 101 3 Any ANT, POL, PSY, or SOC course 3</p> <p>Math (3-4 credits) MTH 100 or higher 3-4</p> <p>Humanities (3 credits) Any History course 3</p> <p>MAJOR COURSE REQUIREMENTS: (42 credits)</p> <p>BIO 125 Anat. & Physiology of the Eye 3 OPH 123 Ophthalmic Laboratory I 4 OPH 124 Ophthalmic Laboratory II 4 OPH 126 Ophthalmic Materials I 3 OPH 127 Ophthalmic Materials II 3 OPH 201 Ophthalmic Dispensing I 5 OPH 202 Ophthalmic Dispensing II 5 OPH 203 Contact Lenses I 3 OPH 204 Contact Lenses II 3 OPH 210 Principles of Refraction 3 OPH 273 Supervised Clinical Experience 3 PHY 111 Theory of Optics I 3</p> <p>ADDITIONAL COURSE REQUIREMENTS: (10 credits)</p> <p>ACC 101 Principles of Accounting I 4 BUS 101 Business Organization and Mgmt. 3 CIS 107, 131, 133, 135, or 137 3</p> <p>The minimum passing grade for all courses designated BIO, OPH, or PHY is "C." If you earn a grade below "C," you need to repeat that course.</p> <p>Total Credits Required for Degree: 70-71</p> <p>For those individuals possessing a New Jersey Apprentice Dispensing permit, the following courses are offered to fulfill the requirement to obtain college credit to qualify for the State licensing examination.</p> <p>OPH 123 Ophthalmic Laboratory I 4 OPH 124 Ophthalmic Laboratory II 4 OPH 126 Ophthalmic Materials I 3 OPH 127 Ophthalmic Materials II 3 OPH 201 Ophthalmic Dispensing I 5 OPH 202 Ophthalmic Dispensing II 5 OPH 203 Contact Lenses I 3 BIO 125 Anat. & Physiology of the Eye 3 PHY 111 Theory of Optics I 3</p>	<p>RECOMMENDED SEQUENCE OF COURSES*</p> <p><u>First Semester</u></p> <p>ENG 101 College Composition I 3 PSY 101 General Psychology I 3 Math requirement 3-4 OPH 123 Ophthalmic Laboratory I 4 OPH 126 Ophthalmic Materials I 3</p> <p><u>Second Semester</u></p> <p>ENG 102 College Composition II or ENG 105 Technical Writing 3 BIO 125 Anat. & Physiology of the Eye 3 CIS requirement 3 OPH 124 Ophthalmic Laboratory II 4 OPH 127 Ophthalmic Materials II 3</p> <p><u>Summer</u></p> <p>Social Science requirement 3</p> <p><u>Third Semester</u></p> <p>ACC 101 Principles of Accounting I 4 BUS 101 Business Organization & Mgmt. 3 OPH 201 Ophthalmic Dispensing I 5 OPH 203 Contact Lenses I 3 PHY 111 Theory of Optics I 3</p> <p><u>Fourth Semester</u></p> <p>OPH 202 Ophthalmic Dispensing II 5 OPH 204 Contact Lenses II 3 OPH 210 Principles of Refraction 3 OPH 273 Supervised Clinical Experience 3 History requirement 3</p>
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***NOTE:** This plan assumes the completion of all required developmental courses in reading, writing, and mathematics as well as other pre- and co-requisites for some of the courses, as listed in the Course Descriptions section of the catalog.

Physical Education Program

Division of Social Science — Curriculum Code: 0899

Will Earn Upon Program Completion: Associate in Science (A.S.) Degree

Why major in Physical Education?

The curriculum parallels the first two years of a baccalaureate degree in a four-year college or university and will also serve as preparation for careers such as: teacher of health and physical education, recreation director, private fitness center administrator, personal trainer/coach.

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

Yes. Essex grants the two-year degree and the student can complete the next two years at an upper level institution to obtain a bachelor's degree in the field.

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

Based on your placement test scores, you may have to take developmental courses in mathematics, English and/or reading before taking courses at the 100 level and above.

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

If you do not need developmental course work and if 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 the Division at (973) 877-3250 for referral to a faculty advisor or counselor, or call Admissions at (973) 877-1941.

Upon completion of this program, graduates will be able to:

- ◆ Demonstrate a wide variety of physical skills, and the techniques and mechanics of activity;
- ◆ Practice preventive measures and first aid in the event of accidents or illness;
- ◆ Demonstrate mastery of the concepts related to health and physical fitness;
- ◆ Demonstrate knowledge of the fundamentals and techniques of specific sports;
- ◆ Make informed career choices; and
- ◆ Qualify for interim employment opportunities.

Physical Education — A.S. Degree Program

<p>GENERAL EDUCATION REQUIREMENTS: (33-35 credits)</p> <p>Communications (6 credits) ENG 101 College Composition I 3 ENG 102 College Composition II 3</p> <p>Social Science (6 credits) ANT 101, POL 104, PSY 101, or SOC 101 3 Any ANT, POL, PSY, or SOC course 3</p> <p>Lab Science/Math (10-12 credits) A Lab Science sequence and a Math course (100 or higher) or two Math courses (100 or higher) and a Lab Science course: MTH (100 level or higher) 3-8 BIO 101-102, 103-104, or 121-122; CHM 101-102 or 103-104; PHY 101-102 or 103-104 4-8</p> <p>Physical Education (2 credits) PHE 119 Concepts in Physical Education 2</p> <p>Humanities (9 credits) Any course within a History sequence 3 Any 200-level English literature course 3 ART 100, 101, 102, or 200 or MUS 100, 108, 109, or 117 3</p> <p>MAJOR COURSE REQUIREMENTS: (17 credits)</p> <p>HLT 101 Healthful Living 3 PHE 101 Introduction to Physical Education 2 PHE 115 First Aid and Safety 2 Note: All Physical Education students must select any ten activity courses. 10</p> <p>ADDITIONAL COURSE REQUIREMENTS: (13-14 credits)</p> <p>Any English literature course 3 PHE elective 1-2 Complete the History sequence 3 Social Science course (100-level or higher) 3 BUS 101 Business Organization & Mgmt. 3</p> <p>Total Credits Required for Degree: 63-66</p>	<p>RECOMMENDED SEQUENCE OF COURSES*</p> <p><u>First Semester</u></p> <p>ENG 101 College Composition I 3 BIO 101 College Biology I 4 Social Science requirement 3 PHE 101 Introduction to Physical Education 2 PHE (3 Activity courses) 3</p> <p><u>Second Semester</u></p> <p>ENG 102 College Composition II 3 BIO 101 College Biology II 4 PHE 119 Concepts in Physical Education 2 Math requirement 3-4 PHE (3 Activity courses) 3</p> <p><u>Summer</u></p> <p>Social Science requirement 3 Art/Music requirement 3</p> <p><u>Third Semester</u></p> <p>English literature (200-level) 3 Social Science requirement 3 History requirement 3 HLT 101 Healthful Living 3 PHE (4 Activity courses) 4</p> <p><u>Fourth Semester</u></p> <p>English literature (200-level) 3 History requirement 3 PHE 115 First Aid and Safety 2 BUS 101 Business Organization & Mgmt. 3 PHE elective 1-2</p>
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***NOTE:** This plan assumes the completion of all required developmental courses in reading, writing, and mathematics as well as other pre- and co-requisites for some of the courses, as listed in the Course Descriptions section of the catalog.

Physical Therapist Assistant Program

Division of Allied Health — Curriculum Code: 2106

Will Earn Upon Program Completion: Associate in Applied Science (A.A.S.) Degree

Who are Physical Therapist Assistants and why major in the field?

Physical therapist assistants or PTAs work under the supervision of physical therapists in implementing treatment programs. Their responsibilities include training patients in exercises and activities of daily living, and keeping the physical therapist informed about patient progress. PTAs may also perform such functions as patient transport, and clinic or equipment preparation and maintenance. The field enables them to make a positive difference in the quality of people's lives. PTAs work in hospitals, private physical therapy offices, community health centers, corporate or industrial health centers, sports facilities, research institutions, rehabilitation centers, nursing homes, home health agencies, schools, pediatric centers, and colleges and universities. ECC's program is accredited by the American Physical Therapy Association's Commission on Accreditation in Physical Therapy Education (CAPTE).

If I major in the field, can I transfer to an upper division college or university?

The major is career-oriented and not designed for transfer to a baccalaureate program. Credits earned in this program can be applied toward the Associate of Science degree in the Health Sciences at ECC. Other colleges and universities will apply most or all of the courses you have taken toward a bachelor's degree program, depending upon their program requirements.

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

Admission into the professional component of the program is selective. Application deadline is March 1 for enrollment in the fall semester. Contact the program coordinator at (973) 877-3456. The following are the minimum requirements for admission:

- Be at the college level in reading, English, and mathematics, which may require the completion of developmental courses based on placement test scores;
- Complete BIO 121, ENG 101, and PSY 101 with a grade of "C" or better and have a cumulative grade point average of 2.5 or higher;
- Perform successfully on the Health Occupation Basic Entrance Test (HOBET); and
- Complete 50 volunteer hours in a physical therapy setting.

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

If you do not need developmental coursework and you attend full-time, you can complete the degree in two years.

Where should I direct specific questions about this program?

Call the Division at (973) 877-3354/3456 or Admissions at (973) 877-1941.

Upon completion of this program, graduates will be able to:

- ◆ Take the state licensing exam for physical therapist assistant;
- ◆ Implement a comprehensive treatment plan developed by a physical therapist;
- ◆ Perform appropriate measurement and assessment techniques to assist a physical therapist in monitoring and modifying a plan of care;
- ◆ Provide psychosocial support for patients and families;
- ◆ Participate in the teaching of other health care providers, patients, and families;
- ◆ Document relevant aspects of patient treatment;
- ◆ Participate in discharge planning and follow-up care; and
- ◆ Communicate effectively in oral and written form with the supervising physical therapists as well as with patients, families, healthcare providers, and the public.

Physical Therapist Assistant – A.A.S. Degree Program

<p>GENERAL EDUCATION REQUIREMENTS: (19 credits)</p> <p>Communications (6 credits) ENG 101 College Composition I 3 ENG 102 College Composition II or ENG 105 Technical Writing 3</p> <p>Social Science (6 credits) PSY 101 General Psychology I 3 PSY 209 Abnormal Psychology 3</p> <p>Lab Science (4 credits) BIO 121 Anatomy & Physiology I 4</p> <p>Humanities (3 credits) Any History course 3</p> <p>MAJOR COURSE REQUIREMENTS: (46 credits)</p> <p>BIO 122 Anatomy and Physiology II 4 BIO 221 Kinesiology 3 HSC 109 Medical Terminology 3 PTA 101 Fund. of Physical Therapist Asst. 5 PTA 102 Princ. of Physical Therapist Asst. I 5 PTA 103 Physical Therapist Assisting Pract. I 5 PTA 106 Therp. Devel. in Children and Geron. 1 PTA 201 Princ. of Physical Therapist Asst. II 4 PTA 202 Princ. of Physical Therapist Asst. III 4 PTA 203 Physical Therapist Assisting Pract. II 4 PTA 205 Physical Therapist Assisting Pract. III 6 PTA 209 Therapeutic Exercise 2</p> <p>ADDITIONAL COURSE REQUIREMENTS: (3 credits)</p> <p>Free elective 3</p> <p>Note: The minimum passing grade for all courses designated BIO, CHM, HSC, and PTA is “C.” If you earn a grade below “C,” you need to repeat that course.</p> <p>Total Credits Required for Degree: 68</p>	<p>RECOMMENDED SEQUENCE OF COURSES*</p> <p><u>Pre-admission</u> ENG 101 College Composition I 3 PSY 101 General Psychology I 3 BIO 121 Anatomy and Physiology I 4</p> <p><u>First Semester</u> PTA 101 Fund. of Physical Therapist Asst. I 5 HSC 109 Medical Terminology 3 BIO 122 Anatomy and Physiology II 4 ENG 102 College Composition II or ENG 105 Technical Writing 3</p> <p><u>Second Semester</u> PTA 102 Princ. of Physical Therapist Asst. I 5 PTA 106 Therp. Devel. in Children and Geron. 1 PSY 209 Abnormal Psychology 3 Free elective 3</p> <p><u>Summer</u> PTA 103 Physical Therapist Assisting Pract. I 5</p> <p><u>Third Semester</u> PTA 201 Princ. of Physical Therapist Asst. II 4 PTA 203 Physical Therapist Assisting Pract. II 4 PTA 209 Therapeutic Exercise 2 BIO 221 Kinesiology 3</p> <p><u>Fourth Semester</u> PTA 202 Princ. of Physical Therapist Asst. III 4 PTA 205 Physical Therapist Assisting Pract. III 6 History requirement 3</p>
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***NOTE:** This plan assumes the completion of all required developmental courses in reading, writing, and mathematics as well as other pre- and co-requisites for some of the courses, as listed in the Course Descriptions section of the catalog.

Radiography Program

A Joint Admissions Program with the University of Medicine and Dentistry of NJ

Division of Allied Health — Curriculum Code: 2105

Will Earn Upon Program Completion: Associate in Applied Science (A.A.S.) Degree

Why major in Radiography?

Radiography involves assisting in the diagnosis and management of human illness by producing images (also called radiographs or X-rays) of the structures in the body. Students receive hands-on training in radiographic procedures and imaging modalities, and in operating room and fluoroscopic procedures. Graduates of the program become eligible to take the licensing exams to qualify to work with physicians in offices, clinics, and hospitals. As a radiographer, you can specialize in mammography, computed tomography (CT), digital vascular imaging (angiography), ultrasound, and magnetic resonance imaging (MRI). Related jobs can be found in manufacturing firms and medical supply companies. The program is accredited by the Joint Review Committee on Education in Radiologic Technology (20 N. Wacker Drive, Chicago, IL 60606).

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

The major is job-oriented and not designed for transfer to a baccalaureate program. However, credits earned upon program completion can be applied to three bachelor's degree programs offered by the University of Medicine and Dentistry of New Jersey - School of Health Related Professions (UMDNJ - SHRP) in collaboration with New Jersey City University and Thomas Edison State College, designed exclusively for practicing health professionals.

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

Based on your placement test scores, you may have to take developmental courses in reading, English, and/or mathematics prior to applying for program admission. You must also perform successfully in the Health Occupations Basic Entrance Test (HOBET). Admission into the program is selective. Application deadline is March 15. Although not required as a prerequisite, it is strongly recommended that you complete BIO 121, math requirement, ENG 101, and HSC 109 prior to admission.

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

If you do not need developmental courses and you can take 16-17 credits per semester, you should be able to complete the program in 2 1/2 years, including summer terms.

Where should I direct specific questions about this program?

Call the Division at (973) 877-3354/3496 or Admissions at (973) 877-1941.

Upon completion of this program, graduates will be able to:

- ◆ Take the American Registry of Radiologic Technology (ARRT) Examination and the New Jersey State Licensure Exam;
- ◆ Work in a career with a promising future and, as a Registered Technologist (RT), work in any of the fifty states;
- ◆ Use X-ray equipment to produce images of internal body structures;
- ◆ Specialize in Mammography, Computed Tomography (CT), Magnetic Resonance Imaging (MRI), or other imaging specialties; and
- ◆ Become a vital member of the patient care team.

Radiography – A.A.S. Degree Program

<p>GENERAL EDUCATION REQUIREMENTS: (18-19 credits)</p> <p>Communications (6 credits) ENG 101 College Composition I 3 ENG 102 College Composition II 3</p> <p>Social Science (6 credits) ANT 101, POL 104, PSY 101, SOC 101 3 Any ANT, POL, PSY, or SOC course 3</p> <p>Math (3-4 credits) Math 100 or higher 3-4</p> <p>Humanities (3 credits) Any History course 3</p> <p>MAJOR COURSE REQUIREMENTS: (54 credits)</p> <p>BIO 121 Anatomy & Physiology I 4 BIO 122 Anatomy & Physiology II 4 HSC 109 Medical Terminology 3 RTC 100 Radiologic Technology I 2 RTC 101 Radiologic Positioning Principles I 4 RTC 102 Recording Media 1 RTC 103 Patient Care/Ethics 2 RTC 104 Radiation Protection 2 RTC 105 Radiologic Technology II 2 RTC 106 Radiologic Positioning Principles II 4 RTC 107 Contrast Media (Pharmacology) 2 RTC 108 Clinical Radiography I 1 RTC 109 Radiologic Positioning Prin. III: Skull 2 RTC 110 Radiologic Adv. Positioning Prin. IV 1 RTC 111 Clinical Radiography II 1 RTC 112 Clinical Radiography III 2 RTC 200 Medical/Surgical Diseases 2 RTC 201 Radiation Biology 2 RTC 202 Clinical Radiography IV 2 RTC 203 Special Procedures 3 RTC 204 Pediatrics/Geriatrics Radiography 2 RTC 205 Clinical Radiography V 2 RTC 206 Clinical Radiography VI 2 RTC 207 Clinical Radiography VII 2</p> <p>The minimum passing grade for all courses designated BIO, CHM, HSC, MTH and RTC is “C.” If you earn a grade below “C,” you need to repeat that course.</p> <p>Total Credits Required for Degree: 72-73</p>	<p>RECOMMENDED SEQUENCE OF COURSES*</p> <p><u>Pre-admission</u> ENG 101 College Composition I 3 BIO 121 Anatomy and Physiology I 4 Math requirement 3-4 HSC 109 Medical Terminology 3</p> <p><u>First Semester</u> RTC 100 Radiologic Technology I 2 RTC 101 Radiologic Positioning Principles I 4 RTC 102 Recording Media 1 RTC 103 Patient Care/Ethics 2 RTC 104 Radiation Protection 2 BIO 122 Anatomy & Physiology II 4</p> <p><u>Second Semester</u> RTC 105 Radiologic Technology II 2 RTC 106 Radiologic Positioning Principles II 4 RTC 107 Contrast Media (Pharmacology) 2 RTC 108 Clinical Radiography I 1 Social Science requirement 3</p> <p><u>Summer</u> RTC 109 Radiologic Positioning Prin. III: Skull 2 RTC 110 Radiologic Adv. Positioning Prin. IV 1 RTC 111 Clinical Radiography II 1 RTC 112 Clinical Radiography III 2</p> <p><u>Third Semester</u> RTC 200 Medical/Surgical Diseases 2 RTC 201 Radiation Biology 2 RTC 202 Clinical Radiography IV 2 ENG 102 College Composition II 3 Social Science requirement 3</p> <p><u>Fourth Semester</u> RTC 203 Special Procedures 3 RTC 204 Pediatrics/Geriatrics Radiography 2 RTC 205 Clinical Radiography V 2 History requirement 3</p> <p><u>Summer</u> RTC 206 Clinical Radiography VI 2 RTC 207 Clinical Radiography VII 2</p>
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***NOTE:** This plan assumes the completion of all required developmental courses in reading, writing, and mathematics as well as other pre- and co-requisites for some of the courses, as listed in the Course Descriptions section of the catalog.

Respiratory Care Program

A Joint Admissions Program with the University of Medicine and Dentistry of NJ

Division of Allied Health — Curriculum Code: 2112

Will Earn Upon Program Completion: Associate in Science (A.S.) Degree

Why major in Respiratory Care?

Respiratory therapists are health care specialists who participate in the diagnosis, treatment, management, education, and preventive care of patients with disorders of the cardiopulmonary system. They work in hospitals, caring for patients on medical and surgical wards, in emergency rooms, in neonatal, adult, and cardiac intensive care units, and in outpatient departments. They also provide care in patients' homes, rehabilitation centers, nursing homes, and other healthcare facilities. The curriculum parallels the first two years of a bachelor's degree program in the field. The program is accredited by the Commission on Accreditation of Allied Health Programs (CAAHP) in collaboration with the Committee on Accreditation for Respiratory Care (CoARC). Experienced therapists with advanced education qualify for teaching positions or managerial jobs in areas such as equipment sales and marketing.

If I major in Respiratory Care, can I transfer to an upper division college or university?

The major is job-oriented and not designed for transfer to a baccalaureate program. However, colleges and universities, including the University of Medicine and Dentistry of New Jersey (UMDNJ), New Jersey City University, and Thomas Edison State College will apply most or all of the courses you have taken toward a bachelor's degree.

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

Admission into the program is selective. Application deadline for admission into the professional component of the program at the University of Medicine and Dentistry of New Jersey (UMDNJ) is March 15 for courses beginning the following June. Students are chosen by a joint admissions committee of both institutions. The following are the minimum requirements for admission:

- Be at the college level in reading, English, and mathematics, which may require the completion of developmental courses based on placement test scores;
- Complete a 35-credit pre-professional component of general education courses and basic science courses and have a cumulative grade point average of 2.5 or better;
- Have a passing grade of "C" for all courses designated BIO, CHM, or MTH;
- Have a current CPR card (BLS-C for health care providers).

How long will it take me to complete this degree?

Following completion of the prerequisite course work, the professional phase of the Respiratory Care Program can be completed within two academic semesters and one summer semester as a full-time student. Should a part-time schedule be requested and approved, the student will have a maximum of four academic semesters and two summer terms to complete the course work (part-time option is granted on a case by case basis).

Where should I direct specific questions about this program?

Call the Division at (973) 877-3354/3496 or Admissions at (973) 877-1941.

Upon completion of this program, graduates will be able to:

- ◆ Take the entry and registry examinations offered by the National Board for Respiratory Care, and obtain the New Jersey State Board of Respiratory Care license;
- ◆ Obtain and analyze physiological specimens;
- ◆ Interpret physiological data;
- ◆ Perform tests and studies of the cardiopulmonary system;
- ◆ Perform neurophysiological studies and sleep disorder studies;
- ◆ Identify medical gases and environmental control systems;
- ◆ Perform mechanical ventilator support;
- ◆ Perform oxygen therapy, humidification, and aerosol therapy;
- ◆ Administer artificial airway care;
- ◆ Perform bronchopulmonary hygiene;
- ◆ Utilize pharmacological agents related to respiratory care procedures;
- ◆ Assist in cardiopulmonary rehabilitation and hemodynamic cardiovascular support;
- ◆ Perform cardiopulmonary resuscitation;
- ◆ Educate patients and family on the disease process, medical therapy, and self-help; and
- ◆ Promote cardiopulmonary wellness and disease prevention measures.

Respiratory Care — A.S. Degree Program

<p>GENERAL EDUCATION REQUIREMENTS: (33 credits)</p> <p>Communications (6 credits) ENG 101 College Composition I 3 ENG 102 College Composition II 3</p> <p>Social Science (6 credits) ANT 101, POL 104, PSY 101, or SOC 101 3 Any ANT, POL, PSY, or SOC course 3</p> <p>Lab Science/Math (12 credits) BIO 121 Anatomy & Physiology I 4 BIO 122 Anatomy & Physiology II 4 MTH 100 Introductory College Math 4</p> <p>Humanities (9 credits) Any History course 3 Any 200-level English literature course 3 Art/Music requirement 3</p> <p>MAJOR COURSE REQUIREMENTS: (31 credits)</p> RST 100 Core Concepts in Respiratory Care 1 RST 110 Fundamentals of Respiratory Care 4 RST 118 Clinical Practice I 1 RST 123 Applied Cardiopulmonary Patho. I 2 RST 125 Principles of Ventilatory Support 4 RST 128 Clinical Practice II 2 RST 138 Clinical Practice III 3 RST 212 Cardiopulmonary Pharmacology 2 RST 213 Applied Cardiopulmonary Patho. II 2 RST 214 Patient Management - Critical Care 3 RST 223 Cardiopulmonary Evaluation 2 RST 225 Pediatric/Neonatal Respiratory Care 3 RST 237 Long-Term, Home Rehabilitative Care 2 <p>ADDITIONAL COURSE REQUIREMENTS: (8 credits)</p> BIO 211 Microbiology 4 CHM 101 College Chemistry I 4 <p>The minimum passing grade for all courses designated BIO, CHM, MTH or RST is "C." If you earn a grade below "C," you need to repeat that course.</p> <p>Total Credits Required for Degree: 72</p>	<p>RECOMMENDED SEQUENCE OF COURSES*</p> <p><u>First Semester</u></p> BIO 121 Anatomy & Physiology I 4 ENG 101 College Composition I 3 MTH 100 Introductory College Math 4 CHM 101 College Chemistry I 4 PSY 101 General Psychology I 3 <p><u>Second Semester</u></p> BIO 122 Anatomy and Physiology II 4 ENG 102 College Composition II 3 BIO 211 Microbiology 4 History requirement 3 Social Science requirement 3 <p><u>Summer</u></p> RST 100 Core Concepts in Respiratory Care 1 RST 110 Fundamentals of Respiratory Care 4 RST 118 Clinical Practice I 1 RST 123 Applied Cardiopulmonary Patho. I 2 <p><u>Third Semester</u></p> RST 125 Principles of Ventilatory Support 4 RST 128 Clinical Practice II 2 RST 212 Cardiopulmonary Pharmacology 2 RST 213 Applied Cardiopulmonary Patho. II 2 RST 223 Cardiopulmonary Evaluation 2 English literature requirement 3 <p><u>Fourth Semester</u></p> RST 138 Clinical Practice III 3 RST 214 Patient Management - Critical Care 3 RST 225 Pediatric/Neonatal Respiratory Care 3 RST 237 Long-Term, Home Rehabilitative Care 2 ART/MUS requirement 3
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***NOTE:** This plan assumes the completion of all required developmental courses in reading, writing, and mathematics as well as other pre- and co-requisites for some of the courses, as listed in the Course Descriptions section of the catalog.

Social Sciences Program

Division of Social Sciences — Curriculum Code: 0710
Will Earn Upon Program Completion: Associate in Science (A.S.) Degree

Why major in Social Science?

This program provides you with a foundation for majoring in areas such as sociology, psychology, pre-law, social work, gerontology, anthropology, counseling, political science or urban studies at a four-year college or university. The curriculum parallels the first two years at a 4-year institution. The program is best suited for those interested in human behavior and in helping individuals and communities.

If I major in Social Science can I transfer to an upper division college or university?

The curriculum prepares you for transfer to upper division colleges and universities to pursue a bachelor's degree. Students should consult the catalog of the college or university to which they plan to transfer upon graduation from ECC in order to select courses at ECC that they can apply toward a bachelor's degree in an area of social science that they choose.

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

Students must complete all required developmental courses in reading, writing, and mathematics as well as other pre- and/or co-requirements for some of the courses.

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

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

Where should I direct specific questions about this program?

Contact the Division at (973) 877-3250 or Admissions at (973) 877-1941.

Upon completion of this program, graduates will be able to:

- ◆ Demonstrate knowledge of diverse cultures and social structures;
- ◆ Demonstrate knowledge of psycho-social factors that influence human behavior;
- ◆ Recognize social and political trends within a society;
- ◆ Demonstrate in-depth knowledge via formal research reports on varied topics in the Social Science disciplines;
- ◆ Demonstrate knowledge of the ways of thinking or methods of analysis associated with significant modes of inquiry represented by Social Science disciplines; and
- ◆ Demonstrate knowledge of the skills and attitudes of professional practice in Social Service occupations.

Social Sciences — A.S. Degree Program

<p>GENERAL EDUCATION REQUIREMENTS: (33-36 Credits)</p> <p>Communications (6 credits) ENG 101 College Composition I 3 ENG 102 College Composition II 3</p> <p>Social Science (6 credits) ANT 101, POL 104, PSY 101 or SOC 101 3 Any ANT, POL, PSY or SOC course 3</p> <p>Lab Science/Math (10-12 credits) A Lab Science sequence and a Math course (100 or higher) or two Math courses (100 or higher) and a Lab Science course. MTH (100 level or higher) 3-8 BIO 101-102, 103-104, or 121-122; CHM 101-102 or 103-104; PHY 101-102 or 103-104 4-8</p> <p>Physical Education (2-3 credits) PHE 119 or HLT 101 2-3</p> <p>Humanities (9 credits) Any 200-level English literature course 3 Any History course within a sequence 3 ART 100, ART 101, ART 102, ART 200, MUS 100, MUS 108, MUS 109, or MUS 117 3</p> <p>MAJOR COURSE REQUIREMENTS: (15 credits)</p> <p>Select five courses* from the Social Sciences area of interest: ANT, CJJ, EDU, POL, PSY, SOC 15</p> <p>ADDITIONAL COURSE REQUIREMENTS: (15 credits)</p> <p>English literature elective 3 Completion of History sequence 3 Humanities elective 3 Free electives 6</p> <p>Total Credits Required for Degree: 63-66</p>	<p>RECOMMENDED SEQUENCE OF COURSES**</p> <p>First Semester</p> <p>ENG 101 College Composition I 3 Social Science requirement 3 PHE/HLT requirement 2-3 Free elective 3 Social Science requirement 3</p> <p>Second Semester</p> <p>ENG 102 College Composition II 3 Social Science major requirement* 3 Lab Science requirement 4 History course within a sequence 3 ART/MUS requirement 3</p> <p>Third Semester</p> <p>English literature (200-level) 3 Humanities elective 3 Math requirement/Lab Science sequence 3-4 Completion of History sequence 3 Social Science major requirement* 3</p> <p>Fourth Semester</p> <p>English literature (200-level) 3 Humanities elective 3 Math requirement 3-4 Three Social Science major requirements* 9</p> <p>*If you plan to pursue Psychology at a 4-year institution, it is recommended that you take the following 5 courses: PSY 102 General Psychology II 3 PSY 205 Theories of Personality 3 PSY 209 Abnormal Psychology 3 PSY 211 Social Psychology 3 PSY 219 Child Psychology & Development 3</p> <p>*If you plan to pursue Sociology at a 4-year institution, it is recommended that you take the following 5 courses: SOC 108 Social Problems 3 SOC 203 Racial & Cultural Minorities 3 SOC 204 Urban Sociology 3 SOC 206 Social Stratification 3 SOC 219 Sociology of the Family 3</p> <p>*If you plan to pursue Social Work at a 4-year institution, it is recommended that you take the following 5 courses: SOC 111 Helper Theory 3 SOC 121 Social Serv. Policies & Procedures 3 SOC 207 Understanding Death & Dying 3 SOC 228 Human & Soc. Serv. Fieldwork I 3 SOC 229 Human & Soc. Serv. Internship Seminar I 3</p>
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****NOTE:** This plan assumes the completion of all required developmental courses in reading, writing, and mathematics as well as other pre- and co-requisites for some of the courses, as listed in the Course Descriptions section of the catalog.

Uniform Construction Code Technology Programs

Division of Community and Continuing Education

Building Code Technology – Curriculum Code: 3052

Electrical Code Technology – Curriculum Code 3051

Will Earn Upon Program Completion: Certificate in Construction Code Technology

Why major in Uniform Construction Code Technology?

Certificate programs in Construction Code Enforcement have been designed to:

1. Offer the opportunity to fulfill the credentials for state approved licensing requirements adopted by the New Jersey Uniform Construction Code, administered by the Department of Community Affairs;
2. Provide currently licensed code enforcement personnel a means by which to upgrade their educational credentials;
3. Prepare individuals for inspector related employment in private industry.

The underlying principle of the certificate program is the protection of the health, safety, and welfare of the people in so far as they are affected by construction regulations.

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

The major is job-oriented and not designed for transfer to a baccalaureate program, but courses earned upon program completion may be applied to an associate degree program at ECC. Also, many four-year colleges and universities may apply some or all of the courses you have taken toward a bachelor's degree, depending upon their program requirements.

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

All students pursuing the certificate program must take the placement test. Developmental courses may be needed before enrolling in college level English.

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

If you do not need developmental course work and you register for an average of two courses each semester, you can complete the certificate in two years. You may shorten the amount of time by taking courses in the summer or by attending full-time. Most students in the program are working in the field and attend class in the evening.

Where should I direct specific questions about this program?

Contact the Director of Academic Programs/West Essex Campus at (973) 403-2531.

Upon completion of this program, graduates will be able to:

- ◆ Evaluate construction plans in terms of compliance with state and local codes;
- ◆ Determine whether construction is in conformance with approved plans;
- ◆ Apply technical and administrative code-related knowledge in code enforcement;
- ◆ Effectively use the English language skills gained in the program to comprehend and evaluate ideas in the context of code enforcement, and communicate them both orally and in writing;
- ◆ Be certified as a Sub-Code and Construction official; and
- ◆ Pass the National Certification Examination to become a licensed Residential, Industrial, High Rise, and Safety Inspector.

Building Code Technology – Certificate Program

<p>GENERAL EDUCATION REQUIREMENTS: (6 Credits)</p> <p>Communications (6 credits) ENG 101 College Composition I 3 ENG 105 Technical Writing 3</p> <p>MAJOR COURSE REQUIREMENTS: (20 credits)</p> <p>UCC 109 Subcode Official 3 UCC 110 Construction Official 3 UCC 120 Building Inspector RCS 4 UCC 121 Building Inspector ICS 6 UCC 220 Building Inspector HHS 4</p> <p>ADDITIONAL COURSE REQUIREMENTS: (6 credits)</p> <p>ARC 131 Construction Methods I 3 ARC 132 Construction Methods II 3</p> <p>Total Credits Required for Certificate: 32</p>	<p>RECOMMENDED SEQUENCE OF COURSES*:</p> <p><u>First Semester</u> UCC 109 Subcode Official 3 UCC 120 Building Inspector RCS 4</p> <p><u>Second Semester</u> UCC 110 Construction Official 3 UCC 121 Building Inspector ICS 6</p> <p><u>Summer</u> UCC 220 Building Inspector HHS 4</p> <p><u>Third Semester</u> ENG 101 College Composition I 3 ARC 131 Construction Methods I 3</p> <p><u>Fourth Semester</u> ENG 105 Technical Writing 3 ARC 132 Construction Methods II 3</p>
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Electrical Code Technology – Certificate Program

<p>GENERAL EDUCATION REQUIREMENTS: (6 Credits)</p> <p>Communications (6 credits) ENG 101 College Composition I 3 ENG 105 Technical Writing 3</p> <p>MAJOR COURSE REQUIREMENTS: (13 credits)</p> <p>UCC 109 Subcode Official 3 UCC 110 Construction Official 3 UCC 130 Electrical Inspector ICS 4 UCC 230 Electrical Inspector HHS 3</p> <p>ADDITIONAL COURSE REQUIREMENTS: (6 credits)</p> <p>ARC 131 Construction Methods I 3 ARC 132 Construction Methods II 3</p> <p>Total Credits Required for Certificate: 25</p>	<p>RECOMMENDED SEQUENCE OF COURSES*:</p> <p><u>First Semester</u> UCC 109 Subcode Official 3 UCC 130 Electrical Inspector ICS 4</p> <p><u>Second Semester</u> UCC 110 Construction Official 3 UCC 230 Electrical Inspector HHS 3</p> <p><u>Third Semester</u> ENG 101 College Composition I 3 ARC 131 Construction Methods I 3</p> <p><u>Fourth Semester</u> ENG 105 Technical Writing 3 ARC 132 Construction Methods II 3</p>
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***NOTE:** This plan assumes the completion of all required developmental courses in reading, writing, and mathematics as well as other pre- and co-requisites for some of the courses, as listed in the Course Descriptions section of the catalog.

Uniform Construction Code Technology Programs

Division of Community and Continuing Education

Fire Code Technology – Curriculum Code: 3050

Plumbing Code Technology – Curriculum Code 3053

Will Earn Upon Program Completion: Certificate in Construction Code Technology

Why major in Uniform Construction Code Technology?

Certificate programs in Construction Code Enforcement have been designed to:

1. Offer the opportunity to fulfill the credentials for state approved licensing requirements adopted by the New Jersey Uniform Construction Code, administered by the Department of Community Affairs;
2. Provide currently licensed code enforcement personnel a means by which to upgrade their educational credentials;
3. Prepare individuals for inspector related employment in private industry.

The underlying principle of the certificate program is the protection of the health, safety, and welfare of the people in so far as they are affected by construction regulations.

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

The major is job-oriented and not designed for transfer to a baccalaureate program, but courses earned upon program completion may be applied to an associate degree program at ECC. Also, many four-year colleges and universities may apply some or all of the courses you have taken toward a bachelor's degree, depending upon their program requirements.

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

All students pursuing the certificate program must take the placement test. Developmental courses may be needed before enrolling in college level English.

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

If you do not need developmental course work, and you register for an average of two courses each semester, you can complete the certificate in two years. You may shorten the amount of time by taking courses in the summer or by attending full-time. Most students in the program are working in the field and attend class in the evening.

Where should I direct specific questions about this program?

Contact the Director of Academic Programs/West Essex Campus at (973) 403-2531.

Upon completion of this program, graduates will be able to:

- ◆ Evaluate construction plans in terms of compliance with state and local codes;
- ◆ Determine whether construction is in conformance with approved plans;
- ◆ Apply technical and administrative code-related knowledge in code enforcement;
- ◆ Effectively use the English language skills gained in the program to comprehend and evaluate ideas in the context of code enforcement, and communicate them both orally and in writing;
- ◆ Be certified as a Sub-Code and Construction official; and
- ◆ Pass the National Certification Examination to become a licensed Residential, Industrial, High Rise, and Safety Inspector.

Fire Code Technology – Certificate Program

<p>GENERAL EDUCATION REQUIREMENTS: (6 Credits)</p> <p>Communications (6 credits) ENG 101 College Composition I 3 ENG 105 Technical Writing 3</p> <p>MAJOR COURSE REQUIREMENTS: (18 credits)</p> <p>UCC 109 Subcode Official 3 UCC 110 Construction Official 3 UCC 140 Fire Protection Inspector ICS-Part I 4 UCC 141 Fire Protection Inspector ICS-Part II 4 UCC 240 Fire Protection Inspector HHS 4</p> <p>ADDITIONAL COURSE REQUIREMENTS: (6 credits)</p> <p>ARC 131 Construction Methods I 3 ARC 132 Construction Methods II 3</p> <p>Total Credits Required for Certificate: 30</p>	<p>RECOMMENDED SEQUENCE OF COURSES*:</p> <p><u>First Semester</u> UCC 109 Subcode Official 3 UCC 140 Fire Protection Inspector ICS-Part I 4</p> <p><u>Second Semester</u> UCC 110 Construction Official 3 UCC 141 Fire Protection Inspector ICS-Part II 4</p> <p><u>Summer</u> UCC 240 Fire Protection Inspector HHS 4</p> <p><u>Third Semester</u> ENG 101 College Composition I 3 ARC 131 Construction Methods I 3</p> <p><u>Fourth Semester</u> ENG 105 Technical Writing 3 ARC 132 Construction Methods II 3</p>
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Plumbing Code Technology – Certificate Program

<p>GENERAL EDUCATION REQUIREMENTS: (6 Credits)</p> <p>Communications (6 credits) ENG 101 College Composition I 3 ENG 105 Technical Writing 3</p> <p>MAJOR COURSE REQUIREMENTS: (16 credits)</p> <p>UCC 109 Subcode Official 3 UCC 110 Construction Official 3 UCC 150 Plumbing Inspector ICS 6 UCC 250 Plumbing Inspector HHS 4</p> <p>ADDITIONAL COURSE REQUIREMENTS: (6 credits)</p> <p>ARC 131 Construction Methods I 3 ARC 132 Construction Methods II 3</p> <p>Total Credits Required for Certificate: 28</p>	<p>RECOMMENDED SEQUENCE OF COURSES*:</p> <p><u>First Semester</u> UCC 109 Subcode Official 3 UCC 150 Plumbing Inspector ICS 6</p> <p><u>Second Semester</u> UCC 110 Construction Official 3 UCC 250 Plumbing Inspector HHS 4</p> <p><u>Third Semester</u> ENG 101 College Composition I 3 ARC 131 Construction Methods I 3</p> <p><u>Fourth Semester</u> ENG 105 Technical Writing 3 ARC 132 Construction Methods II 3</p>
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***NOTE:** This plan assumes the completion of all required developmental courses in reading, writing, and mathematics as well as other pre- and co-requisites for some of the courses, as listed in the Course Descriptions section of the catalog.

Word Processing Program

Division of Business — Curriculum Code: 3034

Will Earn Upon Program Completion: Certificate in Word Processing

Why major is Word Processing?

This certificate program is designed to prepare individuals for entry into or advancement in administrative support positions requiring computer proficiency. Word processing typists and data entry keyers are needed in most organizations to help process vast amounts of information. Students are also introduced to spreadsheets, databases, and desktop publishing software applications. The program includes courses in business communication, English composition, and office management.

If I major in Word Processing, can I transfer to an upper division college or university?

While the program is not designed for transfer to a baccalaureate program, Essex County College will apply some or most of the courses you have taken toward an associate degree. Consult your faculty advisor for more information.

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

Based on your placement test scores, you may have to take developmental courses in reading, English, and/or mathematics before taking courses in your major.

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

If you do not need developmental course work, and you register for a minimum of 12 credits per semester, you can complete the certificate in three semesters.

Where should I direct specific questions about this program?

Contact the Division at (973) 877-3222 or Admissions at (973) 877-1941.

Upon completion of this program, graduates will be able to:

- ◆ Demonstrate the ability to work with highly technical material, plan and type complicated statistical tables, combine and rearrange materials from different sources, and prepare master copies;
- ◆ Demonstrate proficiency in language arts — spelling, punctuation, grammar;
- ◆ Communicate effectively using E-mail and the Internet;
- ◆ Use advanced features of MS Word;
- ◆ Use beginning features of MS Excel;
- ◆ Use beginning features of MS PowerPoint;
- ◆ Demonstrate the ability to format a variety of office documents;
- ◆ Quickly and effectively proofread a variety of business correspondence; and
- ◆ Demonstrate the ability to keyboard rapidly and accurately.

Word Processing – Certificate Program

<p>GENERAL EDUCATION REQUIREMENTS: (3 credits)</p> <p>Communications (3 credits) ENG 101 College Composition I 3</p> <p>MAJOR COURSE REQUIREMENTS (23 credits)</p> <p>OST 106 Keyboarding and Formatting I 4 OST 107 Keyboarding and Formatting II 3 OST 121 Business Communications 3 OST 210 Office Systems Management 3 OST 250 Word/Information Processing Applications I 4 OST 251 Word/Information Processing Applications II 3 OST 290 Internship or Elective approved by OST Advisor 3</p> <p>ADDITIONAL COURSE REQUIREMENTS: (9 credits)</p> <p>CIS 136 Desktop Publishing for IBM Compatibles 3 CIS 131, 135, or 137 3 BUS 101, 141, or 204 3</p> <p>Total Credits Required for Certificate: 35</p>	<p>RECOMMENDED SEQUENCE OF COURSES*</p> <p><u>First Semester</u></p> <p>OST 106 Keyboarding and Formatting I 4 OST 121 Business Communications 3 ENG 101 College Composition I 3 One of the following: 3 CIS 131 Microcomputers in Business CIS 135 Microcomputer Spreadsheets CIS 137 Microcomputer Databases</p> <p><u>Second Semester</u></p> <p>OST 107 Keyboarding and Formatting II 3 OST 250 Word/Information Processing Applications I 4 CIS 136 Desktop Publishing for IBM Compatibles 3 One of the following: 3 BUS 101 Business Organization & Management BUS 141 Business Mathematics BUS 204 Intro. to Organizational Behavior in Business</p> <p><u>Third Semester</u></p> <p>OST 251 Word/Information Processing Applications II 3 OST 210 Office Systems Management 3 OST 290 Internship or Elective approved by OST Advisor 3</p>
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***NOTE:** This plan assumes the completion of all required developmental courses in reading, writing, and mathematics as well as other pre- and co-requisites for some of the courses, as listed in the Course Descriptions section of the catalog.

Community & Continuing Education

The College offers a wide range of non-credit and credit courses and programs to help meet the lifelong learning and cultural needs of the community, and enhance advancement opportunities for area professionals. The programs are offered at the main campus, the West Essex Campus, and at sites throughout the county. The programs are offered at conveniently scheduled times — usually in the late afternoons, evenings, and on Saturdays. Courses in career and personal development, computer training, and one-semester certificate programs are designed to enhance the professional, personal, and vocational needs of area residents. Employees can earn Continuing Education Units (CEUs) that document newly acquired or upgraded skills that often lead to new job opportunities. Faculty have a broad range of academic and business backgrounds.

Extension Center Programs

The College offers credit courses and non-credit enrichment courses, workshops, and seminars at a variety of conveniently located sites throughout Essex County. The college's two major extension centers are FOCUS and Ironbound. Multilingual programs offered at these two sites attract a large number of students who wish to learn English. Once enrolled at these sites, whether it be in non-credit or credit courses, students are apprised of other educational opportunities that exist at the main and West Essex campuses. FOCUS and Ironbound operate on Saturdays. Their locations are as follows:

FOCUS
Hispanic Center for Community Development
433 Broad Street
Newark, NJ 07102
(973) 624-2528

Ironbound Community Center
422 Lafayette Street
Newark, NJ 07105
(973) 465-0947

The College has also developed service agreements with other community-based organizations, adult schools, civic groups, and agencies.

Current off-site programs include:

Nutley Adult School
30 Franklin Avenue
Nutley, NJ 07110
(973) 667-2525

South Orange/Maplewood Adult School
17 Parker Avenue
Maplewood, NJ 07040
(973) 378-7620

District 1199J New Jersey Training and Development Fund
9-25 Alling Street
Newark, NJ 07102
(973) 643-1600

Newark Office of Children
110 William Street
Newark, NJ 07102
(973) 733-7976

Additionally, the College offers classes at senior centers in Irvington, East Orange, Newark, and Orange (The Senior Education Program is also available at the college's main and West Essex campuses). Specific non-credit courses and workshops can be designed and organized through the Community and Continuing Education area if requested by a particular group or agency. The college offers Continuing Education Units (CEUs), a nationally acceptable unit of measurement applicable to non-credit, continuing education courses. A certificate of completion is awarded after successful participation in a CEU certified non-credit course.

Adult Learning Center

The college offers various levels of English as a Second Language (ESL), Adult Basic Education (ABE), and General Education Development (GED) courses at five locations — the main campus, West Essex Campus, Ironbound Community Center, Nutley Adult School, and District 1199J New Jersey Training and Development Fund. The complete program includes academic instruction integrated with the development of computer literacy and workplace skills, with scheduled hours for tutoring. Counseling, job placement assistance, and family literacy activities are also essential components of the program. All enrollees are pre-tested and post-tested after 50 hours of instruction.

Workforce Development Programs:

Corporate Training

Corporate training programs, usually offered at the company site for the convenience of its employees, are developed by customizing the College's existing credit and non-credit courses to meet a company's specific training needs. Training can range from a one-day workshop or seminar to a year-long program leading to state certification. The College responds rapidly to training requests, beginning with an analysis or assessment of training needs. The College works

closely with state and local employment agencies to secure grants and identify corporate training needs.

Uniform Construction Code (UCC)

Technology Certificate Programs

The College offers certificate programs in Building Code Technology, Electrical Code Technology, Fire Code Technology, and Plumbing Code Technology to help individuals meet state approved licensing requirements of the New Jersey Uniform Construction Code, administered by the Department of Community Affairs. The programs also offer the opportunity for currently licensed code enforcement personnel to upgrade their educational credentials.

Professional Development for Educators

Essex County College is a Professional Development Provider registered with the New Jersey Department of Education. The College offers specific courses for meeting the requirement for New Jersey Standards for Professional Development. These courses enhance knowledge in subject content, and enable classroom professionals to help students achieve the New Jersey Core Curriculum Context Standards.

Training, Inc.

Training Inc., Essex County College's Career Training Institute, provides a wide variety of career services to county residents seeking initial entry, reentry, or upward mobility in the workplace. The program is an integrated mix of credit and non-credit courses, offered in 20-week training cycles that lead to eventual job acquisition. Training, Inc. is part of a network of similar programs across the country. It has been commended by national and regional organizations and agencies for its successful contextual approach to preparing individuals for employment. Its unique approach of teaching job skills and interpersonal skills within a simulated work setting eases the transition into the workforce.

WIB One-Stop Center

Essex County College, in collaboration with the Newark Workforce Investment Board, houses a One-Stop Center on its main campus in Newark. The One-Stop Center serves as a central location for providing a wide range of job training and employment placement services. ECC students, as well as individuals from around the county, are served on a walk-in basis. The Center is staffed by college employees who work closely with counselors assigned to the main campus from the Mayor's Office of Employment and Training and the New Jersey State Employment Services Office.

Community and Cultural Programs

The College provides a broad spectrum of enrichment and recreational activities, public forums, countywide events, and programs in support of youth and the adult community. Cultural events span the arts and reflect the ethnic diversity of Essex County. The College also sponsors major observances during the year to celebrate the rich heritage of the community.

Mary B. Burch Theater

The College's Burch Theater, designed by theater consultant and Broadway designer Ming Cho Lee, is a 440-seat house facing a combination proscenium/thrust stage that is 50 feet deep and 40 feet wide. The stage is equipped with a memory lighting board, a twelve-line counterweight fly system, orchestra shell, sprung dance floor, and a concert-sound system for use with its performing arts programming system. The college presents professional actors, dancers, musicians, and lectures at the theater as part of its mission to educate the student body and the community. The theater provides a training ground for students enrolled in acting and theater design courses. Co-curricular student productions are produced each year by the Burch Theater.

Youth Programs

The college sponsors various programs for area youth that supplement their schoolwork. The programs provide educational, social, and cultural enrichment while integrating career exploration into all instruction. The purpose is to ensure academic success in primary and secondary schools, and to provide academic enrichment and support activities that ultimately result in high school graduation and pursuit of a higher education degree. The youth programs include: Project GRAD, GEAR UP, College Bound Tech, Upward Bound, and Talent Search, administered through the Office of Academic Affairs, and also the Saturday Youth Program and Summer Youth Enrichment Program, administered by the Community and Continuing Education Department.

WISE Women's Center

The WISE (Women In Support of Essex) Women's Center offers support services to women in the College and Essex County at-large. The focus is to assist women in becoming personally and economically self-sufficient. The services include free personal and group counseling in the areas of education, career development, employment, finance, health, and family issues. The Center provides student recruitment and retention counseling, referrals, and other resources through the following programs and services:

- Child Assault Prevention Program
- Computer Skills Training

- Displaced Homemakers Program
- Division of Youth and Family Services Parenting Skills Training
- Domestic/Relationship Violence Training
- Entrepreneurship Training
- Information and Resource Center
- Life Skills/Career Development Program
- Non-Credit Classes
- Parenting Skills Training
- Self Employment Assistance Program (SEA)
- Senator Lipman Saturday Seminars for Minority/Women Owned and Small Business Enterprises
- Truancy Alternative Program (TAP)
- Urban Women Program
- WISE Training for Trades

Police Academy

On December 31, 1998, Essex County College purchased the Essex County Police Academy and assumed full responsibility for all course offerings at the Academy. The Police Academy is located at 250 Grove Avenue, Cedar Grove, New Jersey 07009.

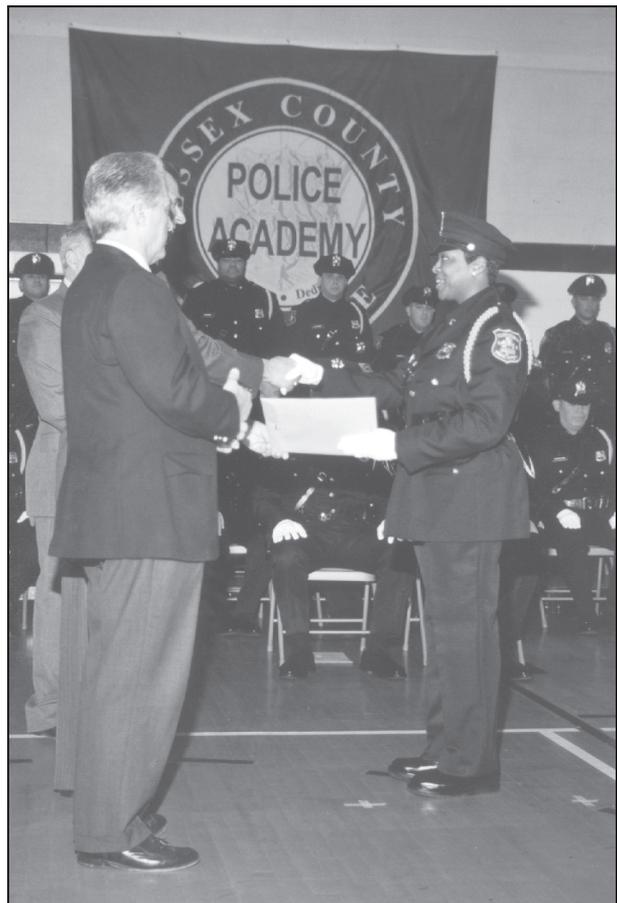
The Police Academy is certified by the New Jersey Police Training Commission to offer the following courses:

- Basic Course for Police Officers
- Basic Course for Deputy Sheriffs
- Basic Course for County Correction Officers

- Basic Course for Class One Special Law Enforcement Officers
- Basic Course for Class Two Special Law Enforcement Officers
- Basic Firearms Course
- RADAR Instructors Course
- RADAR Operators Course
- Methods of Instruction Course
- Firearms Instructor Course
- Basic Course for Juvenile Detention Officers
- Fundamentals of Crime Prevention for the Practitioner
- Crime Prevention for the Patrol Officer
- Modified Basic Courses for Veteran County Correction Officers

Participants in these courses are referred by local law enforcement agencies. Upon successful completion of the Basic Course for Police Officers, Basic Course for County Correction Officers, and Basic Course for Deputy Sheriffs, the participants will receive college credits.

A variety of continuing education courses for law enforcement officers are also offered throughout the year.



COURSE DESCRIPTIONS

- ◆ Accounting
- ◆ Anthropology
- ◆ Arabic
- ◆ Architecture
- ◆ Art
- ◆ Biology
- ◆ Business Administration
- ◆ Chemistry
- ◆ Cinema
- ◆ Civil Construction Engineering Technology
- ◆ College Success
- ◆ Communication
- ◆ Computer Information Systems
- ◆ Computer Sciences
- ◆ Criminal Justice
- ◆ Dance
- ◆ Dental Auxiliaries
- ◆ Drama
- ◆ Economics
- ◆ Education
- ◆ Electronic Engineering Technology
- ◆ Emergency Medical Technology
- ◆ Engineering
- ◆ English
- ◆ English as a Second Language
- ◆ French
- ◆ Health
- ◆ History
- ◆ Hospitality Management
- ◆ Italian
- ◆ Legal Assistant Studies
- ◆ Manufacturing/Mechanical Engineering Technology
- ◆ Massage Therapy
- ◆ Mathematics
- ◆ Medical Terminology
- ◆ Music
- ◆ Nursing
- ◆ Nutrition
- ◆ Office Systems Technology
- ◆ Ophthalmic Dispensing
- ◆ Philosophy
- ◆ Physical Education
- ◆ Physical Therapist Assistant
- ◆ Physics
- ◆ Political Science
- ◆ Psychology
- ◆ Radiography
- ◆ Reading
- ◆ Respiratory Therapy
- ◆ Sociology
- ◆ Spanish
- ◆ Uniform Construction Code Administration
- ◆ Uniform Fire Code

COURSE DESCRIPTIONS

0-099

Courses with these numbers may be required for students as a result of testing.

100-199

Courses with these numbers are considered freshman year courses.

200-299

Courses with these numbers are considered sophomore year courses.

Order of Courses

The courses are grouped under subject headings that are arranged in alphabetical order. For example, Massage Therapy courses that go by the designation HSC can be found under Massage Therapy and Uniform Fire Code courses that go by the designation FSC can be found under Uniform Fire Code. In most instances, however, there is a similarity between the subject heading and the course designation. For example, under Accounting you will find the courses that go by the designation ACC, under Biology you will find the courses that go by the designation BIO, etc.

Accounting

ACC 101 PRINCIPLES OF ACCOUNTING FINANCIAL 4 Credits

This course introduces the principles of financial accounting while covering the accounting cycle for service and merchandise companies. Emphasis is on analyzing transactions, summarizing through use of the general ledger, and reporting the results through the preparation of financial statements for use by internal and external decision makers such as stockholders, trade creditors, banks, unions, and governmental agencies. The fundamentals of accounting for inventories, receivables, plant assets, long-term liabilities, internal control, and owners' equity for proprietorship and corporate entities are stressed. Students are introduced to computerized accounting applications. Prerequisite: "C" or better in MTH 086/087

ACC 102 PRINCIPLES OF ACCOUNTING II MANAGERIAL 4 Credits

This course examines the fundamental managerial accounting concepts and techniques that aid in management decision-making, performance evaluation, and in planning and controlling operations. Emphasis is on the use of accounting data as a management tool rather than on the techniques of data accumulation. The course deals with such topics as corporate equity, cost behavior patterns, budgeting, cost-volume profit relationships, product costing methods, preparation of Statement of Cash Flows, and financial statement analysis. Quantitative methods applicable to managerial accounting are studied, including the use of accounting software applications. Prerequisite: "C" or better in ACC 101.

ACC 121 ACCOUNTING SYSTEMS AND MICROCOMPUTERS 4 Credits

This course offers an introduction to the development and implementation of computerized accounting information systems used to document, record, and summarize financial information accurately. Emphasis is on how such systems safeguard the assets of the firm and insure the integrity of the reporting system. The use of source documents as a means of developing an information base; how special journals and voucher systems can be designed to facilitate the recording function; and how subsidiary ledgers can be developed to facilitate the recording of secondary information are examined. The course concludes with the study of a fully integrated computerized general ledger accounting system that students will be able to utilize for accounting in large businesses, small businesses, and non-profit organizations. Significant out-of-class independent computer laboratory time is required of students. Prerequisite: "C" or better in ACC 101.

ACC 201 INTERMEDIATE ACCOUNTING I 4 Credits

This course provides an expanded treatment of the theory and accounting principles underlying the preparation of financial statements, and the proper uses that can be made of financial data. Current asset analysis and valuation methodology, current liabilities, and revenue determination procedures are studied in relation to FASB accounting requirements. A comprehensive review of fundamental accounting processes using microcomputer software is included. Prerequisite: "C" or better in ACC 102.

ACC 202 INTERMEDIATE ACCOUNTING II 4 Credits

This course is a continuation of ACC 201. Accounting for long-lived assets, long-term liabilities, investments in securities and funds, and stockholders' equity are emphasized. The more complex aspects of financial statement presentation and analysis are also covered. Prerequisite: "C" or better in ACC 201.

ACC 211 COST ACCOUNTING 4 Credits

This course examines in depth cost analysis and product costing for both the profit and not-for-profit sectors of the economy. Accounting for labor, materials, and manufacturing overhead emphasizes the use of source documents to analyze and record cost data in both manual and computerized accounting systems. Methods of allocating indirect costs to products are introduced. Budgeting concepts

are reviewed with emphasis on capital budget techniques. Reporting for segments and decentralized operations are also covered. Prerequisite: "C" or better in ACC 102.

ACC 231 FEDERAL TAXATION 4 Credits

This course introduces the fundamental accounting procedures for determining tax liabilities for individuals and single-owner businesses. The accurate completion of Form 1040 with the accompanying schedules in compliance with the Internal Revenue Code is emphasized using both manual and computerized systems. The calculation of payroll taxes and maintenance of tax records and other selected tax reports are also studied. Prerequisite: "C" or better in ACC 102.

Anthropology

ANT 101 CULTURAL ANTHROPOLOGY 3 Credits

This course examines the behavior and customs of all human groups. It describes human universals, as well as how and why human societies differ, drawing on fieldwork performed in a wide variety of tribal, village, and urban societies. Topics covered include kinship and other social systems; the supernatural and sacred; language and non-verbal communication; beliefs and behavior regarding health and curing; myth, art, and music. Pre- or Co-requisites: ENG 096/097 and RDG 096/097 (passing grade of "C" or better for each), or placement.

ANT 105 PHYSICAL ANTHROPOLOGY 3 Credits

This course examines the origin and emergence of humanity, the early unwritten history of the human race, physical variations among humans, and prehistoric civilizations. Pre- or Co-requisites: ENG 096/097 and RDG 096/097 (passing grade of "C" or better for each), or placement.

Arabic

ARB 101 ELEMENTARY ARABIC I 3 Credits

This is the first half of a one-year course for students with little or no background in the Arabic language. Listening comprehension, speaking, reading, and writing are developed within the limits of basic vocabulary, idioms and grammar. Pre- or Co-requisites: ENG 096/097 and RDG 096/097, or ESL 103 (passing grade of "C" or better for each), or placement. Laboratory fee.

ARB 102 ELEMENTARY ARABIC II 3 Credits

This is a continuation of ARB 101. The student's knowledge of vocabulary and grammar expands to include multiple tenses and uses of the verb. The four language skills (listening comprehension, speaking, reading, and writing) continue to be developed. Prerequisite: "C" or better in ARB 101 or placement. Laboratory fee.

Architecture

ARC 101 ARCHITECTURAL DESIGN I 4 Credits

This course is an introduction to architectural design with emphasis on basic design content, including the logical arrangement of elements in space. A series of projects are assigned and reviewed for format, presentation, and completeness. Prerequisite: "C" or better in MTH 092 or placement.

ARC 102 ARCHITECTURAL DESIGN II 4 Credits

This course is a continuation of ARC 101. Assigned projects include three-dimensional representations. Students learn how to construct perspectives and build architectural models. Prerequisite: "C" or better in ARC 101.

ARC 111 HISTORY OF ARCHITECTURE I 3 Credits

This is a course in the history of architecture, beginning with ancient Egyptian architecture and ending with the Industrial Revolution era architecture of the eighteenth century. Major emphasis is placed on historical periods such as Byzantine, Romanesque, Gothic, Renaissance, and Baroque. Particular works of classical architects are also studied. Pre- or Co-requisites: ENG 096/097 and RDG 096/097 (passing grade of "C" or better for each), or placement.

ARC 112 HISTORY OF ARCHITECTURE II 3 Credits

This is a course on historical developments in architecture from the nineteenth century to the present post-modern era. Major emphasis is placed on architectural movements in Europe, namely the Beaux-Arts and Art Nouveau in France, the Arts and Crafts in England, the Bauhaus in Germany, and also the international style of architecture in both hemispheres. Works of noted architects are given special review. Prerequisite: "C" or better in ARC 111.

ARC 131 CONSTRUCTION METHODS I 3 Credits

This course introduces the concepts of building construction principles and processes including foundations, walls, floors, and roof systems. Materials considered are wood, masonry, steel, and concrete. Also discussed are site preparation and building code requirements. Prerequisite: "C" or better in MTH 113.

ARC 132 CONSTRUCTION METHODS II 3 Credits

This course is a continuation of ARC 131 and focuses on the details of buildings including windows, doors, and specialty construction such as stairs. Also discussed are thermal and moisture protection, finishing, and electrical and plumbing systems. Prerequisite: "C" or better in ARC 131.

ARC 201 ARCHITECTURAL DESIGN III 4 Credits

This is the third course in the architectural design sequence. Projects involve researching and analyzing programmatic

requirements of a design problem. Students generate multiple design solutions and present them using graphic methods appropriate to the solution. Prerequisite: "C" or better in ARC 102.

ARC 202 ARCHITECTURAL DESIGN IV 4 Credits

This is a design drawing workshop where the student selects an architectural problem and develops the solution by investigating design, structure, costs, and environment. The student then presents his/her solution through two and three-dimensional drawings. Prerequisite: "C" or better in ARC 201.

Art

ART 100 ART APPRECIATION 3 Credits

This is an introductory course designed to acquaint the student with the greatest achievements of painting, sculpture, and architecture for a richer understanding and appreciation of art in daily life as well as in the cultures of the world. This course is for non-art majors only.

ART 101 ART HISTORY I 3 Credits

This course is a study of the historical contributions in painting, sculpture, architecture, and the minor arts of all cultures from prehistoric times up to the year 1400. Pre- or Co-requisite: ENG 101 (passing grade of "C" or better.)

ART 102 ART HISTORY II 3 Credits

This course is an historical study of world painting, sculpture, architecture, and the minor arts from 1400 to the present. Cultures from throughout the entire world are covered, as are the contributions of women to the arts. Note: ART 102 can substitute for the ART 100 or ART 101 core Humanities requirement.

ART 103 FUNDAMENTALS OF ART I 3 Credits

This is the first of two design courses dealing with problems involving the use of shape, line, texture, space, and color (the elements of design) in accordance with the principles of design. Students are introduced to various media in solving the design problems posed.

ART 104 FUNDAMENTALS OF ART II 3 Credits

This course is the second half of ART 103, with a particular emphasis on color theory. Special projects in color and design are done according to individual student interest in consultation with the instructor. Prerequisite: ART 103.

ART 107 DRAWING I 3 Credits

This course is an introduction to drawing techniques, materials, and philosophies with emphasis on the development of observational skills and order and clarity of form in graphic terms.

ART 108 LIFE DRAWING 3 Credits

This course features both fundamental and advanced drawing study from life. It uses the skeleton, live models, and a variety of drawing media for both long and short action poses. Basic anatomy and proportion are emphasized. Prerequisite: ART 107.

ART 110 SCULPTURE 3 Credits

This course is an introduction to the three-dimensional fine art medium of sculpture. Its focus is mainly on additive and subtractive media in sculpting, especially the use of clay.

ART 111 FUNDAMENTALS OF PAINTING 3 Credits

This course is a studio exploration of various painting techniques, media, and materials, including the preparation of canvasses.

ART 119 MUSEUMS AND GALLERIES 3 Credits

This course is about how looking can be interesting when it is accompanied by thinking and knowing. Students visit New Jersey's and New York's famous museums and galleries with the instructor. Participants develop sensitivity to the actual work of art so that they can increase their knowledge and enjoyment of the art world. Students pay individual admission to the museums, where required.

ART 140 PHOTOGRAPHY 3 Credits

This course is an introduction to black and white photography. It provides students experience with a 35mm camera and basic darkroom equipment. Topics and assignments covered include photograph composition, film development, enlarging, and photo printing. NOTE: a 35mm camera is required.

**ART 160 ELECTRONIC MECHANICALS/
PRE-PRESS PRODUCTION 3 Credits**

This is a course in the basic methods and applications of the computer to previously utilized manual paste up and mechanical production now used in digital graphic design, publishing, and advertising art. The course places emphasis upon the student developing a demonstrated proficiency in a number of pre-press procedures, techniques, and applications for making published documents using desktop publishing computer skills. Scanning, digital photography editing techniques, color publication production, and the special use of typography are covered.

**ART 161 COMPUTER ENHANCED
LAYOUT AND DESIGN 3 Credits**

The course focuses upon the elements and principles of design with the computer as the major production tool. Line, shape, color, textures, space, light, balance, rhythm, unity, harmony, emphasis, and contrast are applied to the digitally produced documents, presentations, video, Web page designs, and advertisements. Design elements and principles, conceptualization of ideas, and the use of digitally

created effects are all featured.

ART 163 DIGITAL VIDEO GRAPHIC DESIGN 3 Credits

This course emphasizes the artistic production of hard copy, film, slides, video, and animation created by digital photography, digital video imaging, scanning, and desktop editing techniques. Design elements and principles are combined with computer skills to produce portfolio and production video clips necessary for employment placement or advanced study in the computer graphics field. Prerequisite: ART 161, ART 167, or ART 168.

ART 167 INTRODUCTION TO COMPUTER ART 3 Credits

This introductory course covers the basics of computer graphic applications for design, commercial reproduction of art work, mechanicals, comprehensives, and the use of the computer as a graphic design tool. Scanning line art, copy, half tones, modifying half tones, and techniques for graphic design using the computer are emphasized. The student makes a part of his/her portfolio a multiplicity of design and camera-ready projects, transparencies, four color art, and multilevel drawings.

**ART 168 DESKTOP PUBLISHING/
PRESENTATION GRAPHICS 3 Credits**

This is an introductory course focusing on the fundamental theories, practices, and computer applications of presentation graphics. The course places a major emphasis upon computer-generated graphics including project schedules, spreadsheets, financial data, brochures, flyers, effective communications, slides, transparencies, animation, and page design. Prerequisite: Familiarization with keyboarding or permission of instructor.

ART 169 ADVANCED COMPUTER GRAPHICS 3 Credits

This course focuses on the continued development of individual design skills using the elements and the principles of design while enhancing individual computer proficiency. Students perfect their ability to creatively use Adobe Photoshop, Adobe Illustrator, Quark Xpress, and other design software to produce original graphic design for print and Web-based media. Instruction is given on Windows or MacIntosh. Prerequisites: ART 167 or ART 168 or portfolio with demonstrated proficiencies, and keyboarding at an acceptable number of words per minute.

ART 170 BASIC WEB PAGE DESIGN 3 Credits

This course prepares the novice Web designer for the complex task of Web page design. The course focuses on learning the essential elements and principles of design and applying them to page layout, design of text, and graphics for the Web. Topics covered include simple graphics and links, navigational controls, the basics of HTML, as well as planning cognitive content and artistic effects that would be dynamic in the global marketplace of the World Wide Web. Students are required to create three Web sites: personal, business and educational.

Prerequisites: ART 167 or ART 168 or portfolio with demonstrated proficiencies, and keyboarding proficiency.

**ART 171 CYBERSPACE GRAPHICS AND
BEGINNING ANIMATION 3 Credits**

Using the elements and the principles of design, this course instructs the student in the principles of creating and preparing GIFs (Graphic Interface Formats) and basic animation for the World Wide Web. Students learn about the two basic graphic types (bit maps and vectors), graphic formats supported by popular software programs, and those used for graphic design on the Web. A variety of software programs for both platforms (Windows and MacIntosh) are used. Prerequisite: ART 167 or ART 169 or ART 170 or portfolio with demonstrated proficiencies

**ART 200 THE ART OF THE
AFRICAN-AMERICAN 3 Credits**

This course is an introduction to and exploration of works and styles of African-American artists with special attention given to values expressed in their art. The course also includes artistic ideas generated by the African diaspora. NOTE: This course can substitute for the ART 100 or ART 101 core Humanities requirement.

ART 205 TWO-DIMENSIONAL DESIGN 3 Credits

This course continues the emphasis on the elements and principles of design found in ART 103 and 104. It assigns students design projects in the fine, commercial, and applied arts. Prerequisite: ART 103.

ART 206 THREE-DIMENSIONAL DESIGN 3 Credits

This course extends the application of the elements and principles of design into an examination of the three-dimensional aspects of design. Functional as well as aesthetic utilization of space and manipulative skills with tools, new materials, and subjects are emphasized.

Biology

**BIO 100 FOUNDATIONS OF BIOLOGY 4 Credits
(Science Majors)**

This is a beginning laboratory science course for students who plan to continue into medical, biological, or related sciences. This course covers selected biology topics and introduces examples of physical science vocabulary and theory related to biological studies. This course provides a background for the student who has never studied biology, or who is "rusty," to succeed in more advanced biology courses such as BIO 103-104, BIO 121-122, and BIO 211. It is also a helpful science preparation for chemistry, pharmacology, and nursing requirements. Topics offered include: anatomical terminology systems, tissues, body chemistry inorganic, body chemistry organic, cells and cell membranes, and cell respiration. Laboratory introduces measuring instruments, microscope, and dissection

techniques. Pre- or Co-requisites: ENG 096/097 and RDG 096/097 (passing grade of “C” or better for each), or placement.

BIO 101 COLLEGE BIOLOGY I 4 Credits
(Non-Science Majors)

This course is designed to develop, from a conceptual approach, meaningful understanding of some fundamental principles of the living world. Particular emphasis is placed on the unity and diversity of life forms and their relationship to each other and to their environment. This course can be taken to satisfy the science requirement of a non-science major, and can be taken independent of, before, or after BIO 102. Pre- or Co-requisites: ENG 096/097 and RDG 096/097 (passing grade of “C” or better for each), or placement.

BIO 102 COLLEGE BIOLOGY II 4 Credits
(Non-Science Majors)

Using a conceptual approach, this course places emphasis on human biology and human ecology. Basic principles concerning the structure and function of human body systems in both health and disease conditions are studied. This course can be taken to satisfy the science requirements for non-science majors, and can be taken independent of, before, or after BIO 101. Pre- or Co-requisites: ENG 096/097 and RDG 096/097 (passing grade of “C” or better for each), or placement.

BIO 103 GENERAL BIOLOGY I 4 Credits
(Biology Majors Only)

This course explores the basic principles which govern the behavior of living matter on the molecular and cellular level. Topics covered include: characteristics of important biological macromolecule, cell metabolism and energetics, cell structure, cell division, and fundamentals of modern genetics. Pre- or Co-requisites: ENG 096/097, RDG 096/097, and MTH 100 (passing grade of “C” or better for each), or placement. High school biology strongly recommended.

BIO 104 GENERAL BIOLOGY II 4 Credits
(Biology Majors Only)

A continuation of BIO 103, this course covers evolution, organization of cells into tissues and organs, organ systems, comparative physiological studies among plants and among animals, and structure and function relationships. Prerequisites: “C” or better in BIO 103 and MTH 100.

BIO 117 FUNDAMENTALS OF ANATOMY 4 Credits
AND PHYSIOLOGY I

This is a course in basic anatomy and physiology. Lecture topics include: basic science fundamental to the understanding of the body’s structure function, the cell, tissues, water compartments, skeletal system, muscular system, and nervous system. Pre- or Co-requisites: ENG 096/097 and RDG 096/097 (passing grade of “C” or better for each), or placement. High school biology strongly recommended.

BIO 118 FUNDAMENTALS OF ANATOMY 4 Credits
AND PHYSIOLOGY II

This course in basic anatomy and physiology includes the following lecture topics: the respiratory system, digestive system, metabolism and nutrition, the urinary system, and the lymphatic, cardiovascular, and reproductive systems. Prerequisite: “C” or better in BIO 117.

BIO 121 ANATOMY AND PHYSIOLOGY I 4 Credits

This course on human anatomy and physiology covers integration and regulation of physiological processes with emphasis on the structural and functional interrelationships. Lecture topics include: chemical and physical constituents of living material; cell structure and function; tissues, their arrangements and their contributions to systemic function; development and functions of the skeletal system; muscle physiology; nervous system; and special sense organs. The laboratory work serves to enhance the lectures through detailed discussions, hands-on examination of specimens, and problem solving. Pre- or Co-requisites: ENG 096/097 and RDG 096/097 (passing grade of “C” or better for each), or placement. High school biology and chemistry are strongly recommended.

BIO 122 ANATOMY AND PHYSIOLOGY II 4 Credits

This course builds on Anatomy and Physiology I. Lecture topics include: structure and function of the circulatory system, respiratory system, and digestive system, basic concepts of metabolism, excretory system, water and salt metabolism, and endocrine and reproductive systems. The laboratory experience serves to enhance the topics covered in lectures. Prerequisite: “C” or better in BIO 121.

BIO 125 ANATOMY AND PHYSIOLOGY OF 3 Credits
THE EYE
(Ophthalmic Dispensing Program Majors Only)

This course starts with a basic overview of human anatomy and physiology and then focuses on the anatomy and physiology of the eye. Emphasis is placed on embryological development of the eye, the normal structure and function of ocular tissues, and their interrelationships with other systems. Consideration is given to anatomical abnormalities and the pathophysiology of the visual system. Laboratory work includes dissection of an eye.

BIO 211 MICROBIOLOGY 4 Credits

Microbiology is the study of microorganisms. Topics covered include: eucaryotic cells, protozoans and fungi, pro-caryotic cells, bacteria, rickettsiae and mycoplasmas, and viruses. Lectures and laboratory sessions consider techniques in culturing, studying, and identifying microorganisms. Also covered are nutritional and environmental needs, biochemical activity, genetic makeup and expression, and the interrelations between microorganisms and human or animal hosts during health and disease. Additional topics are pathogenicity, virulence, immunology, natural defense, and environmental control factors.

Prerequisites: "C" or better in CHM 101 or CHM 103 and also in BIO 104 or BIO 122.

BIO 221 KINESIOLOGY 3 Credits
(Physical Therapy Assistant Majors Only)

A study of human movement and its relationship to anatomical structure. The mechanics of underlying motor skills and the application of these factors by Physical Therapist Assistants are emphasized. Prerequisite: "C" or better in BIO 121.

BIO 237 GENETICS WITH LABORATORY 4 Credits

This is an introductory course in genetics for biology majors. The course follows a lecture/laboratory format to cover traditional topics in transmission genetics (Mendelian and Non-Mendelian), gene mapping, molecular genetics, organization of viral, prokaryotic, and eukaryotic genes, regulation of gene expression, recombinant DNA technology, and population genetics. The laboratory component introduces students to techniques and instrumentation that are used to manipulate and to investigate the structure, function, and transmission of inheritable information. Prerequisite: "C" or better in BIO 103. Co-requisite: BIO 104. Laboratory fee.

BIO 241 PATHOPHYSIOLOGY 3 Credits

This course emphasizes disease mechanisms, the various responses of the body to restore homeostasis, and the effect of these responses on normal function. Pathogenesis is viewed at the molecular, cellular, tissue, and systemic levels and correlated with signs and symptoms. Diagnostic procedures and the rationale for treatment modalities are covered for model diseases. Prerequisite: "C" or better in BIO 104 or BIO 122.

BIO 251 PHARMACOLOGY FOR HEALTH PROFESSIONALS 3 Credits

This is an introductory course in pharmacology. Students utilize the physical and social sciences as a framework for developing an understanding of drug action and usage. Selected classifications and families of drugs are introduced. The names, indications, mechanisms, dosage range, side effects, and adverse effects of individual drugs are discussed. The format of the course is lecture, discussion, and case presentation. Prerequisite: "C" or better in BIO 121 or BIO 103. Co-requisite: BIO 104 or BIO 122.

Business Administration

BUS 100 BUSINESS WORKSHOP 3 Credits

This course offers an introduction to contemporary business principles and practices, raises economic awareness, and also reinforces study skills. Topics that are covered include business career opportunities, successes in business, reading comprehension, writing about business subjects, listening and taking notes, vocabulary development,

and improvement of the student's learning processes. Prerequisite: "C" or better in ENG 086/087.

BUS 101 BUSINESS ORGANIZATION AND MANAGEMENT 3 Credits

This course offers a concise overview of the world of business. Emphasis is placed on the following topics: ownership, risk, production, finance and the financial system, marketing, human resources, and the effect of government on business. Pre- or Co-requisites: ENG 096/097 and RDG 096/097 (passing grade of "C" or better for each), or placement.

BUS 141 BUSINESS MATHEMATICS 3 Credits

Emphasis is on the application of fundamental mathematical principles to business: ratio and proportion, percentage, discounts, interest, graphs and measurements. Prerequisite: "C" or better in MTH 092/093.

BUS 201 PRINCIPLES OF MANAGEMENT 3 Credits

This course offers an introduction to the major functions of management: planning, staffing, organizing, controlling, direction, and financing. The technical tools of management are considered in relation to their social and psychological implications in management decision making. Prerequisite: "C" or better in BUS 101.

BUS 204 INTRODUCTION TO ORGANIZATIONAL BEHAVIOR IN BUSINESS 3 Credits

This course traces the foundation and development of behavioral science as applied to business, and analyzes organizational and human needs. Topics emphasized include: organizational design and development, formal and informal work groups, communication and group processes, motivation theory, leadership, and the relationship between the work environment and the community and the urban setting. The course includes a review of selected behavioral research findings. Prerequisite: "C" or better in BUS 201.

BUS 207 LEADERSHIP AND SUPERVISION IN ORGANIZATIONS 3 Credits

This course offers students the opportunity to learn about leadership and supervision in modern organizations. Students are introduced to a variety of behavioral and managerial leadership theories and research findings including the Ohio Studies, participative leadership, and charismatic leadership. Case studies, experiential exercises, and print and electronic media are used to enhance classroom discussion. Prerequisite: "C" or better in BUS 201.

BUS 211 PRINCIPLES OF MARKETING 3 Credits

This course examines those business activities that are paramount in affecting the sale and distribution of goods and services. Consideration is given to market research and analysis, the place of the consumer in our economic

system, and the functions of retailing and wholesaling. Prerequisite: "C" or better in BUS 101.

BUS 212 PRINCIPLES OF RETAILING 3 Credits

This course deals with the organization of retail stores with emphasis placed on management and merchandising policies, the world of fashion, color, design, textiles, and non-textiles. Planning and control are studied, particularly the use of pricing techniques, gross margin, markup and markdown, discounts, inventories, and open to buy. Constant reference is made to the economic and social forces which affect retail distribution. Prerequisite: "C" or better in BUS 211.

BUS 213 PRINCIPLES OF SELLING 3 Credits

Students study the techniques of successful selling. Topics covered include: the location and selection of prospects, the approach, the sales presentation, meeting objectives, and closing the sale. These techniques are applied through student sales presentations and use of videotape evaluations. Prerequisite: "C" or better in BUS 211.

BUS 215 ADVERTISING PRINCIPLES 3 Credits

Advertising and other promotional methods are studied from the perspective of communication with the market. Topics covered include advertising's place in the marketing mix, media selection, advertising research and production, and sales promotional strategies. Student creativity is encouraged and developed. Prerequisite: "C" or better in BUS 211.

BUS 221 HUMAN RESOURCE MANAGEMENT 3 Credits

This course focuses on the background and operating concepts underlying the management of human resources in business and public organizations. It examines the critical issues in human resources including employment, wage and salary administration, training and development, employee and labor relations, and accident prevention. Emphasis is placed on the findings of the behavioral sciences as applied to personnel administration. Prerequisite: "C" or better in BUS 201.

BUS 231 GLOBAL BUSINESS 3 Credits

This course is an introduction to the theory and practice of international business. Topics covered include global organization, principles of international trade, international management, marketing, finance, foreign exchange, balance of payments, trade deficits, free trade agreements, NAFTA, GATT, trade barriers, international investment, U.S. International Trade Zones, European Union, and the global environment of business. Prerequisite: "C" or better in BUS 201.

BUS 251 BUSINESS LAW I 3 Credits

This course provides an introduction to the principles, rules, and scope of business law. Topics covered include sources of law, contracts, and the law of sales under the Uniform Commercial Code. Major antitrust, administrative, and

environmental laws are reviewed. Current issues in consumer affairs and legal challenges are discussed. Prerequisite: "C" or better in BUS 101.

BUS 252 BUSINESS LAW II 3 Credits

This course further explores legal topics governing business operations including agency, personal property and bailments, negotiable instruments, corporations, and partnerships. The Uniform Commercial Code is referenced, as are other relative sources of law. Prerequisite: "C" or better in BUS 251.

Chemistry

CHM 100 INTRODUCTION TO CHEMISTRY 4 Credits

A broad survey of the basic principles of chemistry is provided with a laboratory section for non-science, pre-science, and allied health students. Pre- or Co-requisites: ENG 096/097, RDG 096/097, and MTH 092/093 (passing grade of "C" or better for each), or placement.

CHM 101 COLLEGE CHEMISTRY I 4 Credits

This course covers the major concepts of general chemistry which includes states and properties of matter, atomic structure, mole concept and stoichiometry, solutions, acid base chemistry, equilibrium, and kinetics with laboratory sessions. This course is designed to provide appropriate chemistry background for nursing and health science students. Pre- or Co-requisites: ENG 096/097, RDG 096/097, and MTH 092/093 (passing grade of "C" or better for each), or placement. High school chemistry strongly recommended.

CHM 102 COLLEGE CHEMISTRY II 4 Credits

This course is an introduction to organic and biological chemistry for students preparing for careers in health care. Course content includes hydrocarbons, alcohols, carbohydrates, amines, lipids, amino acids and proteins, enzymes, biochemical energy transfer, metabolism, and nutrition. The course is taught via lecture and laboratory sessions. Prerequisite: "C" or better in CHM 101.

CHM 103 GENERAL CHEMISTRY I 4 Credits

This is a transfer course in chemistry for chemistry, biology, pre-med, and engineering students. Principles and concepts of stoichiometry, thermochemistry, ionic and molecular equilibria, and kinetics are covered. Also included is a brief introduction to organic nomenclature. Emphasis is on problem solving. Laboratory work is coordinated with lectures and numerous problem-solving sessions. Pre- or Co-requisites: ENG 096/097, RDG 096/097, and MTH 092/093 (passing grade of "C" or better for each), or placement. High school chemistry strongly recommended.

CHM 104 GENERAL CHEMISTRY II 4 Credits

This is a continuation of CHM 103. Atomic theory and bonding, elementary thermodynamics, electrochemistry, and nuclear chemistry are discussed. Theory and practice of ionic equilibria in qualitative analysis are also covered. Laboratory introduces students to theory and practice of semimicroqualitative analysis. Prerequisite: "C" or better in CHM 103.

**CHM 107 TECHNICAL CHEMISTRY I 3 Credits
(TTP Program Majors Only)**

This course offers an introduction to the science of chemistry. It covers major concepts in chemistry, with emphasis placed on inorganic chemistry. Topics covered include atomic structure, periodic law, states of matter, acid-based equilibrium, solutions, and oxidation-reduction.

**CHM 108 TECHNICAL CHEMISTRY II 3 Credits
(TTP Program Majors Only)**

Organic chemistry and industrial processes are covered. Prerequisite: "C" or better in CHM 107.

**CHM 109 TECHNICAL CHEMISTRY LABORATORY 2 Credits
(TTP Program Majors Only)**

This is a course in chemical laboratory techniques. Gravimetric and volumetric methods of chemical analysis are emphasized along with preparations, extractions, types of chromatography, and distillation.

**CHM 111 CHEMISTRY SEMINAR 3 Credits
(TTP Program Majors Only)**

Students are introduced to the chemical industry and its impact on society and job opportunities. The course includes tours of chemical plants and labs. Students also receive help in resumé writing.

**CHM 112 CHEMICAL CALCULATIONS 3 Credits
(TTP Program Majors Only)**

This is a practical course on methods of presenting data and performing chemical calculations using logarithms, algebra, graphical methods, and electronic calculators. Typical industrial problems are studied.

CHM 203 ORGANIC CHEMISTRY I 4 Credits

The fundamental synthesis and reactions of various organic molecules and the role these molecules play in our everyday lives are covered. The theory behind the reactions is also covered along with topics such as resonance and mechanisms. The lab includes experiments in polymers, flavoring, dyes, perfumes, analgesics, and food colors where the methods employed in the synthesis and purification of the product are emphasized. Prerequisite: "C" or better in CHM 104. Laboratory fee.

CHM 204 ORGANIC CHEMISTRY II 4 Credits

This is a continuation of CHM 203. The fundamental synthesis and reactions of still other organic molecules are covered. The laboratory includes experiments in chemiluminescence, natural products, local anesthetics, sulfa drugs, proteins, carbohydrates, and artificial sweeteners. Prerequisite: "C" or better in CHM 203. Laboratory fee.

**CHM 206 INSTRUMENTAL METHODS 4 Credits
(TTP Program Majors Only)**

This course covers modern analytical techniques. Emphasis is on spectral methods (infrared, ultraviolet, visible), polarimetry, refractometry, interpretation, and reporting of results.

Cinema

CIN 101 INTRODUCTION TO THE ART OF FILM 3 Credits

This is an introductory course designed to acquaint students with the art of film and to enable them to gain a greater understanding and appreciation of this important medium. The course covers the history of cinema, various cinematic theories and genres, and profiles of the industry's most influential directors. Pre- or Co-requisites: ENG 096/097 and RDG 096/097 (passing grade of "C" or better for each), or placement.

CIN 103 HISTORY OF AFRICAN-AMERICAN FILM 3 Credits

This is an introductory course designed to acquaint students with the history of African-American film and to develop in them a greater understanding and appreciation of African-American film history. The course develops chronologically, starting with the inventors and African-American film pioneers and ending with the resurgence of African American films in the 1980s. Much of the course content is analyses of theories, film facts, and people. Pre- or Co-requisites: ENG 096/097 and RDG 096-097 (passing grade of "C" or better for each), or placement.

Civil Construction Engineering Technology

CET 111 CONSTRUCTION METHODS AND MATERIALS 3 Credits

This course is an introduction to construction practices and materials used in construction. Emphasis is placed on the basic materials including concrete, steel, asphalt, masonry, and wood. Portland cement concrete is mixed in the lab and tested for strength. Other topics covered include site preparation and grading, foundations, and framing systems. A research paper is presented orally in class. Pre- or Co-requisite: ENG 096/097 and RDG 096/097 (passing grade of "C" or better for each), or placement.

CET 211 SURVEYING I 3 Credits

This is an introductory course that includes the use, care, and adjustment of modern digital surveying instruments, the measurement of distance, and differences in elevation, angles, directions, lines, and grades. Other topics covered include the theory of measurement and errors, traversing, and area computation. Field exercises are included to complement lecture topics. Co-requisite: MTH 114.

CET 212 SURVEYING II 3 Credits

This course is a continuation of CET 211 and covers the elements of horizontal, vertical, and compound curves, cross-sectioning, and earthwork computations. Other topics covered include the essentials of boundary surveys, coordinates, control surveys, construction surveys, and state plane coordinates. Field exercises and computer applications are included to complement lecture topics. Prerequisite: "C" or better in CET 211.

CET 214 EVIDENCE & PROCEDURES FOR BOUNDARY LOCATION 3 Credits

This course addresses the concept of evidence relating to boundary locations as discoverable on the ground and through deeds or other written records, and the procedures followed by the land surveyor when conflicts occur between those items of evidence by relating laws and cases. Prerequisite: "C" or better in CET 212.

CET 221 HYDRAULICS AND DRAINAGE 4 Credits

This course is an introduction to the fluid properties of water and the concepts of surface water hydrology. Topics covered include flow through pipes and channels and relationships between rainfall and runoff. Class time is divided between the study of theory and the application of this theory in the design of storm drainage systems. Procedures for determining drainage areas and sizing and layout of culverts are also covered. Laboratory experiments are performed to complement lecture topics. Prerequisite: "C" or better in CET 211. Co-requisite: MTH 114.

CET 225 SOIL MECHANICS 3 Credits

This is an introductory course in soil properties and testing techniques. Topics covered include soil classification, index properties, bearing capacity, retaining walls, soil compaction, and pile driving. Emphasis is placed on practical field applications including inspection and testing. Laboratory experiments are performed to complement lecture topics. Prerequisite: "C" or better in ENR 220.

CET 231 STRUCTURES 4 Credits

This is an introductory course in steel and concrete structural design. Students perform calculations and write specifications for the correct size and physical characteristics of structural components of the simpler forms of structural systems. Design of steel and wood framing members – including bearing plates, base plates, and riveted, bolted,

and welded connections – is included. Also included is the study of reinforced concrete elements such as rectangular beams, T-beams and one and two-way slabs, tied and spiral columns, footings, and foundation walls. Prerequisite: "C" or better in ENR 220.

CET 251 CET SEMINAR 1 Credit

This is a survey course involving a variety of topics relevant to civil engineering, construction, and land surveying. Through group discussion, research, and oral presentation, students gain an appreciation of the skills and techniques needed for success as a professional in their chosen field. Co-requisite: CET 231 or permission.

College Success

CSS 101 COLLEGE SUCCESS SEMINAR 1.5 Credits

This course prepares students for college life by offering critical information and providing an ongoing support system, as needed, throughout the first semester. It emphasizes self-assessment, self-management, the development of life skills, goal-directed behavior, and effective study habits. Co-requisites: ENG 088/089/090.

Communication

CMS 110 FUNDAMENTALS OF TELEVISION PRODUCTION 3 Credits

This course is designed to teach the basic fundamentals of broadcasting operations. Topics covered include basic production, audio systems equipment and operations, camera operation techniques, lighting and video switching, master control, and studio operations. Also covered are electronic news gathering, electronic field production, and videotape editing.

CMS 113 WRITING FOR FILM AND TELEVISION 3 Credits

This course familiarizes students with the basics of writing for film and television. Students are taught to apply industry standard formats in preparing scripts. Topics covered include style, story structure and content, characterization, dialogue, and opportunities for new writers in the industry. Students practice writing in the different styles of film and television shows. Prerequisite: "C" or better in ENG 101.

CMS 121 FUNDAMENTALS OF FILMMAKING 3 Credits

This introductory course is designed to acquaint students with the basic elements of film production. Students are taught the aesthetics and techniques required for producing 8mm film and 16mm film. They are also introduced to techniques in producing, writing, cinematography, directing, and editing. Students are required to write, produce, and

direct a short film. (Note: Students are required to share in the expenses involved in their productions.) Prerequisite: "C" or better in CMS 113 or permission by instructor.

CMS 136 RADIO BROADCASTING AND PRODUCTION 3 Credits

This course is designed to teach the fundamentals of radio production. Students examine the basic audio and studio operating procedures and gain hands-on experience in operating a radio broadcasting station. This is a theoretical as well as a "hands-on" course that splits time between lecture, lab, and station operation.

CMS 210 TELEVISION PRODUCTION II 3 Credits

This is an advanced course for those students interested in acquiring increased knowledge and sophistication in the production of television programs. Remote shooting, field production, and studio operations are principal components of the course. Students in CMS 210 participate in the Essex County College Observer (ECCO) -TV productions. Prerequisite: "C" or better in CMS 110.

CMS 219 VIDEO PRODUCTION 3 Credits

This advanced hands-on course allows students to create and develop a series of independent video productions. The tasks that students undertake include script writing, producing, directing, scheduling productions, camera operating, field videotaping, and post-production editing. (Note: Students are required to purchase their own videotapes.) Prerequisite: "C" or better in CMS 110.

ENG 151 MASS COMMUNICATIONS AND CULTURE 3 Credits

This course surveys and examines mass communications, concentrating on radio, television, film, and other electronic and print media. The expression of popular culture through the mass media is analyzed and evaluated. Prerequisite: "C" or better in ENG 101.

Computer Information Systems

CIS 107 COMPUTER LITERACY 3 Credits

This introductory course in personal computers is specifically designed for students who have had little or no experience using the personal computer. The course introduces important computer concepts and provides students with hands-on lab experiences to prepare them for word processing assignments in college courses and for further study in computer-related courses. CIS 107 can be used as a free elective in all departments except Computer Information Systems.

CIS 111 INFORMATION PROCESSING I 4 Credits

This course provides an introduction to JavaScript programming. Topics covered include integrating JavaScript and HTML, creating pop-up windows, adding scrolling messages, validating forms, enhancing the use of images and form objects, working with cookies, arrays, and frames, and using objects to create a shopping mall application. Prerequisite: "C" or better in CIS 153.

CIS 114 INTRODUCTION TO VISUAL BASIC 4 Credits

This is a course about problem solving with computers. The programming language used is Visual Basic. Hands-on use and manipulation of Windows events, forms, controls, components, and structured programming techniques are covered. The examples and exercises present a sampling of the way that computers are used in society. Pre-requisites: "C" or better in MTH 092/093 and CIS 107 or CSC 100.

CIS 131 MICROCOMPUTERS IN BUSINESS 3 Credits

This course provides hands-on instruction on the applications of microcomputers in the business environment. Students gain experience in using application software packages such as Microsoft Office. The course includes an introduction to Windows, Microsoft Word, Excel, Access, Outlook, and PowerPoint. Pre- or Co-requisites: ENG 096/097 and RDG 096/097 (passing grade of "C" or better for each), or placement. Prerequisite: Some computer literacy is strongly recommended.

CIS 135 MICROCOMPUTER SPREADSHEETS 3 Credits

This course provides hands-on instruction in the use of Excel for Windows. It covers basic spreadsheet design and creation, formulas, charts, and data management. Step-by-step instruction using realistic case studies emphasizes the important features of the software. (Advanced features, case studies, and macro creation using Visual Basic are covered in CIS 235). Pre- or Co-requisites: ENG 096/097 and RDG 096/097 (passing grade of "C" or better for each), or placement. Pre-requisite: "C" or better in CIS 107.

CIS 136 DESKTOP PUBLISHING FOR IBM COMPUTERS 3 Credits

This course provides hands-on instruction to develop students' understanding of desktop publishing using Microsoft Office and the Internet. Topic covered include basic concepts, layout and good form, research, creating a presentation, using templates, and working with text, fonts, clip-art, drawings, and photographs. Students are required to design a variety of presentations as well as printed works indicative of their competence and typical of those found in business and industry as part of their portfolio. Pre- or Co-requisites: ENG 096/097 and RDG 096/097 (passing grade of "C" or better for each), or placement. Prerequisite: "C" or better in CIS 107.

CIS 137 MICROCOMPUTER DATABASES 3 Credits

This course provides hands-on instruction in the use of the database management package, Access. This course is designed to help students plan, create, and maintain database files for typical business needs. The course covers basic concepts, displays, editing, sorting and querying of information, producing forms and reports, and managing multiple databases. A final class project is assigned. Pre- or Co-requisites: ENG 096/097 and RDG 096/097 (passing grade of "C" or better for each), or placement. Prerequisite: "C" or better in CIS 107.

CIS 139 MULTIMEDIA CONCEPTS 3 Credits

This course provides an introduction to many of the individual components of interactive, computer assisted communications. Because multimedia technology is a tool, the applications are practically endless and multimedia may mean different things to different people. It may be a communications tool to some and an artistic medium to others. It can also be a teaching tool or a way to complete a business transaction. This course assists students in planning and developing multimedia presentations in their field of interest. Pre- or Co-requisites: ENG 096/097 and RDG 096/097 (passing grade of "C" or better for each), or placement. Prerequisite: "C" or better in CIS 107.

CIS 152 INTERNET CONCEPTS 3 Credits

This course provides a basic introduction to the world wide computer communications network, the Internet, including the World Wide Web. Students gain an understanding of the history and background as well as the hardware and media which comprise the Internet. This is a research-oriented course in which Internet Protocol, net etiquette, e-mail, accessing Internet services, File Transfer Protocol, and searching the databases are explored. Students are provided hands-on introduction to the HyperText Markup Language (HTML) used to create World Wide Web sites on the Internet. Students also create their own web site and begin to use the Language (HTML) to create, edit, and maintain their site. Pre- or Co-requisites: ENG 096/ 097 and RDG 096/097 (passing grade of "C" or better for each), or placement. Prerequisite: "C" or better in any CIS course.

CIS 153 ADVANCED INTERNET CONCEPTS AND APPLICATIONS 3 Credits

This course is an extension of the basic introduction to the Internet language covered in CIS 152. Students learn to design and improve World Wide Web sites. The course also covers more complex tables, manipulation of Frames, Common Gate Interface (CGI), Cascading Style Sheets (CSS), and a brief introduction to JavaScript within the confines of HTML tags. Incorporating multimedia files (audio and video) is also covered. CSS and JavaScript are discussed on a very basic level with the goal of introducing students to tools that enhance HTML and add dynamic content to web sites. Upon the completion of this course, students will be prepared to take the introductory

course in JavaScript (CSS 111). Prerequisite: "C" or better in CIS 152.

CIS 212 SYSTEMS ANALYSIS AND DESIGN 3 Credits

This course gives an overview of the systems development life cycle covering the information gathering and reporting activities from the analysis phase through the implementation phase. The course introduces the classical and structured tools/techniques for describing process flow, data flows, data structures, file design, input/output designs, and program specifications. Pre- or Co-requisites: ENG 096/097 and RDG 096/097 (passing grade of "C" or better for each), or placement. Prerequisite: "C" or better in any CIS course.

CIS 215 DATA COMMUNICATIONS 3 Credits

This course is designed to develop an understanding of current data communications technology as it applies to information systems. Topics covered include basic concepts and terminology as it relates to data communications and networks, with particular emphasis on local area networks. Students are required to design PC network hardware configurations based upon selected case studies. Prerequisite: "C" or better in CIS 212 or permission of the instructor.

CIS 235 ADVANCED MICROCOMPUTER SPREADSHEETS 3 Credits

This course is a continuation of CIS 135, which introduced students to the spreadsheet analysis application, Excel for Windows. Continuing the step-by-step instruction using case studies, advanced Excel features, and OLE (Object Linking and Embedding), hyperlink to the Internet and Visual Basic functions are covered. Special attention is paid to creating macro modules using Visual Basic. An advanced research project is required. Pre- or Co-requisite: ENG 101 (passing grade of "C" or better). Prerequisite: "C" or better in CIS 135.

CIS 237 ADVANCED MICROCOMPUTER DATABASE 3 Credits

This course is a continuation of CIS 137 emphasizing advanced features of database management. Topics covered include creating customized forms and reports, creating charts and graphs, advanced queries and OLE (Object Linking and Embedding), macros, and hyperlink to the Internet and Visual Basics. A case project is assigned to be completed by the end of the semester. Pre- or Co-requisite: ENG 101 (passing grade of "C" or better). Prerequisite: "C" or better in CIS 137.

Computer Sciences

CSC 100 FUNDAMENTALS OF COMPUTER SCIENCE 3 Credits

This course introduces the elementary concepts of computer science and is specifically designed for students planning to major in the discipline. The course emphasizes the various aspects of computing such as problem solving, algorithm design, and program construction. Students also explore the application of computer science to various real-world problems. An object-oriented programming language is used to develop the student's problem solving and programming skills. Successful completion of programming projects requires students to use a computer laboratory outside of the class period. Co-requisite: MTH 092/093.

CSC 104 NETWORK FUNDAMENTALS 3 Credits

This course is an introduction to microcomputer hardware and operating system components associated with network technology. It focuses on the introductory topics that are necessary for a student who is planning a career in network technology.

CSC 105 NETWORK ADMINISTRATION 4 Credits

This course provides the necessary information and hands-on laboratory experience for students who intend to administer Local Area Networks. The course provides students with technical knowledge in the areas of networking connectivity, data communications, and communication protocols. Students are required to demonstrate their proficiency in the subject matter by completing a series of laboratory exercises. Prerequisite: "C" or better in CSC 104. Laboratory fee.

CSC 108 CLIENT OPERATING SYSTEMS 4 Credits

This is a course in the organization, structure, and implementation of operating systems typically used by clients in Local and Wide Area Networks. The course covers in detail the features associated with graphical, secure, 32-bit network operating systems such as Windows 2000 Professional. Students must be prepared for extensive hands-on work in a client/server environment. Prerequisite: "C" or better in CSC 104. Laboratory fee.

CSC 110 ROUTING AND SWITCHING FUNDAMENTALS 4 Credits

This course is designed to introduce the fundamental terminology, concepts, and principles associated with the configuration and implementation of Cisco routers in Local and Wide Area Networks. The course covers in detail the OSI Reference Model, IP addressing, signaling and data transmission, and network topologies. All course topics correspond to the first semester of the Cisco Networking Academy Program curriculum for the CCNA examination. The course is taught in a lecture, discussion,

and demonstration format within the confines of a specialized laboratory. Laboratory fee.

CSC 111 ROUTING AND SWITCHING WIDE AREA NETWORKS 4 Credits

This course is a continuation of CSC 110. Students develop the knowledge to configure Cisco routers in Local and Wide Area Networks. The course covers in detail router configuration, IP addressing, WAN routing protocols, and network troubleshooting. All course topics correspond to the second semester of the Cisco Networking Academy Program curriculum for the CCNA examination. Students are required to complete a selected series of router implementation and configuration exercises to pass the course. The course is taught in a lecture, discussion, and demonstration format within the confines of a specialized laboratory. Prerequisite: "C" or better in CSC 110. Laboratory fee.

CSC 112 COMPUTER PROGRAMMING FOR ENGINEERING & TECHNOLOGY 3 Credits

This course is an introduction to computer-oriented problem solving and programming and their applications in engineering. It provides the essential foundation for a program of study in object-oriented programming and computer-oriented mathematics. It covers the general areas of data analysis (graphics, sorting, and statistics), curve fitting (regression and interpolation), and equation solving. Students learn programming and the use of general-purpose application software tools such as spreadsheets, database, and mathematical software. Students are required to complete a series of laboratory assignments illustrating applications of computer-oriented problem solving. Prerequisite: "C" or better in MTH 113 or MTH 119.

CSC 121 COMPUTER SCIENCE I 4 Credits

This course serves as an introduction to the concepts and methodologies fundamental to computer science. Emphasis is placed upon object-oriented design and analysis with a thorough discussion of the concepts and principles associated with object-oriented programming. A high level object-oriented language is utilized for programming assignments and to illustrate conceptual material. It is recommended that a student be enrolled concurrently in either MTH 113 or MTH 119 to derive the most benefit from the course. Prerequisite: "C" or better in MTH 100.

CSC 122 COMPUTER SCIENCE II 4 Credits

This course explores further the concepts introduced in CSC 121, applying them to more complex problems. Areas covered include class construction, class instantiation, file/stream processing, list processing, string processing, dynamic storage allocation, and internal search/sort methods. Prerequisite: "C" or better in CSC 121 and MTH 113 or MTH 119.

CSC 210 ADVANCED NETWORK ADMINISTRATION 4 Credits

This is a continuation of CSC 105. Emphasis is on the advanced concepts of network administration in a Microsoft Windows 2000 environment. The course provides the necessary information through lecture and hands-on laboratory work for the management of local area networks. Topics covered include server management, client configuration, network security configuration, and network infrastructure administration. Students are required to demonstrate their proficiency in the subject matter by completing a series of laboratory exercises. Prerequisite: "C" or better in CSC 105. Laboratory fee.

CSC 211 INTERNETWORKING 4 Credits

This course is designed to enhance students' knowledge of the implementation and configuration of Cisco routers in an internetworking environment. It covers in detail LAN switching, Virtual LANs, Access Control Lists, Interior Gateway Routing Protocol, and network management. All course topics correspond to the third semester of the Cisco Networking Academy Program curriculum for the CCNA examination. Students are required to complete a selected series of router implementation and configuration exercises to pass the course. The course is taught in a lecture, discussion, and demonstration format within the confines of a specialized laboratory. Prerequisite: "C" or better in CSC 111. Laboratory fee.

CSC 212 ADVANCED INTERNETWORKING 4 Credits

This course develops students' knowledge of Wide Area Network Design. It covers in detail the concepts and design implementations for Wide Area Networks using the Point-to-Point Protocol, ISDN, and Frame Relay. Topics covered correspond to the fourth semester of the Cisco Networking Academy Program curriculum for the CCNA examination. Students are required to complete a network design project to pass the course. The course is taught in a lecture, discussion, and demonstration format within the confines of a specialized laboratory. Prerequisite: "C" or better in CSC 211. Laboratory fee.

CSC 221 COMPUTER SYSTEMS AND ARCHITECTURE 4 Credits

This course provides a general introduction to the structure of computer systems and covers Assembly language for a specific computer. Topics discussed include machine components and cycles, assemblers, addressing techniques, macros, subroutines, program linkage, and input/output. A specific Assembly language is developed and implemented. Students must be prepared for extensive individual work in the computer laboratory. Prerequisite: "C" or better in CSC 122.

CSC 225 DATA STRUCTURES 4 Credits

This course is designed to present the fundamentals of data structures from an object-oriented perspective. The

course introduces students to the design and implementation of abstract data types using an object-oriented programming language. The course includes introduction to algorithm analysis, recursion, and internal and external sorting/searching methods. The fundamental concepts of inheritance and virtual functions are also examined. Students are required to complete a series of programming projects that demonstrate their understanding of lecture topics. Prerequisite: "C" or better in CSC 122.

CSC 228 OPERATING SYSTEMS 4 Credits

This course examines the concepts, designs, and operations of modern real-time, general-purpose operating systems. The course covers fundamental operating system technology as well as contemporary design principles such as real-time systems, multiprocessor scheduling, memory management, file management, and security and network processing. Students are required to complete a selected series of programming projects that illustrate operating system design principles. Prerequisite: "C" or better in CSC 225.

CSC 231 DATABASE DESIGN 4 Credits

This course introduces the concepts and techniques associated with the manipulation of mass storage based files. Topics explored include various file processing environments, access methods, typical data structures, and file design and implementation. Students must be prepared for extensive individual work in the computer laboratory. Prerequisite: "C" or better in CSC 122.

CSC 235 ADVANCED OBJECT-ORIENTED PROGRAMMING 4 Credits

This course covers the object-oriented paradigm associated with programming in a network environment. The course focuses on topics that relate to developing object-oriented applications for the Internet, Intranets, and World Wide Web. The Java programming language is used to illustrate software development for network environments. Topics covered include applet construction, animation, class construction, exception handling, graphics, HTML interfacing, and graphical user interface design. Students are required to develop and implement a network application. Prerequisite: "C" or better in CSC 225.

Criminal Justice

CJI 101 INTRODUCTION TO CRIMINAL JUSTICE 3 Credits

This introductory course on the principles and problems of the criminal justice system analyzes the role of the criminal justice officer in the community, the rights of the individual citizen, and the laws under which we live. The course examines in depth the organization and administration of the courts, corrections, and law enforcement agencies. The course includes analysis of the opportunities and obligations

of the criminal justice officials, and those in law enforcement, correctional services, and courts. Pre- or Co-requisites: ENG 096/097 and RDG 096/097 (passing grade of “C” or better for each), or placement.

CJI 102 POLICE ROLE IN THE COMMUNITY 3 Credits

The course includes analysis of the social, economic, population, and political factors that affect the relationship between police and the community. The course examines community/police partnership collaborations and a problem-solving approach to policing. Prerequisite: “C” or better in CJI 101.

CJI 103 PROBATION AND PAROLE 3 Credits

This course presents probation as a judicial process and parole as an executive function. Modern trends in probation and parole such as the community-based programs in work release, half-way house contract program planning, therapeutic community, and treatment team concepts in probation and parole are examined. The course includes discussion of the community resources that can be brought to bear on the correctional task and the concept of shock probation. Prerequisite: “C” or better in CJI 101.

CJI 104 CONSUMER LAW AND PROTECTION 3 Credits

This course is designed to provide students with an understanding of consumer law which will be of value in their everyday lives. Topics covered include family law, housing law, environmental law, consumer law, individual rights, and local, state, and federal consumer protection agencies. Students are required to complete a research project and submit the result in an acceptable form. Prerequisite: “C” or better in CJI 101.

CJI 111 POLICE ADMINISTRATION AND ORGANIZATION 3 Credits

This course examines the organizational framework, authority structure, and major functions of representative police agencies. It also covers the administrative problems of allocating responsibility and support functions and of coordinating many large and small area commands. The course includes discussion of recruitment, career advancement, and selection of leadership. Prerequisite: “C” or better in CJI 101.

CJI 112 POLICE MANAGEMENT 3 Credits

Principal areas of emphasis include the duties and responsibilities of the police supervisor, personnel problems, and handling of disciplinary problems, complaints, and grievances. The principles of efficient leadership, the relevance of motivation and communication, and techniques of teaching are presented. Prerequisite: “C” or better in CJI 101.

CJI 120 PRISON SUBCULTURES AND LIFESTYLES 3 Credits

This course focuses on the theoretical and policy issues and dilemmas of the American correctional system in handling citizens who have been imprisoned. It examines the origin and nature of the inmate social system, inmate social roles, and the prison socialization process. It explores, partly from the inmate's own perspective, modern concepts of behavior modification, punishment, community alternatives to imprisonment, and probable trends in the practice of correction. Prerequisites: C” or better in CJI 101.

CJI 121 INTRODUCTION TO CORRECTIONS 3 Credits

This course examines the total correctional process from law enforcement through the administration of justice, probation, prisons, correctional institutions, and parole. Prerequisite: C” or better in CJI 101.

CJI 123 CORRECTIONAL ADMINISTRATION 3 Credits

This course examines the principles of organization and management as applied to correctional institutions. It covers the theoretical and practical aspects of correctional management. Factors such as organization, decision making, values, human relations, and power are considered. Prerequisite: “C” or better in CJI 121.

CJI 134 INTRODUCTION TO SECURITY 3 Credits

This course surveys the concepts and issues surrounding the administration of security techniques and provides an overview of the functions of a wide range of security activities in a democratic society. Pre- or Co-requisites: ENG 096/097 and RDG 096/097 (passing grade of “C” or better for each).

CJI 135 SECURITY ADMINISTRATION 3 Credits

The purpose of this course is to introduce the student to the management and administration of a private security force and/or agency. Special attention is given to selection of security personnel, licensing/bonding requirements, and administrative style. Prerequisite: “C” or better in CJI 134.

CJI 136 CRIMINOLOGY 3 Credits

This course examines the various causative explanations of the nature of crime and criminal behavior and society's reaction to criminal and correctional institutions. Major theories of criminal behavior and current issues of crime prevention and control are also covered. Prerequisite: “C” or better in CJI 101.

CJI 137 PRINCIPLES OF LOSS PREVENTION 3 Credits

This is a theory course on the development of physical, operational, and other security programs. It explains the various types of surveys used to identify loss exposures and the management processes which define proper security countermeasures to use for specific vulnerabilities. Accepted theories and principles associated with loss prevention are

presented as basic tools for decision-making. Students enrolling in the course should have background in typical applications of security countermeasures and also in organizational frameworks defining the level at which security decision-making is required. Prerequisites: "C" or better in CJI 134 and 135.

CJI 138 UNIFORMED SERVICES 3 Credits

This survey course exposes the student to a wide range of activities and responsibilities associated with uniformed protection services in both "in-house" and commercial organizations. Students gain familiarity with typical duties in such areas as patrol, fire prevention, plant safety, first aid, and disaster control. The course also examines current trends in professionalism, use of firearms, and licensing. Specific duties associated with selected industries such as transportation, hospitals, and educational institutions are explored. Prerequisite: "C" or better in CJI 134.

CJI 139 SECURITY HARDWARE 3 Credits

This survey course focuses on physical security countermeasures, particularly on the design and monitoring of electronic alarm systems, responses to alarm signals, and identifying the causes of false alarms. The techniques used in integrating various physical security measures, both electronic and non-electronic, into an effective facility program are examined with consideration given to such determinant factors as desired or required profile, regulatory requirements, impact on operational requirements, and alternative countermeasures. Students enrolling in this course should have knowledge of processes used in loss prevention decision-making and have some background in physical security measures vis a vis the total security function. Prerequisite: "C" or better in CJI 134. Co-requisite: CJI 137.

CJI 201 PATROL ADMINISTRATION 3 Credits

This course examines in detail the primary police functions and their objectives. It analyzes administrative planning of patrol activities, requirements for their effective execution, and the allocation of patrol strength to meet specific needs and emergencies. Prerequisite: "C" or better in CJI 101.

CJI 202 CRIME AND DELINQUENCY 3 Credits

This course surveys the nature and extent of crime and delinquency and examines the major approaches to causation, apprehension, control, and treatment. Prerequisite: "C" or better in CJI 101.

CJI 204 EVIDENCE 3 Credits

This course surveys the basic rules of evidence important to law enforcement personnel and criminal justice students. It includes a study of the applicable amendments to the constitution, landmark Supreme Court decisions, and recent changes in the rules of evidence at the federal and state levels. Prerequisite: "C" or better in CJI 101.

CJI 210 FORENSIC SCIENCE 3 Credits

This is an introductory course on the application of physical and biological sciences to physical evidence to explain or solve civil and/or criminal law cases. Emphasis is placed on lecture and demonstration. Prerequisite: "C" or better in CJI 101.

CJI 211 COUNSELING THE ADDICTED OFFENDER 3 Credits

This course provides an introduction to the knowledge, skills, attitudes, case management, and counseling techniques required for the counseling and treatment of the addicted offender. The course includes a review of the special needs of this population and the focus programs and facilities set up to treat them in addictions and criminal justice settings. This course is a joint offering of the Criminal Justice and Human Services programs of the Social Science Division. Pre- or Co-requisites: ENG 096/097 and RDG 096/097 (passing grade of "C" or better for each).

CJI 250 CURRENT ISSUES IN CRIMINAL JUSTICE 3 Credits

This course examines the current critical issues in the criminal justice system. It includes comparison and analysis of pending cases before the federal and state courts. Students learn about previous decisions and other topics of a social nature that can impact on the administration of the criminal justice system. Prerequisite: "C" or better in CJI 101.

Dance

DAN 161 MODERN INTERPRETIVE DANCE I 3 Credits

This studio course offers basic instruction for beginning and intermediate students. The course focuses on developing the familiarity and understanding of the major systems of modern dance.

DAN 162 MODERN INTERPRETIVE DANCE II 3 Credits

Continuation of DAN 161. Prerequisite: "C" or better in DAN 161.

Dental Auxiliaries

DAS 103 DENTAL MATERIALS (Core Course) 3 Credits

This course introduces the dental student to the chemical and physical properties of materials most commonly used in dental practice. It includes discussion of theory, and demonstration and performance of basic laboratory and operatory procedures as related to these materials. Emphasis is placed on the expanded functions as listed in the New Jersey Dental Auxiliary's Act. Prerequisite: Formal acceptance into the program.

DAS 106 DENTAL SCIENCE 2 Credits

The dental student is introduced to the basic principles of pharmacology as it relates to the practice of dentistry. Students also learn how to relate the basic principles of general pathology to disease conditions of the oral cavity and related structures. Prerequisite: Formal acceptance into the program.

DAS 107 CLINICAL ASSISTING 4 Credits

Students learn clinical application of the principles and techniques learned in previous courses as pre-clinical procedures. Expanded functions allowed by the State of New Jersey are practiced in the New Jersey Dental School during the clinical rotation assignments; students thereby gain practical experience with dentists, patients, and other auxiliary personnel. Prerequisites: "C" or better in DAS 110 and DHY 205.

DAS 108 PRACTICE MANAGEMENT 1 Credit

This course provides the dental hygiene and dental assisting student with background information required to effectively manage the business office of a dental practice. Prerequisite: Formal acceptance into the program.

DAS 110 INTERNSHIP 1 Credit

This course incorporates the pre-clinical principles and techniques addressed in DHY 112 and DHY 205. Chair-side assisting, office management, laboratory assignments, inventory control, radiographs, and expanded functions allowed by the State of New Jersey for dental assistants are performed during the clinical rotation assignments in private practice. Prerequisites: "C" or better in DAS 103 and DHY 205.

DHY 100 INTRODUCTION TO CLINICAL DENTAL HYGIENE 4 Credits

This course develops students' basic knowledge, skills, and judgments necessary for prevention of diseases of the teeth and surrounding tissue. Students learn via lectures, seminars, self-instructional audio-visual presentations, and reading assignments. Laboratory and clinical experiences provide the opportunity for practical application of the principles of comprehensive dental hygiene treatment. Prerequisite: Formal acceptance into the program.

DHY 101 DENTAL HEAD AND NECK ANATOMY (Core Course) 3 Credits

This course examines the basic structures of the oral cavity, the nomenclature, structure and morphology of the teeth, and function of the teeth. Demonstrations and lecture sessions emphasize the clinical appearance of the anatomical features of the teeth, and the relationship of the teeth to adjacent teeth, opposing teeth, immediately surrounding tissues, and approximating tissues. This course also deals with the structure and function of the cross structures of the head and neck. Discussions emphasize

important anatomical concepts. Prerequisite: Formal acceptance into the program.

DHY 102 DENTAL RADIOLOGY (Core Course) 3 Credits

Lecture and laboratory sessions focus on the principles of radiology and their clinical application. Lecture topics include x-ray production, processing, intra and extra oral techniques, quality assurance, utilization of radiographic selection criteria, radiographic interpretation and radiation biology and safety, infection control, and hazardous waste disposal. Laboratory experience includes simulation exercises with mannequins, and working with assigned patients. Students are taught via lectures and demonstrations, and are responsible for answering workbook questions and completing a quality assurance project. Students who take the laboratory component will also complete a portfolio with a self-evaluation paper. Prerequisite: "C" or better in DHY 112.

DHY 103 CLINICAL DENTAL HYGIENE I 3 Credits

Students are offered introduction and demonstration in advanced techniques used during a dental hygiene appointment including oral physiotherapy, applying fluoride, treatment planning, adjunctive instrumentation, hypersensitivity testing, and airbrasive treatment. Case studies are examined with respect to treatment planning, behavior modification strategies, and adult and pediatric preventive counseling. Prerequisites: "C" or better in DHY 100, DHY 101, and DHY 112.

DHY 104 CLINICAL SERVICES I 2 Credits

The student learns to perform the basic procedures relative to the traditional dental hygiene appointment. Learning will be through clinical experience and weekly seminars. The seminar supports and supplements clinical education with discussion of topics relating to: treatment planning, time management with respect to setting up patient appointments and running the clinic, telephone skills, legal and ethical issues surrounding patients records, sharpening, adjunctive instrumentations, tobacco cessation, and latex sensitivity. Prerequisites: "C" or better in DHY 100, DHY 102, and DHY 112.

DHY 106 NUTRITION 2 Credits

This course offers students knowledge and skills to apply in the dental setting in the areas of nutrition, diet evaluation, and counseling relative to oral health. Prerequisite: Formal acceptance into the program.

DHY 107 ORAL EMBRYOLOGY AND HISTOLOGY 2 Credits

The course develops students' basic knowledge of general histology and embryology and detailed knowledge of histology and embryology of the head, neck, and oral cavity. Teaching methods include lecture, laboratory, and slide presentations. Prerequisites: "C" or better in DHY 101, DHY 105, BIO 121, and BIO 122.

DHY 110 MEDICAL EMERGENCIES IN THE DENTAL OFFICE (Core Course) 1 Credit

The course is designed to prepare the student to play a vital role in the management of medical emergencies. Information is offered on recognizing and treating emergency situations. The medical history and evaluation section of this course is designed specifically to help obtain and record accurately the patient's past and present physical condition, and to modify the dental hygiene treatment plan accordingly. Prerequisite: Formal acceptance into the program.

DHY 112 INTRODUCTION TO THE DENTAL PROFESSIONS (Core Course) 4 Credits

Topics relevant to the practice of dentistry, including concepts pertaining to general and specialty practice are covered in this class. The purpose is to introduce students to the areas of the profession and allied dental education. Prerequisite: Formal acceptance into the program.

DHY 113 DENTAL HEALTH EDUCATION (Core Course) 1 Credit

This course is designed to prepare the dental hygiene student to help individuals and groups develop patient education programs. Emphasis is given to focusing on the patient as a whole person, analyzing the patient's lifestyles, values, behavioral patterns, and the environment in which the patient lives. The course covers the processes involved in the development, implementation, and evaluation of dental health education programs in a number of settings. Prerequisite: "C" or better in DHY 112.

DHY 200 ORAL PATHOLOGY 2 Credits

The course covers abnormalities in morphology and function. Since abnormalities begin at the cellular level, this course also begins with cellular alterations and response. The majority of the course is devoted to oral pathology, with emphasis placed on those lesions most frequently encountered. For each lesion discussed, the etiology, pathogenesis, clinical and microscopic signs and symptoms, differential diagnosis, treatment, follow-up, and prognosis are presented. Limited discussion is devoted to general pathology as it relates to oral lesions and manifestations. Prerequisites: "C" or better in DHY 100, DHY 101, DHY 106, DHY 107, BIO 121, BIO 122, and BIO 211.

DHY 201 PERIODONTOLOGY I 2 Credits

The course examines the basic concepts of the anatomy and physiology of the gum with regard to the pathology of the periodontium, and the etiology and treatment of periodontal disease. The relationship between the histopathologic changes of the supporting structures of the teeth and the clinical situation is stressed. The course includes information on the dental hygienist's role in initial therapy and as a disease control therapist in maintaining oral health. Prerequisite: Formal acceptance into the program.

DHY 202 CLINICAL DENTAL HYGIENE II 2 Credits

This course is designed to further educate the dental hygiene student in various aspects of clinical practice. Included in this course is information relative to the care and treatment of periodontic, adolescent, pregnant, geriatric, and special needs patients. Lectures, student presentations and interviews, discussions, and case studies are used to enhance learning. Prerequisite: "C" or better in DHY 103.

DHY 203 CLINICAL SERVICES II 3 Credits

The student is required to demonstrate advanced techniques relative to the dental hygiene appointment, including oral physiotherapy, treatment planning, behavior modification strategies, and adult and child preventive counseling. Case presentations are also discussed and analyzed. Students learn from the seminar and clinical experience. Prerequisites: "C" or better in DHY 103, 104, 107, 110, and 113.

DHY 204 DENTAL HEALTH EDUCATION/ COMMUNITY DENTAL HEALTH 2 Credits

This course examines the principles and practices with regard to delivering health care to the public. Topics covered include: Dental public health, the role of the dental auxiliary in delivering public health, research methods and biostatistics, planning and evaluation of community dental health programs, and tools of public health, including epidemiology, dental indices, and reliability and validity of research methods. Prerequisite: Formal acceptance into the program.

DHY 205 DENTAL SPECIALTIES I (Core Course) 1 Credit

Students are given the opportunity to manipulate properties of dental materials used in the practice of dentistry. Biological considerations in the selection and utilization of dental materials are covered. Students learn about the way the clinical applications react to the oral environment. The course is a prerequisite to DHY 210, where the student will function and perform expanded duties to laboratory proficiency. The expanded duties are outlined in the New Jersey Dental Auxiliary Practice Act. This course consists of both lecture and laboratory sessions. Prerequisite: "C" or better in DAS 103.

DHY 207 CLINICAL SERVICES III 3 Credits

This course further refines students' clinical skills and prepares them to apply their knowledge of pathology and periodontology to the clinical setting. Prerequisite: "C" or better in DHY 203.

DHY 209 PHARMACOLOGY AND ORAL MEDICINE 1 Credit

This course introduces the dental hygiene student to pharmacology as it relates to the practice of dentistry. Students receive preparation for dealing with adverse drug reactions, pharmacological effects, and their usual incitations and contraindications. Prerequisite: Formal acceptance into the program.

DHY 210 DENTAL SPECIALTIES II 1 Credit

This course is designed to build upon the knowledge and skills developed in DHY 205. Students will rotate throughout the clinic, where they will function as New Jersey expanded duties dental hygienists/dental assistants, and become clinically proficient in all expanded duties listed in the New Jersey Dental Auxiliary Practice Act. In addition, dental hygiene students will attend the New Jersey Dental School Pain Control course to obtain necessary information about the application of pain control techniques. Prerequisite: "C" or better in DHY 205.

DHY 211 PERIODONTOLOGY II 2 Credits

This lecture course is a continuation of DHY 201. Students further explore clinical manifestations of periodontal disease and its treatment using case histories. Guest lecturers present the most current information on available clinical and adjunctive home care aids. Students' knowledge is further enhanced through case presentations and review of articles on current developments. Prerequisite: "C" or better in DHY 201.

DHY 213 CAPSTONE SEMINAR 2 Credits

The Capstone Seminar is to be taken at the conclusion of the student's program of study. Students are expected to synthesize what they have learned in the Dental Hygiene major by putting together a case study for publication and presentation, using appropriate research methods and analyzes of oral pathological conditions. Prerequisites: All DAS and DHY courses to this level.

DHY 215 PAIN AND ANXIETY CONTROL 1 Credit

This course is designed to introduce the student to the principles of local anesthesia in dentistry. Emphasis is placed on clinical application of these principles. Anatomy of the head and neck is stressed throughout the course, including in depth review of the trigeminal nerve and neurophysiology. The pharmacology of various local anesthetics and vasoconstrictors are reviewed. Discussion of systemic toxicity and local anesthetics alert the student to emergencies that can develop in the dental suite. Local anesthetic techniques are discussed. A rational approach to selecting anesthetic and injection techniques for each patient is presented. Co-requisite: DHY 210.

Drama

DRA 101 FUNDAMENTALS OF ACTING I 3 Credits

This course assists the student in developing pretextual techniques, including memory and sensory exercises and improvisations for the stage. The student's abilities to observe, concentrate, and imagine are also developed. Additionally, the course develops the student actor's ways and means of controlling body tension. As part of the practicum, short scenes are assigned to be rehearsed and performed in class for evaluation.

DRA 102 FUNDAMENTALS OF ACTING II 3 Credits

This is a continuation of DRA 101. Prerequisite: "C" or better in DRA 101. Note: Students taking Fundamentals of Acting are encouraged to take Introduction to the Theater (ENG 250).

DRA 104 THEATER WORKSHOP 3 Credits

This is a performance course for advanced acting students. The students present all forms of theatrical productions for the college community. Prerequisite: "C" or better in DRA 101 or placement.

DRA 108 INTERPRETIVE SPEECH 3 Credits

This course introduces the student to the techniques of dramatic interpretation of plays, poetry, short stories, and other prose pieces from literature. As a performance oriented course, its purpose is to give the student an opportunity to make poetry and drama come alive for an audience. The interpreter learns to create the dramatic dimensions of set, characterization, and mood through use of his/her voice alone. The class has several exhibitions of dramatic reading and an end of term Readers Theater Production. Prerequisite: "C" or better in DRA 101 or placement.

Economics

ECO 101 PRINCIPLES OF ECONOMICS (MACRO) 3 Credits

This course provides a comprehensive introduction to the principles of macroeconomics. Topics covered include supply and demand, free market ecosystems, the role of government, national income accounting, GDP, Keynesian fiscal policy, money and banking, Federal Reserve monetary policy, and current economic problems. Pre- or Co-requisites: ENG 096/097 and RDG 096/097 (passing grade of "C" or better for each), or placement.

ECO 102 PRINCIPLES OF ECONOMICS II (MICRO) 3 Credits

This course provides a comprehensive introduction to the principles of microeconomics. It covers elasticity of supply and demand, marginal utility, cost of production, break even analysis, marginal analysis of all market models, antitrust issues, farm problems, labor market issues, urban poverty problems, and international trade and economic development. Pre- or Co-requisites: ENG 096/097 and RDG 096/097 (passing grade of "C" or better for each), or placement.

Education

ECE 101 EARLY CARE AND EDUCATION I 4 Credits

This course introduces the paraprofessional in early childhood education to the Child Development Associate (CDA) credentialing process and provides comprehensive instruction in early childhood education. The first three CDA competency goals and functional areas are discussed. Students begin to develop a professional resource file. Students who enroll in the course must have (within the past five years) at least 480 hours of experience working with children from infancy through five years old in a group setting. Strategies learned in the course will be practiced in the student's childcare center. Prerequisite: High school diploma or GED.

ECE 102 EARLY CARE AND EDUCATION II 4 Credits

This course builds on the knowledge and skills developed in ECE 101. It focuses on practical skills needed to successfully complete the Child Development Associate (CDA). The last three competency goals and functional areas are discussed. Students complete the professional resource file. Students enrolled in the course must have (within the past five years) at least 480 hours of experience working with children from infancy through five years old in a group setting. Strategies learned in the course will be practiced in the student's childcare center. Prerequisite: "C" or better in ECE 101. Co-requisite: ECE 103

ECE 103 EARLY CARE AND EDUCATION FIELD EXPERIENCE 3 Credits

This course allows the paraprofessional to develop and demonstrate professional standards and practical skills in an early childhood setting. It provides students the opportunity to put theory into practice. Students are required to document working hours toward the requisite 480 hours of experience in one of the following childcare settings: center-based preschool, center-based infant/toddler facility, or a family childcare facility. Prerequisite: "C" or better in ECE 101. Co-requisite: ECE 102

EDU 101 INTRODUCTION TO EDUCATION 3 Credits

This course introduces students interested in a career in education to some of the concepts, practices, and procedures of contemporary American education. The organization and operation of American schools, their financial and legal support, their place and role in the community, as well as some of the historical and philosophical foundations upon which American education is predicated, are examined. Teaching as a profession is also examined. Pre- or Co-requisites: ENG 096/097 and RDG 096/097 (passing grade of "C" or better for each), or placement.

EDU 103 PHILOSOPHY AND HISTORY OF EDUCATION 3 Credits

This course examines some of the most prominent concepts and philosophers in the field of education. Focus is

on those educational theories and ideas that have shaped educational practices. Prerequisite: "C" or better in EDU 101.

EDU 201 EDUCATION IN URBAN ENVIRONMENT 3 Credits

This course examines the educational and social forces affecting the learning process of the inner city student. Issues considered include multiculturalism and the educational system, the effect of social institutions on the educational process, and the role of the teacher in the urban school. Pre-requisite: "C" or better in EDU 101.

EDU 203 CHILDREN WITH SPECIAL NEEDS 3 Credits

This course is designed for those who plan to work with children who have special needs due to physical or mental differences or debilitating life situations. Emphasis is on meeting the needs of the child in an institutional setting, especially in agencies and schools. Prerequisite: "C" or better in PSY 101 or permission of the instructor.

EDU 205 EARLY CHILDHOOD EDUCATION 3 Credits

This is an introductory course in early childhood education. It includes discussion of curriculum for young children, focusing on the importance of appropriate goals, teaching methods, and teaching tools. Topics covered include practical scheduling, routines, and classroom management. Prerequisite: "C" or better in EDU 101 or permission of instructor.

EDU 207 PRINCIPLES AND PRACTICES IN EDUCATION 3 Credits

This course examines the goals, curriculum, and teaching methods of schools. New organizational patterns and new techniques are introduced. Prerequisite: "C" or better in EDU 101 or permission of instructor.

EDU 209 AUDIOVISUAL AIDS 3 Credits

This course covers the use of audiovisual materials including films, tapes, slides, photographs, and transparencies with emphasis on displays, classification, storage, acquisition, and repair. Pre- or Co-requisites: ENG 096/097 and RDG 096/097 (passing grade of "C" or better for each), or placement.

EDU 233 EDUCATION SEMINAR I 3 Credits

Students discuss and analyze teaching strategies and their implementation at the educational sites where they are completing their fieldwork. Students are expected to use their knowledge and skills from academic courses in seminar discussion and relate this to their fieldwork assignments. Co-requisite: EDU 234.

EDU 234 EDUCATION FIELDWORK I 3 Credits

Students are placed in a voluntary internship for a minimum of ten hours per week. The site may be a day care

center, public or private school, or a special agency serving children. Students will teach and perform other duties under the supervision of the site staff and Essex County College faculty. Evaluation is conducted throughout the semester cooperatively by the faculty member and the professionals at the educational site. Co-requisite: EDU 233.

EDU 235 EDUCATION SEMINAR II 3 Credits

This internship seminar is a continuation of EDU 233. Co-requisite: EDU 236.

EDU 236 EDUCATION FIELDWORK II 3 Credits

This second semester internship placement is a continuation of EDU 234. Co-requisite: EDU 235.

EDU 270 PRINCIPLES AND TEACHING STRATEGIES IN EARLY CHILDHOOD EDUCATION 3 Credits

This course presents the principles underlying age appropriate strategies of instruction in graphic arts, music, drama, language, science, and the social sciences in an early childhood educational setting. Prerequisite: "C" or better in EDU 101.

EDU 271 MODERN TRENDS IN EARLY CHILDHOOD EDUCATION 3 Credits

This course examines the current use of television, computers, and community resources as teaching tools. It covers models of early childhood education including the Open Classroom, the Montessori School, the Piagetian Pre-School, and behavior analysis procedures. Prerequisite: "C" or better in EDU 101.

Electronic Engineering Technology

ELC 115 ELECTRIC CIRCUITS: DC AND AC 4 Credits

This introductory course in circuit analysis defines the electrical quantities, current, and voltage, and examines their relationship in various components and circuits. Circuits comprised of resistance, capacitance, and inductance which are energized by both DC and AC sources are considered. The theory includes Ohm's Law, Kirchhoff's Laws, series and parallel circuits, and several network theorems. In the laboratory the student performs electrical measurements which confirm his/her grasp of the theory. A circuit simulation computer software package is introduced and used as an analytical tool. Co-requisite: MTH 113.

ELC 120 ELECTRONICS I: SEMICONDUCTOR COMPONENTS 4 Credits

This course introduces students to the active components used in electronics circuits. It covers the physics, the characteristics, and some applications of semiconductor diodes and transistors. The emphasis is on transistor biasing circuits. These devices and their applications are also studied

through laboratory experiments. Prerequisite: "C" or better in ELC 115 or permission.

ELC 211 ELECTRIC POWER 3 Credits

This course treats in detail the subject of electrical power including its generation, distribution, and utilization. It presents the theory, construction, maintenance, and characteristics of AC and DC motors, generators, and transformers. The associated laboratory is an integral part of the course. Prerequisite: "C" or better in ELC 115.

ELC 218 PULSE AND DIGITAL CIRCUITS 3 Credits

This course is an introduction to computer electronics. It includes Boolean Algebra, fundamentals of logic, logic circuits, and digital logic systems. Laboratory work is closely allied with theory and includes computer simulation. Prerequisite: "C" or better in ELC 115.

ELC 221 ELECTRONICS II: AMPLIFIERS 4 Credits

This course extends ELC 120 to include AC analysis of transistor circuits. Electronic amplification is examined in considerable detail. Field effect transistors (FET) and integrated circuits (IC) are introduced. Laboratory work, complementing the theoretical work, is emphasized. Prerequisite: "C" or better in ELC 120.

ELC 222 ELECTRONICS III COMMUNICATIONS SYSTEMS 4 Credits

This is the final course in the electronics sequence. Topics covered include modulation and demodulation for AM, FM, PM, and TV. Transmitters, receivers, and transmission characteristics are studied. Concepts of information theory, waveform analysis, and noise are introduced. Prerequisite: "C" or better in ELC 221.

ELC 224 LINEAR CIRCUIT ANALYSIS 3 Credits

This course introduces the basic theory and mathematical tools for analyzing Linear Electronic Systems. Areas covered include feedback concepts, frequency-response, transfer functions, and bode diagrams. Laboratory experiments are performed to support the theory. Prerequisite: "C" or better in ELC 221.

ELC 228 INTRO TO MICROPROCESSORS 4 Credits

This is an introductory course in microprocessor applications for students who already have basic knowledge of digital circuits principles. Computer hardware organization is analyzed, and machine-language programs are written and run. Hardware and software aspects of a popular eight-bit microprocessor are studied in detail. Theoretical ideas are reinforced by building and testing realistic experimental systems in the laboratory. Prerequisite: "C" or better in ELC 218.

ELC 230 CIRCUITS AND SYSTEMS FOR ENGINEERING 3 Credits

This is a calculus based course in electric circuit theory and analysis for Engineering A.S. degree program students interested in pursuing computer or electrical engineering. It includes DC and AC principles with an emphasis on Kirchoff's laws, network theorems for resistive, capacitive, and inductive networks, mesh and nodal analysis, and sinusoidal steady-state analysis. Also, power, resonance, and ideal transformers are studied. The theory is reinforced with instructor run demos. Assignments include the use of circuit analysis computer software. Prerequisites: "C" or better in PHY 104, MTH 122, and in either CSC 112 or CSC 121.

Emergency Medical Technology

EMT 112 PARAMEDIC APPLICATIONS AND PROCEDURES 6 Credits

This course serves as an introduction to clinical concepts necessary for an understanding of emergency pre-hospital care. Lecture, laboratory simulation, and clinical experience focus on pharmacology, EKG interpretation, airway management, patient assessment, and concepts of the pre-hospital environment. EMS systems, the roles and responsibilities of the paramedic, and medical-legal concerns are explored. Prerequisites: Must be certified as an EMT-B and have CPR (BLS-C) certification. Co-requisite: BIO 121. Laboratory fee.

EMT 113 PRE-HOSPITAL EMERGENCY CARE I 7 Credits

Selected topics are covered in the areas of pathology, pre-hospital assessment, and management of cardiac and respiratory disorders and emergencies. Also covered are current theories and concepts in the areas of pathology and assessment and management of the trauma victim in the pre-hospital and in-hospital environments. Students have clinical rotations in critical care units and emergency departments. Prerequisite: "C" or better in EMT 112. Co-requisite: BIO 122. Laboratory fee.

EMT 200 PRE-HOSPITAL EMERGENCY CARE II 4 Credits

Selected topics are covered in the areas of pathology, pre-hospital assessment, and management of toxicologic, OB/GYN, environmental, endocrine, and nervous system disorders and emergencies. Students have clinical rotations in the critical care, emergency, and OB/GYN units. Prerequisite: "C" or better in EMT 113. Laboratory fee.

EMT 211 ADVANCED CONCEPTS IN EMERGENCY CARE I 4 Credits

This course emphasizes the pathology, assessment, and management of disorders and emergencies in the various phases of the life cycle. Selected topics are covered in the areas of pediatrics, adolescent medicine, and geriatrics.

Also covered are concepts of pre-hospital communications. Each student gains practical experience through clinical rotations in a pediatric unit and emergency department, as well as through the initial portion of the pre-hospital field internship. Prerequisite: "C" or better in EMT 200. Co-requisite: Advanced Cardiac Life Support (ACLS). Students arrange to take this course on their own through the American Red Cross. Laboratory fee.

EMT 212 ADVANCED CONCEPTS IN EMERGENCY CARE II 6 Credits

This course emphasizes behavioral and psychological emergencies, crisis intervention, and advanced concepts relating to the pre-hospital environment including: rescue, hazardous material response, incident command, triage, and multi-casualty incidents. It also provides a comprehensive review for the National Registry Examination. The conclusion of the field internship clinical rotations includes work experience in a crisis unit and an emergency department. Prerequisites: "C" or better in EMT 211 and ACLS Certification. Laboratory fee.

Engineering

ENR 100 INTRODUCTION TO ENGINEERING TECHNOLOGIES AND SCIENCE 3 Credits

This introductory course in engineering technologies and science professions is designed to help students select the technology field of interest to them. Use of computer applications, written communications, and report writing is also emphasized. Word processing, mathematics packages, spreadsheets, design software packages, and programming software packages are introduced. Students utilize software packages while learning more about each branch of engineering and technology. A field trip is also included. Pre- or Co-requisites: ENG 096/097 and MTH 092/093 (passing grade of "C" or better for each), or placement.

ENR 103 ENGINEERING GRAPHICS 2 Credits

This interdisciplinary course covers pencil and paper sketching and drawing of orthographic, isometric, and auxiliary projections in three-dimensional space. The course includes lettering, sectioning, dimensioning, documentation, and an introduction to Computer Aided Design (CAD) using AutoCAD software. Prerequisite: "C" or better in MTH 092/093 or placement.

ENR 105 APPLIED COMPUTER AIDED DESIGN 2 Credits

This first course in Computer Aided Design (CAD) uses the latest release of AutoCAD software. Students are introduced to the terminology, use, and capabilities of CAD. Through hands-on instruction, students learn to complete projects using the latest hardware and software. After starting with the beginning "draw" and "edit" commands, the course proceeds to cover tolerance dimensioning, printing,

the creation of symbols libraries, isometric rendering, three dimensional wire-frame modeling, and blocks with attributes. Prerequisite: "C" or better in ARC 101 or ENR 103.

ENR 106 INTERMEDIATE COMPUTER AIDED DESIGN 2 Credits

This course uses the latest release of CAD software commonly used in workplaces. Through hands-on instruction, students learn to complete a series of CAD projects. Topics covered include drawings in different disciplines, three-dimensional wire, surface, and solid modeling, geometric dimensioning and tolerancing, shading, and rendering. Prerequisite: "C" or better in ENR 103. Laboratory fee.

ENR 110 MECHANICS 3 Credits

This is a course in trigonometry based applied statics for technology students, involving the fundamental principles of the mechanics of rigid bodies. Topics covered include vectors, forces, moments, center of gravity, free-body diagrams, equilibrium, simple trusses, friction, and moment of inertia. Prerequisites: "C" or better in MTH 113 and PHY 101.

ENR 205 ADVANCED CAD 3 Credits

This course is designed to introduce advanced CAD applications using the latest versions of operating systems as well as the most recent CAD systems. The course covers attribute and attribute extraction, external reference files, rendering and animation, and solid modeling. It includes an introduction to customization. Prerequisite: "C" or better in ENR 105 or placement. Laboratory fee.

ENR 211 ENGINEERING MECHANICS I STATICS 3 Credits

This is a course in calculus-based statics. Topics covered include elementary vector algebra, scalar and vector products as applied to two and three-dimensional force systems, equilibrium, friction, second moments, and virtual work. Extensive use is made of the free body diagram approach and vector analysis. Prerequisites: "C" or better in MTH 121 and PHY 103.

ENR 212 ENGINEERING MECHANICS II DYNAMICS 3 Credits

This is a course in kinematics and kinetics using vector analysis. Topics covered include curvilinear motion with respect to fixed and rotating axes of particles and rigid bodies, work, energy, impulse, and momentum. Prerequisite: "C" or better in ENR 211.

ENR 220 MECHANICS OF MATERIALS 4 Credits

This course for technology students covers stresses and deformation in structural members due to axial tensile and compressive loads, torsional loads on shafts, and bending and shear loads on beams. It also covers the basic design of structural members based on the analysis of stress and

deformation. Laboratory experiments are performed to complement lecture topics. Prerequisite: "C" or better in ENR 110. Co-requisite: MTH 114.

ENR 250 COMPUTER AIDED DESIGN PROJECT 2 Credits

In this course, students apply the skills they learned from previous CAD courses to individually design a comprehensive project in their fields using specialized CAD software commonly used in workplaces. For example, manufacturing and mechanical students design parts using a parametric solid modeling package; architectural students make architectural designs using an animation and rendering package; civil construction/surveying students complete projects in construction, road design, and surveying using civil and mapping packages. Students have internship opportunities with industry. Prerequisite: "C" or better in ENR 205.

English

ENG 088 COLLEGE LANGUAGE STUDIES (READING) 3 Credits

This is a reading skills course designed to develop student ability to comprehend and analyze text. This course takes a whole language approach. Students are taught to apply reading skills to selected fiction, including short stories and novels. This course must be taken concurrently with ENG 089 and ENG 090. Co-requisite: CSS 101.

ENG 089 COLLEGE LANGUAGE STUDIES (WRITING) 3 Credits

This course develops writing skills by engaging students in writing assignments. Importance is given to the writing process, sentence structure, developing paragraphs, and essay development. Grammar is taught as part of the writing process. Students utilize various textual materials as a springboard for writing topics and assignments. Texts studied in College Language Studies are used as models (or examples for style, structure, and content) for student writing. This course must be taken concurrently with ENG 088 and ENG 090. Co-requisite: CSS 101.

ENG 090 STUDY SKILLS FOR COLLEGE LANGUAGE STUDIES 1.5 Credits

This course provides a foundation for the development of effective study habits and skills. Course emphasis is on listening, concentrating, note-taking, following directions, understanding textbooks, managing time, and test-taking. Special emphasis is placed upon helping students to overcome the anxieties of testing, reading, writing, and studying. This course must be taken concurrently with ENG 088 and ENG 089. Co-requisite: CSS 101.

ENG 096 ENGLISH FOUNDATIONS I 3 Credits

This course is designed to enable students to advance beyond the basic level to the college level in writing. The technique of putting an essay together is taught through a variety of methods, from pre-writing through the critical analysis of compositions by others (both professionals and fellow students) to editing one's own drafts for grammar, style, organization, and content. The goal is to develop fluent and intelligible writing that culminates in a number of five-paragraph essays. This course must be taken concurrently with ENG 097. Prerequisites: "C" or better in ENG 088, ENG 089, and ENG 090, or placement.

ENG 097 ENGLISH FOUNDATIONS II 1.5 Credits

This course reinforces writing skills by focusing on English grammar, usage, and mechanics as they apply to the student's own compositions assigned in English 096. Students are made aware of common errors as they engage in editing, revising, and rewriting to improve their sentence structure and style and advance to college-level work. This course must be taken concurrently with ENG 096. Prerequisites: "C" or better in ENG 088, ENG 089, and ENG 090, or placement.

ENG 101 COLLEGE COMPOSITION I 3 Credits

Expository writing is taught through principles of rhetoric, mechanics, and style. Critical thinking is developed through analysis and discussion of selected essays. Introductory library procedures are taught. Prerequisite: "C" or better in ENG 096/097 or placement. Pre- or Co-requisite: RDG 096/097 (passing grade of "C" or better), or placement.

ENG 102 COLLEGE COMPOSITION II 3 Credits

This course develops students' ability to write longer compositions using advanced library skills, research techniques, and proper documentation. Students are introduced to literature and develop interpretive skills through literary discussions. The goal is also to develop students' appreciation of fine writing and an understanding of literary concepts. The course culminates in the production of an original, extensive, multiple source, fully documented research paper. Prerequisite: "C" or better in ENG 101.

ENG 105 TECHNICAL WRITING 3 Credits

Emphasizing the need to write clearly in any professional setting, this course introduces a variety of technical and business writing formats including resumes, business correspondence, formal and informal reports and proposals, and memos. A variety of research and documentation techniques and styles is also covered. Prerequisite: "C" or better in ENG 101.

ENG 106 AMERICAN ENGLISH PHONETICS FOR THE ESL STUDENT 3 Credits

This is a non-technical course for the student whose first language is not English. It deals with the sounds of English

and its sound patterns (stress, rhythm, pitch, and intonation). Students practice words and conversational phrases, listen to tapes, record their own voices, and give talks in class. The goal is to enable them to be readily understood when they speak English, and to understand the spoken English they hear. Prerequisite: placement/advisement.

ENG 108 VOICE AND DICTION 3 Credits

This course is designed for students who wish to improve control over their voices in speaking, and to study and practice English pronunciation and articulation through a series of planned exercises and drills. Students are required to practice and apply the proper methods of voice production and articulation to improve their performance. Prerequisite: placement.

ENG 109 EFFECTIVE SPEECH 3 Credits

This course covers the basic elements of oral communication. Students are required to prepare and present several brief speeches with emphasis on content, organization, and delivery. Pre- or Co-requisite: ENG 096/097 and RDG 096/097 (passing grade of "C" or better for each), or placement. Completion of or simultaneous enrollment in ENG 101 is strongly recommended.

ENG 141 INTRODUCTION TO JOURNALISM 3 Credits

This is an introductory course for students who wish to acquire technical and analytical knowledge of newspaper and news magazine literature. The course covers all major aspects of journalism and the journalistic process. Prerequisite: "C" or better in ENG 101 or written departmental approval.

ENG 142 JOURNALISM II 3 Credits

Designed to give the student a working knowledge of journalistic writing, this course emphasizes the composition of news stories, feature articles, and other types of copy. The printing process, picture editions, page makeup, and problems and responsibilities of the key positions on a newspaper staff are also stressed. Prerequisite: "C" or better in ENG 141.

ENG 144 JOURNALISM WORKSHOP 1 Credits

This course provides the opportunity to apply the techniques learned in journalism theory courses. Students have the opportunity to work on a variety of college publications. Prerequisite: "C" or better in ENG 141.

ENG 151 MASS COMMUNICATIONS AND POPULAR CULTURE 3 Credits

This course surveys and examines mass communications, concentrating on radio, television, film, and other electronic and print media forms. The expression of popular culture through the mass media is analyzed and evaluated. Prerequisite: "C" or better in ENG 101.

ENG 169 CREATIVE WRITING 3 Credits

Designed to give practice, guidance, and criticism to students interested in becoming writers, this course emphasizes the development of creative talent through structured assignments, independent writing, and the analysis of selected literary works. Prerequisite: "C" or better in ENG 101 or written departmental approval.

ENG 205 THE WESTERN LITERARY TRADITION 3 Credits

The literary tradition of the western world is examined from its roots in the Old Testament and the Koran through its culmination in the European Renaissance. Students conduct an intensive study of selected literary masterpieces. Prerequisite: "C" or better in ENG 102 or ENG 105.

ENG 208 SURVEY OF SHAKESPEAREAN LITERATURE 3 Credits

This survey course examines Shakespeare's histories, comedies, and tragedies, paying close attention to the major themes and characters, and their place in the social and literary context. Prerequisite: "C" or better in ENG 102 or ENG 105.

ENG 215 MODERN LITERARY MASTERPIECES 3 Credits

The development of modern literary thought is examined from the post-Renaissance era to the present day. Students conduct an intensive study of selected masterpieces of world literature. Prerequisite: "C" or better in ENG 102 or ENG 105.

ENG 221 AMERICAN LITERATURE I 3 Credits

The student is acquainted with representative selections of American literature, both poetry and prose, from pre-Revolutionary times to the Civil War. The contributions of minority writers to American literature are considered. Prerequisite: "C" or better in ENG 102 or ENG 105.

ENG 222 AMERICAN LITERATURE II 3 Credits

The student is acquainted with representative selections of American literature, both poetry and prose, from the time of the Civil War to the contemporary era. The contributions of minority group writers to American literature are considered. Prerequisite: "C" or better in ENG 102 or ENG 105.

ENG 232 AFRICAN AND CARIBBEAN LITERATURE 3 Credits

The literary traditions of sub-Saharan Africa and the Caribbean, from their oral beginnings to the present, are examined through an intensive study of selected works. Particular emphasis is placed on the sociocultural and political forces that have shaped this literature as well as on the mode of presentation. Negritude is examined and

folklore is analyzed, particularly in its relationship with written literature in European languages. Prerequisite: "C" or better in ENG 102 or ENG 105.

ENG 237 SURVEY OF AFRO-AMERICAN LITERATURE 3 Credits

Beginning with the slave narratives of 1700 and proceeding to the protest writings of modern times, this survey course examines the literature of the African American in America, and gives importance to the historical development. Prerequisite: "C" or better in ENG 102 or ENG 105.

ENG 238 MAJOR BLACK AMERICAN WRITERS 3 Credits

This course addresses the development of literary trends and values as well as prevailing social conditions as they are represented by Black American writers from early to modern literature. Prerequisite: "C" or better in ENG 102 or ENG 105.

ENG 242 MODERN LATIN AMERICAN LITERATURE 3 Credits

This course offers an introduction to the emerging voices of Latin America. In presenting the literature of this region, importance is given to the history, politics, and culture of Latin America, enabling students to recognize the literary works as an expression of a common humanity. Prerequisite: "C" or better in ENG 102 or ENG 105.

ENG 250 INTRODUCTION TO THE THEATER 3 Credits

The drama as a literary and theatrical form is examined from early through modern plays. Students conduct intensive study of selected plays from the points of view of the playwright, actor, director, designer, and audience. Prerequisite: "C" or better in ENG 102 or ENG 105.

ENG 263 THE IMAGE OF WOMEN IN LITERATURE 3 Credits

The course considers literary examples of the classical and Judeo-Christian attitudes toward women, then moves toward the more modern period where there has been not only an obvious increase in the amount of writing by and about women, but also a more sensitive exploration of their role in society. Prerequisite: "C" or better in ENG 102 or ENG 105.

ENG 264 CONTEMPORARY WOMEN'S WRITING 3 Credits

This course examines the rise of contemporary women's writing in the United States and globally. It focuses on the ways in which this literature has developed as a means of exploring what it is to be a woman in today's world. The course concentrates on literature that represents the commonalities and differences among women's varied experiences in diverse cultural, social, economic, political, and personal situations. Prerequisite: "C" or better in ENG 102 or ENG 105.

English as a Second Language

ESL 073 ESL INTENSIVE EXPERIENCE 3 Credits **CULTURE**

This is an introductory course designed to expose English as a Second Language students to several aspects of American society. Through field trips, class discussions, media exposure, student presentations, and course readings, students discuss, question, and effectively experience elements of American cultural life. Topics such as family life, holidays, sports, and the educational system are discussed. Students are also challenged to understand and appreciate the ethnic, religious, and linguistic diversity of the United States as they begin to examine their prior assumptions and understanding of cultures other than their own. All class sessions are conducted in English. Prerequisites: Placement through the departmental writing exam and an oral interview conducted by an academic advisor in the Bilingual Education Department. Co-requisites: ESL 074, ESL 075, ESL 076, & ESL 077.

ESL 074 ESL INTENSIVE EXPERIENCE 3 Credits **LISTENING & COMPREHENSION**

This is a basic English as a Second Language course designed to enhance and develop the listening comprehension of non-native speakers of English. Through class conversations, individual and group listening exercises, and lab work, students are exposed to conversations and spoken narratives, and asked to demonstrate an understanding of the basic messages communicated through these texts. Students also receive practice in selective listening as they are asked to listen more discriminately to the more formal aspects of the language. All class sessions are conducted in English. Prerequisites: Placement through the departmental writing exam and an oral interview conducted by an academic advisor in the Bilingual Education Department. Co-requisites: ESL 073, ESL 075, ESL 076, & ESL 077.

ESL 075 ESL INTENSIVE EXPERIENCE 3 Credits **SPEAKING**

This is a basic English as a Second Language course designed to facilitate and develop the communicative oral competence of non-native speakers of English. Through the use of role-playing, dialogue, conversations, and oral presentations, students enhance their speech fluency and increase their ability to communicate basic needs, ideas, and feelings about everyday life. Students are afforded a comfortable and nurturing environment as they practice using English for the accomplishment of goal-oriented tasks of an academic and functional nature. All class sessions are conducted in English. Prerequisites: Placement through the departmental writing exam and an oral interview conducted by an academic advisor in the Bilingual Education Department. Co-requisites: ESL 073, ESL 074, ESL 076, & ESL 077.

ESL 076 ESL INTENSIVE EXPERIENCE 3 Credits **READING**

This is a basic English as a second language reading comprehension course for students who demonstrate first language literacy and some prior exposure to English. Selections from literature, popular media, and academic texts are read and discussed. Students learn to employ specific reading and pre-reading strategies, expand their vocabulary, and increase their understanding of written English. Students are also challenged to speak and write about the concepts and issues addressed in the class readings. All class discussions are conducted in English. Prerequisites: Placement through the departmental writing exam and an oral interview conducted by an academic advisor in the Bilingual Education Department. Co-requisites: ESL 073, ESL 074, ESL 075, & ESL 077.

ESL 077 ESL INTENSIVE EXPERIENCE 3 Credits **WRITING**

This is a basic English as a Second Language writing course for students who demonstrate first language literacy and some prior exposure to English. Through lecture, group dynamics, and one-on-one student-teacher interaction, students learn to communicate ideas with increased fluency, clarity, and grammatical accuracy in English, while gradually decreasing their reliance on first language translation. Use of fundamental pre-writing and revision strategies enable students to effectively carry out writing tasks of both an academic and functional nature. All class sessions are conducted in English. Prerequisites: Placement through the departmental writing exam and an oral interview conducted by an academic advisor in the Bilingual Education Department. Co-requisites: ESL 073, ESL 074, ESL 075, & ESL 076.

ESL 085 ESL BEGINNING GRAMMAR 3 Credits

This is a beginning course in English for speakers of other languages. The course requires no background in English. Emphasis is placed on the development of the following language skills: listening and comprehension, vocabulary expansion, and grammar (speaking and writing in complete sentences). The course is conducted in English. Individualized instruction in developing listening and speaking skills is emphasized. Prerequisite: ESL placement test. Co-requisite: ESL 086.

ESL 086 ESL BEGINNING CONVERSATION 1.5 Credits

This is a beginning course for speakers of other languages and requires no background in English. It is a supplement to ESL 085. Individualized instruction in developing listening and speaking skills is emphasized. The course is conducted in English. Co-requisite: ESL 085.

ESL 095 ESL WRITING AND 3 Credits **COMMUNICATION I**

This is an intermediate ESL writing course designed for students whose first language is not English. Through

extensive reading and writing activities, students learn to read and write English with greater confidence and ease. Students also learn to produce fluent, coherent, logical, and academic prose as they write about topics and books read in class. Grammar is explained in the context of student writings in an effort to clarify meaning. This course is conducted in English. Prerequisite: "C" or better in ESL 077 or placement through the Bilingual Education placement exam. Co-requisite: ESL 096.

ESL 096 ESL READING AND COMMUNICATION I 3 Credits

This is a course for students whose first language is not English. In this course students read authentic and unedited works of popular fiction and non-fiction in English. By reading and by discussing and writing about what they read, students enhance their vocabulary and comprehension of written English. This course is conducted in English. Prerequisite: "C" or better in ESL 076 or placement through the Bilingual Education placement exam. Co-requisite: ESL 095.

ESL 100 FORM AND FUNCTION OF ENGLISH 3 Credits

This course is designed to help ESL students gain a better understanding of English grammatical structures necessary for effective communication. The grammatical structures studied in this class are from authentic, unabridged reading materials and students' writings. The focus is on analysis of errors that are typical for ESL students who experience first language interference. This course is for students who are at the ESL 103/104 or ESL 105/106 level, and will be conducted in English. Prerequisites: "C" or better in ESL 095/096 or placement by writing sample and interview.

ESL 103 ESL WRITING AND COMMUNICATION II 3 Credits

This is a course for students whose first language is not English. The goal of this course is to develop students' ability to understand, summarize, and discuss abstract ideas in formal academic English. Students learn to produce grammatically accurate, logical, connected, well developed essays. This course is conducted in English. Prerequisites: "C" or better in ESL 095 or placement through the Bilingual Education placement exam. Co-requisite: ESL 104.

ESL 104 ESL READING AND COMMUNICATION II 3 Credits

This is a course for students whose first language is not English. Through the reading of authentic works of fiction and non-fiction, students increase their command of American English vocabulary, syntax, writing, and speaking styles, and gain introductory knowledge of relevant aspects of American culture, history, and society. This course is conducted in English. Prerequisites: "C" or better in ESL 096 or placement through the Bilingual

Education placement exam. Co-requisite: ESL 103.

ESL 105 ESL WRITING AND COMMUNICATION III 3 Credits

This course is for students whose first language is not English. Students learn to write a variety of expository pieces such as paraphrases, book reports, summaries of articles, essays, and term paper. Library research may be required for projects. Students learn to write with grammatical accuracy and clear focus, give importance to logical development of ideas and support for main ideas, and prepare appropriate introductions and conclusions. The course is conducted in English. Prerequisites: "C" or better in ESL 103 or placement through the Bilingual Education placement exam. Co-requisite: ESL 106.

ESL 106 ESL READING AND COMMUNICATION III 3 Credits

This course is for students whose first language is not English. The goal of this course is to develop skills necessary for accurate reading and comprehension of unabridged novels, periodicals, non-fiction, and reference materials in anticipation of further college-level work. Students are required to demonstrate reading and comprehension skills through in-class oral presentations, double-entry journals, and a research project. The research project is a synthesis of what has been read and discussed in class. This course is conducted in English. Prerequisites: "C" or better in ESL 104 or placement through the Bilingual Education placement exam. Co-requisite: ESL 105.

ESL 108 ACCELERATED WRITING 3 Credits

The purpose of this course is to guide students through the process of writing and organizing multi-paragraph essays following standard rhetorical techniques. The course addresses the entire process of writing, from the pre-writing stage to the editing and revision steps where grammar and mechanics are covered. Prerequisites: Placement through a writing exam and an oral interview. Co-requisites: ESL 109, ESL 110, ESL 111, and ESL 112.

ESL 109 ACCELERATED READING 3 Credits

This course enables students to efficiently pick out main ideas as well as details from a variety of sources including segments from newspapers, magazines, and novels. Students are required to outline and summarize some of these materials. Techniques for increasing vocabulary are taught. The course assists students in making the transition to college level reading. Prerequisites: Placement through a writing exam and an oral interview. Co-requisites: ESL 108, 110, 111, and 112.

ESL 110 ACCELERATED SPEAKING 3 Credits

This course offers students an opportunity to improve their speaking ability. Students' pronunciation difficulties are addressed as well as their use of idiomatic English. Students also present several speeches focusing on content

and organization. Academic language in class discussions is emphasized. Prerequisites: Placement through a writing exam and an oral interview. Co-requisites: ESL 108, ESL 109, ESL 111, and ESL 112.

ESL 111 ACCELERATED LISTENING COMPREHENSION 3 Credits

This course is designed to improve students' listening skills in both academic and personal settings. Lectures, videos, and other teaching tools are used to enhance students' abilities to identify and comprehend main ideas as well as details. Note-taking strategies are practiced to help students prepare for college-level communication demands. Prerequisites: Placement through a writing exam and an oral interview. Co-requisites: ESL 108, ESL 109, ESL 110, and ESL 112.

ESL 112 AMERICAN CULTURE & DIVERSITY 3 Credits

The purpose of this course is to familiarize international students with basic aspects of American culture and history in preparation for college-level courses. The course engages students in discussions and writings on assigned readings. Students are encouraged to use academic language in classroom discussions and writings. Prerequisites: Placement through a writing exam and an oral interview. Co-requisites: ESL 108, ESL 109, ESL 110, and ESL 111.

French

FRN 101 ELEMENTARY FRENCH I 3 Credits

This is the first half of a one-year course for students with little or no background in the French language. Listening comprehension, speaking, reading, and writing are developed within the limits of basic vocabulary, idioms, and grammar. Pre- or Co-requisites: ENG 096/097 and RDG 096/097 or ESL 103 (passing grade of "C" or better for each), or placement.

FRN 102 ELEMENTARY FRENCH II 3 Credits

This course is a continuation of FRN 101. It is designed to expand students' knowledge of vocabulary and grammar to include multiple tenses and uses of the verb. The four language skills: Listening comprehension, speaking, reading, and writing continue to be developed. Prerequisite: "C" or better in FRN 101 or placement.

Health

HLT 101 HEALTHFUL LIVING 3 Credits

This course is offered to help students achieve and maintain optimum health and to understand the principles underlying healthful living. Among the topics covered are mental and emotional health, narcotics, human sexuality, and heart disease. Prerequisite: "C" or better in ENG 096/097 or placement.

History

HST 101 WORLD CIVILIZATION I 3 Credits

This course is the first half of a two-semester sequence. It examines aspects of the major social, political, economic, religious, and intellectual developments of world civilization from earliest times to the seventeenth century. Emphasis is placed on the ideas and institutions which have shaped the culture of world civilization. Pre- or Co-requisites: ENG 096/097 and RDG 096/097 (passing grade of "C" or better for each), or placement.

HST 102 WORLD CIVILIZATION II 3 Credits

World Civilization II is the second half of a two-semester sequence. It examines aspects of the major social, political, economic, and intellectual developments of world civilization from the seventeenth century to the present. Emphasis is placed on the ideas and institutions that have shaped the society and culture of the modern world. It is recommended that HST 101 be taken before HST 102. Pre- or Co-requisites: ENG 096/097 and RDG 096/097 (passing grade of "C" or better for each), or placement.

HST 111 AMERICAN HISTORY I 3 Credits

This course surveys the history of the United States from the pre-Columbian period to the end of Reconstruction (1877). It analyzes the political, economic, social, and intellectual events of Native American history, colonial history, the American Revolution and Constitution, the early national period, expansion, slavery, and the sectional differences leading to the Civil War and Reconstruction. Pre- or Co-requisites: ENG 096/097 and RDG 096/097 (passing grade of "C" or better for each), or placement.

HST 112 AMERICAN HISTORY II 3 Credits

This course surveys the history of the United States from 1877 to the present. It examines the political, economic, intellectual, and social forces that shaped modern America. Particular attention is given to developments surrounding the industrialization of the United States, the emergence of the United States as a world power, immigration, economic changes in the twentieth century including periods of prosperity and the depression, and the civil rights and women's rights movements. It is recommended that HST 111 be taken before HST 112. Pre- or Co-requisites: ENG 096/097

and RDG 096/097 (passing grade of “C” or better for each), or placement.

HST 121 AFRICAN-AMERICAN HISTORY I 3 Credits

This course is an introduction to the African-American historical experience from the 1440’s to 1865, beginning with West African societies and their relations with European explorers and traders. It concludes with the end of slavery in the United States. Students explore the economic, social, political, intellectual, and psychological dynamics of African, Caribbean, and African-American life and the intra- and interracial relations. Pre- or Co-requisites: ENG 096/097 and RDG 096/097 (passing grade of “C” or better for each), or placement.

HST 122 AFRICAN-AMERICAN HISTORY II 3 Credits

This course examines the historical presence of Africans in the Americas and the Caribbean from the end of slavery in the nineteenth century to the present. Students explore the social, political, economic, and psychological dimensions of this experience throughout this global study with focus on United States history and intra- and interracial relations. It is recommended that HST 121 be taken before HST 122. Pre- or Co-requisites: ENG 096/097 and RDG 096/097 (passing grade of “C” or better for each), or placement.

HST 131 LATIN AMERICAN HISTORY I 3 Credits

This course surveys the history of Latin America from the pre-Columbian period to about 1830. It focuses on pre-Columbian civilizations, the conquest, the establishment of the Spanish and Portuguese empires, the evolution of a Latin culture, the struggle for independence, and the first attempts at modernization and intellectual independence in Latin America. Pre- or Co-requisites: ENG 096/097 and RDG 096/097 (passing grade of “C” or better for each), or placement.

HST 132 LATIN AMERICAN HISTORY II 3 Credits

This course surveys the history of Latin America from about 1850 to the present. Emphasis is on the colonial heritage, the shaping of Latin culture, and the role of neo-colonialism. Special attention is given to the Caribbean nations and to present models of social, cultural, and economic development adopted by Latin American nations. It is recommended that HST 131 be taken before HST 132. Pre- or Co-requisites: ENG 096/097 and RDG 096/097 (passing grade of “C” or better for each), or placement.

HST 133 CULTURE AND HISTORY OF PUERTO RICO 3 Credits

This course introduces the student to the culture and history of Puerto Rico by tracing the development of the Puerto Rican nation through the Spanish “discovery” and eventual colonization by the United States. The course includes analysis of the contemporary Puerto Rican scene from a social, political, and economic context. Pre- or Co-requisites: ENG

096/097 and RDG 096/097 (passing grade of “C” or better for each), or placement.

HST 134 SURVEY OF AFRICAN HISTORY I 3 Credits

This course examines the growth and development of the African continent from prehistoric times to the early nineteenth century. Considered are the geographic divisions of the continent, ancient empires of Africa, the structure, nature, and significance of African tribal life, and development of European exploitation during the nineteenth century. Pre- or Co-requisites: ENG 096/097 and RDG 096/097 (passing grade of “C” or better for each), or placement.

HST 135 SURVEY OF AFRICAN HISTORY II 3 Credits

This is a continuation of HST 134. The course analyzes the 19th century European impact on Africa, the socio-economic, political, and ideological reactions of African peoples, the nature of colonialism and neo-colonialism, and national movements of independence. Pre- or Co-requisites: ENG 096/097 and RDG 096/097 (passing grade of “C” or better for each), or placement.

HST 136 SURVEY OF ASIAN CIVILIZATION I 3 Credits

This is the first half of a two-part introduction to the political history of China, Japan, and India. Special attention is given to the diverse value systems that developed in this area, with discussions focusing on the basic philosophical assumptions of Confucian, Buddhist, and Hindu beliefs. The student is introduced to the current scholarship in the field and to primary source translations. The first semester deals with China to 1840, Japan to 1868, and India to 1854. Pre- or Co-requisites: ENG 096/097 and RDG 096/097 (passing grade of “C” or better for each), or placement.

HST 137 SURVEY OF ASIAN CIVILIZATION II 3 Credits

This is a continuation of HST 221, bringing China, Japan, and India into perspective in the modern world. It is recommended that HST136 be taken before HST137. Pre- or Co-requisites: ENG 096/097 and RDG 096/097 (passing grade of “C” or better for each), or placement.

HST 161 MODERN HISTORY I 3 Credits

This is the first semester of a two-semester sequence which examines the social, intellectual, economic, and political problems in European history from 1648 to 1914. Particular attention is given to the role of ideas in historical events and processes and to the place of Europe in the context of world civilizations. Pre- or Co-requisites: ENG 096/097 and RDG 096/097 (passing grade of “C” or better for each), or placement.

HST 162 MODERN EUROPEAN HISTORY II 3 Credits

This is the second half of a two-semester sequence which explores representative developments in European intellectual and cultural history from the mid-nineteenth century until the 1980s. Emphasis is on France and Germany and on movements and figures that have had an important impact on social and cultural analysis and practice during the last hundred years. It is recommended that HST 161 be taken before HST 162. Pre- or Co-requisites: ENG 096/097 and RDG 096/097 (passing grade of “C” or better for each), or placement.

Hospitality Management

HMM 103 INTRODUCTION TO HOSPITALITY MANAGEMENT 3 Credits

This course provides an introduction to the field of hospitality and to the career opportunities and specific skills required for various positions in the hospitality industry. Pre- or Co-requisites: ENG 096/097 and RDG 096/097 (passing grade of “C” or better for each), or placement.

HMM 226 SUPERVISORY DEVELOPMENT IN HOSPITALITY MANAGEMENT 3 Credits

This course is designed to build students’ knowledge and skills in administration with respect to the hospitality industry. Importance is given to methods of motivating people, delegating duties, handling grievances, discipline, and training of subordinates. Prerequisite: “C” or better in HMM 103.

HMM 256 HOSPITALITY MANAGEMENT LAW 3 Credits

This course is designed to familiarize students with laws pertaining to the operation of hotels and motels. The laws include those on accommodations and discrimination, liability for premises, liability of products sold and supplied, property of guest, checks and credit cards, liens and eviction, employer-employee relationships, and related criminal and civil responsibilities. Prerequisite: “C” or better in HMM 103.

HMM 261 HOSPITALITY HOUSING MANAGEMENT 3 Credits

This course identifies, defines, and describes the fundamentals of housekeeping and laundry management in the hotel-motel industry. It covers proper record keeping, organizing, functions, and responsibilities. Practical skills are developed. The course covers the essentials of proper management including proper planning and implementation, efficiency, and meeting standards with regard to purchasing, hygiene, staffing, and scheduling. Prerequisite: “C” or better in HMM 103.

HMM 263 HOSPITALITY MANAGEMENT FRONT OFFICE PROCEDURES 3 Credits

This course analyzes jobs in the hotel-motel front office including that of cashiering, switchboard operating, auditing and posting machine operations, registering, credit, and checking out of guests. Prerequisite: “C” or better in HMM 103.

HMM 264 FOOD AND BEVERAGE MANAGEMENT 3 Credits

This course examines standards of quality, grades, methods of purchasing, receiving, issuing, storage, inventory, and service of food commodities. Basic principles of beverage management and merchandising as related to the hospitality industry are studied. The course includes detailed examination of wines and spirits, their origins, manufacturing process, and service. Prerequisite: “C” or better in HMM 103.

Italian

ITL 101 ELEMENTARY ITALIAN I 3 Credits

This is the first half of a year course for students with little or no background in the Italian language. Listening comprehension, speaking, reading, and writing are developed within the limits of basic vocabulary, idioms, and grammar. Pre or Co-requisites: ENG 096/097 and RDG 096/097 or ESL 103 (passing grade of “C” or better for each), or placement.

ITL 102 ELEMENTARY ITALIAN II 3 Credits

This course is a continuation of ITL 101. It is designed to expand students’ knowledge of vocabulary and grammar to include multiple tenses and uses of the verb. The four language skills: Listening comprehension, speaking, reading, and writing continue to be developed. Prerequisite: “C” or better in ITL 101 or placement.

Legal Assistant Studies

LAS 101 INTRODUCTION TO LEGAL ASSISTANT STUDIES 3 Credits

This course provides an introduction to the legal profession in general, the specific role of legal assistants, and their relationship to other legal professionals. Students explore the American legal system and are introduced to federal and state courts. The course examines in detail the Code of Professional Ethics and other related standards of proper conduct. Pre- or Co-requisites: “C” or better in ENG 096/097 and RDG 096/097 (passing grade of “C” or better for each), or placement.

LAS 102 LEGAL RESEARCH AND WRITING 3 Credits

This course serves as an introduction to the specific research and writing functions and skills necessary to perform as a legal assistant. Students learn to analyze legal problems using locators and other general references in the law library. Students brief cases, write legal memoranda, and use the Shepard's Citators. The course also introduces students to the use of computer-assisted legal research including the use of WESTLAW, Lexis-Nexis, reporter systems, and statutory materials. Prerequisites: "C" or better in both ENG 101 and LAS 101.

LAS 105 TORTS 3 Credits

This course covers the principles of tort law, its application in commonly faced situations in law practice, and the role of the legal assistant in the preparation of a tort claim. Emphasis is placed on negligence and the defenses to negligence. Prerequisite: "C" or better in LAS 101.

LAS 106 INTRODUCTION TO LAW 3 Credits

This course offers an introduction to the American legal system, the American system of government, and the fundamental principles of American substantive law including principles of contract law, property law, torts, estate and probate, criminal law, and family law. Professional and ethical guidelines are examined. Pre- or Co-requisites: "C" or better in ENG 096/097 and RDG 096/097 (passing grade of "C" or better for each), or placement.

LAS 107 CONTRACTS 3 Credits

This course provides an introduction to the basic elements of contract law and contract formation and discharge including offer, acceptance, consideration, capacity, intent, discharge, and remedies. Students learn to draft simple clauses and contracts. Pre- or Co-requisites: "C" or better in ENG 096/097 and RDG 096/097 (passing grade of "C" or better for each), or placement.

LAS 108 INTRODUCTION TO NURSE PARALEGALISM 3 Credits

This course provides an introduction to the legal nurse profession. It includes examination of the history and evolution of the legal nurse and the role of the legal nurse in the areas of legal analysis; research and writing; review and analysis of medical records; litigation procedures; medical/legal ethics; and personal injury law. The business and marketing plan of an independent legal nurse practitioner is also examined.

LAS 202 ADVANCED LEGAL RESEARCH AND WRITING 3 Credits

This course is designed to improve and refine legal research and writing skills through a series of assignments which require in-depth research and legal analysis and which are designed to simulate actual assignments given to paralegals in the workplace. Prerequisite: "C" or better in LAS 102.

LAS 203 WILLS AND ESTATE ADMINISTRATION 3 Credits

Students are introduced to the basic provisions of the law of wills and estates. They learn to draft wills and other appropriate instruments. The laws of interstate succession and the law of trusts are also examined. Prerequisite: "C" or better in LAS 101.

LAS 204 BUSINESS ORGANIZATION, GOV'T REGULATION, AND BANKRUPTCY 3 Credits

This course examines in detail the forms of business organizations with emphasis on partnerships and corporations. Employment law and government regulation of businesses are also studied. Creditors' rights and remedies under state and federal law are also discussed. The course includes comparative review of Chapters 7, 11, and 13 of the bankruptcy code. Prerequisite: "C" or better in LAS 101.

LAS 205 ADMINISTRATIVE LAW 3 Credits

This introductory course in administrative law focuses on the sources and evolution of administrative law, administrative agencies, due process, delegation, rule making, investigation, adjudication, and judicial review. It includes examination of the Administrative Procedures Act and a review of the ethical principles of administrative law. Prerequisite: "C" or better in LAS 101.

LAS 206 LITIGATION PROCEDURES 3 Credits

This course examines the rules governing a case as it moves through the courts and basic litigation procedures. Topics covered include state and federal court rules and procedures, client interviews, pleadings, discovery proceedings, trial preparation, and the appellate process. Prerequisite: "C" or better in LAS 101.

LAS 210 PROPERTY TRANSACTIONS 3 Credits

Students are introduced to the law of property as well as to the various types of property transactions and related matters. Topics covered include contracts, mortgages, leases, deeds, title searches, and recording statutes. Students learn to prepare sample real estate closing documents. Prerequisite: "C" or better in LAS 101.

LAS 211 MEDICAL LEGAL ETHICS 3 Credits

This course examines the major ethical codes of the medical and legal professions as set forth by the ABA, AMA, ANA, AALNC, NALA, and NFPA. How the principles of these codes apply to contemporary medical and legal issues is also covered, with emphasis on application to the role of the legal nurse.

LAS 220 FAMILY LAW 3 Credits

This course examines substantive and procedural laws and rules pertaining to marriage, dissolution of marriage, child support and custody, separation agreements, adoption, sur-

rogate motherhood, and custody issues. Prerequisite: "C" or better in LAS 101.

LAS 225 LAW OFFICE MANAGEMENT AND FIELD EXPERIENCE 3 Credits

Students are placed in law-related positions to gain practical experience necessary for success as legal assistants. Students are required to establish learning objectives related to their positions to effect the attainment of specific job competencies. Students are required to attend a weekly one-hour session on campus with their professor to go over their work experiences. Prerequisites: "C" or better in LAS 202 and LAS 206.

Manufacturing/Mechanical Engineering Technology

MEC 210 KINEMATICS 3 Credits

Students learn about moving elements used in the design and analysis of basic mechanisms in machines. Topics covered in the course include velocity and acceleration analysis on a plane, design and analysis of four-bar linkages, and cams, gears, and other mechanisms using graphical and analytical methods. Prerequisite: "C" or better in ENR 110. Co-requisite: MTH 114.

MET 201 MANUFACTURING PROCESSES AND MATERIALS 3 Credits

This course deals with the principles, methodology, and economics of production requirements with respect to materials, tolerances, and finish. Processes are matched to the product requirements. Laboratory work and computer problem solving are incorporated. Prerequisite: "C" or better in PHY 101 or placement.

MET 202 MODERN MANUFACTURING SYSTEMS AND ROBOTICS 4 Credits

This course introduces the concept of computer integrated manufacturing systems through the use of a flexible manufacturing center comprised of a number of workcells. It covers communication between the individual process controllers and a factory control system. Robot operation and programming is introduced. The course also covers the mechanical aspects of material manipulation, various feedback mechanisms, and the integration of robots with other machines in the workcell. The student applies the design concept and techniques to develop a machine tool operation system. Field trips to assembly plants are included. Prerequisite: "C" or better in MET 201 or placement.

MET 211 MACHINES AND CONTROLS 3 Credits

Students learn about DC and AC motors and generators and the transmission mechanisms used to drive mechanical power. The course covers transducers for position and velocity. Programmable logic control (PLC) systems are

introduced. Laboratory work involves the use of computer integrated manufacturing (CIM) workcell equipment which includes computer numerical control (CNC) machinery, robotics control systems, and vision control systems. Prerequisites: "C" or better in ELC 115 and PHY 101. Co-requisite: MET 215.

MET 215 FLUID MECHANICS 3 Credits

This course covers the basic concepts and applications of fluid systems including essentials of fluid properties, fluid statics, Bernoulli's theorem, fluid measurements, and losses due to flow in pipes. Laboratory work deals with models and operational systems as well as exercises involving the underlying principles of hydraulics and pneumatic mechanisms. Prerequisite: "C" or better in PHY 101. Co-requisite: MTH 114.

MET 225 COMPUTER NUMERICAL CONTROL 4 Credits

This course introduces computer numerical control (CNC) programming in an applied fashion using lathe, milling, and other machines in the laboratory. The course emphasizes mastery of G and M codes and focuses on the integration of computer aided design (CAD), computer aided manufacturing (CAM), and CNC. The latest release of CAM software packages and modern CNC machines are available and used by the students to complete several hands-on projects. Prerequisite: "C" or better in ENR 103 or placement. Co-requisite: ENR 105.

MET 250 MANUFACTURING ENGINEERING TECHNOLOGY PROJECT 1 Credit

The student completes a comprehensive project which includes the various aspects of manufacturing engineering technology. The project must encompass a wide range of topics such as design CAD, production planning, material handling, machining, and quality control and inspection using machine vision. Prerequisites: "C" or better in MET 202 and MET 225.

Massage Therapy

HSC 151 MESSAGE THEORY AND PRACTICE I 4 Credits

This introductory course in massage therapy emphasizes basic massage training using Shiatsu and Swedish massage styles. Lecture topics include: history of massage therapy, theory, benefits, and definitions of techniques. Laboratory work includes hands-on demonstrations and practice sessions to gain proficiency in basic techniques. Prerequisites: MTH 086/087, ENG 096/097, and RDG 096/097, or placement, and formal admission into the program. Co-requisites: BIO 117 or BIO 121, HSC 155. Laboratory fee.

HSC 152 MASSAGE THEORY AND PRACTICE II 2 Credits

This course builds on massage therapy techniques learned in HSC 151. Emphasis is on Swedish massage and the practical integration of other styles. Lecture topics include: Massage therapy equipment options, massage styles and intention (for example, general relaxation and energizing), introducing the new client to massage, and building working relationships with clients. Laboratory work includes demonstrations and practice sessions to learn and refine massage techniques related to upper and lower extremities, abdomen, pelvis, and hip. Prerequisite: HSC 151. Co-requisite: HSC 160. Laboratory fee.

HSC 153 MASSAGE THEORY AND PRACTICE III 4 Credits

This course deals with deep tissue work and medical massage techniques, and refines student knowledge of the human anatomy. Prerequisites: HSC 152, HSC 160, and BIO 117. Co-requisites: BIO 118 and HSC 161. Laboratory fee.

HSC 155 PROFESSIONAL DEVELOPMENT I 2 Credits

Students are oriented to the role of the professional massage therapist within the health care environment and the general community. Topics covered include: ethics, insurance, contraindications, and regulations at the state and national levels. Prerequisites: MTH 086/087, ENG 096/097, and RDG 096/097, or placement.

HSC 156 PROFESSIONAL DEVELOPMENT II 3 Credits

The course provides detailed information on running a massage therapy business. Topics covered include: Self-analysis and career planning, marketing, pricing, opening a practice, legal requirements, client records, and financial management. Prerequisites: HSC 155 and HSC 160. Co-requisite: HSC 161.

HSC 160 MASSAGE THERAPIST PRACTICUM I 2 Credits

During a six-week period, students work in the student clinic at Essex County College applying basic skills in hands-on work with members of the college community. The course meets weekly to discuss the experience and remedy any difficulties encountered. Prerequisites: HSC 151, HSC 155, and BIO 117 (or BIO 121). Co-requisite: HSC 152.

HSC 161 MASSAGE THERAPIST PRACTICUM II 3 Credits

During a 15-week period, students build greater confidence while working in the student clinic at Essex County College and refining their massage style, which now incorporates Shiatsu, Swedish, and deep tissue massage techniques. The course meets weekly for discussion of clinical experiences and difficulties. Prerequisites: HSC 152, HSC 160, and BIO 117 (or BIO 121). Laboratory fee.

HSC 165 SELF-CARE FOR THE MASSAGE THERAPIST 1 Credit

Students learn the techniques for preventing repetitive strain injuries, promoting a balanced life style, and improving overall wellness. The self-care techniques that are presented include joint and muscle specific exercises, breathing techniques for stress relief, and visualization/affirmations for career success. Body mechanics and body awareness activities are emphasized. The relationship of posture and body mechanics to pain and injury is also covered. Prerequisites: MTH 086/087, ENG 096/097, and RDG 096/097, or placement.

Mathematics

Mathematics courses should be taken sequentially each semester until you meet the college core proficiency requirement of "C" or better in MTH 092/093. Upon completion of zero level math courses, you should continue immediately with the math requirements for your major.

MTH 086 MTH 087 INTRODUCTORY ALGEBRA 4.5 Credits

This beginning mathematics course is designed to take students from concrete arithmetic ideas to the more abstract algebraic forms of these ideas. Throughout, the emphasis is on showing students the practical use of concepts and developing understanding by equating English phrases and sentences into algebraic expressions. Topics covered include simplifying arithmetic and algebraic expressions, fractions, decimals, estimations, geometric applications, percents, and signed numbers.

MTH 092 MTH 093 ELEMENTARY ALGEBRA 4.5 Credits

In this course, algebraic concepts introduced in MTH 086/087 are fully developed, and the algebra curriculum is extended to include the following topics: linear equations, graphing, exponents, systems of equations, quadratic equations, and applications. Prerequisite: "C" or better in MTH 086/087 or placement.

MTH 100 INTRODUCTORY COLLEGE MATHEMATICS 4 Credits

Special products, factoring, and other operations on polynomials, rational expressions, and radical expressions are covered. This course also includes solving linear equations, linear systems, literal equations, quadratic equations and graphical solutions, integral and rational exponents, and scientific notation. Students are also introduced to analytic geometry including lines, circles, parabolas, and ellipses. Diverse applications are emphasized throughout the course. Prerequisite: "C" or better in MTH 092/093 or placement.

MTH 101 STATISTICS AND PROBABILITY I 3 Credits

This course offers an analysis, on an elementary level, of the basic ideas and methods of collecting, tabulating, and representing data. It covers frequency distributions, histograms and frequency polygons, measures of central tendency and variability, percentiles, Z-scores and standard scores, elementary probability, normal and binomial distributions, and, if time permits, an introduction to statistical inference. Prerequisite: "C" or better in MTH 092/093 or placement.

MTH 102 STATISTICS AND PROBABILITY II 3 Credits

This is a continuation of MTH 101. Emphasis is placed on sampling theory and hypothesis testing, the t-distribution and the chi-square distribution, regression, correlation, linear prediction, analysis of variance, and non-parametric tests. Prerequisite: "C" or better in MTH 101.

MTH 103 FUNDAMENTAL CONCEPTS OF MODERN MATHEMATICS I 3 Credits

This is a survey course that considers mathematics as a factor in our culture. It is intended to impart an appreciation of the impact of mathematics on our society. The course is designed primarily for students in humanities and elementary education. Topics covered include set theory, symbolic logic, mathematical reasoning, number theory, and mathematical system. Prerequisite: "C" or better in MTH 092/093 or placement.

MTH 104 FUNDAMENTAL CONCEPTS OF MODERN MATHEMATICS II 3 Credits

This is a continuation of MTH 103. Topics covered include symbolic logic, the algebra of sets, probability, and selected topics from plane and solid geometry. Prerequisite: "C" or better in MTH 103.

MTH 109 TECHNICAL MATHEMATICS 3 Credits

This course covers topics selected from arithmetic, algebra, geometry, and trigonometry with applications. This course is offered to meet the needs of specific disciplines, e.g., Radiologic Technology, Ophthalmic Dispensing, and Chemical Technology. Prerequisite: "C" or better in MTH 092/093 or placement.

MTH 113 COLLEGE ALGEBRA WITH TRIGONOMETRY 4 Credits

This course covers topics from algebra and trigonometry at a level and emphasis appropriate for applied technology majors who will continue on with a semester or two of applied calculus. Topics covered include functions and their graphs, angles and triangles, systems of linear equations with determinants, trigonometric functions, equations and identities, exponential and logarithmic functions, and brief review of conic sections. Prerequisite: "C" or better in MTH 100 or placement.

MTH 114 UNIFIED CALCULUS I 3 Credits

This course in traditional calculus of one variable is designed for students who need applications with less of theory. Topics covered include functions, graphs, tangents, velocity, limits, the derivative, continuity, techniques of differentiation, antiderivatives, the definite integral, applications, and some techniques of integration. Prerequisite: "C" or better in MTH 113 or placement.

MTH 116 MEDICAL MATHEMATICAL CALCULATIONS 1 Credit

This course reviews basic mathematical calculations and conversions and emphasizes how these techniques are used in the administration of medications. Prerequisite: "C" or better in MTH 092/093 or placement. Co-requisite: NRS 107.

MTH 117 MATHEMATICS FOR MANAGEMENT SCIENCE 3 Credits

This course reviews linear functions and inequalities, formulating linear equations and inequalities in n-space, and linear programming techniques in one and two space using algebraic and graphical methods. It offers introduction to three space and associated algebraic, graphical, and linear programming techniques. Basic matrix operations with applications, the use of inverse and augmented matrices in solving a system of linear equations, the simplex method, graphs and networks, mathematics of finance, introductory probability, and decision strategies are also covered. Prerequisite: "C" or better in MTH 100 or placement.

MTH 119 PRECALCULUS I 4 Credits

Topics covered include absolute value and inequalities; relations and functions; polynomials and rational functions and their graphs, determinants, and matrices; sequences, series, and induction; the line and the ellipse. The course is designed for students who plan to take MTH 121. A graphics calculator may be required. Prerequisite: "C" or better in MTH 100 or placement.

MTH 120 PRECALCULUS II 4 Credits

This course, along with MTH 119, prepares students for a rigorous treatment of calculus. Topics covered include circular and trigonometric functions; trigonometric identities and equations; vectors and complex numbers; theory of equations; log and exponential functions; polar coordinates; sequences and series; parabolas, hyperbolas, and translation. A graphics calculator may be required. Prerequisite: "C" or better in MTH 119 or placement.

MTH 121 CALCULUS WITH ANALYTIC GEOMETRY I 4 Credits

This course covers the theory of limits, continuity, differentiation, maximal-minimals theory, related rates, mean value theorem, the fundamental theorem, integration, and

applications of the integral. A graphics calculator may be required. Prerequisite: "C" or better in MTH 120 or placement.

MTH 122 CALCULUS WITH ANALYTIC GEOMETRY II 4 Credits

This is a continuation of MTH 121. Topics offered include volumes, surface areas, arc lengths, force, work, and other applications of the definite integral: Derivatives and integrals of logarithmic, trigonometric, and hyperbolic functions and their inverses, techniques of integration, brief review of conic sections, and improper integrals. Prerequisite: "C" or better in MTH 121.

MTH 136 DISCRETE MATHEMATICS 3 Credits

This is a course in finite mathematical structures relevant to the computer and information sciences. Topics offered include logic and proofs, sets, combinatorics, recursion, relations, functions, graphs and digraphs, trees, finite state machines, Boolean algebra, and an overview of computability and formal language theory. Prerequisite: "C" or better in MTH 113 or MTH 119.

MTH 141 MATHEMATICAL STATISTICS 3 Credits

This is a course in the mathematical theory of statistics. Topics offered include counting techniques and mathematical probability, random variables and probability distributions, applications to sampling theory, hypothesis testing, and correlation and regression. Prerequisite: "C" or better in MTH 114 or MTH 121.

MTH 213 UNIFIED CALCULUS II 3 Credits

This is a continuation of MTH 114. Topics offered include the fundamental theorem of integral calculus; derivatives and integrals of trigonometric, exponential, and logarithmic functions; and further techniques and applications of integration, polar coordinates, and elementary differential equations. Prerequisite: "C" or better in MTH 114.

MTH 221 CALCULUS WITH ANALYTIC GEOMETRY III 4 Credits

This course is a continuation of MTH 122. The main topics considered are polar coordinates, solid analytic geometry, parametric equations, vectors, functions of more than one variable, partial derivatives, multiple integrals, and infinite sequences and series. Taylor's series with remainder and MacLaurin's series are also discussed. Prerequisite: "C" or better in MTH 122.

MTH 222 DIFFERENTIAL EQUATIONS 4 Credits

This course covers methods for solving ordinary differential equations together with physical and geometrical applications. General methods include undetermined coefficients and variations of parameters. Laplace transforms and series solutions are also covered. Prerequisite: "C" or better in MTH 221.

MTH 239 INTRODUCTION TO LINEAR ALGEBRA 3 Credits

This course introduces the theory of linear operators as related to systems of linear equations, vector spaces, inner product spaces, and related topics such as determinants and eigenvalues. It also covers applications to geometry and quadratic forms. Prerequisite: "C" or better in MTH 121.

Medical Terminology

HSC 109 INTRODUCTION TO MEDICAL TERMINOLOGY 3 Credits

This course surveys medical science and is designed to foster mastery of medical terminology to insure its accurate and appropriate use in allied health fields. Names of major diseases and agents of disease, tumor and operations, and terms used in physical examinations, diagnosis, and laboratory procedures are covered.

Music

MUS 100 MUSIC APPRECIATION 3 Credits

This course is designed to develop students' knowledge and appreciation of Western classical music. It also considers certain world music and its influence on the Western tradition. Pre- or Co-requisites: ENG 096/097 and RDG 096/097 (passing grade of "C" or better for each), or placement.

MUS 105 MUSICIANSHIP I 2 Credits

This course in music theory, harmony, counterpoint, ear training, sight singing, and composition is designed for the music major. It is the first in the musicianship series (Musicianship I, II, III, and IV).

MUS 106 MUSICIANSHIP II 2 Credits

This is a continuation of MUS 105. Prerequisite: "C" or better in MUS 105 or placement.

MUS 108 MUSIC HISTORY 3 Credits

This survey course on musical literature examines the relationship of music to other arts historically, from the romantic period to contemporary music. Pre- or Co-requisites: ENG 096/097 and RDG 096/097 (passing grade of "C" or better for each), or placement.

MUS 109 JAZZ APPRECIATION 3 Credits

This course is an introduction to America's classical music and jazz. Importance is given to listening techniques, terminology, style characteristics, and the history of jazz and African-American music. This course is designed for both music and non-music majors. Pre- or Co-requisites: ENG 096/097 and RDG 096/097 (passing grade of "C" or better for each), or placement.

MUS 115 EAR TRAINING AND SIGHT SINGING I 3 Credits

This course is designed to develop music reading and related aural skills through practice and application of sight reading techniques and ear training procedures.

MUS 116 EAR TRAINING AND SIGHT SINGING II 3 Credits

This course is a continuation of MUS 115. Prerequisite: "C" or better in MUS 115 or placement.

MUS 117 BLACK CONTRIBUTIONS TO MUSIC 3 Credits

This course examines in detail the unique and essential elements that characterize Black music in both vocal and instrumental styles, giving emphasis to its historical development and role as a major force in shaping America's musical taste. Pre- or Co-requisites: ENG 096/097 and RDG 096/097 (passing grade of "C" or better for each), or placement.

MUS 121 VOICE CLASS I 2 Credits

This course is designed to train and develop the individual voice and ear for solo work as well as for ensemble singing. Areas of study include breathing, tone production, diction, general musicianship, and interpretation. Four to six credits in voice class are recommended for students planning to major in music education.

MUS 122 VOICE CLASS II 2 Credits

This course is a continuation of MUS 121. Prerequisite: "C" or better in MUS 121.

MUS 131 KEYBOARD CLASS I 2 Credits

Music students apply their knowledge of music theory to the keyboard in class, and develop sufficient technique and facility to classify piano as their minor requirement.

MUS 132 KEYBOARD CLASS II 2 Credits

This course is a continuation of MUS 131. Prerequisite: "C" or better in MUS 131 or placement.

MUS 141 COLLEGE CHOIR I 1 Credit

This course is designed for students who possess vocal and technical abilities. The choir represents the College and meets during the school day to sing both sacred and secular vocal pieces, accompanied and a cappella.

MUS 142 COLLEGE CHOIR II 1 Credit

This course is a continuation of MUS 141. Prerequisite: "C" or better in MUS 141 or placement.

MUS 153 INSTRUMENTAL WORKSHOP I 1 Credit

Practical experience in solo and ensemble instrumental performance is offered. The required performance level

for entry into this course is left to the discretion of the instructor.

MUS 154 INSTRUMENTAL WORKSHOP II 1 Credit

This course is a continuation of MUS 153. Prerequisite: "C" or better in MUS 153.

MUS 161 APPLIED PERFORMANCE AREA 1 Credit

This is private instruction for the music major in his/her chosen performance area of voice or instrument. One half-hour private lesson is given weekly. Special fee.

MUS 162 APPLIED PERFORMANCE AREA II 1 Credit

This course is a continuation of MUS 161. Prerequisite: "C" or better in MUS 161 (if you are continuing in the same instrument or voice). Special fee.

MUS 171 APPLIED PERFORMANCE AREA I 2 Credits

This is private instruction for the music major in his/her chosen performance area of voice or instrument. One hour private lesson is given weekly. Special fee.

MUS 172 APPLIED PERFORMANCE AREA II 2 Credits

This course is a continuation of MUS 171. Prerequisite: "C" or better in MUS 171 (if you are continuing in the same instrument or voice). Special fee.

MUS 205 MUSICIANSHIP III 2 Credits

This course is a continuation of MUS 106. Prerequisite: "C" or better in MUS 106 or placement.

MUS 206 MUSICIANSHIP IV 2 Credits

This course is a continuation of MUS 205. Prerequisite: "C" or better in MUS 205 or placement.

MUS 209 CONTEMPORARY ARRANGEMENT AND COMPOSITION 3 Credits

The student is exposed to the techniques involved in providing musical settings for any size performance group, and encouraged to exercise his/her creative ability through the use of technical tools. Prerequisite: "C" or better in MUS 106 or placement.

MUS 221 VOICE CLASS III 2 Credits

This course is a continuation of MUS 122. Prerequisite: "C" or better in MUS 122.

MUS 222 VOICE CLASS IV 2 Credits

This course is a continuation of MUS 221. Prerequisite: "C" or better in MUS 221.

MUS 231 KEYBOARD CLASS III 2 Credits

This course is a continuation of MUS 132. Prerequisite: "C" or better in MUS 132.

MUS 232 KEYBOARD CLASS IV 2 Credits

This course is a continuation of MUS 231. Prerequisite: "C" or better in MUS 231.

MUS 241 COLLEGE CHOIR III 1 Credit

This course is a continuation of MUS 142. Prerequisite: "C" or better in MUS 142.

MUS 242 COLLEGE CHOIR IV 1 Credit

This course is a continuation of MUS 241. Prerequisite: "C" or better in MUS 241.

MUS 253 INSTRUMENTAL WORKSHOP III 1 Credit

This course is a continuation of MUS 154. Prerequisite: "C" or better in MUS 154

MUS 254 INSTRUMENTAL WORKSHOP IV 1 Credit

This course is a continuation of MUS 253. Prerequisite: "C" or better in MUS 253.

MUS 261 APPLIED PERFORMANCE AREA III 1 Credit

This course is a continuation of MUS 162. Prerequisite: "C" or better in MUS 162 (if you are continuing in same instrument or voice). Special fee.

MUS 262 APPLIED PERFORMANCE AREA IV 1 Credit

This course is a continuation of MUS 261. Prerequisite: "C" or better in MUS 261 (if you are continuing in the same instrument or voice). Special fee.

MUS 271 APPLIED PERFORMANCE AREA III 2 Credits

This course is a continuation of MUS 172. Prerequisite: "C" or better in MUS 172 (if you are continuing in same instrument or voice). Special fee.

MUS 272 APPLIED PERFORMANCE AREA IV 2 Credits

This course is a continuation of MUS 271. Prerequisite: "C" or better in MUS 271 (if you are continuing in same instrument or voice). Special fee.

Nursing

NRS 106 LPN MOBILITY I 2 Credits

This is the first course of the LPN Articulation Option. It includes the essential concepts that an LPN needs to bridge the gap in the role of LPN to RN. It is designed to provide a foundation for all subsequent nursing courses. Students review basic concepts of the nursing profession, the role of the provider of care, and the basic physiologic and higher level needs of man. Classroom activities are designed to help students assess and diagnose basic needs,

and assist in meeting those needs in elderly adults who are healthy or who experience simple health alterations. Students are tested in the classroom to determine their proficiency. The goal of this course is to prepare the LPN for a smooth transition into professional nursing. Prerequisites: "C" or better in BIO 121, CHM 101 or CHM 103, and ENG 101. Co-requisite: MTH 116. Laboratory fee.

NRS 107 NURSING I 6 Credits

This course is designed to provide a foundation for all subsequent nursing courses. Students are introduced to basic concepts of the nursing profession, the role of provider of care, and the basic physiologic and higher level needs of man. Laboratory and clinical activities are designed to help students to assess and diagnose basic needs and assist in meeting those needs in elderly adults who are healthy or who experience simple health alterations. Pre- or Co-requisites: BIO 121, CHM 101 or CHM 103, and ENG 101 (passing grade of "C" or better for each). Co-requisite: MTH 116. Laboratory fee.

NRS 108 NURSING II 8 Credits

Students render care to clients who have commonly occurring health alterations generally affecting middle adult populations. Laboratory and clinical activities create a construct which assists students to develop the role of provider of care. Assessment skills and nursing diagnoses are expanded, with a focus on planning and intervention to meet the physiologic, psychosocial, and safety needs of clients. Prerequisites: "C" or better in NRS 106 or NRS 107, and MTH 116. Co-requisite: BIO 122. Laboratory fee.

NRS 109 REVIEW OF LEARNING SKILLS AND NURSING CONCEPTS 2.5 Credits

This is a course for students who are waiting for readmission into the Nursing Program. It involves re-examination of selected professional concepts which were taught in the previous nursing course. Study skills, critical thinking, and test-taking strategies are discussed. The goal of this course is to prepare the student personally and academically to successfully complete the Nursing Program. Prerequisite: Previous enrollment in a nursing course and awaiting readmission to the Nursing Program.

NRS 111 LPN MOBILITY II 6 Credits

This is the second course in the LPN Articulation Option following NRS 106. Students care for clients who have commonly occurring health alterations generally affecting middle adult populations. Laboratory and clinical activities create a construct which assists the LPN to advance in the role of provider of care. Assessment and nursing diagnoses are expanded with a focus on planning and intervention to meet the physiologic, safety, and psychosocial needs of clients. Credit is given for previous knowledge. Upon successful completion of this course, the LPN will be awarded 6 credits of **Nursing for the**

LPN Education (NRS 999). Prerequisite: "C" or better in NRS 106. Co-requisite: BIO 122. Laboratory fee.

NRS 231 MATERNAL HEALTH NURSING 4 Credits
(For Graduates of Foreign Schools of Nursing)

Focus is on the emotional, social, and physiological tasks and needs of the family within the childbearing years. This includes the relationships of the individuals; the reproductive growth and development cycles through the neonate; maintenance of health before, during, and after the birth of the child; and prevention of common health problems during pregnancy. Complications during childbearing as well as women's health are also considered. Nursing care involves the assessment, diagnosis, planning, and evaluation skills as they apply to rendering safe, professional nursing care during pregnancy, labor and delivery, the postpartum, and neonatal periods. Special admission requirements apply. See the Chairperson, Department of Nursing.

NRS 233 NURSING III 9 Credits

Students render care to clients who have complex health alterations generally affecting young adult populations. The focus is on further development of the role of provider of care. Students continue to develop communication skills and the ability to assist clients to meet higher level needs. Laboratory and clinical activities assist students to assess, diagnose, plan, and evaluate nursing care, and to refine previously learned nursing skills to render care to clients with complex health alterations. Prerequisites: "C" or better in NRS 106 or NRS 107, NRS 108 or NRS 111, BIO 122, and PSY 101. Co-requisite: BIO 211. Laboratory fee.

NRS 234 NURSING IV 9 Credits

Students render care to clients with potential and/or actual alterations associated with the childbearing/rearing developmental phases. The course enables students to further refine their expertise as providers of care and to develop skills associated with being managers of care. Students are required to apply to the nursing process an integration of their knowledge of basic and developmental needs and previously learned health alterations. Laboratory and clinical activities focus on assessment, planning, implementation, and evaluation of care of clients within the context of family or significant group, and the application of complex nursing skills. Prerequisites: "C" or better in NRS 233 and BIO 211. Co-requisite: NRS 235. Laboratory fee.

NRS 235 NURSING SEMINAR 2 Credits

This is a seminar course where students integrate all nursing concepts. The focus is on analysis and application of current professional trends and issues. The role of member of the profession is explored and operationalized. Laboratory exercises are designed to develop computer assisted test-taking skills with respect to all areas of nursing practice. Prerequisites: "C" or better in all major program requirements. Co-requisite: NRS 234.

NRS 291 PSYCHIATRIC-MENTAL HEALTH NURSING 4.5 Credits
(For Graduates of Foreign Schools of Nursing)

This course is for graduates of foreign schools of nursing to assist them in fulfilling the Psychiatric/Mental Health requirements for CGFNS certification. The course focuses on the use of the nursing process in caring for young adults who are experiencing threats to their potential for self-actualization. The nursing process is developed as a tool with emphasis placed on shifting nursing care priorities and evaluating care. Nursing care involves the assessment, diagnosis, planning, and evaluation skills as they apply to rendering safe, professional nursing to clients with alterations in their mental health. Special admission requirements apply. See the Chairperson, Department of Nursing.

Nutrition

HSC 101 INTRODUCTION TO NUTRITION 3 Credits

This basic course in nutrition and diet therapy examines the principles of nutrition and their application in daily dietary practice. The classifications of nutrients in food, their sources, and their impact in normal or deficient intake are explored in detail. The course examines how diet and nutrition relate to the pathologic and pathophysiologic processes of the body, and also the benefit of food to emotional health. The concepts of digestion, absorption, transport, and elimination are reviewed. Energy obtained from food which supports the ongoing activities of body tissue and the mechanisms used to maintain energy balance are examined. Prerequisite: "C" or better in BIO 100 or higher or in CHM 100 or higher.

HSC 102 NUTRITION THROUGH THE LIFE CYCLE 3 Credits

This course explores the role and the effect of nutrition and diet on preconception, pregnancy, lactation, infancy, childhood, adolescence, adulthood, and aging. It examines characteristics of normal growth and development, nutrition assessment, nutrition needs, and the common deficiencies seen in each phase of the life span. Students gain practice in menu planning for each stage of life. Prerequisite: "C" or better in HSC 101.

Office Systems Technology

OST 100 MICROCOMPUTER KEYBOARDING 1 Credit

This course is designed to assist the student in developing alpha-numeric keyboarding proficiency. Emphasis is on developing speed and accuracy in using the computer for keyboarding. Pre- or Co-requisites: ENG 096/097 and RDG 096/097 (passing grade of "C" or better for each), or placement.

OST 104 INTRODUCTION TO WORD PROCESSING 1 Credit

This course introduces computer word processing (Microsoft Word for Windows) concepts and provides students hands-on experience in creating, formatting, editing, saving, printing, and retrieving documents. Students learn to prepare documents such as personal and business letters, job application letters, resumes, and multiple page reports with footnotes. Prerequisite: "C" or better in OST 100 or CIS 107 or ENG 088/089.

OST 105 MICROCOMPUTER KEYBOARDING AND DOCUMENT PROCESSING 3 Credits

This course is designed to help students develop a mastery of the microcomputer keyboard using the touch method. Students learn correct keyboarding techniques and formatting for producing manuscripts, simple tables, and personal and business letters. (This course is not a substitute for OST 106. Students in certificate and degree programs in Word Processing, Office Careers, and Office Systems Technology must take OST 106.) Prerequisite: "C" or better in OST 100 or OST 104. Pre- or Co-requisites: ENG 096/097 and RDG 096/097 (passing grade of "C" or better for each), or placement.

OST 106 KEYBOARDING AND FORMATTING I 4 Credits

This course is designed for students with prior keyboarding background. It expands their knowledge and skills in document formatting. The focus is on developing vocational competency; students learn to use computers as a business tool for preparing a wide range of typical business correspondence, tables, reports, and forms from unarranged and rough-draft sources. Emphasis is also on developing proofreading competency. Prerequisite: "C" or better in OST 100 or OST 104 or OST 105. Pre- or Co-requisites: ENG 096/097 and RDG 096/097 (passing grade of "C" or better for each), or placement.

OST 107 KEYBOARDING AND FORMATTING II 3 Credits

This course reviews the basic techniques of computer/ keyboarding and formatting. Focus is on developing speed and accuracy in keyboarding and on using computers to prepare correspondence, complex tables, reports, manuscripts, technical reports, and business forms. Emphasis is also on developing proofreading competency. Prerequisite: "C" or better in OST 106.

OST 121 BUSINESS COMMUNICATION 3 Credits

This course reviews in a practical, step-by-step manner the major areas of grammar and language arts skills, including spelling and business terminology. Students are presented rules, examples, and intensive practice materials relating to improvement of communication skills at the business and professional level. Co-requisite: OST

106. Pre- or Co-requisites: "C" or better in ENG 096/097 and RDG 096/097 (passing grade of "C" or better for each), or placement.

OST 210 OFFICE SYSTEMS MANAGEMENT 3 Credits

This course provides a comprehensive coverage of supervisory management, particularly as it applies to the first-line supervisor in a high-tech office environment. Emphasis is on job planning and controlling the work; making effective decisions; supervising personnel; ensuring employee safety and health; unions, grievances, and discipline; improving productivity and cost control; supervising oneself; managing time and stress; and developing a career plan. Prerequisites: "C" or better in OST 107 and OST 121.

OST 215 SPECIALIZED MACHINE TRANSCRIPTION 3 Credits

This course is designed to develop knowledge and skills in processing pre-recorded communications using word processing software. Seven elements of transcription are reviewed and emphasized: Knowledge of equipment, listening, professional development, proofreading, keyboarding, formatting techniques, and English grammar and usage. Legal and medical terminology use is also covered. A variety of documents that contain such terminology are processed from pre-recorded tapes. Prerequisites: "C" or better in OST 106, OST 121, and OST 250.

OST 220 MEDICAL OFFICE PROCEDURES 3 Credits

This course provides students interested in working in a medical office the opportunity to integrate previous skills in keyboarding, word processing, transcription, and communications as they apply to work in medical facilities. The course also covers procedures in filing; preparation of medical forms, financial records and reports, and case histories; ordering supplies; and duties of the receptionist, secretary, and other medical office personnel. Prerequisites: "C" or better in ENG 101, OST 106, and HSC 109.

OST 230 LEGAL OFFICE PROCEDURES 3 Credits

This course introduces students to the highly specialized skills and knowledge necessary for legal office work. Topics covered include: Legal terminology, ethics, financial record keeping, filing procedures, and current legal office procedures. Students also learn to use computers to process legal documents and correspondence. Prerequisites: "C" or better in OST 107, OST 121, and OST 250.

OST 250 WORD/INFORMATION PROCESSING APPLICATIONS I 4 Credits

This course provides hands-on experience in the operation of computers. Students learn to use state-of-the-art word processing software, such as Microsoft Word. They learn to carry out such tasks as booting the equipment, saving, editing and retrieving, list/merging, sorting, and other specialized machine operations. Documents that students learn to process are representative of those prepared in

typical business offices. Emphasis is also placed on the related areas of proofreading and copy editing. Prerequisites: "C" or better in OST 106, OST 121, and ENG 101.

OST 251 WORD/INFORMATION PROCESSING APPLICATIONS II 3 Credits

This course is a continuation of OST 250. Students learn more advanced word processing functions and are also introduced to desktop publishing. Proofreading and editing skills are further developed. Prerequisite: "C" or better in OST 107 and OST 250.

OST 290 OST INTERNSHIP 3 Credits

This course provides students the opportunity to gain practical work experience related to an occupational specialization or program. Part-time employment opportunities in banks, insurance companies, law firms, government agencies, and other offices enable students to apply skills learned in the classroom to an actual work situation. Supervision and guidance are offered by the training sponsor and the program coordinator. Students attend a seminar once a week to integrate and discuss the work experience and the specialized program. This course should be taken only in the last semester of the certificate or degree program. Divisional permission is required the semester before desired enrollment in this course. Prerequisites: All OST courses to this level.

Ophthalmic Dispensing

OPH 123 OPHTHALMIC LABORATORY I 4 Credits

This course teaches the use of basic lens measuring devices and gauges, LEAP system of blocking, and use of automatic and hand edging machinery. Standard frame alignment is presented using zyl frames. Students learn skills needed to fabricate a pair of eyeglasses including use of lensometers and vertometers, and laying out single vision lenses in preparation for edging and final insertion into zyl frames. Prerequisite: Formal acceptance into the program. Co-requisite: OPH 126. Laboratory fee.

OPH 124 OPHTHALMIC LABORATORY II 4 Credits

Laboratory "finishing" procedures are practiced, such as neutralization and duplication, layout, edging, beveling of single vision and bifocal lenses, and insertion of lenses into plastic and combination frames. Students also learn lens drilling and mounting in rimless and semi-rimless mountings, the use of both hand and automatic equipment related to the finishing operation, the identification of spectacle frames and patterns, and the use of the lens hardening oven. Repair of frames and temples, and the interpretation of shop orders are also covered. Prerequisite: "C" or better in OPH 123. Co-requisite: OPH 127. Laboratory fee.

OPH 126 OPHTHALMIC MATERIALS I 3 Credits

This course provides an introduction to the field of ophthalmic optics. The roles of the ophthalmic laboratory technician, ophthalmic dispenser, optometrist, and ophthalmologist are explained. The course continues with the history of lenses, basic optical terminology, lens characteristics, the metric system, and the refraction of light. Instruction also covers calculation of lens curvature, lens power, and prism. Students are introduced to the gross anatomy of the eye, and the use of optical charts and graphs. Prerequisite: Formal acceptance into the program. Co-requisite: OPH 123.

OPH 127 OPHTHALMIC MATERIALS II 3 Credits

This course is a continuation of OPH 126. It covers calculations and formulae to compute marked and true power, lens thickness, and the relation of center to edge thickness. Performance of higher power lenses and the importance of lens position are considered. The function of bifocal and multifocal lenses, and the proper management of their related optical effects are also considered. Lectures also cover optical standards, tolerances, and introductory information on absorptive lenses and their applications. Prerequisite: "C" or better in OPH 126. Co-requisite: OPH 124.

OPH 201 OPHTHALMIC DISPENSING I 5 Credits

This course examines professional ethics, practices, and responsibilities, followed by an evaluation of absorptive lenses and optical coatings. The calculation and elimination of vertical imbalance, by various methods, is thoroughly presented. Lecture and laboratory sessions include techniques in ocular and facial measurements for single vision, multifocals, and lenses to correct Aphakia. The course covers proper techniques in adjusting plastic and metal frames, and the neutralizing and analysis of completed spectacles. Practical problems are presented for students to solve, the goal being to develop the skills necessary at the dispensing table. Prerequisites: "C" or better in OPH 123, 124, 126, and 127, or placement.

OPH 202 OPHTHALMIC DISPENSING II 5 Credits

The psychology of dispensing is emphasized along with the procedures for proper management of the Presbyopic and low vision patient. The interpretation of complex prescriptions, i.e. the effect of changing lens position, crossing cylinders, and the design of Iseikonic lenses, is covered. Instruction is also offered in the fitting of progressive lenses and eyeglasses for occupational and vocational use, and in consideration of style and fashion. Lecture and laboratory sessions include techniques in adjusting metal and rimless frames, analyzing and neutralizing unknown spectacles, and frame repair. The class participates in simulated case histories. Prerequisite: "C" or better in OPH 201 or placement.

OPH 203 CONTACT LENSES I 3 Credits

This course provides an introduction to contact lenses. Topics covered include: the history of contact lenses, lens materials, the anatomy and physiology of the cornea, and corneal topography and its relation to lens design. Instruction is also offered in the use of the Keratometer and Slit Lamp, and the procedures required in the design and inspection of hard contact lenses. Prerequisites: "C" or better in OPH 124 and OPH 127. Co-requisite: OPH 201 or placement. Laboratory fee.

OPH 204 CONTACT LENSES II 3 Credits

Fitting requisites, lens-cornea relationships, and the fitting of soft contact lenses are presented. Emphasis is on lens parameters, residual astigmatism, and recognition of patient symptoms. The course covers extended wear, scleral, cosmetic, and therapeutic lens fitting methods, and also the signs, symptoms, and management of the Kerataconus patient. Instruction continues in the use of the Keratometer and Slit Lamp, and the basic fitting philosophy underlying rigid and gas permeable contact lens fitting. Refraction techniques are described and demonstrated. Prerequisite: "C" or better in OPH 203 or placement. Laboratory fee.

OPH 210 PRINCIPLES OF REFRACTION 3 Credits

This course is designed to develop students' knowledge of clinical refraction. Topics covered include etiology, types, symptoms, testing, and treatment of refraction anomalies of the eye; accomodation; versions, vergences; anisometropia and aniseikonia; asthenopia; patient history; procedures involved in preliminary testing; objective and subjective refraction; and basic techniques in retinoscopy. Prerequisite: "C" or better in OPH 201 and PHY 111.

OPH 273 SUPERVISED CLINICAL EXPERIENCE 3 Credits

This course offers students co-op experience, of which 20 percent is gained at the College's Ophthalmic Dispensary and the remaining, at a retail optical dispensary chosen from the department's approved site list. The entire hands-on experience is performed under the supervision of a licensed optician. Prerequisites: "C" or better in OPH 123, OPH 124, OPH 126, and OPH 127. Co-requisite: OPH 201 or OPH 202.

Philosophy

PHI 101 INTRODUCTION TO PROBLEMS IN PHILOSOPHY 3 Credits

This course provides an introduction to the basic problems of philosophy, such as metaphysics, epistemology, ethics, aesthetics, and others. Pre- or Co-requisites: ENG 096/097 and RDG 096/097 (passing grade of "C" or better for each), or placement.

Physical Education

PHE 101 INTRODUCTION TO PHYSICAL EDUCATION 2 Credits

This course provides an introduction and professional orientation to the field of physical education. The role of the instructor of physical education in schools, industry, and community agencies is emphasized. The scientific foundations of physical activity and career opportunities in physical education are also examined. Pre- or Co-requisites: ENG 096/097 and RDG 096/097 (passing grade of "C" or better for each), or placement.

PHE 107 BEGINNER AQUATICS 1 Credit

Students are introduced to basic water safety skills to enable them to be reasonably safe while in, on, or about the water. Prerequisite: Permission of instructor.

PHE 115 FIRST AID AND SAFETY 2 Credits

This course provides an introduction to preventive measures and first aid practices and procedures used in the event of accidents or illness. The course emphasizes principles and procedures that form the basis of safety education. Pre- or Co-requisites: ENG 096/097 and RDG 096/097 (passing grade of "C" or better for each), or placement.

PHE 117 INTERMEDIATE AQUATICS 1 Credit

This course is a continuation of PHE 107 and is designed to develop advanced skills in swimming and personal safety. Prerequisite: "C" or better in PHE 107.

PHE 119 CONCEPTS IN PHYSICAL EDUCATION 2 Credits

Through a series of lectures and laboratories, various aspects of health and physical fitness are explored. In addition to mastering selected concepts concerning health and physical fitness, each student develops, through self-testing laboratories, his/her own physical fitness profile. Each student assesses his/her fitness level and designs a program of exercise to achieve and/or maintain fitness. Pre- or Co-requisites: ENG 096/097 and RDG 096/097 (passing grade of "C" or better for each), or placement.

PHE 151 SOCCER/SPEEDBALL 1 Credit

This course is designed to develop basic skills, knowledge, and appreciation of the games and to also develop performance proficiency in both activities.

PHE 153 BASKETBALL 1 Credit

Students learn the fundamentals, techniques, and strategies of the game, and also gain an appreciation of the complexities of the game.

PHE 157 VOLLEYBALL 1 Credit

This course covers the historical development and present status of the sport. Students receive instruction in the fundamental skills, game strategy, rules, terminology, and specifics concerning safety.

PHE 251 BADMINTON/SQUASH 1 Credit

Students receive instruction in the fundamental skills and techniques of the sport. The course also examines the history of the sport, current trends, rules, terminology, equipment, and etiquette.

PHE 252 BOWLING 1 Credit

Students receive instruction in the fundamental skills and techniques of the sport. The course covers: approach, release, follow-through, aiming, scoring, rules, etiquette, and selection of equipment.

PHE 253 GOLF 1 Credit

Students receive instruction in basic golf strokes, rules, etiquette, and playing opportunities. The course includes analysis of the sport through instant video replay.

PHE 255 TENNIS 1 Credit

Students receive instruction in the fundamental skills and techniques of the sport. The course covers forehand and backhand strokes, serve, volley, lob, and smash. Strategies, hand grips, rules of the game, and selection of equipment are also discussed. Development of performance proficiency in the sport is a basic objective of this course.

PHE 256 TRACK AND FIELD 1 Credit

This course introduces students to the techniques and mechanics of such activities as running/sprinting, jumping, throwing and hurdling, and development of speed, power, and endurance.

PHE 257 WEIGHT TRAINING FOR FITNESS 1 Credit

Students are required to follow a regimen of progressive, resistance exercises for developing physical fitness. Individual assistance is rendered to help the student with the regimen in order to build strength, stamina, endurance, and muscle tone.

PHE 258 WRESTLING 1 Credit

Students receive instruction in the fundamental skills and techniques of the sport. The course covers the historical development and present status of the sport, offensive and defensive skills, rules, strategies, and specific techniques. Safety and training procedures are also examined.

PHE 260 GYMNASTICS ON APPARATUS 1 Credit

Students receive instruction in the various methods of gymnastics. They start with basic gymnastic movements and advance to more difficult movements. Student progression

to various levels is determined by how well they perform specific skills and their mastery of equipment. Students are provided instruction in vaulting, horse, parallel bars, high bar, balance beam, and rings. Safety measures related to equipment and spotting are emphasized.

PHE 261 COACHING AND OFFICIATING FOOTBALL 2 Credits

This course offers instruction in various types of offensive and defensive patterns, rules, strategy, scouting techniques, and officiating mechanics.

PHE 262 COACHING AND OFFICIATING SOCCER 2 Credits

This course covers the basic principles and coaching methods for competitive soccer and also the mechanics of officiating.

PHE 263 COACHING AND OFFICIATING BASKETBALL 2 Credits

This course covers coaching methods for competitive basketball, strategy, scouting essentials, and mechanics of officiating.

PHE 266 COACHING AND OFFICIATING CROSS COUNTRY/TRACK AND FIELD 2 Credits

This course covers coaching principles and practices, scouting techniques, rules, strategy, and scoring.

PHE 270 AEROBIC ACTIVITY 1 Credit

This course is designed to help students develop and maintain body flexibility, muscular strength, muscular endurance, cardiovascular endurance, and ideal body composition through aerobic dance and exercise. Students perform prescribed dance/exercise type movements to music.

PHE 276 SELF-DEFENSE 1 Credit

This course is designed to help students develop self-defense skills. Students receive instruction on a variety of basic self defense movements including styles of American Karate. The course covers the physical, verbal, and spiritual benefits of Karate and also safety precautions.

PHE 277 ELEMENTS OF HATHA YOGA 1 Credit

Students perform stretching and breathing exercises based on Hatha Yoga. These exercises (asanas), if practiced regularly and methodically, aid in maintaining good health, improving cardiovascular circulation, and reducing stress. The exercises, when mastered, stretch and flex all major areas of the body in a balanced fashion increasing blood flow and improving breathing. Students keep a log of their individual progress and do a research report on the benefits of Hatha Yoga and its relationship to good health.

Physical Therapist Assistant

PTA 101 FUNDAMENTALS OF PHYSICAL THERAPIST ASSISTING I 5 Credits

This course is designed to orient the student to the role of the Physical Therapist Assistant and some of the duties involved therein. It covers the history of physical therapy, philosophy, duties, patient psychology, and ethics. Students learn about the relationship and placement of physical therapy in today's medical picture. Fundamentals of body structure, osteology, and kinesiology are stressed throughout. Students practice patient positioning, draping, transfers, therapeutic massage, and are also introduced to therapeutic exercises. Students learn via laboratory work and practice sessions in class. Prerequisite: Formal acceptance into the program. Laboratory fee.

PTA 102 PRINCIPLES OF PHYSICAL THERAPIST ASSISTING I 5 Credits

This course is designed to introduce students to disorders most commonly seen in patient care. It includes detailed examination of the application and effects of various modalities and equipment, particularly the use of heat, cold, water, and electricity in clinical practice. Students learn the use of equipment, including traction and intermittent compression pumps. They also learn the practical application of goniometric measurements, manual muscle testing, and ambulation training. Students learn via laboratory work, practice sessions in class, and observations in physical therapy clinics. Prerequisite: "C" or better in PTA 101. Co-requisite: PTA 106. Laboratory fee.

PTA 103 PHYSICAL THERAPIST ASSISTING PRACTICUM 5 Credits

Each student is assigned to a clinical setting that exposes the student to practical application of those principles and techniques covered in PTA 101, 102, and 106. The student meets periodically during the weeks with his/her ACCE for review and help with any encountered difficulties. Prerequisites: "C" or better in BIO 122, PTA 102, and PTA 106.

PTA 106 THERAPEUTIC INTERVENTION IN CHILD DEVELOPMENT AND GERONTOLOGY 1 Credit

This course is designed to address specific aspects of therapeutic intervention for the pediatric and geriatric population. In the area of pediatrics, students are instructed in normal/abnormal development sequence, with emphasis on equilibrium and righting actions. With respect to geriatric patients, students are trained to recognize and treat age-related changes affecting all biological systems. Prerequisite: "C" or better in PTA 101. Co-requisite: PTA 102.

PTA 201 PRINCIPLES OF PHYSICAL THERAPIST ASSISTING II 4 Credits

Students continue to gain skills in the assessment of various aspects of the human body. Sensory testing, balance and coordination, righting, and equilibrium reaction are covered. The anatomy and physiology of the nervous system are reviewed, and pathologies are examined in depth. Techniques in neuro-rehabilitation are introduced. Prerequisites: "C" or better in PTA 101, PTA 102, PTA 103, and PTA 106. Co-requisites: PTA 203 and PTA 209. Laboratory fee.

PTA 202 PRINCIPLES OF PHYSICAL THERAPIST ASSISTING III 4 Credits

The course focuses on orthopaedic pathologies and rehabilitation, burns, cardiac rehabilitation, respiratory pathologies and treatments, prosthetics, and orthotic management. The course also covers the management of the geriatric patient, and ethical issues related to the administration of the Health Care System. Prerequisites: "C" or better in PTA 201 and PTA 203. Co-requisite: PTA 205. Laboratory fee.

PTA 203 PHYSICAL THERAPIST ASSISTING PRACTICUM II 4 Credits

This course offers students opportunities to practice Physical Therapist Assisting. Assignments are made on the basis of demonstrated need for additional knowledge and/or skill. Students are assigned to hospitals, nursing homes, sub-acute hospitals, and pediatric facilities. Prerequisites: "C" or better in PTA 102, PTA 103, and PTA 106. Co-requisites: PTA 201 and 209.

PTA 205 PHYSICAL THERAPIST ASSISTING PRACTICUM III 6 Credits

Students receive more opportunities to practice Physical Therapist Assisting. Assignments are made on the basis of demonstrated need for additional knowledge and/or skill in a given area. Students are assigned to hospitals, nursing homes, sub-acute hospitals, pediatric facilities, and various outpatient facilities. Prerequisites: "C" or better in PTA 201, PTA 203, and PTA 209. Co-requisite: PTA 202.

PTA 209 THERAPEUTIC EXERCISE 2 Credits

Students are introduced to the basic concepts of Exercise Physiology. Current exercise techniques are presented and practiced. The student is trained in the use of various exercise equipment, including isokinetic machines. Importance is given to the development of patient programs to improve posture, strength, power, endurance, flexibility, and relaxation. Prerequisite: "C" or better in PTA 103. Co-requisites: PTA 201 and PTA 203.

Physics

PHY 101 COLLEGE PHYSICS I 4 Credits

This is the first half of a standard college physics sequence for technology majors, biological science majors, and students preparing to take PHY 103 as engineering or computer science majors. Lecture and laboratory work is supported by individual assistance and computer activities. This course includes the study of kinematics, dynamics, momentum, energy, circular motion, universal gravitation, the structure of materials, and fluids. It is recommended that you take MTH 113 or MTH 119 concurrently. Prerequisite: "C" or better in MTH 100.

PHY 102 COLLEGE PHYSICS II 4 Credits

This is the second half of a standard college physics sequence. Lecture and laboratory work is supported by individual assistance and computer activities. This course emphasizes the study of electricity, magnetism and light, and additional topics selected from heat, thermodynamics, vibrations, waves, sound, and areas of modern physics. Prerequisite: "C" or better in PHY 101 or permission of instructor.

PHY 103 GENERAL PHYSICS I 4 Credits

This is the first course in general physics for computer science, engineering, and mathematics majors. Topics covered include calculus-based study of vectors, particle kinematics, Newton's laws, friction, conservation of energy and momentum, work, equilibrium, gravitation, rotation, and simple harmonic motion. Emphasis is placed on problem solving and laboratory applications. Pre- or Co-requisite: MTH 121 (passing grade of "C" or better).

PHY 104 GENERAL PHYSICS II 4 Credits

This is a continuation of PHY 103 with emphasis on electrostatics, DC and AC circuits, electromagnetism, magnetic properties of matter, and electromagnetic oscillations. Laboratory work includes taking electrical measurements using modern electronic test equipment. Prerequisite: "C" or better in PHY 103. Co-requisite: MTH 122.

PHY 111 THEORY OF OPTICS 3 Credits

This course introduces the physics of optics and light. Topics covered include the nature of light, reflection, and refraction and image formation for simple optical systems. Instructor provides laboratory demonstrations of the principles presented. Prerequisite: "C" or better in MTH 109 or equivalent.

PHY 203 GENERAL PHYSICS III 5 Credits

This course is a continuation of PHY 103-104 which completes the introductory physics sequence for engineering majors. The theory and applications of the following topics are covered: Waves; oscillations with an introduction to Maxwell's Equations and its applications to microwaves;

hydrodynamics; kinetic theory; physical and geometrical optics; theory of relativity; introduction to atomic theory; the periodic table; and elementary particles. Prerequisites: "C" or better in PHY 104 and MTH 122.

Political Science

POL 101 INTRODUCTION TO POLITICAL SCIENCE 3 Credits

This course explores systematically the "whys" and "hows" of politics. Political ideas, institutions, and practices are examined. Students develop useful tools for the exploration and discussion of political problems. Theoretical concepts and their application are examined. Pre- or Co-requisites: ENG 096/097 and RDG 096/097 (passing grade of "C" or better), or placement.

POL 104 AMERICAN GOVERNMENT 3 Credits

This course examines the structure and processes of the American governmental system. The branches of government are examined in both their historical and contemporary settings. Pre- or Co-requisite: ENG 096/097 and RDG 096/097 (passing grade of "C" or better for each), or placement.

POL 204 URBAN POLITICS AND PLANNING 3 Credits

This course is designed to orient students to urban political systems. It includes study of institutions, informal operations and dynamics, and complexities associated with economic developments in contemporary urban society. Students analyze both primary and secondary sources of information and examine various planning and policy development suggestions put forth by social scientists and others to cope with existing problems. Each student conducts a case study of a particular public or private agency whose expressed purpose is to provide some social service to the metropolitan community. Prerequisite: "C" or better in POL 101.

POL 206 POLITICS OF BLACK LIBERATION 3 Credits

This course examines the implications of the concept and reality of power and ideologies on the response of Black Americans to their experience of oppression. The relationships between black organizations and the sources of national power as represented by political parties and pressure groups are considered. Prerequisite: "C" or better in POL 104.

POL 210 POLITICAL PARTIES 3 Credits

This course is designed to educate students on the political process. Discussions focus on how parties organize and function to influence public opinion. Manipulative tactics adopted by politicians, media, pressure groups, and party organizational machinery are also covered. Prerequisite: "C" or better in POL 101 or POL 104.

Psychology

PSY 101 GENERAL PSYCHOLOGY I PERSONALITY AND SOCIAL ASPECTS 3 Credits

This introductory course examines the history, methodology, definitions, and ideas relating to such concepts as personality formation, self-concept, defense mechanisms, emotions, and conditioning. Emphasis is placed on the relationship of these concepts to the student's understanding of self and others in everyday interactions. Pre- or Co-requisites: ENG 096/097 and RDG 096/097 (passing grade of "C" or better for each), or placement.

PSY 102 GENERAL PSYCHOLOGY II PHYSICAL AND SENSORY ASPECTS 3 Credits

This course examines the structure and function of our various senses as starting points for all human knowledge. Visual perception and illusions, along with concepts related to human learning and forgetting, are studied. An understanding of the nature of thinking, problem solving, and language is developed. Prerequisite: "C" or better in PSY 101.

PSY 205 THEORIES OF PERSONALITY 3 Credits

This course explores current approaches and theories of personality development and organization. Emphasizing healthy adult personality development, selective theories of personality that guide research, as represented by the psychoanalytic, sociocultural, trait learning, sociobiological, and existential-humanistic paradigms, are presented and critically evaluated. Prerequisite: "C" or better in PSY 101.

PSY 209 ABNORMAL PSYCHOLOGY 3 Credits

This course examines the different types of mental illness that exist within modern society. The influence of heredity and environment upon mental illness is considered and recent therapeutic methods are critically examined. Prerequisite: "C" or better in PSY 101.

PSY 210 GROUP DYNAMICS 3 Credits

This course explores the fundamental concepts of understanding interpersonal behavior in the context of small groups. By integrating group theory and research with experiential activities, students gain a better understanding of group processes and improve their interpersonal skills as group members. The course is of special value to students entering mental health, social work, education, business, or similarly related professions in which the knowledge of group processes are beneficial. Prerequisite: "C" or better in PSY 101.

PSY 211 SOCIAL PSYCHOLOGY 3 Credits

This course is designed to help students understand and explain social-psychological phenomena. Concepts such

as conformity, fear, humor, gratitude, lying, selfishness and attitude, and impression formation are examined. Various methods are applied to enable students to understand the behavior and thoughts of individuals and groups. The course objective is to develop students' ability to independently analyze social-psychological phenomena. Prerequisite: "C" or better in PSY 101.

PSY 219 CHILD PSYCHOLOGY AND DEVELOPMENT 3 Credits

This course examines the interrelationships between the psychological and physical development of the child from birth through adolescence. Topics covered include physical and emotional influences on growth, intellectual development, the significance of interpersonal relations, and cultural aspects of personality development. Prerequisite: "C" or better in PSY 101.

PSY 220 EDUCATIONAL PSYCHOLOGY 3 Credits

The practical application of psychological principles to the educative process is explored. The theoretical ideas behind the practices are explained. Methods of student evaluation are considered. Techniques of motivating students are described and related to studies of efficient learning methods. Special problems of adjustment and their effects on school performance are discussed. Prerequisite: "C" or better in PSY 101.

PSY 250 THEORY AND PRACTICE OF COUNSELING AND PSYCHOTHERAPY 3 Credits

This course presents current theories and practices used in counseling and psychotherapy. Topics covered include legal and ethical issues and therapies such as those classified as psychodynamic, cognitive, behavioral, group, and peer self-help groups. Prerequisite: "C" or better in PSY 101.

PSY 251 COUNSELING AND TREATMENT OF ADDICTIONS 3 Credits

This course provides an introduction to the individual, group, and family treatment of alcohol and drug dependency. The theoretical and historical basis, and the implications of a variety of treatment methods are considered including 12-step self-help programs, therapeutic communities, detoxification, rehabilitation, outpatient care, half-way houses, methadone, and employee and student assistance. Treatment planning by objectives and stages is stressed. Special topics of concern such as engagement, mandated treatment, enabling, and the treatment relationship are surveyed. This course is approved for forty-five educational hours toward N.J. alcoholism counselor (CADC) certification or recertification.

Radiography

RTC 100 RADIOLOGIC TECHNOLOGY I LABORATORY 2 Credits

This course provides detailed information on the theory of X-ray techniques and its practical application in radiography. Seminars are conducted in the classroom/laboratory on radiographic film evaluation. Students learn to critique or differentiate between radiographs of diagnostic quality and non-diagnostic quality. Prerequisite: Formal acceptance into the program. Laboratory fee.

RTC 101 RADIOLOGIC POSITIONING PRINCIPLES I/LABORATORY 4 Credits

This course provides instruction, with related terminology, in radiographic positioning of lower and upper extremities, chests, and abdomens. Lecture is supplemented with demonstrations and opportunities for students to practice the skills in the radiographic room. Critiques of radiographic films are conducted in the classroom/laboratory. Prerequisite: Formal acceptance into the program.

RTC 102 RECORDING MEDIA/LABORATORY 1 Credit

This course is designed to develop the necessary knowledge and skills to perform darkroom procedures with accuracy and efficiency. Students are provided a full understanding of the chemical constituents of processing solutions and their function. Critiques of radiographic films are conducted. Prerequisite: Formal acceptance into the program. Laboratory fee.

RTC 103 PATIENT CARE/ETHICS 2 Credits

This course acquaints students with nursing procedures and techniques used in the general care of the patient. Emphasis is on the role of the technologist in various nursing situations. Students are also instructed in the ethical principles and the responsibilities entailed by becoming a member of a paramedical profession. Prerequisite: Formal acceptance into the program.

RTC 104 RADIATION PROTECTION 2 Credits

This course develops students' knowledge of safety standards in operating radiation equipment. Students learn the principles of radiation protection and practical skills to ensure maximum safety for both patients and the equipment operator. Lecture is supplemented with demonstrations and opportunities for students to practice the skills in the radiographic room. Critiques of radiographic films are conducted in the classroom/laboratory. Co-requisites: RTC 100, RTC 101, RTC 102, and RTC 103.

RTC 105 RADIOLOGIC TECHNOLOGY II LABORATORY 2 Credits

Students gain, through problem solving and completing experiments, a thorough working knowledge of manipulating exposure factors. Students also learn the principles

for constructing technique charts for all situations and all kilovoltage ranges. Critiques of radiographic films are conducted in the classroom/laboratory. Prerequisite: "C" or better in RTC 100. Laboratory fee.

RTC 106 RADIOLOGIC POSITIONING PRINCIPLES II/LABORATORY 4 Credits

This course is a continuation of RTC 101. Instruction is provided in radiographic positioning of the vertebral column, pelvic girdles, and bones of the thorax. Students are taught radiographic procedures using contrast media. Lecture is supplemented with demonstrations and opportunities for students to practice the skills in the radiographic room. Critiques of radiographic films are conducted in the classroom/laboratory. Prerequisite: "C" or better in RTC 101. Co-requisites: RTC 107 and RTC 108. Laboratory fee.

RTC 107 CONTRAST MEDIA (PHARMACOLOGY) 2 Credits

Students are further acquainted with procedures in radiography involving the use of contrast media. Detailed information is provided on the equipment and media used, and on the reactions and contradictions to these media. Critiques of radiographic films are conducted in the classroom/laboratory. Prerequisite: "C" or better in RTC 101. Co-requisites: RTC 106 and RTC 108.

RTC 108 CLINICAL RADIOGRAPHY I 1 Credit

Students are assigned to clinical affiliations for approximately 15 weeks, two days each week, to perform routine examinations under the supervision of a registered radiologic technologist. Critiques of radiographic films are conducted at the clinical site. Prerequisites: "C" or better in RTC 100, RTC 101, RTC 102, RTC 103, and RTC 104. Co-requisites: RTC 106 and RTC 107.

RTC 109 RADIOLOGIC POSITIONING PRINCIPLES III/LABORATORY 2 Credits

This course provides precise and detailed information, with related terminology, on the various positions of the skull, including routine positions, and positions with regard to facial bones, paranasal sinuses, and mastoid. Lecture is supplemented with demonstrations and opportunities for students to practice the skills in the radiographic room. Critiques of radiographic films are conducted in the classroom/laboratory. Prerequisite: "C" or better in RTC 108. Co-requisite: RTC 110. Laboratory fee.

RTC 110 RADIOLOGIC ADVANCE POSITIONING PRINCIPLES IV 1 Credit

Students gain, through problem solving and completion of experiments, a thorough working knowledge of special and troublesome procedures. This course is for students who have practiced the basic views and are aware of positioning limitations. Students learn alternate positioning skills to image various anatomical structures in the emergency room environment. Lecture is supplemented with demonstrations

and opportunities for students to practice the skills in the radiographic room. Critiques of radiographic films are conducted in the classroom/laboratory. Prerequisites: "C" or better in RTC 101 and RTC 106. Co-requisite: RTC 109. Laboratory fee.

RTC 111 CLINICAL RADIOGRAPHY II 1 Credit

Students are assigned to clinical affiliations for approximately eight weeks, three days per week, to perform routine examinations under the supervision of a registered radiologic technologist. Critiques of radiographic films are conducted at the clinical site. Prerequisite: "C" or better in RTC 108. Co-requisites: RTC 109 and RTC 110.

RTC 112 CLINICAL RADIOGRAPHY III 2 Credits

Students are assigned to clinical affiliations for approximately eight weeks, five days per week, to perform all radiographic procedures under the supervision of a registered radiologic technologist. Critiques of radiographic films are conducted at the clinical site. Prerequisite: "C" or better in RTC 111.

RTC 200 MEDICAL/SURGICAL DISEASES 2 Credits

This course deals with application of X-ray technology on seriously ill or injured patients to produce informative radiographs. Students learn about anatomical changes resulting from disease and/or injury and how to take radiographs that are most informative for diagnosis and treatment. Critiques of radiographic films are conducted at the classroom and clinical sites. Prerequisite: "C" or better in RTC 112. Co-requisites: RTC 201, RTC 202, RTC 203, RTC 204, and RTC 205.

**RTC 201 RADIATION BIOLOGY/
LABORATORY 2 Credits**

This course provides basic information on the effects of radiation therapy and radioisotopes on biological systems. It is geared toward students whose training is primarily in the field of diagnostic X-ray technology. Critiques of radiographic films are conducted in the classroom/laboratory, focusing on the effects of radiation as related to radiation biology and health physics. Prerequisite: "C" or better in RTC 112. Co-requisites: RTC 200 and RTC 202.

RTC 202 CLINICAL RADIOGRAPHY IV 2 Credits

Students are assigned to clinical affiliations for approximately 15 weeks, three days per week, to perform all radiographic procedures under the supervision of a registered technologist. Critiques of radiographic films are conducted at the clinical sites. Prerequisite: "C" or better in RTC 112. Co-requisites: RTC 200 and RTC 201.

**RTC 203 SPECIAL PROCEDURES/
LABORATORY 3 Credits**

Students learn about the specialized and highly technical procedures in radiography, such as computerized axial tomography (CAT), magnetic resonance imaging (MRI), and ultrasound angiography, and the general indications for each examination. Quality control methods are also covered. Selected radiographs supplement anatomical review of the systems to be examined, prior to radiographic procedures. Lecture is supplemented with demonstrations and opportunities for students to practice the skills in the radiographic room. Critiques of radiographic films are conducted in the classroom/laboratory. Prerequisite: "C" or better in RTC 202. Co-requisites: RTC 204 and RTC 205. Laboratory fee.

**RTC 204 PEDIATRIC/GERIATRIC
RADIOGRAPHY 2 Credits**

Pediatrics and geriatrics are specialized fields. It is important that the technologist follows definite procedural methods with young and elderly patients. Advantages include saving time, film, and energy, as well as minimizing the amount of radiation on the patient. This course provides detailed instruction in radiographic positioning, procedures, and equipment for pediatric and geriatric patients. Lecture is supplemented with demonstrations and opportunities for students to practice the skills in the radiographic room. Critiques of radiographic films are conducted. Prerequisite: "C" or better in RTC 202. Co-requisites: RTC 203 and RTC 205.

RTC 205 CLINICAL RADIOGRAPHY V 2 Credits

Students are assigned to clinical affiliations for approximately 15 weeks, three days per week, to assist in pediatric and geriatric procedures under the supervision of a registered technologist. Critiques of radiographic films are conducted at the clinical site. Prerequisite: "C" or better in RTC 202.

RTC 206 CLINICAL RADIOGRAPHY VI 2 Credits

Students are assigned to clinical affiliations for approximately eight weeks, five days per week. They rotate through CT departments under the supervision of a registered technologist. They perform routine radiography until designated appointment for CT. Critiques of radiographic films are conducted, with focus on the effects of radiation as related to CT. Prerequisite: "C" or better in RTC 205.

RTC 207 CLINICAL RADIOGRAPHY VII 2 Credits

Students are assigned to clinical affiliations for approximately eight weeks, four days per week, for mastery of radiologic technology skills. Students perform all radiographic procedures including assisting in O.R. and special procedures under the supervision of a registered technologist. Critiques of radiographic films are conducted at the clinical sites. Successful completion of a comprehensive examination is required. Prerequisite: "C" or better in RTC 206.

Reading

RDG 096 READING FOUNDATIONS FOR COLLEGE STUDENTS I 3 Credits

This is a reading skills course designed to increase the comprehension of transition-level students and advance them to the college-level. The focus is on developing students' ability to interpret text accurately and evaluate it logically. The course emphasizes a whole language approach; students learn to discuss and write about text as well as to read it. Individualized tutoring is available in addition to traditional classroom instruction. This course must be taken concurrently with RDG 097. Prerequisites: "C" or better in ENG 088, ENG 089, and ENG 090, or placement.

RDG 097 READING FOUNDATIONS FOR COLLEGE STUDENTS II 1.5 Credits

This course provides a foundation for the development of effective study habits and skills. Emphasis is on the essential skills of listening, concentrating, reasoning, following directions, note-taking, and managing time. Special emphasis is placed upon helping students overcome the anxieties of testing, reading, writing, and studying. This course must be taken concurrently with RDG 096. Prerequisites: "C" or better in ENG 088, ENG 089, and ENG 090, or placement.

Respiratory Therapy

RST 100 CORE CONCEPTS IN RESPIRATORY CARE 1 Credit

This course serves as an orientation to general patient assessment and examination. Topics covered include infection control, patient safety, interviewing and communication, record keeping, and clinical laboratory studies. Students learn, through lecture and demonstrations, the fundamentals underlying the skills to be practiced in the laboratory and then performed during clinical practice. This course must be taken concurrently with RST 110. Prerequisite: Formal acceptance into the program. Co-requisites: RST 110, RST 118, and RST 123.

RST 110 FUNDAMENTALS OF RESPIRATORY CARE 4 Credits

This course serves as an introduction to basic therapeutic modalities employed in contemporary respiratory care, including basic patient assessment, cardiopulmonary resuscitation, medical gas therapy, humidity and aerosol therapy, hyperinflation therapy, chest physical therapy, and infection control. This course must be taken concurrently with RST 100. Prerequisite: Formal acceptance into the program. Co-requisites: RST 100, RST 118, and RST 123. Laboratory fee.

RST 118 CLINICAL PRACTICE I 1 Credit

This course serves as an orientation to the hospital environment and to the basic respiratory care procedures covered in RST 110. Clinical instruction and supervised practice opportunities are provided in the areas of medical charting, infection control, basic patient assessment, and basic therapeutics. Clinical hours: 90. Prerequisite: Formal acceptance into the program. Co-requisites: RST 100, RST 110, and RST 123. Laboratory fee.

RST 123 APPLIED CARDIO-PULMONARY PATHOPHYSIOLOGY I 2 Credits

This course examines the anatomy and physiology of the cardiopulmonary system as it relates to respiratory care. Topics covered include basic anatomy of the pulmonary and cardiac systems, physiology of circulation, ventilation, gas exchange and transport, acid-base balance, and control of respiration. An overview of the pathophysiology and treatment of common disorders of the cardiopulmonary system is also provided. Prerequisite: Formal acceptance into the program. Co-requisites: RST 100, RST 110, and RST 118. Laboratory fee.

RST 125 PRINCIPLES OF VENTILATORY SUPPORT 4 Credits

This course serves as an introduction to the physiologic principles and techniques of artificial ventilatory support. Topics covered include 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. Prerequisites: "C" or better in RST 100, RST 110, RST 118, and RST 123. Co-requisites: RST 128, RST 212, RST 213, and RST 223. Laboratory fee.

RST 128 CLINICAL PRACTICE II 2 Credits

Students further practice and master basic respiratory care procedures introduced in RST 118. They are also introduced to airway management skills and principles of intensive respiratory care, including patient assessment and basic ventilator monitoring. Clinical hours: 180. Prerequisites: "C" or better in RST 100, RST 110, RST 118, and RST 123. Co-requisites: RST 125, RST 212, RST 213, and RST 223. Laboratory fee.

RST 138 CLINICAL PRACTICE III 3 Credits

Students develop, through supervised experience, the skills necessary to function independently in a critical care setting. Observational experience is also provided in pulmonary function testing and pediatric-neonatal respiratory care. Clinical hours: 180. Prerequisites: "C" or better in RST 125, RST 128, RST 212, RST 213, and RST 223. Co-requisite: RST 214, RST 225, and RST 237. Laboratory fee.

RST 212 CARDIOPULMONARY PHARMACOLOGY 2 Credits

This course provides an overview of drugs affecting the cardiopulmonary system, including various classes of bronchodilators, steroids, antimicrobials, skeletal muscle relaxants, central nervous system depressants, respiratory stimulants, diuretics, and cardiovascular agents, including ACLS, PALS, and neonatal resuscitation drugs. Prerequisites: "C" or better in RST 100, RST 110, RST 118, and RST 123. Co-requisites: RST 125, RST 128, RST 213, and RST 223. Laboratory fee.

RST 213 APPLIED CARDIOPULMONARY PATHOPHYSIOLOGY II 2 Credits

This course examines the pathophysiology of the disorders of ventilation, perfusion, and oxygenation which result in cardiopulmonary failure. Emphasis is on diagnosis and treatment in the clinical setting. Clinical hours: 180. Prerequisites: "C" or better in RST 100, RST 110, RST 118, and RST 123. Co-requisites: RST 125, RST 128, RST 212, and RST 223.

RST 214 PATIENT MANAGEMENT - CRITICAL CARE 3 Credits

This course covers in depth the clinical management of the cardio-pulmonary patient in the critical care setting, emphasizing specialized respiratory assessment, advanced ventilatory management, basic interpretation of the chest film, hemo-dynamic monitoring, ECG interpretation, and the effects of cardiopulmonary disorders on other major body systems. Lecture hours: 30. Laboratory hours: 45. Prerequisites: "C" or better in RST 125, RST 128, RST 212, RST 213, and RST 223. Co-requisites: RST 138, RST 225, and RST 237. Laboratory fee

RST 223 CARDIOPULMONARY EVALUATION 2 Credits

This is a lecture and laboratory course on 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. Prerequisites: "C" or better in RST 100, RST 110, RST 118, and RST 123. Co-requisites: RST 125, RST 128, RST 212, and RST 213. Laboratory fee.

RST 225 PEDIATRIC/NEONATAL RESPIRATORY CARE 3 Credits

This course introduces the special respiratory care needs of the neonatal and pediatric patients. Topics covered include development of the respiratory system, care of the newborn, respiratory diseases, mechanical ventilation, oxygen and aerosol therapy, and emergency transport. Supervised pediatric and neonatal clinical experience occurs. Prerequisites: "C" or better in RST 125, RST 128, RST 212, RST 213, and RST 223. Co-requisites: RST 138, RST 214, and RST 237. Laboratory fee.

RST 237 LONG-TERM, HOME, REHABILITATIVE CARE 2 Credits

This course analyses the goals and methods underlying provision of respiratory care in non-acute settings. Topics covered include standards and regulations governing non-acute respiratory care, team planning, patient selection, long-term care, and rehabilitation facilities. The course also deals with cost, reimbursement, and ethical issues. Prerequisites: "C" or better in RST 125, RST 128, RST 212, RST 213, and RST 223. Co-requisite: RST 138, RST 214, and RST 225. Laboratory fee.

Sociology

FPD 080 FOUNDATIONS OF PERSONAL DEVELOPMENT I 1.5 Credits

This is a counseling course designed to assist pre-college students in their personal adjustment to the college environment. The course addresses the development of a positive self-concept, effective interpersonal communication skills, and working knowledge of college systems. The course is limited to Special Programs students. Co-requisite: Any skills development course.

FPD 081 FOUNDATIONS OF PERSONAL DEVELOPMENT II 1.5 Credits

This is a counseling course designed to assist the pre-college student in viewing college education as a component in the career development process. Topics covered include realistic establishment of career/educational goals, pursuit of vocational goals, time management, and personal interaction. The course is limited to Special Programs students. Co-requisite: Any skills development course.

PSR 080 PROBLEM SOLVING AND REASONING SKILLS 1.5 Credits

This is a thinking skills course designed to help the pre-college level student learn to solve problems that pertain to course work and to everyday life situations. Emphasis is placed on developing the student's ability to think things through, make decisions, solve problems, and understand the processes of thinking and decision-making. This course is limited to Special Programs students. Co-requisite: Any skills development course.

SOC 101 INTRODUCTION TO SOCIOLOGY 3 Credits

This course introduces students to the idea of society as a framework within which all people live their lives, and to the factors or processes determining the structure or shape of society. Concepts and processes such as social institutions, social stratification, ideologies, and social change are discussed and clarified. Prerequisites: "C" or better in ENG 096/097 and RDG 096/097, or placement.

SOC 108 SOCIAL PROBLEMS 3 Credits

This course examines the causes of selected social problems. Emphasized are national social problems as well as those that affect urban areas. Prerequisites: "C" or better in ENG 096/097 and RDG 096/097, or placement. (SOC 101 is advised but not a prerequisite.)

SOC 111 HELPER THEORY 3 Credits

This course examines ways in which the helping professions intervene in individual, group, community, and societal processes with the goal of improving social functioning. Prerequisite: "C" or better in ENG 096/097 and RDG 096/097, or placement. (SOC 101 is advised but not a prerequisite.)

SOC 121 SOCIAL SERVICE POLICIES AND PROCEDURES I 3 Credits

This course examines from a historical perspective the processes involved in formulating social service policies and eligibility criteria, and in distribution of benefits. The course covers the relationship of social service agencies and institutions to federal, state, and municipal government and to policy development, and includes an introduction to the structure and mode of operation of these agencies and institutions. Prerequisite: "C" or better in SOC 101 or PSY 101.

SOC 122 SOCIAL SERVICE POLICIES AND PROCEDURES II 3 Credits

Designed to provide the theoretical and practical knowledge needed for entry levels of practice in social work, this course articulates the skills needed for social work practice and spells out the relationship between specific skills and service outcomes. Prerequisite: "C" or better in SOC 121.

SOC 125 THE DISABLED AND THE SOCIAL SERVICES 3 Credits

This course is an introduction to the field of disability. It includes discussion of types and characteristics of disability, the economic, psychological, and social effects on the disabled, and the function, value, and role of health and social agencies involved with the disabled. Prerequisite: "C" or better in SOC 101.

SOC 153 ALCOHOL AND SUBSTANCE ABUSE PREVENTION AND EDUCATION 3 Credits

This course provides an introduction to the individual, group, and social factors that predispose or create a risk for substance abusing behavior, the knowledge and skills needed for entry into the prevention profession, and the broad range of prevention activities and strategies utilized to reduce the risk or frequency of substance abusing behaviors. This course is approved as educational hours towards the CADC credential. Prerequisite: "C" or better in SOC 101 or PSY 101 or permission of the instructor.

SOC 199 BEHAVIORAL SCIENCE FOR HEALTH PROFESSIONS 3 Credits

This course is a survey of the relationship between the social sciences and health fields. Topics covered include group differences in health and illness beliefs and behavior, relationships between providers and patients and among providers, sick roles, and sociocultural roots of health values, health policy, and a health organization. It is designed for majors in health and human services. Prerequisites: "C" or better in SOC 101 and PSY 101, or placement.

SOC 201 SOCIAL GERONTOLOGY 3 Credits

This course examines the role of the aged in today's society; the biological, psychological, and social aspects of aging; problems in the health of the aged; problems in retirement and leisure; the economics and politics of aging; issues confronting the aging person; and the prospects for the aged in tomorrow's society. Prerequisite: "C" or better in SOC 101 or PSY 101.

SOC 203 RACIAL AND CULTURAL MINORITIES 3 Credits

This course analyses the influence and contributions of selected racial, ethnic, and cultural minorities in contemporary American life. Emphasis is placed on the structural elements in American society affecting the entry of such groups into the mainstream of American life. The social and psychological dynamics of prejudice and discrimination are examined. Prerequisite: "C" or better in SOC 101.

SOC 204 URBAN SOCIOLOGY 3 Credits

Urbanism is stressed as a way of life with distinct social relationships and values. Emphasis is on the social and physical environment of modern urban life, its relationships, processes, and implications, and various alternatives open to urban people. Prerequisite: "C" or better in SOC 101.

SOC 205 THE SOCIOLOGY OF THE BLACK COMMUNITY IN CONTEMPORARY AMERICA 3 Credits

This course examines the social forces operating in the Black community. Consideration is given to the changes in the philosophy of the Black movement and changes in attitudes about integration. White liberalism and Black leadership are particularly stressed. Prerequisite: "C" or better in SOC 101.

SOC 206 SOCIAL STRATIFICATION 3 Credits

This course considers the significance of social stratification as an aspect of the structure of social systems. It includes discussion of various stratification theories, historical trends, and cultural variations in stratification. Prerequisite: "C" or better in SOC 101.

SOC 207 UNDERSTANDING DEATH AND DYING 3 Credits

The course takes a close look at aspects of the dying process in such situations as murder, suicide, capital punishment, and grief. It examines the thoughts, feelings, and actions of the dying and of those affected by death so that the student can gain greater insight into the subtle relationships these factors have with each other and with death. This course is designed for all students seeking better understanding of death and the process of bereavement. Prerequisite: "C" or better in SOC 101 or PSY 101.

SOC 219 SOCIOLOGY OF THE FAMILY 3 Credits

This course is a sociological study of the family as an institution. Topics covered include historical development, the American system, child-rearing, and marriage. Prerequisite: "C" or better in SOC 101 or PSY 101.

SOC 228 HUMAN AND SOCIAL SERVICES FIELDWORK I 3 Credits

Students are placed in a voluntary internship capacity for a minimum of ten hours per week at a recognized human services agency, under the supervision of agency staff and an ECC faculty member. Students can gain first-hand knowledge of how human service agencies function. Evaluation conducted during and at the end of the semester is a cooperative effort by the agency and the faculty member responsible. Separate sections are offered for students pursuing careers in social work, mental health, alcoholism/substance abuse, and gerontology. Pre- or Co-requisites: PSY 101 and SOC 111 (passing grade of "C" or better), or permission of instructor. Co-requisite: SOC 229.

SOC 229 HUMAN AND SOCIAL SERVICES INTERNSHIP SEMINAR I 3 Credits

Students discuss and analyze situations encountered in their internship placement, receive specialized skills training in their professional specialization, and are instructed in how to prepare to enter the career market. Separate sections are offered for students pursuing careers in social work, mental health, alcoholism/substance abuse, and gerontology. Pre- or Co-requisite: PSY 101 and SOC 111 (passing grade of "C" or better), or permission of instructor. Co-requisite: SOC 228.

SOC 230 HUMAN AND SOCIAL SERVICES FIELDWORK II 3 Credits

This is the second semester internship placement in social work, mental health, or alcoholism/substance abuse, continuing SOC 228. Pre- or Co-requisites: PSY 101 and SOC 111 (passing grade of "C" or better), or permission of instructor. Co-requisite: SOC 231.

SOC 231 HUMAN AND SOCIAL SERVICES INTERNSHIP SEMINAR II 3 Credits

This second semester internship seminar continues the work of SOC 229. Pre- or Co-requisites: PSY 101 and SOC 111 (passing grade of "C" or better), or permission of instructor. Co-requisite: SOC 230.

SOC 232 HUMAN SEXUALITY 3 Credits

This course deals with various aspects of human sexuality as well as the place of sex in human values, ethics, and behavior. Basic biology of female and male anatomy is discussed as well as the physiology of sexual response. Relationships or non-relationships between sex, love, and commitment are explored, as are the concepts of heterosexuality, homosexuality, bisexuality, and asexuality. The course focuses on the concept of human sexual experience as an avenue for self-understanding and self-awareness. Prerequisite: "C" or better in SOC 101.

SOC 238 METHODS AND TECHNIQUES OF WORKING WITH ELDERLY 3 Credits

This course examines concepts and intervention strategies that are used in providing services to the elderly in our society. Prerequisite: "C" or better in SOC 101 or PSY 101.

SOC 250 SUBSTANCE USE AND ABUSE IN AMERICAN SOCIETY 3 Credits

The course examines the causes and varieties of chemical dependency and abuse. Topics covered include the effects of alcohol, sedatives, narcotics, stimulants, hallucinogens, polyaddiction, and abuse; the psychological, social, genetic, and cultural factors involved in their use and abuse; the progression of addiction; and the resultant medical conditions. (This course and SOC 252 constitute the educational requirements for the Chemical Dependency Associate in New Jersey and are also approved as educational hours toward the Criminal Justice Counselor [CJC] and Certified Alcohol & Drug Counselor [CADC] credential). Pre-requisite: "C" or better in SOC 101 or PSY 101.

SOC 252 CASE MANAGEMENT OF ADDICTIONS 3 Credits

This course provides an introduction to the knowledge, skills, and attitudes necessary for addictions counselors to perform counseling functions, clinical evaluation, treatment planning, and case management. It introduces students to the professional and ethical responsibilities of professional practice. (This course and SOC 250 constitute the educational requirements for the Chemical Dependency Associate in New Jersey and are also approved as educational hours toward the Criminal Justice Counselor [CJC] and Certified Alcohol & Drug Counselor [CADC] credential). Pre-requisite: "C" or better in SOC 101 or PSY 101.

Spanish

SPN 100 PRACTICAL SPANISH 3 Credits

This is an elementary course in speaking and understanding Spanish. Emphasis is on oral comprehension and oral expression in a variety of practical situations rather than on the form and function of the language. The course serves as an excellent tool for communication with Spanish-speaking people, both abroad and within our own Hispanic community. Content area may vary in accordance with student needs.

SPN 101 ELEMENTARY SPANISH I 3 Credits

This is the first half of a year's course for students with little or no background in the Spanish language. Listening comprehension, speaking, reading, and writing are developed within the limits of basic vocabulary, idioms, and grammar. Pre or Co-requisites: ENG 096/097 and RDG 096/097 or ESL 103 (passing grade of "C" or better for each), or placement.

SPN 102 ELEMENTARY SPANISH II 3 Credits

This course is a continuation of SPN 101. It is designed to expand students' knowledge of vocabulary and grammar to include multiple tenses and uses of the verb. The four language skills: listening comprehension, speaking, reading, and writing continue to be developed. Prerequisite: "C" or better in SPN 101 or placement.

SPN 110 ADVANCED SPANISH COMPOSITION 3 Credits

This course, designed for native speakers of Spanish, provides an intensive review of Spanish grammar and examines the problems of written composition in the Spanish language. This course is conducted in Spanish. Prerequisite: Placement.

SPN 201 INTERMEDIATE SPANISH I 3 Credits

This course thoroughly reviews Spanish grammar while continuing the aims of SPN 101-102. Facility in using the language is enhanced through more advanced reading selections and discussions in the language. Prerequisite: "C" or better in SPN 102 or placement.

SPN 202 INTERMEDIATE SPANISH II 3 Credits

This course is a continuation of SPN 201. It completes the review of Spanish grammar and focuses on further development of the four language skills: listening comprehension, speaking, reading, and writing. Prerequisite: "C" or better in SPN 201 or placement.

SPN 222 LATIN AMERICAN LITERATURE 3 Credits

This course, given in Spanish, is designed to acquaint students with some of the outstanding writers of Latin America from colonial times to the present. Prerequisite: "C" or better in SPN 110 or SPN 202, or placement.

SPN 225 CARIBBEAN LITERATURE 3 Credits

This course involves reading, interpretation, and analysis of selected authors and texts of Caribbean literature. It is taught in Spanish. Prerequisite: "C" or better in SPN 110 or SPN 202, or placement.

SPN 227 US LATINO LITERATURE 3 Credits

This course is an introduction to the literature of US Latino writers. It concentrates on their cultural roots and gives the student a better understanding of the sociocultural, political, and economical forces that shaped the literature. It addresses the development of literary trends, values, and prevailing social conditions as they are presented by Latino writers. Classes are conducted in Spanish. Prerequisite: "C" or better in SPN 110 or SPN 202, or placement.

Uniform Construction Code Administration

UCC 109 SUBCODE OFFICIAL 3 Credits

This course is designed to satisfy the official educational requirement for New Jersey State licensure as Uniform Construction Code Enforcement Subcode Official. The course covers in detail the administrative background and procedures of the office, the legal aspects of code enforcement, and related legislation.

UCC 110 CONSTRUCTION OFFICIAL 3 Credits

This course is designed to satisfy the educational requirement for licensure as Construction Official. It provides students the technical and administrative knowledge to effectively enforce the Uniform Construction Code at the local level. Prerequisite: Completion of the educational program required for Subcode Official.

UCC 120 BUILDING INSPECTOR RCS 4 Credits

This course is designed to satisfy the educational requirement for licensure as Building Inspector RCS. The course is based on the BOCA National Building Code, the BOCA National Mechanical Code, and the CABO One and Two Family Dwelling Code. It covers techniques for evaluating structural design and materials, plan review, basic fire protection requirements, and field inspection and reporting as applied to Class III residential and small commercial structures. Reference is made to the New Jersey Uniform Construction Code.

UCC 121 BUILDING INSPECTOR ICS 6 Credits

This course is designed to satisfy the educational requirement for licensure as Building Inspector ICS. The course is based on the New Jersey Uniform Construction Code, the BOCA National Building Code, the National Mechanical Code, and the National Energy Conservation Code. It covers techniques for evaluating structural design, fire protection, and mechanical systems; plan analysis; and

field inspection and reporting as applied to Class II industrial and commercial structures. Prerequisite: UCC 120.

UCC 130 ELECTRICAL INSPECTOR ICS 4 Credits

This course is designed to satisfy the educational requirement for licensure as Electrical Inspector ICS. The course covers the New Jersey Uniform Construction Code and the National Electrical Code. The course consists of 30 hours of instruction in systems design and 30 hours of instruction in plan review and field inspection techniques.

UCC 140 FIRE PROTECTION INSPECTOR ICS- PART I 4 Credits

This course is designed to satisfy the educational requirement for mastery of the Fire Protection Subcode for residential and small commercial structures. The course is based on the New Jersey Uniform Construction Code and the BOCA National Building Code. It covers techniques for plan review, materials testing, field inspection, and report writing. It is Part I of a two-part 120-hour course required for licensure as Fire Protection Inspector ICS.

UCC 141 FIRE PROTECTION INSPECTOR ICS - PART II 4 Credits

This course covers techniques for plan review and field inspection of fire protection systems and electrical systems. It is a detailed study of the Code, focusing on its relation to fire prevention. It is Part II of the 120-hour course required for licensure as Fire Protection Inspector ICS. Prerequisite: Completion of UCC 140.

UCC 150 PLUMBING INSPECTOR ICS 6 Credits

This course is designed to satisfy the educational requirement for licensure as Plumbing Inspector ICS. The course is based on the New Jersey Uniform Construction Code as applied to Class II and Class III structures. It covers design, testing, and analysis techniques for evaluating water service, water distribution, and drainage systems. It also includes training in plan review and field inspection procedures and a study of New Jersey public health requirements.

UCC 160 ELEVATOR INSPECTOR HHS 6 Credits

This course is designed to satisfy the educational requirement for licensure as Elevator Inspector HHS (Hazardous and High-rise Structures). Instruction covers the subject areas specified by statute to ensure technical competence as applied to all structures. Subject areas that are covered include: Inspection and testing regulations, machinery and equipment, plan review, and inspection techniques.

UCC 220 BUILDING INSPECTOR HHS 4 Credits

This course is designed to satisfy the educational requirement for licensure as Building Inspector HHS (Hazardous and High-rise Structures). Instruction focuses on building technical competency in design analysis, materials and standards, and methods for securing compliance in advanced structural systems, advanced fire protection systems, and advanced mechanical systems, as applied to Class I and all other structures established in Subchapter 3 of the New Jersey Uniform Construction Code. Prerequisite: Completion of an educational program for Building Inspector ICS, or the equivalent.

UCC 230 ELECTRICAL INSPECTOR HHS 3 Credits

This course is designed to satisfy the educational requirement for licensure as Electrical Inspector HHS (Hazardous and High-rise Structures). The course is based on the New Jersey Uniform Construction Code and the National Electrical Code. It provides instruction intended to ensure technical competencies in advanced electrical systems, high-rise buildings, and hazardous locations identified in the electrical subcode. Prerequisite: Completion of an educational program meeting the requirements for Electrical Inspector ICS.

UCC 240 FIRE PROTECTION INSPECTOR HHS 4 Credits

This course is designed to satisfy the educational requirement for licensure as Fire Protection Inspector HHS (Hazardous and High-rise Structures). It provides the background of technical and administrative knowledge to effectively enforce the Uniform Construction Code at the local level, as applied to high-rise and hazardous structures. Prerequisite: Completion of an educational program meeting the requirements for Fire Protection Inspector ICS.

UCC 250 PLUMBING INSPECTOR HHS 4 Credits

This course is designed to satisfy the educational requirement for licensure as Plumbing Inspector HHS (Hazardous and High-rise Structures). The course is based on the New Jersey Uniform Construction Code and the National Plumbing Code. The course covers advanced plumbing system design and installation for Class I structures. Prerequisite: Completion of an educational program meeting the requirements for Plumbing Inspector ICS.

Uniform Fire Code

FSI 105 FIRE PREVENTION AND INSPECTION

6 Credits

This course examines the principles of fire prevention and inspection, with emphasis on the standards designed to protect lives and property from fire and explosion. Based upon the New Jersey Uniform Fire Codes, it covers the regulations, administrative aspects, and enforcement provisions of life safety systems of buildings; safe use and maintenance of facilities; handling of hazardous materials; retrofit requirements of the code; and techniques for fire inspection and investigation. This course satisfies the education requirement for state certification of fire prevention inspectors.

FSI 205 FIRE OFFICIAL

3 Credits

This course is offered in conjunction with the New Jersey Division of Fire Safety. It provides a comprehensive review of the duties and responsibilities of an appointed Fire Official. It covers the organization and administration of a local enforcing agency as well as legal methods of code enforcement. This course is approved for credit toward Fire Official certification issued by the Department of Community Affairs pursuant to the Uniform Safety Act. This course is designed to assist fire service personnel, property managers, architects, engineers, builders, safety officials, and the public to understand the administrative requirements of the Uniform Fire Code, references standards, and enforcement procedures. Prerequisite: FSI 105.



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Michael King	Division of Business
John Gribbin	Division of Engineering Technologies and Computer Sciences
Mark B. Schuman	Division of Humanities
Timothy Stafford	Division of Mathematics and Physics
Marlene Dey	Department of Nursing
Mamie Bridgeforth	Division of Social Sciences

FACULTY

Essex County College has both full-time and adjunct faculty members. All are expected to meet the same standards of academic preparation, course content, and dedication to students. In addition to a greater teaching load, full-time faculty have additional responsibilities, notably curriculum development, student advisement, and involvement in the life of the college.

The following is a list of faculty members, together with their credentials and their divisional or departmental assignment.

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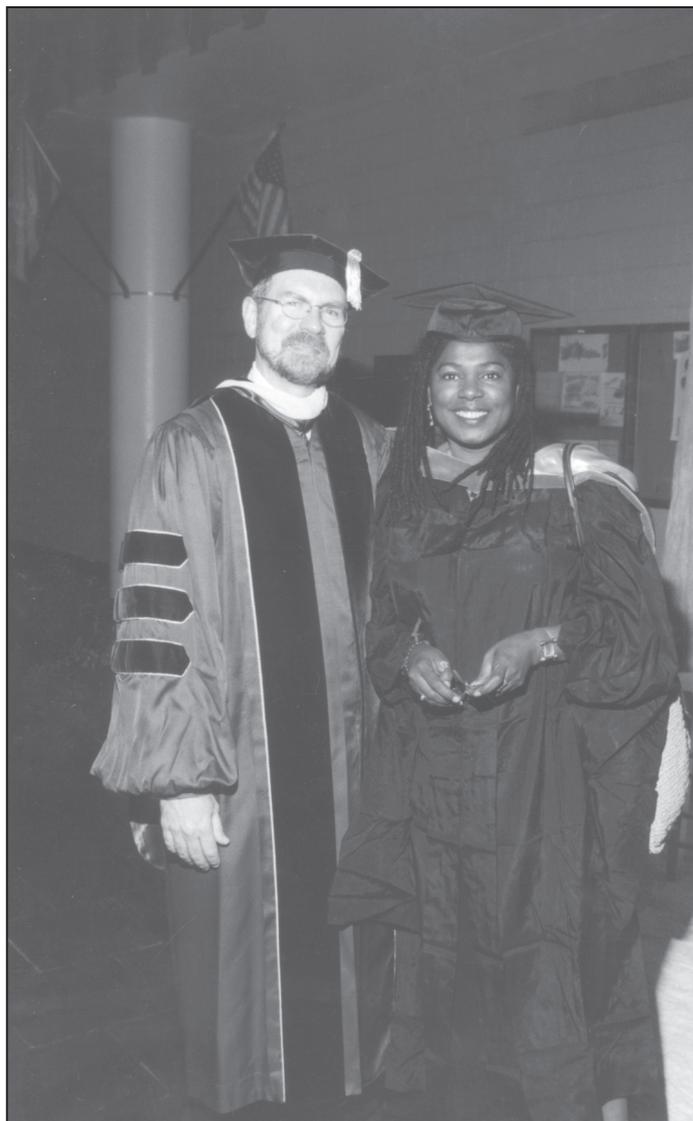
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AKIWOWO, LOLA

Associate Director, Development

ATTENBOROUGH, CHARLOTTE

Director, Auxiliary Services

BEHR, MAUREEN

Associate Director, Corporate and Business Training

BROWN, GRETCHEN

Associate Dean, Community/Customized Programs

BUNYAN, PAULA

Director, Child Development Center

CHOUDHURY, SANGHAMITRA

Associate Director, Training, Inc./CTI

CLARK, WILLIAM

Assistant to the Executive Vice President, Public Safety

COFER, MILDRED

Director, Financial Aid

COTTLE, CHRISTOPHER

Assistant Dean, Student Life and Activities

CROMARTIE, ANTHONY

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DAVIS, CASSANDRA

Director, GEAR UP/Newark Partnership

DONATO, LISA

Director, Freshman Center

DRAKULICH, SCOTT

Director, Institutional Research

FITZSIMMONS, DIANE

Associate Dean, West Essex Campus

FOSTER, BETTY

Director, Special Programs

GIBSON, MARIANNE

Associate Director, Student Support Services

GROOMES, BRENDA

Associate Director, Career Resource Center

HASAN, RASHIDAH

Senior Staff Attorney

JAMES, IRENE

Director, Development

KAGAN, YURY

Associate Director, Facilities Management

KASSA, ZEE

Director, Enrollment Services Express Center

KIRKLAND, KEITH

Director, Continuing Education and Community Services, WEC

KNIGHT, MELVIN

Director, Athletics

LINFANTE, FELIX

Director, Academic Programs, WEC

LOWEN, YVONNE

Associate Director, Human Resources

MACDONNELL, SUSAN

Associate Director, WISE Women's Center

MAYNARD, PAMELA

Director, Career Resource Center

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Bursar

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OFSAK, CHARLES

Director, Police Academy

ONAFOWORA, OLUSOGA

Director, Financial Operations

PALMERI, PATRICIA

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PETTIFORD, SHELLEY

Associate Director, Talent Search

PHILLIPS-CAMERON, GAIL

Director, Community & Extension Programs

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ROSS, RONALD

Director, Evening/Weekend Services

RUTHERFORD, MARYLYN

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SEDDIKI, MOHAMED

Director, Information Technology

SHAPIRO, JEFF

Director, Facilities Management and Planning

SHAW, NADINE

Director, Media Production and Technology

SLATON, GWENDOLYN

Associate Dean, Learning Resources

SPEARS, GWENDOLYN

Director, Purchasing

TORRES, XIOMARA

Director, Educational Opportunity Fund

VIEIRA, ELVIRA

Director, Business Services and Workforce Training

WESCOTT, JOHN

Chair, Division of Allied Health

WILKERSON, CHERYL

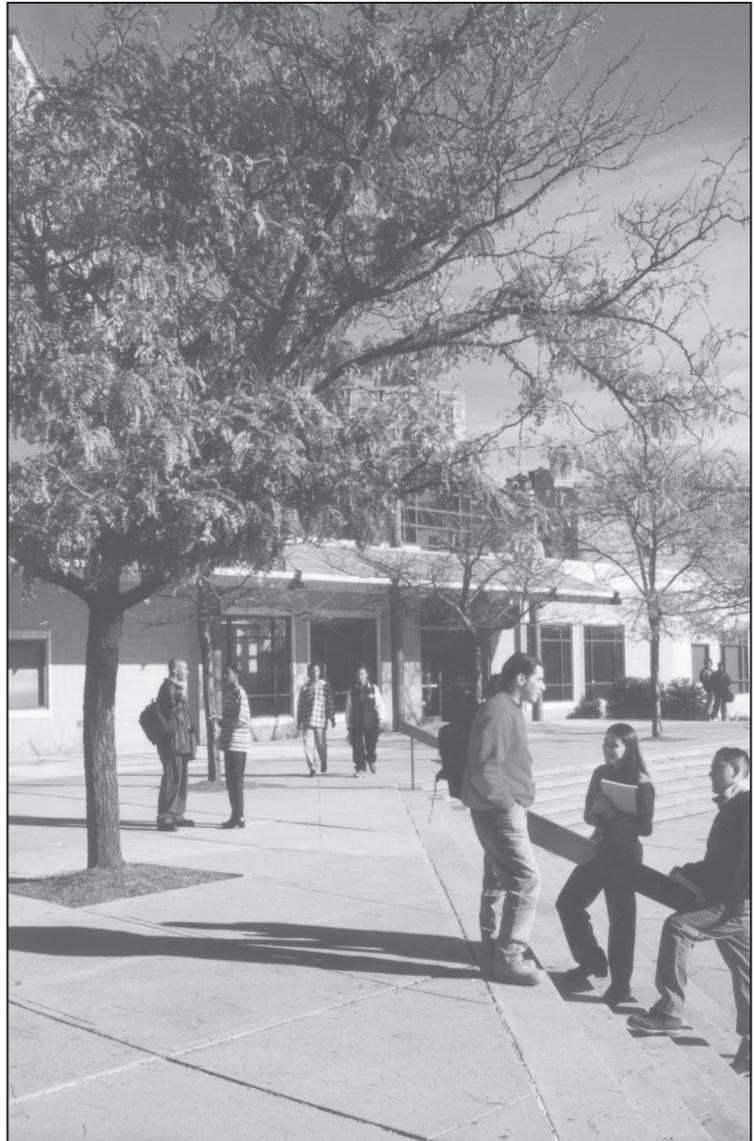
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WILLIAMS, LILISA

Associate Director, College Bound Technology

YARBOROUGH, TAVIA

Associate Director, Workforce Development Program (WDP)



TELEPHONE DIRECTORY OF ECC OFFICES

General Information	(973) 877-3000
Academic Affairs	(973) 877-3062
Academic Divisions/Departments:	
Allied Health	(973) 877-3354
Bilingual Education	(973) 877-3450
Biology and Chemistry	(973) 877-3430
Business	(973) 877-3222
Engineering Technologies and Computer Sciences	(973) 877-4400
Humanities	(973) 877-3320
Mathematics and Physics	(973) 877-3302
Nursing	(973) 877-1868
Social Sciences	(973) 877-3250
Admissions (Enrollment Services Express) – Main Campus	(973) 877-3100
Admissions – West Essex	(973) 403-2560
Adult Learning Center	(973) 877-3244
Athletics	(973) 877-3165
Bookstore – Main Campus	(973) 877-3137
Bookstore – West Essex Campus	(973) 403-2557
Bursar’s Office - Main Campus	(973) 877-3099
Bursar’s Office - West Essex Campus	(973) 403-2540
Campus Police	(973) 877-3312
Career Resource Center	(973) 877-3350
Child Development Center	(973) 877-3357
Community and Continuing Education	(973) 877-3106
Computer Certification Training	(973) 877-3158
Dasher Student Center/Student Life & Activities	(973) 877-3208
Disability Support Services	(973) 877-3186
Educational Opportunity Fund (EOF) Program	(973) 877-3228
Evening & Weekend Services	(973) 877-3078
Executive Vice President	(973) 877-3023
Financial Aid	(973) 877-3200
FOCUS/Ironbound Centers	(973) 877-3439
Freshman Center	(973) 877-3536
Game Room	(973) 877-3206
Health Services	(973) 877-3127
Information Technology	(973) 877-3515
Library - Main Campus	(973) 877-3238
Library - West Essex Campus	(973) 403-2547
Media Production Technology (MPT)	(973) 877-3275
On-Campus Continuing Education	(973) 877-3436
Police Academy	(973) 857-1339
President’s Office	(973) 877-3022
Public Relations	(973) 877-3053
Public Safety Department	(973) 877-3131
Recruitment and Marketing	(973) 877-1941
Registrar – Main Campus	(973) 877-3111
Registration – West Essex Campus	(973) 228-3968
Special Events (Auxiliary Services)	(973) 877-3055
Special Programs	(973) 877-3265
Student Affairs	(973) 877-3071
Summer Youth Programs	(973) 877-3416
Testing	(973) 877-3093
Theater	(973) 877-4423
Training, Inc.	(973) 642-2622
Transfer Student Services	(973) 877-3184
Tutoring Center	(973) 877-3484
Veterans Affairs	(973) 877-3596
West Essex Campus	(973) 228-3968
WISE Women’s Center	(973) 877-3395

DIRECTIONS

MAIN CAMPUS

303 University Avenue, Newark, NJ 07102 (973) 877-3000

BY CAR VIA MAJOR HIGHWAYS

GARDEN STATE PARKWAY TO ROUTE 280 EASTBOUND - Take GS Parkway exit 145 to Route 280 eastbound. Stay to the right on Rt. 280 following signs for Harrison. Get off at exit 14 (Martin Luther King Jr. Boulevard). Turn right onto King Blvd. and go through fourth light at Warren Street. ECC campus is located on both sides of King Blvd. and extends to the West Market Street intersection. For parking, turn right onto Warren Street. Go two blocks and turn left onto Colden Street and go one block to ECC Parking Lot D.

NJ TURNPIKE (I-95) TO ROUTE 280 WESTBOUND - Take NJ Turnpike exit 15 W and proceed on Route 280 westbound. After crossing the drawbridge, take the second Newark exit which is Martin Luther King Boulevard. Turn left onto King Blvd. and go through the fifth light at Warren Street. ECC campus is located on both sides of King Blvd. and extends to the West Market Street intersection.

(See GS Parkway directions for parking.)

FROM THE WEST OR EAST USING ROUTE 78 - Take Route 78 exit 56 (Clinton Avenue). Turn right onto Clinton Ave. and go less than a mile to Martin Luther King Jr. Boulevard. Turn left onto King Blvd. and proceed one mile to ECC campus which is located at the intersection of West Market Street. For parking, continue on King Blvd. to next light and turn left onto Warren Street. Go two blocks and turn left onto Colden Street and go one block to ECC Parking Lot D.

FROM OTHER HIGHWAYS - Highways 1 & 9, 22, 3, & 46 all connect with Route 21 which becomes McCarter Highway in Newark. At junction of McCarter Highway and Raymond Boulevard, turn left onto Raymond Blvd. and proceed to University Avenue. Turn left at University Ave., go to first light, and make right onto West Market Street. Proceed uphill to ECC campus which is located at the intersection of West Market St. and Martin Luther King Jr. Boulevard. Make right onto King Blvd. (See Route 78 directions for parking.)

BY PUBLIC TRANSPORTATION

AMTRAK, PATH, MOST NJ TRANSIT RAIL LINES TO NEWARK PENN STATION - At Penn Station, take the Newark City Subway to the second stop which is Washington Street. Follow signs to the University Avenue entrance to the ECC campus.

NJ TRANSIT MORRIS & ESSEX RAIL LINE - Get off at Newark (Broad Street). Walk seven blocks south on University Avenue to the ECC campus. You can also take NJ Transit bus #72 or #76, get off on University Ave. at Raymond Boulevard, and then walk one block south to ECC.

BUS TRANSPORTATION - More than 30 bus lines from suburban Essex County and other parts of the NJ/NY metropolitan area, including Newark Airport and New York City, come to downtown Newark. Follow signs to University Heights and ECC campus.

WEST ESSEX CAMPUS

730 Bloomfield Avenue, West Caldwell, NJ 07006 (973) 228-3968

BY CAR VIA MAJOR HIGHWAYS

ROUTE 80 EAST TO ROUTE 46 EAST - Follow Route 46 East until it divides at the sign for Newark/The Caldwells. Bear right at the sign and continue until the road becomes Bloomfield Avenue. Follow Bloomfield Avenue past Passaic Avenue. ECC is located on the right, just past the shopping center.

ROUTE 80 WEST - Take 80 West to exit 52 (Lincoln Park/Fairfield/The Caldwells). Keep bearing right at exit under the highway onto Passaic Avenue. Stay on Passaic Avenue and at the seventh traffic light make a left onto Bloomfield Avenue. ECC is located on the right, just past the shopping center.

GARDEN STATE PARKWAY TO ROUTE 280 WEST - Take GS Parkway North to exit 145 to Route 280 West. Proceed on 280 West to exit 5B (527 North, Caldwell). Continue on 527 (Livingston Avenue) to second traffic light. Turn right onto Eagle Rock Avenue and continue one block. Turn left onto Roseland Avenue. Follow Roseland Avenue until it ends at Bloomfield Avenue. Turn left onto Bloomfield Avenue and continue through five traffic lights. ECC is located on the left side of Bloomfield Avenue, immediately after the fifth light.

BLOOMFIELD AVENUE FROM NEWARK - Proceed on Bloomfield Avenue from Newark approximately 13 miles. Continue through Bloomfield, Glen Ridge, Montclair, Verona, and Caldwell into West Caldwell. ECC is located on the left, one block before Passaic Avenue intersection.

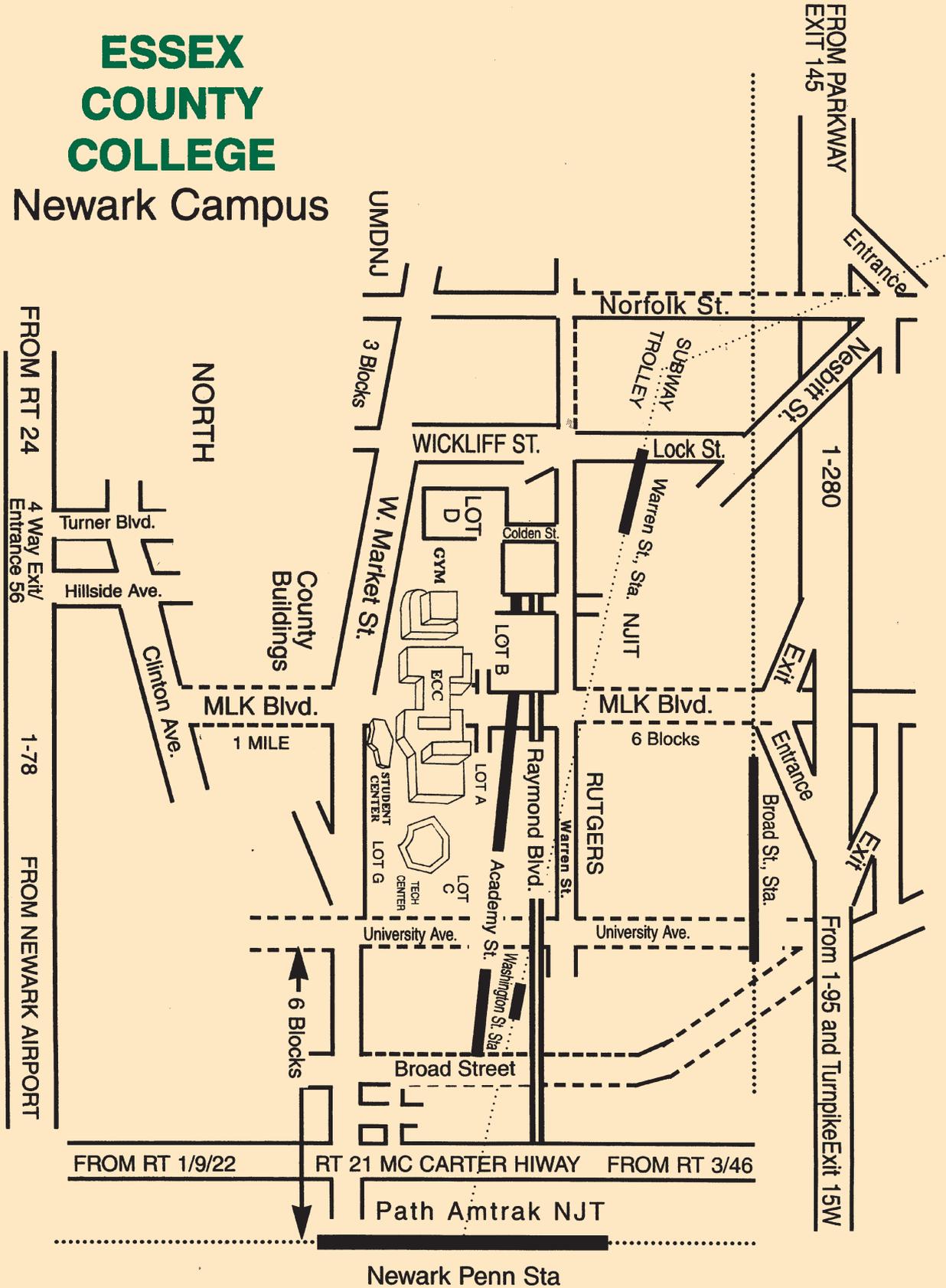
BY PUBLIC TRANSPORTATION

BUS FROM NEWARK - The #29 bus travels to the West Essex campus. Local lines connecting with the #29 at Broad Street Station in Newark are #13 (Broad/Clinton); #24 (Orange/Elizabeth); #27 (Mount Prospect); #38-48 (Harrison/Union); #40 (Kearny/Port Newark); and #52 (Park Avenue).

LOCAL NEWARK LINES - Connecting the #29 at other convenient locations: #7 - Newark City Subway connecting at Bloomfield Avenue in Newark; #11 - connecting at Route 23 and Bloomfield Avenue in Verona; and #20 or #34 - both connecting at Bloomfield Center in Bloomfield.

ESSEX COUNTY COLLEGE

Newark Campus



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N O T E S

N O T E S

ESSEX COUNTY COLLEGE

Admissions Office

303 University Avenue

Newark, New Jersey 07102

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