



COURSE
CATALOG
2009-2012

MIDDLESEX

County College

CATALOG SUPPLEMENT for 2011-2012

Table of Contents

Introduction.....	3
Contact information	3
Calendar & General Information.....	4
Academic Standards and Regulations	5
Student's Rights and Responsibilities	6-7
Expenses, Financial Aid and Scholarships.....	8-11
Enrollment Services, College Programs and Activities.....	12-13
Degree and Certificate Updates	14-80
New Degree Programs	81-93
General Education Electives	94-95
Course Updates.....	96-97
Campus Map	98
College Governance.....	99

Introduction

This supplement is an update to the 2009-2012 catalog and should be used in conjunction with the material in it. It contains updated information on the academic programs, calendar, tuition and fees and policies for the 2011-2012 academic year. Most changes will appear in bold print. However, program requirements, courses, policies, tuition, fees and procedures are subject to change as circumstance and exigencies require. Additional information may be obtained from the appropriate office or the Office of the Registrar.

CONTACT INFORMATION

Office	Building	E-Mail	Telephone
Academic Advising Center	Chambers Hall	advising@middlesexcc.edu	732.906.2596
Admissions and Recruitment Office	Chambers Hall	admissions@middlesexcc.edu	732.906.4243
Bursar	Chambers Hall	bursar@middlesexcc.edu	732.906.2572
Corporate and Community Education	West Hall 203	community_ed@middlesexcc.edu	732.906.2556
Counseling and Career Services	Edison Hall	counseling@middlesexcc.edu	732.906.2546
Financial Aid Office	South I	financial_aid@middlesexcc.edu	732.906.2520
Health Services	South II	jdimaio@middlesexcc.edu	732.906.2530
The Institute	Crabiel Hall 110	the_institute@middlesexcc.edu	732.906.4681
Physical Education Department	Physical Education Center	nwisniewski@middlesexcc.edu	732.906.2558
Office of the Registrar	Chambers Hall	registration@middlesexcc.edu	732.906.2523
Testing Center	Johnson Learning Center 229	testing@middlesexcc.edu	732.906.2508
Tutoring Center	Johnson Learning Center 240	tutoring@middlesexcc.edu	732.906.2631

Calendars & General Information

2011-2012 ACADEMIC CALENDAR

FALL 2011

August	29	First Day of Obligation, State of the College, Faculty Meetings
August	30	Faculty Development Day, Mandatory Day for Faculty
August	31	Change of Program, Advisement by Faculty
September	1	Change of Program, Advisement by Faculty
September	5	Labor Day – No Classes
September	6	Classes Begin – Fall Semester
October	10	Columbus Day – No Classes
November	11	Veteran’s Day – No Classes
November	24-27	Thanksgiving – No Classes
December	16	Last Day of Classes; Last Day of Faculty Obligation
December	16, 17, 19	Specially Scheduled Final Examinations
December	21	Winter Recess Begins
December	23-26	Holiday – No Classes (December 24 is on a Saturday and December 25 is on a Sunday)

WINTERSESSION 2012

December	27	Wintersession Classes Begin (December 27, 28, 29, 30; January 3, 4, 5, 6, 9, 10, 11, 12)
January	2	Holiday - No Classes (January 1 is on a Sunday)
January	7	Wintersession Snow Day (make-up day)
January	12	Last Day of Wintersession Classes
January	16	Winter Recess Ends

SPRING 2012

January	16	Martin Luther King Day
January	17	Faculty Meetings; First Day of Faculty Obligation
January	18	Change of Program, Advisement by Faculty
January	19	Change of Program, Advisement by Faculty
January	23	Classes Begin – Spring Semester
February	20	Presidents’ Day – No Classes
March	10	Spring Recess Begins – No Classes
March	17	Weekend Classes Resume
March	19	Regular Classes Resume
April	6	Good Friday – No Classes
April	7, 8	No Classes
May	8	Last day of Classes
May	8, 9, 10	Specially Scheduled Final Examinations
May	11	Last day of Faculty Obligation
May	17	Graduation – No Classes

SUMMER SESSION 2012

May	14	1st 4-Week Summer I Session A begins 1st 7-Week Summer I Session C begins 14-Week Summer II Session F begins
May	17	No Classes (Graduation)
May	28	Memorial Day – No Classes
May	29	Classes Resume
June	7	1st 4-Week Summer I Session A ends
June	11	2nd 4-Week Summer I Session B begins
July	3	1st 7-Week Summer I Session C ends
July	4	Independence Day – No Classes
July	5	2nd 4-Week Summer I Session B ends
July	9	2nd 7-Week Summer II Session E begins
July	9	3rd 4-Week Summer II Session D begins
August	2	3rd 4-Week Summer II Session D ends
August	20	14 -Week Summer II Session F ends
August	23	2nd 7-Week Summer II Session E ends

Academic Standards and Regulations

DEVELOPMENTAL EDUCATION PROCEDURES

5. The Student Success Course (SSD 101) is open to all students. **SSD is mandatory for all students who place into two or more of developmental subject areas which include the following courses:**

ENG 009 Writing Skills for College I
ENG 010 Writing Skills for College II
MAT 010 Basic Mathematics
MAT 013 Algebra I
RDG 009 Reading Skills for College I
RDG 011 Reading Skills for College II

Note: *ESL courses are not developmental, and ESL students are not required to take SSD 101.*

GRADUATION

Application

Degrees and Certificates are awarded in August, January, and May.

Students must submit an application for graduation.

The application fee is \$40. **The deadlines for filing are:**

July 1 for August graduation, December 1 for January graduation, and April 1 for May graduation.

Students who do not meet all degree or certificate requirements for the graduation date stated in the application must reapply in order to be considered for graduation at a later date and are not charged an additional application fee.

GRADING SYSTEM

Letter Grade Point System

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

Other Grades (Not included in cumulative average)

Letter Grade	Description
E	Credit by examination
GU	Grade unreported by the instructor due to emergency situation
I	Incomplete work is to be made up within the agreed time frame between student and faculty or by special arrangement of the department. An "I" grade is temporary and will expire 6 months from the end of the semester in which it was assigned. If make-up work is not accomplished within this extension, the grade will be automatically changed to an "F".
IP	Course in progress grade has not yet been assigned
T	Transfer credit from another institution
W	Withdrawal from course
X	Audit

ACADEMIC INTEGRITY POLICY

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

Plagiarism

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

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

Cheating

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

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

Penalties

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

Student's Rights and Responsibilities

CODE OF STUDENT CONDUCT

In order to provide for the maximum safety and well-being of the total college community, including guests, certain standards of behavior have been established at Middlesex County College. Upon admission to the College, all students accept an unqualified commitment to adhere to such standards and to conduct themselves in a manner that reflects pride in themselves and the College. These standards of conduct will apply to students engaging in College sponsored activities both on and off-campus.

Conduct that adversely affects a student's responsible membership in the academic community shall result in appropriate disciplinary action. The College will not tolerate deliberately disruptive behavior, violence, or physical interference with the rights of any member of our college community.

The Code of Student Conduct outlines behavior deemed unacceptable at Middlesex County College. Infractions of the Code include, but are not limited to, the actions listed below.

Violations

1. **Unauthorized use or possession on the campus of weapons, ammunition, explosives, fireworks, or other dangerous substances or materials.**
2. **Threatening, harassing or inflicting bodily harm or physical abuse or injury to the person of a fellow student, faculty or staff member, administrative officer or guest of the College.**
3. **Harassment, intimidation or bullying to the person of a fellow student of the College. Harassment, intimidation or bullying is defined as any actual or perceived characteristic, such as race, color, religion, ancestry, national origin, gender, sexual orientation, gender identity and expression, or a mental, physical or sensory disability, or by any other distinguishing characteristic, that takes place on the property of the College or at any function sponsored by the College that substantially disrupts or interferes with the orderly operation of the institution or the rights of other students' and that:**
 - a. **a reasonable person should know, under the circumstances, will have the effect of physically or emotionally harming a student or damaging the student's property, or placing a student in reasonable fear of physical or emotional harm to his person or damage to his property;**
 - b. **has the effect of insulting or demeaning any student or group of students in such a way as to cause disruption in, or interference with, the orderly operation of the College; or**
 - c. **creates a hostile educational environment for the student at the College; or**
 - d. **infringes on the rights of the student at the College by interfering with a student's education or by severely or pervasively causing physical or emotional harm to the student.**
4. **Obstruction or disruption of teaching, learning, research, administration, discipline procedures or other College authorized event. Disruptions of teaching and learning which may include tardiness, offensive language or behavior, noise and improper use of personal communication devices (eg: cell phones, headphones, pagers, PDAs and laptops).**
5. **All forms of academic dishonesty, including but not limited to cheating, copyright infringement, facilitating academic dishonesty, and plagiarism or assisting others to engage in those activities.**
6. **The failure to report any action or plan of dishonesty whether knowledge of such act or plan is obtained directly or indirectly.**
7. **The soliciting of assisting another to do any act which would subject a student to probation, suspension or expulsion.**
8. **Unauthorized distribution, use, or possession of any substance constituting a "controlled dangerous substance" within the meaning of the New Jersey Controlled Dangerous Substance Act, N.J.S.A. 24:21-1 et seq., or any illegal drug, on College property or at College sponsored activities.**
9. **Failure to comply with the College's policy on smoking.**
10. **Illegally gambling on College property.**
11. **Any charge relating to the violation of any of the criminal statutes of the State of New Jersey, which violation occurs either on the campus, at off campus sponsored events or directly affects the College community. The College will cooperate fully with any law enforcement agency investigating such violations.**
12. **Falsification, alteration or withholding information related to records or documents maintained by the College.**
13. **Theft, misappropriation, vandalism, non-accidental damage, grossly negligent damage or arson to any College property or private property of a fellow student, faculty or staff member, administrative officer or guest of the College.**
14. **Failure to present student identification to a College employee in response to a request.**
15. **Unauthorized entry into any secured building or facility, obstructing access to any campus building or facility, the unauthorized use or occupation of any classroom, public or common indoor areas, recreational or athletic facility, faculty office or any other components of the College's physical plant or property.**
16. **Failure to register the dissemination of printed material or unauthorized display of posters and advertising material.**
17. **Abusive or unauthorized use and operation of outdoor and indoor sound systems, public address systems sound tracks, or bull horns.**
18. **Unauthorized consumption and/or unauthorized possession of alcoholic beverages on campus.**
19. **Failure, after a warning, to wear adequate clothing and foot covering while attending classes or utilizing any campus facility.**

20. **Consumption of food and beverages outside of authorized areas unless authorization has been given by a faculty member, staff or administrator.**
21. **Soliciting or assisting another to do any act which would subject that student to any sanction within the Code of Student Conduct.**
22. **A failure to abide by the “acceptable use policies for computers.”**
23. **It is the policy of this College that membership in secret fraternities or sororities or in other clubs or gangs not sponsored by established agencies or organizations is prohibited. Organizations that initiate, advocate or promote activities which threaten the safety or well-being of persons or property on College grounds, which disrupt the program environment or are harmful to the education process are prohibited. Activities involving initiations, hazing, intimidation, and/or related actions of such group affiliations which are likely to cause bodily danger, physical harm, personal degradation or disgrace resulting in physical or mental harm to students are prohibited. Any student causing and/or participating in activities which intimidate or adversely affects the attendance of another student or staff member will be subject to disciplinary action.**
24. **Engaging or the soliciting of any activity which would interfere with the normal operation of the College.**

Sanctions

The various penalties for the commission of a violation are set forth hereafter. Upon a finding of or plea of guilty for any violation, one or more of the listed sanctions may be imposed independently or cumulatively.

- a. **Warning: Notice, orally or in writing, that continuation or repetition of conduct found wrongful may be cause for more severe disciplinary action.**
- b. **Probation:**
 1. **Exclusion from participation in privileged or extracurricular College activities for a period not to exceed 1 year.**
 2. **Fine, restitution and or community service not to exceed 50 hours and/or counseling services as may be required.**
- c. **Disciplinary Suspension: Temporary separation from the College for a period of time not to exceed 2 years.**
- d. **Expulsion: Permanent separation from the College for all programs academic or extracurricular.**

Administrative Suspension or Dismissal

The Vice President of Academic and Student Affairs or her/his representative shall have the authority and responsibility to assure the well being of the college community and to insure the College's ability to carry out its mission. To provide for this environment, any act or threat which, in the opinion of the Vice President of Academic and Student Affairs, endangers any individual, or which results in terrorizing any member of the college community or guests may warrant immediate suspension or dismissal. Similarly, any act which may result in the disruption of college activities or inciting others to disrupt college activities or interference with the right of any member of the college from performing assigned duties or attending class may also warrant immediate suspension or dismissal. A suspension shall remain in effect until the Vice President of Academic and Student Affairs determines that the presence of the accused does not pose a threat to any member of the college community.

Disciplinary Procedures

Detailed information on procedures for filing complaints, hearings, the Judicial Board and appeals are available in the Office of Student Activities.

Expenses, Financial Aid and Scholarships

EXPENSES

The tuition and fees and other expense amounts below are provided for informational purposes for 2011-2012 and are subject to change.

Tuition and Fees

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

- Tuition
 - Middlesex County Residents **\$101.00** per credit or credit equivalent
 - Out of County Residents..... **\$202.00** per credit or credit equivalent

■ Fees

General Service

- Middlesex County Residents **\$18.00** per credit or credit equivalent
- Out of County Residents..... **\$36.00** per credit or credit equivalent

Student Service

- Middlesex County Residents\$3.50 per credit or credit equivalent
- Out of County Residents.....\$7.00 per credit or credit equivalent

Technology

- Middlesex County Residents **\$13.00** per credit or credit equivalent
- Out of County Residents..... **\$26.00** per credit or credit equivalent

General Expenses

- Course Fees\$30 to \$170
Per course with clinical, laboratory, computer, or other appropriate non-replaceable materials including energy uses. Refer to the schedule bulletins for specific information.

- Registration Fee Fall/Spring\$25.00 per semester
- Winter/Summer\$15.00

■ Insurance

Accident/Health and Sickness \$70.00 per year
Required of students registering for 12 or more credits. Students who are covered by their own insurance policy can have the fee waived. The form can be obtained from the Bursar's Office. The waiver must be returned within 10 days from the first day of class or the fee is non-refundable.

Clinical Liability\$36.00
Mandatory annual fee for students enrolled in Dental Hygiene, Dietetic Technology, Medical Laboratory Technology, Nursing, Psychosocial Rehabilitation, Respiratory Care or Radiography Education courses with clinic requirements.

Miscellaneous Fees

These miscellaneous fees are non-refundable.

- Application Fee\$25.00
- Curriculum Change Fee.....\$10.00
- Late Registration Fee.....\$40.00
Begins two weeks immediately prior to the first day of classes and continues through the registration period.

Graduation Application Fee.....\$40.00
Students pay this fee only once for each degree or certificate awarded.

Dishonored Check Fee\$25.00 per dishonored check

Reinstatement Penalty Fee \$101.00 per credit
Students who attend class without being properly registered may be subject to a \$101.00 per credit late registration penalty.

Special Fees

- International Student Fee
 - All international students must pay\$300.00 per semester
 - Fall and Spring semester only*

■ Nursing

NRB courses/credit cost determined by RBMC.....Fall 2011 and Spring 2012 cost/credit..... \$535.00

ATI Testing FeeFall 2011 fees.. \$130.00 for 1st semester; each semester after \$102.00; for Fall 2010 fees are \$128.00 for 1st semester; each semester after is \$98.00

NCLEX Predictor Test - Last Semester.....\$50.00 (approximately)

Software FeeEffective Fall 2011 \$100.00 (total) ("The Neighborhood"...\$35.00; "Neehr Perfect"...\$65.00)

Program Supplies

These charges are approximate and subject to change.

- Automotive Technology
 - Tools.....\$1,800.00

- Dental Hygiene
 - Instrument Kit.....2,000.00 (approx.)
 - Uniform\$200.00
 - Background Check..... approximately \$50.00**

- Dietetic Technology
 - Knives..... \$65.00**
 - Uniform \$100.00**
 - Background Check..... approximately \$75.00**

- Engineering Program
 - Drawing Kits.....\$50.00

- Hotel, Restaurant and Institution Management
 - Knives..... \$65.00**
 - Uniform \$100.00**

- Media Arts & Design
 - A 35mm film camera with adjustable shutter speed and aperture settings and a non-automatic metering system is required. A secondhand camera in good working condition meeting these specifications may be used.**
 - Art and photographic equipment and supplies.....\$150.00-\$350.00**

- Medical Laboratory Technology Uniform.....\$45.00

- Nursing-Joint Program with RBMC Uniform\$100.00

- Radiography Education
 - Uniform\$200.00
 - Drug Screening..... \$50.00**
 - Background Check..... \$41.00**

- Respiratory Care
 - Uniform approximately \$150.00**
 - Stethoscope approximately \$80.00**

Middlesex County College Fitness Club Rates

- Middlesex County College Students (full and part time)

Individual

- Fall or Spring Semester\$25.00
- Summer Session.....\$15.00
- Winter Session.....\$10.00

Family

- Fall or Spring Semester\$70.00
- Summer Session.....\$45.00
- Winter Session.....\$25.00

- Adjuncts, Retirees & Grant Personnel

Individual

- Annual.....\$100.00

Family

- Annual\$260.00

- All Full-Time Employees, Trustees and HS Academy Instructors

Individual

- Annual.....FREE

Family

- Annual.....\$260.00

- Middlesex County College Alumni

Individual

- Annual.....\$130.00

Family

- Annual.....\$330.00
Family membership will be limited to the individual and three (3) additional family members living in the household. The above rates will be prorated as appropriate for alumni, full-time faculty, staff and grant personnel with contracts of less than one year. Adjuncts must be at the College for four consecutive semesters in order to apply.

Other Athletic Fees

■ Swimming Pool

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

Rentals-School.....	\$70.00/hour
Community nonprofit and county organizations.....	\$80.00/hour
Other groups.....	\$100.00/hour

■ Weight Room

before 4 p.m. free/after 4 p.m. see PE Center
Children under 16 are not permitted in the weight room.

■ Racquetball Courts

Monday-Friday

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

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

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

Each participant is entitled to play with one free guest. Additional guest will be charged \$2.00 each. Middlesex County College community members include registered students charged the student service fee, full-time employees and adjuncts.

PAYMENT POLICY

All tuition and fees must be paid on or before the date shown on the class schedule/invoice. If an employer pays the tuition, the student must submit an employer tuition voucher prior to the payment due date. **Students are obligated for the payment of tuition and fees regardless of whether or not they attend class. A completed withdrawal form must be submitted to the Office of the Registrar. Refunds are determined by the policy below.** Overdue accounts will be referred to a collection agency and all collection costs and fees will be added to the account. If the account is overdue, the student will be prohibited from registering and official transcripts will not be released.

REFUND POLICY

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

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

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

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

The semester refund/withdrawal schedule is posted around campus and is available online at www.middlesexcc.edu for specific withdrawal deadlines for each semester. Summer and Wintersession rules vary.

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

FINANCIAL APPEALS

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

FINANCIAL AID REFUND POLICY

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

Financial aid students who withdraw prior to the 60% point of the semester will have their aid recalculated following federal and state requirements. Students who receive midterm grades of all "Fs" will be treated as unofficial withdrawals and these students' aid awards and loans will be recalculated. Recalculations may result in the student owing a refund to MCC.

Financial aid students who withdraw after the 60% point of the semester will not have their aid reduced.

The College's Business Office will return the undisbursed student loan check to the lender for any borrower who has not met loan requirements, who has fewer than 6 credits or who has withdrawn completely from the College. If the loan has been disbursed, the College will use federal regulations to determine the amount to be returned to the lender.

FINANCIAL AID

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

All applicants for Federal, State, and College aid must complete the Free Application for Federal Student Aid (FAFSA). Students may apply electronically through the Internet at www.fafsa.ed.gov. Students may also mail their FAFSA to the processing center but should allow four extra weeks for processing.

The FAFSA must be filed each academic year. Apply as early as possible; applications become available each January. Students must also be accepted into an eligible academic program of study. Students should apply by May 1 to ensure priority processing especially for limited campus aid funds.

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

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

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

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

FINANCIAL AID PROGRAMS

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

FEDERAL GRANTS

Pell Grant Program

- Awards range from \$200 to \$5,550.
- The U.S. Department of Education uses a standard formula to determine student eligibility.
- The student is notified via a Student Aid Report (SAR).

Supplemental Educational Opportunity Grant

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

NEW JERSEY GRANTS

Tuition Aid Grant (TAG)

- Awards range from \$208 to \$2,268, based on the previous academic year.
- The NJ Higher Education Student Assistance Authority uses a State formula to determine eligibility.
- The student is notified via a Student Eligibility Notice (SEN) from the State.

Educational Opportunity Fund Program

- Awards range from \$200 to \$525 per semester.
- The College uses State guidelines to determine eligibility.
- The student is notified via a Student Eligibility Notice (SEN) from the State.

Garden State Scholarship Program

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

MIDDLESEX COUNTY COLLEGE GRANTS

Middlesex County College Foundation Grants

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

FEDERAL WORK STUDY PROGRAM

Federal Work Study Program

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

FEDERAL DIRECT LOAN PROGRAM

- Loans range from \$500 to \$10,500.
- Direct Loans are low-interest loans for students and parents to help pay for the cost of a student's education after high school. To apply for a Direct Loan, a student must complete the Free Application For Federal Student Aid (FAFSA).
A student must be enrolled at least half time for a semester, submit all required documents and/or forms, and the direct loan must be originated prior to the last date of the student enrollment. Lastly, students must meet general eligibility requirements for federal student aid programs.
- The Department of Education is the lender for all Direct Loans rather than a bank or other financial institution(s). Direct Loans are repaid after the student leaves college or enrolls less than half time. The interest rate is fixed for repayment of new loans.
There are three types of Direct loans: the Subsidized, Unsubsidized, and Parent Loan (PLUS). Direct Subsidized and Unsubsidized loans are for students who demonstrated financial need, as determined by federal regulations. Direct PLUS loans are low-interest loans available to parents of dependent students. In addition to completing the FAFSA, a Direct Loan Master Promissory Note and entrance interview counseling must be completed. *For more information regarding the Direct Loan Program, contact the Financial Aid Office or visit the Direct Loan.*

OTHER SOURCES OF ASSISTANCE

Part-Time Jobs

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

Cooperative Education

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

Outside Scholarships

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

Electronic Sources of Financial Aid Information

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

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

PROMISSORY NOTE - FINANCIAL AID APPLICANTS

Admitted students applying for financial aid and unable to pay tuition due to unusual circumstances will be considered for a promissory note according to the following procedures:

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

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

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

Enrollment Services, College Programs and Activities

ADMISSIONS COUNSELING

To learn more about the College, to obtain help in selecting a major, to learn more about specific courses of study, or to simply schedule a campus tour, students are invited to make an appointment by emailing the Office of Admissions at admissions@middlesexcc.edu or calling us at 732.548.6000.

ADMISSIONS GUIDELINES

Middlesex is a public college with an open admission policy. Applications are accepted to degree and certificate programs from anyone who holds an official high school diploma or GED, and adults (18 years of age or older) who can demonstrate an ability to benefit from a college education. Home-schooled students may submit an official home-schooling diploma. Some programs have specific entrance requirements and/or limited seating. SAT scores are optional. **For questions or additional information, please email the Admissions Office at admissions@middlesexcc.edu or calling us at 732.548.6000.**

The majority of programs begin in the Fall, Spring or Summer and can be completed by studying full- or part-time. Applications for most programs are reviewed on a rolling admission basis. The exceptions are those full-time programs beginning only in the Fall semester: Dental Hygiene, Medical Laboratory Technology, Nursing, Radiography Education, and Respiratory Care. These programs have application deadline dates. Automotive Technology starts every even Fall semester.

ADMISSIONS POLICY

1. Policy

The College provides educational opportunities for all students who have a reasonable chance of benefiting from college level work and who have a reasonable chance of successfully participating in the educational program for which enrollment is sought.

2. Program Categories

The College recognizes the following categories of students as either part-time or full-time:

- Matriculated students enrolled in programs of study leading to a degree or certificate.
- Non-matriculated students taking credit courses for personal interest, career advancement, enrichment or transfer back to another institution.
- Non-credit students taking programs of varying lengths for which no credit is assigned, for purposes of personal enrichment, career advancement or professional education.

3. Admission Eligibility and Conditions for Credit Programs and Credit Courses

Except for admission to restricted programs listed in Section 6, admission to credit programs and courses is open to all individuals with a high school diploma or general equivalency diploma (GED) and individuals not possessing a high school diploma or GED who are at least 18 years of age and have not attended high school for at least one year. In addition, high school students meeting the criteria under Section 4 may apply for admission.

4. Credit Programs for High School Students

High school students are permitted to enroll in credit courses for which they meet the prerequisites, with the written acknowledgment of a high school counselor or principal and permission of a parent or guardian. Below the junior year of high school, students may be considered for credit course admission based only on strong recommendations of high school officials and standardized achievement test scores at the 97th percentile or above and/or results of the college placement test.

5. Documentation Required

All applicants are required to complete and file, at the College's Admissions Office, the application form for admission prescribed by the College. The student should arrange to have high school/college authorities forward official transcripts in sealed envelopes to the Office of Admissions. The student must also provide a valid record of immunization.*

**New Jersey law requires that as a condition of enrollment all degree seeking applicants present a valid record of immunization against measles, mumps and rubella. Individuals are exempt from this requirement only if they were born before 1957 or if they attended an elementary or secondary school in New Jersey. When all admission materials have been received, the College may request a personal interview.*

6. Selective Enrollment

Admission into certain programs is restricted or may be limited if the number of applicants exceeds the number that can be enrolled at a particular time. Accordingly, admission to the following specialized selective programs is subject to additional criteria: **psychosocial rehabilitation**, respiratory care, radiography, medical lab technology, nursing, dental hygiene, and automotive technology.

7. Conditional Admission

Applicants who have not satisfied State and local high school graduation or GED requirements, or who have been exempted from these requirements, shall be conditionally admitted subject to demonstration of reasonable chance of benefiting from college level work based upon administration of a diagnostic assessment.

8. Part-Time Enrollment

A part-time student is one who takes fewer than 12 credit hours per semester.

9. Transfer Student

Applicants who have attended another college must submit official transcripts of all college and high school work to the Office of Admissions and Recruitment. Transfer credit, subject to the approval of the dean of the division, is generally defined as coursework required in the curriculum and equivalent in content and credit hours to courses offered by Middlesex County College. Only letter grades of "C" and above are accepted. Students seeking transfer credit for courses taken at a foreign institution should submit a course-by-course evaluation from World Education Services (WES) or another evaluation service which is a member of the National Association of Credential Evaluation Services (NACES).

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

Transfer credit from another institution is listed on the transcript with a "T" grade. Courses completed at another institution will not be applicable for a grade point average recalculation.

Course Time Limits – Major courses are subject to review after five years and all other courses after 10 years. The review procedure also applies to the evaluation of transfer credits.

10. **Advanced Placement Credit**

The College may grant credit for Advanced Placement Examinations (minimum grade of 3). The Advanced Placement Program, sponsored by the College Entrance Examination Board, offers students the opportunity to pursue college-level study while in secondary school and receive advanced placement and/or credit upon entering college.

11. **Placement Testing Requirements**

MCC students are required to complete the College's placement test. Performance on the test will determine eligibility for enrollment in credit courses. See placement test exemptions on page 6 of the **MCC 2009-12 catalog**. ESL students do not take the college placement test until completion of the ESL sequence. Visiting students with a specific course authorization from the primary institution will not be asked to complete the College's placement test.

12. **International Students**

Middlesex County College is authorized under federal law to enroll non-immigrant alien students. International applicants must follow degree programs as full-time students if they require a Certificate of Eligibility (Form I-20). Students from other countries apply to Middlesex County College in the same way as all other students. In addition to admission requirements for other students, international students must submit documentary evidence of sufficient funds for college and living expenses in the United States. Applicants must complete the Declaration of Finance statement issued by the College. A sponsor must complete three copies of the Affidavit of Support form which is also supplied by the College. International students are not eligible for federal study grants, nor is there any financial aid or scholarship program for international students. Some international students with visas other than F-1 may be eligible for admission subject to approval by the director of admissions.

13. **Admission to Non-Credit Courses**

Eligibility for admission to developmental non-credit courses is determined by performance on the college placement test. Eligibility for admission to other non-credit courses is determined on a course-by-course basis as a function of course level, content, and requirements.

14. **Insurance Requirements**

All full-time students shall maintain health insurance coverage which provides basic hospital benefits. This insurance coverage shall be maintained throughout the period of the student's enrollment. Group basic health insurance coverage shall be automatically provided and billed as a mandatory charge to all full-time students. A full-time student may waive this coverage and associated charge upon presentation of satisfactory evidence of individual coverage through an alternate basic hospital benefit health insurance arrangement. All students enrolled within a Health Technologies curriculum shall purchase and maintain a group malpractice policy throughout the period of enrollment. This insurance shall be automatically provided and billed as a mandatory charge to all students so enrolled. The malpractice insurance may not be waived or substituted without regard to such other coverage as the student may enjoy.

REGISTRATION

First Week of a Fall or Spring Semester or First Day of Summer or Wintersession

Students are required to obtain an instructor's signature (or a printed copy of an e-mail from the instructor giving permission) during the first week of classes if the class has met and the section is open. In addition, students will be required to obtain signatures from both the chair and instructor (or a printed copy of an e-mail from both the instructor and chairperson giving permission) if the class has already met and the section is closed. It is the student's responsibility to contact his or her professor as soon as possible to make up the work that was missed in the course.

Degree and Certificate Updates

Accounting

ACCOUNTING AND LEGAL STUDIES DEPARTMENT Associate in Applied Science (A.A.S.) Degree

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

❑ **Can Accounting majors transfer to a four-year college or university?**

Articulation agreements with public and private institutions offer students who earn the A.A.S. degree the opportunity to transfer all of their coursework to the four-year institution. Students in specialized programs, or who earn an A.A.S. degree should discuss the transfer process with an advisor.

❑ **What will students learn studying Accounting?**

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

❑ **Are there any requirements students must satisfy before taking courses in the major?**

Algebra I is a prerequisite for all majors. Algebra I competency may be verified with a passing score on the College's placement test or by completing the appropriate class.

❑ **How long will it take to complete this degree?**

Once students complete developmental coursework (if needed), the degree can be completed in two years of full-time study. They can shorten the amount of time by taking courses in the summer and winter sessions.

❑ **Questions?**

Contact Name: Professor Nancy Bailey, department chair

Contact Phone: 732.906.2594

Contact Email: ABL5@middlesexcc.edu

Department Web: <http://www.middlesexcc.edu/departments/bam>

ACCOUNTING

Associate in Applied Science (A.A.S.) Degree - ACC.AAS

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

Courses may have prerequisite and corequisite requirements. Check course descriptions for details.

Courses	Credits	Requisites / Comments
<i>Semester I</i>		
ACC 101 Financial Accounting	4	
BUS 101 Business Organization and Management	3	
CSC 105 Computer Applications and Systems (GE MST)	3	Students may select an alternate Computer Science course for which they have appropriate academic advisement and preparation in mathematics, such as CSC 106.
ENG 121 English Composition I	3	A passing score on the College's placement test or a grade of "C" or better in ENG 010.
BUS 115 Mathematics of Finance	3	MAT 013 BUS 115, Mathematics of Finance, will satisfy the math requirement. Students considering transfer to a baccalaureate program should consult an academic advisor as to the other math choices.
<hr/>		
<i>Semester II</i>		
ACC 102 Managerial Accounting	4	ACC 101
BUS 201 Business Law I	3	
ENG 122 English Composition II	3	A grade of "C" or better in ENG 121
SPE 121 Fundamentals of Public Speaking	3	
___ ___ General Education Social Science Elective (GE SS)	3	
<hr/>		
<i>Semester III</i>		
ACC 202 Cost Accounting	4	ACC 102
ACC 211 Intermediate Accounting I	4	ACC 102
BUS 202 Business Law II	3	BUS 201
ECO 201 Principles of Economics I	3	A passing score on the algebra portion of the College's placement test or MAT 013.
___ ___ Physical/Health Education Elective	1-3	
<hr/>		
<i>Semester IV</i>		
___ ___ Choose one of the following two courses (3 credits each):	3	
ACC 206 Tax Accounting		ACC 102
OR ACC 208 Accounting Field Experience		ACC 211 and written permission from the department chairperson and the director of cooperative education and internships.
___ ___ General Education Science Elective (GE MST)	3-4	Students must select a course with the GE MST designation from the following sciences: BIO, CHM, PHY, SCI.
ACC 212 Intermediate Accounting II	4	ACC 211
ECO 202 Principles of Economics II	3	ECO 201
___ ___ General Education Humanities Elective (GE HUM)	3	
OR		
___ ___ General Education Social Science Elective (GE SS)		
Total Credits: 63-66		

Contact Name: Professor Nancy Bailey, department chair

Contact Phone: 732.906.2594

Contact Email: ABL5@middlesexcc.edu

Department Web: <http://www.middlesexcc.edu/departments/bam>

Biology

DEPARTMENT OF NATURAL SCIENCES

Associate in Science (A.S.) Degree

Students choose from one of three biology curricula: traditional biology major, pre-professional and biotechnology. These curricula parallel the first two years of a baccalaureate degree in biology. The traditional Biology option prepares students, upon graduation, to transfer to a four-year college or university to pursue a career in biology related fields such as molecular biology, cell biology, physiology, microbiology, biochemistry, ecology, **biology education, medicine, dentistry and veterinary medicine.**

Students interested in pre-chiropractic, physical therapy, **occupational therapy** or physician's assistant may major in the Biology Pre-Professional option. The students choosing the Biotechnology option acquire knowledge in inorganic and organic chemistry, genetics, microbiology, cell biology and molecular biology as well as achieving competence in laboratory techniques and instrumentation that are relevant to the biotechnology industry.

□ **What will students learn if they study Biology Transfer, Biology Pre-Professional, or Biotechnology Degree Options?**

They concentrate on the theoretical and applied sciences, and mathematics. Their studies prepare them to meet the challenges of advanced study in professional careers.

□ **Are there any requirements that must be satisfied before taking courses in the major?**

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

□ **Can Biology majors transfer to a four-year college or university?**

The Statewide Transfer Agreement for New Jersey ensures that students who earn an A.A. or A.S. degree at a community college will have those credits fully transferable to a New Jersey public four-year institution, will have completed half of the credits required for a basic four-year degree and will have completed all of the lower division general education requirements. In addition, articulation agreements with private institutions may provide similar transfer provisions. Students should discuss the transfer process with an advisor.

□ **How long will it take to complete this degree?**

Once students complete developmental coursework (if needed), the degree can be completed in two years of full-time study. They can shorten the amount of time by taking courses in the summer and winter sessions.

□ **Questions?**

Contact Name: Dr. Parag Muley, associate department chair
Contact Phone: 732.906.2592
Contact Email: pmuley@middlesexcc.edu
Department Web: <http://www.middlesexcc.edu/academi/bio>

BIOLOGY OPTION - SCIENCE TRANSFER DEGREE

Associate in Science (A.S.) Degree - BIO.AS

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

Courses may have prerequisite and corequisite requirements. Check course descriptions for details.

Courses	Credits	Requisites / Comments
<i>Semester I</i>		
BIO 123 General Biology I	4	One year of high school laboratory biology or BIO 010 and one year of high laboratory chemistry or CHM 020. Also appropriate score on the College's placement test or MAT 013 or MAT 013A/MAT 013B.
CHM 121 General Chemistry I - Lecture	3	MAT 014 and one year of high school chemistry or CHM 010.
CHM 125 General Chemistry I - Lab	1	MAT 014 and one year of high school chemistry or CHM 010.
ENG 121 English Composition I	3	A passing score on the College's placement test or a grade of "C" or better in ENG 010.
MAT 129 Precalculus	4	Appropriate score on the College's placement test and/or satisfactory score on the diagnostic examination, "B" or better in MAT 014, or departmental approval. Students may substitute MAT 014A plus MAT 014B. MAT 131-MAT 132 recommended.
____ Physical/Health Education Elective	1-3	
<hr/>		
<i>Semester II</i>		
BIO 124 General Biology II	4	BIO 123
CHM 122 General Chemistry II - Lecture	3	CHM 121 with a grade of "C" or better.
CHM 126 General Chemistry II - Lab	1	Prerequisite(s): CHM 121, CHM 125 with a grade of "C" or better Corequisite(s): CHM 122
ENG 122 English Composition II	3	A grade of "C" or better in ENG 121
MAT 131 Analytic Geometry and Calculus I	4	MAT 129, or MAT 129A/MAT 129B, or appropriate score on the College's placement test and/or satisfactory score on the diagnostic examination, or departmental approval.
<hr/>		
<i>Semester III</i>		
BIO 221 Microbiology	4	BIO 118 or BIO 124; CHM 118 or CHM 122/ CHM 126
PHY 123 General Physics I – Lecture (GE MST)	3	MAT 129 or MAT 129A/MAT 129B
PHY 125 General Physics I – Lab (GE MST)	1	MAT 129 or MAT 129A/MAT 129B
____ General Education Social Science Elective (GE SS)	3	
____ General Education Humanities Elective (GE HUM)	3	
CSC 106 Intermediate PC Applications with Programming	3	
<hr/>		
<i>Semester IV</i>		
____ Biology Elective	4	Students may choose BIO 228 or BIO 224 (offered only in the spring semester) or BIO 229 (offered only in the fall semester) or BIO 240.
PHY 124 General Physics II – Lecture (GE MST)	3	PHY 123
PHY 126 General Physics II – Lab (GE MST)	1	PHY 125
____ General Education Humanities Elective (GE HUM) OR General Education Social Science Elective (GE SS)	3	
____ Science/Math Elective	3-4	Students may select from BIO 221, BIO 228, BIO 229 (offered only in the fall semester), BIO 240, CHM 221 with CHM 227, or MAT 132 or a course with permission of the department chairperson.

Total Credits: 62-65

Contact Name: Dr. Parag Muley, associate department chair
Contact Phone: 732.906.2592
Contact Email: pmuley@middlesexcc.edu
Department Web: <http://www.middlesexcc.edu/academi/bio>

BIOLOGY PRE-PROFESSIONAL OPTION - SCIENCE TRANSFER DEGREE
Associate in Science (A.S.) Degree - BPPST.AS

<u>Courses</u>	<u>Credits</u>	<u>Requisites / Comments</u>
BIO 123 General Biology I	4	One year of high school laboratory biology or BIO 010 and one year of high school laboratory chemistry or CHM 020. Also appropriate score on the College's placement test or MAT 013.
CHM 121 General Chemistry I - Lecture	3	MAT 014 and one year of high school chemistry or CHM 010.
CHM 125 General Chemistry I - Lab	1	MAT 014 and one year of high school chemistry or CHM 010.
ENG 121 English Composition I	3	A passing score on the College's placement test or a grade of "C" or better in ENG 010.
MAT 129 Precalculus	4	Appropriate score on the College's placement test and/or satisfactory score on the diagnostic examination, "B" or better in MAT 014, or departmental approval. Students may substitute MAT 014A plus MAT 014B. MAT 131-MAT 132 recommended.
___ ___ Physical/Health Education Elective	1-3	
<i>Semester II</i>		
BIO 124 General Biology II	4	BIO 123
CHM 122 General Chemistry II - Lecture	3	CHM 121 with a grade of "C" or better.
CHM 126 General Chemistry II - Lab	1	Prerequisite(s): CHM 121, CHM 125 with a grade of "C" or better Corequisite(s): CHM 122
ENG 122 English Composition II	3	A grade of "C" or better in ENG 121
MAT 131 Analytic Geometry and Calculus I	4	MAT 129, or MAT 129A/MAT 129B, or appropriate score on the College's placement test and/or satisfactory score on the diagnostic examination, or departmental approval.
<i>Semester III</i>		
BIO 111 Human Anatomy and Physiology I	4	One year of high school laboratory biology or BIO 010 and one year of high school laboratory chemistry or CHM 020 and appropriate score on the College's placement test or MAT 013 or MAT 013A/MAT 013B
PHY 123 General Physics I – Lecture (GE MST)	3	MAT 129 or MAT 129A/MAT 129B
PHY 125 General Physics I – Lab (GE MST)	1	MAT 129 or MAT 129A/MAT 129B
___ ___ General Education Social Science Elective (GE SS)	3	
___ ___ General Education Humanities Elective (GE HUM)	3	
CSC 106 Intermediate PC Applications with Programming	3	
<i>Semester IV</i>		
BIO 112 Human Anatomy and Physiology II	4	BIO 111
PHY 124 General Physics II – Lecture (GE MST)	3	PHY 123
PHY 126 General Physics II – Lab (GE MST)	1	PHY 125
___ ___ General Education Social Sciences Elective (GE SS)	3	
OR		
General Education Humanities Elective (GE HUM)		
___ ___ Science/Math Elective	3-4	Students may select from BIO 221, BIO 228 (offered only in the fall semester), BIO 229 (offered only in the fall semester), BIO 240, CHM 221 with CHM 227, or MAT 132 or a course with permission of the department chairperson.

Total Credits: 62-65

Contact Name: Dr. Parag Muley, associate department chair
Contact Phone: 732.906.2592
Contact Email: pmuley@middlesexcc.edu
Department Web: <http://www.middlesexcc.edu/academi/bio>

Biotechnology Program

DEPARTMENT OF NATURAL SCIENCES
Associate in Science (A.S.) Degree – BIOTC.AS

Biotechnology is a branch of science in which we use living organisms to make useful products, and is a rapidly-growing career path for the future. The program is designed to provide hands-on skills training in biotechnology, as well as an AS transfer option for students with interests in the biological sciences.

❑ What will students learn if they study Biotechnology?

Students in this program acquire knowledge in biology, chemistry, organic chemistry, genetics, cell biology, microbiology, molecular biology and biochemistry. Students will demonstrate proficiency in chemical, biological, cellular, immunological and molecular techniques and lab instrumentation.

❑ Are there any requirements that must be satisfied before taking courses in the major?

A passing score on the College's placement mathematics test for both Algebra I and Algebra II or MAT 013 and MAT 014 is required for biotechnology majors. In addition, a high school laboratory biology course with a minimum grade of "C" or BIO 010 and a high school laboratory chemistry or CHM 020 with a minimum grade of "C" are also required.

❑ Can Biotechnology majors transfer to a four-year college or university?

The Statewide Transfer Agreement for New Jersey ensures that students who earn an A.A. or A.S. degree at a community college will have those credits fully transferable to a New Jersey public four-year institution, will have completed half of the credits required for a basic four-year degree, and will have completed all lower division general education requirements. In addition, articulation agreements with a number of public and private institutions provide guaranteed transfer into several Biotechnology programs, provided students meet specific GPA requirements. Students should discuss the transfer process with an advisor.

❑ How long will it take to complete this degree?

Once students complete developmental coursework (if needed), the A.S. degree can be completed in two years of full-time study. Students may shorten the amount of time by taking courses in the summer sessions at the College.

❑ Why major in Biotechnology?

Biotechnology offers multiple opportunities for work and research. Employment opportunities include: environmental, medical/pharmaceutical companies; diagnostic and research products; food products; US government laboratories; police and forensic science departments; US Customs; patent law; and, science writing.

❑ Questions?

Contact Name: Dr. Uma Narayanan, Biotechnology Program Coordinator

Contact Phone: 732-548-6000 Ext: 3146

Contact Email: Unarayanan@middlesexcc.edu

Department Web: <http://www.middlesexcc.edu/academi/bio>

BIOTECHNOLOGY - SCIENCE TRANSFER

Associate in Science (A.S.) Degree – BIOTC.AS

*Below is required courses and recommended course groupings and sequences for program completion.
Courses may have prerequisites and corequisites requirements.*

Courses	Credits	Requisites / Comments
<i>Semester I</i>		
BIO 123 General Biology I	4	One year of high school laboratory biology or BIO010 and one year of high school laboratory chemistry or CHM 020. Also appropriate score on the College's placement test or MAT 013 or MAT 013A/MAT 013B
CHM 121 General Chemistry I Lecture	3	MAT 014 and one year of high school laboratory chemistry or CHM 010.
CHM 125 General Chemistry I Lab	1	MAT 014 and one year of high school laboratory chemistry or CHM 010.
ENG 121 English Composition I	3	A passing score on the College Placement Test or a grade of 'C' or better in ENG 010.
MAT 131 Analytic Geometry and Calculus I	4	MAT 129 or MAT 129A/129B or appropriate score on the College's placement test and/or satisfactory score on the Diagnostic Examination, or departmental approval
___ ___ Physical /Health Education Elective	1-3	
<hr/>		
<i>Semester II</i>		
BIO 124 General Biology II	4	BIO 123
CHM 122 General Chemistry II	3	CHM 121 with a grade of "C" or better.
CHM 126 General Chemistry II - Lab	1	Prerequisite(s): CHM 121, CHM 125 with a grade of "C" or better Corequisite(s): CHM 122
ENG 122 English Composition II	3	A grade of 'C' or better in ENG 121.
MAT 132 Analytic Geometry and Calculus II	4	MAT 131 or appropriate score on the College's placement test and/or satisfactory score on the Diagnostic Examination, or departmental approval
BIO 132 Introduction To Biotechnology: Concepts and Issues	1	BIO 123
<hr/>		
<i>Semester III</i>		
BIO 228 Genetics	4	BIO 124, CHM 122 and CHM 126 or permission of Department Chairperson
BIO 229 Cell Biology	4	Prerequisite(s): BIO 124 and CHM 123 Corequisite(s) CHM 124
OR BIO 221 Microbiology		BIO 118, BIO 120 or BIO 124, CHM 118 or CHM 124
CHM 221 Organic Chemistry I Lecture	3	A grade of "C" or better in CHM 122
CHM 227 Organic Chemistry I Lab	1	Prerequisite (s): CHM 124, CHM 126 with a grade of "C" or better Corequisite(s) CHM 221
___ ___ General Education Social Science Elective (GE SS)	3	
___ ___ General Education Humanities Elective (GE HUM)	3	
<hr/>		
<i>Semester IV</i>		
CHM 222 Organic Chemistry II Lecture	3	A grade of "C" or better in CHM 221, CHM 227
CHM 228 Organic Chemistry II Lab	1	Prerequisite(s): CHM 221, A grade of "C" or better in CHM 227 Corequisite(s): CHM 222
___ ___ General Education Social Science Elective (GE SS)	3	
OR ___ ___ General Education Humanities Elective (GE HUM)		
CSC 106 Intermediate PC Applications With Programming	3	M AT 014
BIO 251 Introduction To Biomolecules And Molecular Biology -Lecture	3	Prerequisite(s): CHM 221, CHM 227, BIO 123 and BIO 124 Co-requisite(s): CHM 222, CHM 228 and BIO 252 Or permission from department chair
BIO 252 Introduction To Biomolecules and Molecular Biology - Lab	1	Corequisite(s): BIO 251 or permission from department chair

Total Credits: 64 - 66

Contact Name: Dr. Uma Narayanan, Biotechnology Program Coordinator
Contact Phone: 732-548-6000 Ext: 3146
Contact Email: Unarayanan@middlesexcc.edu
Department Web: <http://www.middlesexcc.edu/academi/bio>

Business Administration Degree

(Designed for Transfer)

BUSINESS ADMINISTRATION AND MANAGEMENT DEPARTMENT

Associate in Science (A.S.) Degree

This program parallels the first two years of the bachelor's degree program at a four-year college or university. It is designed to transfer.

❑ Why major in Business Administration?

Students prepare to transfer to a four-year college or university in any field of business after earning their associate degree.

❑ What will students learn if they study Business Administration?

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

❑ Can students transfer to a four-year college or university?

The Statewide Transfer Agreement for New Jersey ensures that students who earn an A.A. or A.S. degree at a community college will have those credits fully transferable to a New Jersey public four-year institution, will have completed half of the credits required for a basic four-year degree and will have completed all of the lower division general education requirements. In addition, articulation agreements with private institutions may provide similar transfer provisions. Students should discuss the transfer process with an advisor.

❑ Are there any requirements that must be satisfied before taking courses in the major?

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

❑ How long will it take to complete this degree?

Once students complete developmental coursework (if needed), the degree can be completed in two years of full-time study. They can shorten the amount of time by taking courses in the summer and winter sessions.

❑ Questions?

Contact Name: Professor Nancy Bailey, department chair

Contact Phone: 732.906.2594

Contact Email: ABLS@middlesexcc.edu

Department Web: <http://www.middlesexcc.edu/departments/bam>

BUSINESS ADMINISTRATION DEGREE (DESIGNED FOR TRANSFER)

Associate in Science (A.S.) Degree - BUS.AS

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

Courses may have prerequisite and corequisite requirements. Check course descriptions for details.

Courses	Credits	Requisites / Comments
<i>Semester I</i>		
ENG 121 English Composition I	3	A passing score on the College's placement test or a grade of "C" or better in ENG 010.
_____ Mathematics Requirement <i>Students must complete a minimum of 6 credits in mathematics in one of the following sequences: MAT 123 and MAT 124</i>	3-4	MAT 014 (or MAT 014A and MAT 014B) or appropriate score on the College's placement test.
OR MAT 129 (or MAT 129A and MAT 129B) and MAT 131 (or MAT 131A and MAT 131B) approval.		Appropriate score on the College's placement test and/or satisfactory score on the diagnostic test, "C" or better in MAT 014 MAT 014 (or MAT 014A and MAT 014B), or departmental
OR MAT 131 (or MAT 131A and MAT 131B) and MAT 132		Appropriate score on the College's placement test or diagnostic exam, and MAT 129 (or MAT 129A and MAT 129B).
OR MAT 131 (or MAT 131A and MAT 131B) and MAT 285		Appropriate score on the College's placement test or diagnostic exam, and MAT 129 (or MAT 129A and MAT 129B).
ACC 101 Financial Accounting	4	
BUS 101 Business Organization and Management	3	
_____ General Education Humanities Elective (GE HUM)	3	
<hr/>		
<i>Semester II</i>		
ENG 122 English Composition II	3	A grade of "C" or better in ENG 121
_____ Mathematics Requirement <i>Second course in mathematics sequence (see mathematics requirement in Semester I above)</i>	3-4	
ACC 102 Managerial Accounting	4	ACC 101
ECO 201 Principles of Economics I	3	A passing score on the algebra portion on the College's placement test or MAT 013. Students must complete ECO 201 and ECO 202 to fulfill GE SS requirement.
SPE 121 Fundamentals of Public Speaking	3	
<hr/>		
<i>Semester III</i>		
ECO 202 Principles of Economics II	3	ECO 201 or permission of department chairperson. Students must complete ECO 201 and ECO 202 to fulfill GE SS requirement.
BUS 201 Business Law I	3	
CSC 105 Computer Applications and Systems	3	Student may select an alternate Computer Science (GE MST) course for which they have appropriate academic advisement and preparation in mathematics, such as CSC 106.
_____ Business Elective <i>Recommended business electives are as follows (3 credits each):</i>	3	
BUS 202 Business Law II		BUS 201
MGT 210 Concepts of Business Management		BUS 101
MKT 201 Marketing I		BUS 101
_____ Physical/Health Education Elective	1-3	
<hr/>		
<i>Semester IV</i>		
_____ General Education Humanities Elective (GE HUM)	3	
_____ General Education Science Elective (GE MST)	3-4	Students must select a course with the GE MST designation from the following sciences: BIO, CHM, PHY, SCI.
_____ Elective	3	
_____ Business Elective <i>Recommended business electives are as follows (3 credits each):</i>	3	
BUS 202 Business Law II		BUS 201
MGT 210 Concepts of Business Management		BUS 101
MKT 201 Marketing I		BUS 101
_____ Business Elective <i>Recommended business electives are as follows (3 credits each):</i>	3	
BUS 202 Business Law II		BUS 201
MGT 210 Concepts of Business Management		BUS 101
MKT 201 Marketing I		BUS 101

Total Credits: 60-65

Contact Name: Professor Nancy Bailey, department chair

Contact Phone: 732.906.2594

Contact Email: ABL5@middlesexcc.edu

Department Web: <http://www.middlesexcc.edu/departments/bam>

Chemistry

DEPARTMENT OF NATURAL SCIENCES

Associate in Science (A.S.) Degree

The Chemistry Transfer program parallels the first two years of a baccalaureate degree program at four-year colleges and universities. The Chemistry Transfer degree prepares students to transfer to a four-year college or university to pursue professional careers in chemistry.

❑ **What will students learn if they study Chemistry Pre-Professional?**

They will learn the basics of general chemistry and organic chemistry that will prepare them to meet the challenges of pre-professional courses at the upper division colleges and universities.

❑ **Are there any requirements students must satisfy before taking courses in the major?**

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

❑ **Can Chemistry students transfer to four-year colleges and universities?**

The Statewide Transfer Agreement for New Jersey ensures that students who earn an A.A. or A.S. degree at a community college will have those credits fully transferable to a New Jersey public four-year institution, will have completed half of the credits required for a basic four-year degree and will have completed all of the lower division general education requirements. In addition, articulation agreements with private institutions may provide similar transfer provisions. Students should discuss the transfer process with an advisor.

❑ **How long will it take to complete this degree?**

Once students complete developmental coursework (if needed), the degree can be completed in two years of full-time study. They can shorten the amount of time by taking courses in the summer and winter sessions.

❑ **Questions?**

Contact Name: Dr. Diane Trainor, department chair

Contact Phone: 732.906.2587

Contact Email: DTrainor@middlesexcc.edu

Department Web: <http://www.middlesexcc.edu/academi/chm>

CHEMISTRY OPTION - SCIENCE TRANSFER
Associate in Science (A.S.) Degree - CHM.AS

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

Courses	Credits	Requisites / Comments
<i>Semester I</i>		
CHM 121 General Chemistry I – Lecture	3	MAT 014 and one year of high school chemistry or CHM 010.
CHM 125 General Chemistry I – Lab	1	MAT 014 and one year of high school chemistry or CHM 010.
ENG 121 English Composition I	3	A passing score on the College's placement test or a grade of "C" or better in ENG 010.
MAT 129 Precalculus	4	Appropriate score on the College's placement test and/or satisfactory score on the diagnostic examination, "B" or better in MAT 014 or departmental approval. Can be taken in two semesters –MAT 129A/MAT 129B.
CSC 106 Intermediate PC Applications With Programming	3	CSC 105, CSC 107, or one year of high school computer applications or programming course and MAT 104 or appropriate score on the College's placement test.
Physical/Health Education Elective	1-3	Students may take a health elective (3 credits) in place of Physical Education. However, if the total credits exceed 66 upon graduation, they may not transfer.
<hr/>		
<i>Semester II</i>		
CHM 122 General Chemistry II – Lecture	3	CHM 121 with a grade of "C" or better.
CHM 126 General Chemistry II - Lab	1	Prerequisite(s): CHM 121, CHM 125 with a grade of "C" or better Corequisite(s): CHM 122
ENG 122 English Composition II	3	A grade of "C" or better in ENG 121
MAT 131 Analytical Geometry and Calculus I	4	MAT 129, or MAT 129A/MAT 129B, or appropriate score on the College's placement test and/or satisfactory score on the diagnostic examination, or department approval.
___ ___ General Education Humanities Elective (GE HUM)	3	
___ ___ General Education Social Science Elective (GE SS)	3	
<hr/>		
<i>Semester III</i>		
CHM 221 Organic Chemistry I – Lecture	3	CHM 122 with a grade of "C" or better
CHM 227 Organic Chemistry I – Lab	1	Prerequisite (s): CHM 124, CHM 126 with a grade of "C" or better Corequisite(s): CHM 221
PHY 123 General Physics I – Lecture (GE MST)	3	MAT 129 or MAT 129A/MAT 129B
PHY 125 General Physics I – Lab (GE MST)	1	MAT 129 or MAT 129A/MAT 129B
CHM 219 Classical Volumetric & Spectrophotometric Analysis*	5	CHM 118 and MAT 014 or equivalent
___ ___ General Education Humanities Elective (GE HUM)	3	
___ ___ General Education Social Science Elective (GE SS)	3	
<hr/>		
<i>Semester IV</i>		
CHM 222 Organic Chemistry II – Lecture	3	CHM 221 Lecture with a grade of "C" or better, CHM 227 Lab
CHM 228 Organic Chemistry II – Lab	1	Prerequisite (s): CHM 221, CHM 227 with a grade of "C" or better Corequisite(s): CHM 222
PHY 124 General Physics II – Lecture (GE MST)	3	PHY 123
PHY 126 General Physics II – Lab (GE MST)	1	PHY 125
CHM 220 Methods of Chromatographic Separation*	4	CHM 201, CHM 219
___ ___ Technical Elective	4	
Electives: BIO 123, CHM 202, CHM 240		

Total Credits: 67

*CHM 219/CHM 220 sequence may be substituted with BIO 123/BIO 124
For students majoring in Pharmacy or Pre-Professional (medical, dental, etc.), biology may be required.

Contact Name: Dr. Diane Trainor, department chair
Contact Phone: 732.906.2587
Contact Email: DTrainor@middlesexcc.edu
Department Web: <http://www.middlesexcc.edu/academi/chm>

Computer Science

COMPUTER SCIENCE AND INFORMATION TECHNOLOGY DEPARTMENT

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

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

❑ What will students learn if they study Computer Science?

Students learn on PC's running the DOS, Windows, and LINUX operating systems. They learn several programming languages and administration of both LINUX and Windows systems. Students develop problem-solving and communication skills using modern information processing techniques.

❑ Are there any requirements students must satisfy before taking courses in the major?

Algebra II is a prerequisite for all Computer Science majors. Algebra II competency may be verified with a passing score on the College's placement test or by completing the appropriate course. Students must also have a grade of "C" or better in algebra II and geometry.

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

Network Administration and Support Option of the CIS program leads to the Associate in Applied Science Degree in Computer Science. Students learn network administration of Windows and LINUX operating systems. Problem solving skills are taught through the use of the object oriented programming language C++ or Java and the event driven programming Visual Basic. This program prepares students to take the certification tests for a PC Hardware operating systems technology, networking and security and Microsoft Windows MCP (Microsoft Certified Professional). Through a cooperative education program, students can gain work experience and earn college credits during their studies at Middlesex County College.

❑ Can students transfer to a four-year college or university?

Articulation agreements with public and private institutions offer students who earn the A.A.S. degree the opportunity to transfer all of their coursework to the four-year institution. Students in specialized programs, or who earn an A.A.S. degree should discuss the transfer process with an advisor.

❑ How long will it take to complete this degree?

Once students complete developmental coursework (if needed), the degree can be completed in two years of full-time study. They can shorten the amount of time by taking courses in the summer and winter sessions. They can complete the certificate in one year.

❑ Questions?

Contact Name: Dr. Peter Farrett, department chair
Contact Phone: 732.906.2526
Contact Email: PFarrett@middlesexcc.edu
Department Web: <http://www.middlesexcc.edu/departments/csc>

COMPUTER AND INFORMATION SYSTEMS

Associate in Applied Science (A.A.S.) - General Degree Option - CSI .AAS

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

Courses may have prerequisite and corequisite requirements. Check course descriptions for details.

Courses	Credits	Requisites / Comments
<i>Semester I</i>		
CSC 105 Computer Applications and Systems	3	
OR		
CSC 106 Intermediate PC Applications with Programming	3	CSC 105 or CSC 107 or one year of high school computer applications or a programming course and MAT 014 or appropriate score on the College's placement test.
CSC 161 Introduction to Computer Science Using Java	4	MAT 014 or appropriate score on the College's placement test.
ENG 121 English Composition I	3	A passing score on the College's placement test or a grade of "C" or better in ENG 010.
MAT 116 College Algebra	3	Prerequisite(s): MAT 014
OR		
MAT 129 Precalculus	4	Appropriate score on the College's placement test and/or satisfactory score on the diagnostic examination, "B" or better in MAT 014, or departmental approval.
OR		
MAT 129A Precalculus (Part A)	2	Appropriate score on the College's placement test and/or satisfactory score on the diagnostic examination, "C" or better in MAT 014 or MAT 014A and MAT 014B, or departmental approval.
AND		
MAT 129B Precalculus (Part B)	2	MAT 129A or equivalent courses
___ ___ General Education Social Science Elective (GE SS)	3	
<hr/>		
<i>Semester II</i>		
CSC 110 Microcomputer Operating Systems and Architecture	3	CSC 105 or CSC 106
CSC 162 Object Oriented Programming Using Java	4	Prerequisite(s): CSC 161 and MAT 116 or MAT 129 or MAT 129A
CSC 208 Visual BASIC Programming	4	CSC 106 or CSC 161 or CSC 133
ENG 122 English Composition II	3	A grade of "C" or better in ENG 121
MAT 123 Statistics I	3	MAT 014 or appropriate score on the College's placement test.
OR		
MAT 131 Analytic Geometry and Calculus I	4	MAT 129 or MAT 129A/MAT 129B or appropriate score on the College's placement test and/or satisfactory score on the diagnostic examination, or departmental approval.
OR		
MAT 131A Analytic Geometry and Calculus I (Part A)	2	MAT 129 or MAT 129A/MAT 129B or appropriate score on the College's placement test and/or satisfactory score on the diagnostic examination, or departmental approval.
AND		
MAT 131B Analytic Geometry and Calculus I (Part B)	2	MAT 131A
<hr/>		
<i>Semester III</i>		
CSC 200 Networking Technologies	3	CSC 110
CSC 236 Data Structures In Java	4	CSC 162 and MAT 116 or MAT 129B or MAT 129
CSC 245 UNIX* and Shell Programming	4	CSC 133 or CSC 161
___ ___ Physical/Health Education Elective	1-3	

Semester IV

CSC 239 Database Concepts	3	CSC 133 or CSC 161
CSC 241 Web Programming	4	CSC 134 or CSC 162
CSC 246 UNIX/ Web Server Administration	3	CSC 245
___ ___ General Education Humanities Elective (GE HUM)	3	
___ ___ <i>Choose Technical Elective listed below:</i>	3	
CSC 116 Introduction to Information Systems Security	3	CSC 105 or CSC 106
CSC 126 Help Desk Customer Service	3	CSC 105 or CSC 106 and ENG 121
CSC 127 Help Desk Operation	3	CSC 126
CSC 205 Computer Science Work Experience I	3	Completion of all courses in first year of CIS or Network Administration Option.
CSC 206 Computer Science Work Experience II	3	
CSC 248 PC Service and Support	3	CSC 110 and CSC 200
CSC 251 Windows Workstation Administration	3	CSC 200
CSC 252 Windows Server Administration	3	CSC 251
CSC 261 Information Technology Management	3	CSC 133 or CSC 161 and CSC 200 and ENG 121
<i>Other Electives:</i>		
CSC 211 Programming in JAVA	4	CSC 134 or CSC 162
MAT 132 Analytic Geometry and Calculus II	4	MAT 131 or equivalent
Science Elective	4	

Total Credits: 61-66

Contact Name: Dr. Peter Farrett, department chair
Contact Phone: 732.906.2526
Contact Email: PFarrett@middlesexcc.edu
Department Web: <http://www.middlesexcc.edu/departments/csc>

NETWORK ADMINISTRATION AND SUPPORT
 Associate in Applied Science (A.A.S.) - Networking Degree Option - CSNN.AAS

Courses	Credits	Requisites / Comments
<i>Semester I</i>		
CSC 105 Computer Applications and Systems OR CSC 106 Intermediate PC Applications with Programming	3	CSC 105 or CSC 107 or one year of high school computer applications or a programming course and MAT 014 or appropriate score on the College's placement test.
CSC 133 Introduction to Computer Science using C++	4	MAT 014 or appropriate score on College's placement test.
ENG 121 English Composition I	3	A passing score on the College's placement test or a grade of "C" or better in ENG 010.
MAT 116 College Algebra OR MAT 129 Precalculus	3	MAT 014
OR MAT 129 Precalculus	4	Appropriate score on the College's placement test and/or satisfactory score on the diagnostic examination, "B" or better in MAT 014 or departmental approval.
OR MAT 129A Precalculus (Part A)	2	Appropriate score on the College's placement test and/or satisfactory score on the diagnostic examination, "C" or better in MAT 014 or MAT 014A and MAT 014B or departmental approval.
AND MAT 129B Precalculus (Part B)	2	MAT 129A or equivalent courses
___ ___ General Education Social Science Elective (GE SS)	3	
<i>Semester II</i>		
CSC 110 Microcomputer Operating Systems and Architecture	3	CSC 105 or CSC 106
CSC 208 Visual BASIC Programming	4	CSC 106 or CSC 133 or CSC 161
CSC 116 Introduction to Information Systems Security	3	CSC 105 or CSC 106
ENG 122 English Composition II	3	A grade of "C" or better in ENG 121
MAT 123 Statistics I	3	MAT 014 or appropriate score on the College's placement test.
OR MAT 131 Analytic Geometry and Calculus I	4	MAT 129 or MAT 129A/MAT 129B or appropriate score on the College's placement test and/or satisfactory score on the diagnostic examination, or departmental approval.
OR MAT 131A Analytic Geometry and Calculus I (Part A)	2	MAT 129 or MAT 129A/MAT 129B or appropriate score on the College's placement test and/or satisfactory score on the diagnostic examination, or departmental approval.
AND MAT 131B Analytic Geometry and Calculus I (Part B)	2	MAT 131A

<i>Semester III</i>		
CSC 200 Networking Technologies	3	CSC 110
CSC 245 UNIX and Shell Programming	4	CSC 133 or CSC 161
CSC 251 Windows Workstation Administration	3	CSC 200
PED/HED Physical/Health Education Elective	1-3	
___ ___ <i>Choose Technical Elective listed below:</i>	3	All students should consult a computer science advisor.
Technical Electives:		
CSC 126 Help Desk Customer Service	3	CSC 105 or CSC 106 and ENG 121
CSC 127 Help Desk Operation	3	CSC 126
CSC 205/CSC 206 Computer Science Work Experience I/ II	3	Completion of all courses in first year of CIS or CSC 206 Computer Science Work Experience II Network Administration Option.
CSC 258 Computer Forensics	3	CSC 116 and CSC 245 or written permission of departmental chairperson.
CSC 261 Information Technology Management	3	CSC 133 or CSC 161 and CSC 200 and ENG 121
<i>Other Electives:</i>		
CSC 134 Object Oriented Programming using C++	4	Prerequisite(s): CSC 133 and MAT 116 or MAT 129 or MAT 129A Corequisite(s): MAT 126 or MAT 128 or MAT 131 or MAT 131A
CSC 211 Programming in JAVA	4	CSC 134 or CSC 162
CSC 230 Multimedia Production and Authoring Tools	4	CSC 134
CSC 235 Data Structures	4	CSC 134 and MAT 116 or MAT 129 or MAT 129B
CSC 241 Web Programming	4	CSC 134 or CSC 162
MAT 132 Analytic Geometry and Calculus II	4	MAT 131, MAT 131A/MAT 131B or equivalent

<i>Semester IV</i>		
CSC 239 Database Concepts	3	CSC 133 or CSC 161
CSC 246 UNIX and Web Server Administration	3	CSC 245
CSC 248 PC Service and Support	3	CSC 200 and CSC 110
CSC 252 Windows Server Administration	3	CSC 251
___ ___ General Education Humanities Elective (GE HUM)	3	

Total Credits: 61-66

Contact Name: Dr. Peter Farrett, department chair
Contact Phone: 732.906.2526
Contact Email: PFarrett@middlesexcc.edu
Department Web: <http://www.middlesexcc.edu/departments/csc>

COMPUTER PROGRAMMING CERTIFICATE - CSC.CER

Courses	Credits	Requisites / Comments
CSC 106 Intermediate PC Applications with Programming	3	CSC 105 or CSC 107 or one year of high school computer applications or a programming course and MAT 014 or appropriate score on the College's placement test.
CSC 110 Microcomputer Operating Systems and Architecture	3	CSC 105 or CSC 106 or
CSC 133 Introduction to Computer Science using C++	4	MAT 014 or appropriate score on College's placement test.
CSC 134 Object Oriented Programming using C++	4	CSC 133 and MAT 116 or MAT 129 or MAT 129A
CSC 235 Data Structures	4	CSC 134 and MAT 116 or MAT 129 or MAT 129B
___ ___ <i>Recommended Computer Science Electives:</i>	3-4	All students should consult a computer science advisor.
CSC 116 Introduction to Information Systems Security	3	CSC 105 or CSC 106
CSC 211 Programming in JAVA	4	CSC 134 or CSC 162
CSC 241 Web Programming	4	CSC 134 or CSC 162
CSC 261 Information Technology Management	3	CSC 133 or CSC 161 and CSC 200 and ENG 121
<i>The following courses cannot be taken as electives: CSC 105, CSC 107, CSC 108, CSC 109, CSC 115, CSC 117, CSC 165</i>		
ENG 121 English Composition I	3	A passing score on the College's placement test or a grade of "C" or better in ENG 010.
ENG 122 English Composition II	3	A grade of "C" or better in ENG 121
MAT 116 College Algebra	3	MAT 014 or MAT 014A and MAT 014B
OR		
MAT 129 Precalculus	4	Appropriate score on the College's placement test and/or satisfactory score on the diagnostic examination, "B" or better in MAT 014 or departmental approval.
OR		
MAT 129A Precalculus (Part A)	2	Appropriate score on the College's placement test and/or satisfactory score on the diagnostic examination, "C" or better in MAT 014 or MAT 014A and MAT 014B or departmental approval.
AND		
MAT 129B Precalculus (Part B)	2	MAT 129A or equivalent courses
OR		
MAT 123 Statistics	3	MAT 014, MAT 014A/MAT 014B or satisfactory score on the College's placement test.
OR		
MAT 131 Analytic Geometry and Calculus I	4	MAT 129 or MAT 129A/MAT 129B or appropriate score on the College's placement test and/or satisfactory score on the diagnostic examination, or departmental approval.
OR		
MAT 131A Analytic Geometry and Calculus I (Part A)	2	MAT 129 or MAT 129A/MAT 129B or appropriate score on the College's placement test and/or satisfactory score on the diagnostic examination, or departmental approval.
AND		
MAT 131B Analytic Geometry and Calculus I (Part B)	2	MAT 131A

Total Credits: 33-36

Contact Name: Dr. Peter Farrett, department chair
Contact Phone: 732.906.2526
Contact Email: PFarrett@middlesexcc.edu
Department Web: <http://www.middlesexcc.edu/departments/csc>

NETWORK ADMINISTRATION CERTIFICATE - CSNN.CER

Courses	Credits	Requisites / Comments
CSC 106 Intermediate PC Applications with Programming	3	CSC 105 or CSC 107 or MCT 101 or one year of high school computer applications or a programming course and MAT 014 or appropriate score on the College's placement test.
CSC 110 Microcomputer Operating Systems and Architecture	3	CSC 105 or CSC 106
CSC 116 Introduction to Information System Security	3	CSC 105 or CSC 106
CSC 126 Help Desk Customer Service	3	ENG 121, CSC 105 or CSC 106
CSC 200 Networking Technologies	3	CSC 110
CSC 251 Windows Workstation Administration	3	CSC 200
CSC 252 Windows Server Administration	3	CSC 251
___ ___ Technical Electives	3-4	
CSC 125 Web Markup Languages	3	CSC 106 and MAT 014
CSC 127 Help Desk Operation	3	CSC 126
CSC 133 Introduction to Computer Science Using C++	4	Prerequisite(s): MAT 014 or appropriate score on College's placement test. Corequisite(s): MAT 116 or MAT 129 or MAT 129A
CSC 161 Introduction to Computer Science Using JAVA	4	MAT 014 or appropriate score on College's placement test. Corequisite(s): MAT 129 or MAT 129A or higher
CSC 208 Visual BASIC Programming <i>The following courses cannot be taken as electives: CSC 105, CSC 107, CSC 108, CSC 109, CSC 165,</i>	4	CSC 106 or CSC 133 or CSC 161
ENG 121 English Composition I	3	A passing score on the College's placement test or a grade of "C" or better in ENG 010.
ENG 122 English Composition II	3	A grade of "C" or better in ENG 121
MAT 116 College Algebra OR	3	MAT 014 or MAT 014A and MAT 014B
MAT 129 Precalculus	4	Appropriate score on the College's placement test and/or satisfactory score on the diagnostic examination, "B" or better in MAT 014 or departmental approval.
OR		
MAT 129A Precalculus (Part A)	2	Appropriate score on the College's placement test and/or satisfactory score on the diagnostic examination, "C" or better in MAT 014 or MAT 014A and MAT 014B, or departmental approval.
AND		
MAT 129B Precalculus (Part B)	2	MAT 129A or equivalent courses

Total Credits: 33-35

Contact Name: Dr. Peter Farrett, department chair
Contact Phone: 732.906.2526
Contact Email: PFarrett@middlesexcc.edu
Department Web: <http://www.middlesexcc.edu/departments/csc>

**COMPUTER HELP DESK ADMINISTRATION
CERTIFICATE OF ACHIEVEMENT - CSH.COA**

<u>Courses</u>	<u>Credits</u>	<u>Requisites / Comments</u>
CSC 108 Introduction to Internet Applications	2	Prerequisites recommended: Prior completion of one of the following courses: CSC 105 or CSC 106 or CSC 107 or equivalent microcomputer experience.
CSC 110 Microcomputer Operating Systems and Architecture	3	CSC 105 or CSC 106
CSC 116 Introduction to Information Systems Security	3	CSC 105 or CSC 106
CSC 200 Networking Technologies	3	CSC 110
CSC 126 Help Desk Customer Service	3	ENG 121, CSC 105 or CSC 106
CSC 127 Help Desk Operation	3	CSC 126
SPE 121 Fundamentals of Public Speaking	3	

Total Credits: 20

Certificate Prerequisites

- CSC 105 - Computer Applications and Systems or CSC 106 - Intermediate PC Applications with Programming
- ENG 121 - English Composition I

Contact Name: Dr. Peter Farrett, department chair

Contact Phone: 732.906.2526

Contact Email: PFarrett@middlesexcc.edu

Department Web: <http://www.middlesexcc.edu/departments/csc>

Computer Science Transfer Degree

COMPUTER SCIENCE AND INFORMATION TECHNOLOGY DEPARTMENT

Associate in Science (A.S.) Degree

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

❑ **What will students learn if they study Science Transfer?**

They concentrate on the theoretical and applied sciences, and mathematics. These studies prepare students to meet the challenges of advanced study in professional careers.

❑ **Are there any requirements that must be satisfied before taking courses in my major?**

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

❑ **Can Computer Science majors transfer to four-year colleges and universities?**

The Statewide Transfer Agreement for New Jersey ensures that students who earn an A.A. or A.S. degree at a community college will have those credits fully transferable to a New Jersey public four-year institution, will have completed half of the credits required for a basic four-year degree and will have completed all of the lower division general education requirements. In addition, articulation agreements with private institutions may provide similar transfer provisions. Students should discuss the transfer process with an advisor.

❑ **How long will it take to complete this degree?**

Once students complete developmental coursework (if needed), the degree can be completed in two years of full-time study. They can shorten the amount of time by taking courses in the summer and winter sessions.

❑ **Questions?**

Contact Name: Dr. Peter Farrett, department chair

Contact Phone: 732.906.2526

Contact Email: PFarrett@middlesexcc.edu

Department Web: <http://www.middlesexcc.edu/departments/csc>

COMPUTER SCIENCE TRANSFER

Associate in Science (A.S.) Degree - CSC.AS

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

Courses may have prerequisite and corequisite requirements. Check course descriptions for details.

Courses	Credits	Requisites / Comments
<i>Semester I</i>		
CSC 161 Introduction to Computer Science Using Java	4	MAT 014 or appropriate score on College's placement test.
ENG 121 English Composition I	3	A passing score on the College's placement test or a grade of "C" or better in ENG 010.
MAT 131 Analytic Geometry and Calculus I	4	MAT 129, or MAT 129A/MAT 129B, or appropriate score on the College's placement test and/or satisfactory score on the diagnostic examination, or departmental approval.
OR		
MAT 131A Analytic Geometry and Calculus I (Part A)	2	MAT 129, or MAT 129A/MAT 129B, or appropriate score on the College's placement test and/or satisfactory score on the diagnostic examination, or departmental approval.
AND		
MAT 131B Analytic Geometry and Calculus I (Part B)	2	MAT 131A
___ ___ General Education Science Elective (GE MST)	4	Students should take science courses designated as general education that are numbered 117 or higher and should take a two-course sequence in the same science.
___ ___ Physical/Health Education Elective	1-3	
<hr/>		
<i>Semester II</i>		
CSC 162 Object Oriented Programming Using Java	4	CSC 161 and MAT 129 or MAT 129A
ENG 122 English Composition II	3	A grade of "C" or better in ENG 121
MAT 132 Analytic Geometry and Calculus II	4	MAT 131, MAT 131A/MAT 131B, or equivalent
___ ___ General Education Science Elective (GE MST)	4	Students should take science courses designated as general education that are numbered 117 or higher and should take a two-course sequence in the same science.
___ ___ Technical Elective	3	CSC 116 or 200 level Computer Science or Science Elective
<hr/>		
<i>Semester III</i>		
CSC 263 Computer Organization and Architecture I	3	CSC 161
CSC 236 Data Structures in Java	4	CSC 162, MAT 129 or MAT 129B
MAT 206 Introduction to Discrete Mathematics	4	MAT 132 or approval of department chairperson
___ ___ General Education Social Science Elective (GE SS)	3	
<hr/>		
<i>Semester IV</i>		
CSC 264 Computer Organization and Architecture II	3	CSC 263
MAT 210 Linear Algebra	4	MAT 132
___ ___ General Education Social Science Elective (GE SS)	3	
___ ___ General Education Humanities Elective (GE HUM)	3	

Total Credits: 61-63

Contact Name: Dr. Peter Farrett, department chair

Contact Phone: 732.906.2526

Contact Email: PFarrett@middlesexcc.edu

Department Web: <http://www.middlesexcc.edu/departments/csc>

Criminal Justice

HISTORY AND SOCIAL SCIENCE DEPARTMENT

Associate in Science (A.S.) Degree

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

❑ **What will students learn if they study Criminal Justice?**

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

❑ **Are there any requirements that must be satisfied taking courses in the major?**

Algebra I is a prerequisite for all majors. Algebra I competency may be verified with a passing score on the College's placement test or completion of the appropriate course. Students also need a grade of "C" or better in one year of high school laboratory science or in BIO 010 or CHM 010.

❑ **Can students transfer to a four-year college or university?**

The Statewide Transfer Agreement for New Jersey ensures that students who earn an A.A. or A.S. degree at a community college will have those credits fully transferable to a New Jersey public four-year institution, will have completed half of the credits required for a basic four-year degree and will have completed all of the lower division general education requirements. In addition, articulation agreements with private institutions may provide similar transfer provisions. Students should discuss the transfer process with an advisor.

❑ **How long will it take to complete this degree?**

Once students complete developmental coursework (if needed), the degree can be completed in two years of full-time study. They can shorten the amount of time by taking courses in the summer and winter sessions.

❑ **Questions?**

Contact Name: Dr. Steven Barnhart, department chair OR Academic Advising
Contact Phone: 732.906.2590 OR 732.906.2596
Contact Email: HSS@middlesexcc.edu OR Advising@middlesexcc.edu
Department web: <http://www.middlesexcc.edu/departments/hss>

CORRECTION ADMINISTRATION - OPTION
Associate in Science (A.S.) Degree - CJC.AS

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

Courses	Credits	Requisites / Comments
General Education Communication		
ENG 121 English Composition I	3	A passing score on the College's placement test or a grade of "C" or better in ENG 010.
ENG 122 English Composition II	3	A grade of "C" or better in ENG 121
General Education Humanities		
___ ___ General Education Humanities Elective (GE HUM)	3	Choose two courses designated in the course descriptions as General Education Humanities (GE HUM).
___ ___ General Education Humanities Elective (GE HUM)	3	
General Education Mathematics, Science and Technology		
___ ___ General Education Technology Elective (GE MST)	3	Choose either CSC 105 or CSC 106.
___ ___ General Education Mathematics Elective (GE MST)	3-4	Choose one math course (GE MST).
___ ___ General Education Science Elective (GE MST)	4	Choose one lab science course (GE MST).
General Education Social Science		
PSY 123 Introduction to Psychology	3	
SOC 121 Introduction to Sociology I	3	
POS 201 United States State and Local Government	3	
POS 220 United States National Government	3	
Physical Education / Health		
___ ___ Physical/Health Education Elective	1-3	Students may satisfy this requirement with any HED or PED course except PED 270.
Additional Courses		
CJU 123 Criminal Justice I	3	
CJU 124 Criminal Justice II	3	CJU 123
COR 201 Introduction to Correction Administration	3	Prerequisite(s) or Corequisite(s): CJU 123
COR 207	3	Prerequisite(s) or Corequisite(s): CJU 123
COR 280 Corrections Externship	3	Prerequisite(s) or Corequisite(s): COR 201 or
OR		
POL 204 Law Enforcement and Community		Prerequisite(s) or Corequisite(s): CJU 123
POS 231 Constitutional Law	3	Prerequisite(s): POS 121 or POS 201 or POS 220
SOC 140 Introduction to Criminology	3	
SOC 225 Juvenile Delinquency	3	
PSY 222 Social Psychology	3	SOC 121 or PSY 123
OR		
SOC 131 Contemporary Social Problems		

Total Credits: 62-65

Contact Name: Dr. Steven Barnhart, department chair
Contact Phone: 732.906.2590
Contact Email: HSS@middlesexcc.edu
Department web: <http://www.middlesexcc.edu/departments/hss>

CORRECTION ADMINISTRATION CERTIFICATE - COR.CER

Courses	Credits	Requisites / Comments
CJU 123 Criminal Justice I	3	
CJU 124 Criminal Justice II	3	CJU 123
COR 201 Introduction to Correction Administration	3	Prerequisite(s) or Corequisite(s): CJU123
COR 207 Correctional Institutions	3	Prerequisite(s) or Corequisite(s): CJU 123
COR 280 Corrections Externship OR POL 204 Law Enforcement and Community	3	Prerequisite(s) or Corequisite(s): COR 201 or COR 207 Prerequisite(s) or Corequisite(s): CJU 123
ENG 121 English Composition I	3	A passing score on the College's placement test or a grade of "C" or better in ENG 010.
ENG 122 English Composition II	3	A grade of "C" or better in ENG 121
POS 201 United States State and Local Government	3	
POS 220 United States National Government	3	
PSY 123 Introduction to Psychology	3	
SOC 121 Introduction to Sociology	3	
SOC 140 Introduction to Criminology	3	

Total Credits: 36

Contact Name: Dr. Steven Barnhart, department chair
Contact Phone: 732.906.2590
Contact Email: HSS@middlesexcc.edu
Department web: <http://www.middlesexcc.edu/departments/hss>

POLICE SCIENCE - OPTION
Associate in Science (A.S.) Degree - CJP.AS

Courses	Credits	Requisites / Comments
General Education Communication		
ENG 121 English Composition I	3	A passing score on the College's placement test or a grade of "C" or better in ENG 010.
ENG 122 English Composition II	3	A grade of "C" or better in ENG 121
General Education Humanities		
___ ___ General Education Humanities Elective (GE HUM)	3	Choose two courses designated in the course descriptions as General Education Humanities (GE HUM).
___ ___ General Education Humanities Elective (GE HUM)	3	
General Education Mathematics, Science and Technology		
___ ___ General Education Technology Elective (GE MST)	3	Choose either CSC 105 or CSC 106.
___ ___ General Education Mathematics Elective (GE MST)	3-4	Choose one math course (GE MST).
___ ___ General Education Science Elective (GE MST)	4	Choose one lab science course (GE MST).
General Education Social Science		
PSY 123 Introduction to Psychology	3	
SOC 121 Introduction to Sociology I	3	
POS 201 United States State and Local Government	3	
POS 220 United States National Government	3	
Physical Education / Health		
___ ___ Physical/Health Education Elective	1-3	Students may satisfy this requirement with any HED or PED course except PED 270.
Additional Courses		
CJU 123 Criminal Justice I	3	
CJU 124 Criminal Justice II	3	CJU 123
POL 201 Police Administration	3	Prerequisite(s) or Corequisite(s): CJU 123
POL 202 Police Operations	3	Prerequisite(s) or Corequisite(s): CJU 123
POL 204 Law Enforcement and Community	3	Prerequisite(s) or Corequisite(s): CJU 123
POS 231 Constitutional Law	3	Prerequisite(s): POS 121 or POS 201 or POS 220
SOC 140 Introduction to Criminology	3	
SOC 225 Juvenile Delinquency	3	
PSY 222 Social Psychology	3	SOC 121 or PSY 123
OR		
SOC 131 Contemporary Social Problems		

Total Credits: 62-65

Contact Name: Dr. Steven Barnhart, department chair
Contact Phone: 732.906.2590
Contact Email: HSS@middlesexcc.edu
Department web: <http://www.middlesexcc.edu/departments/hss>

Dental Hygiene

DENTAL AUXILIARIES EDUCATION DEPARTMENT

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

The program in Dental Hygiene is accredited by the Commission on Dental Accreditation and has been granted the accreditation status of approval. Graduates of this program qualify to take the North East Regional and the National Board Examinations for licensure to practice.

❑ Why major in Dental Hygiene?

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

❑ Can students who major in Dental Hygiene transfer to a four-year college or university?

Some colleges and universities such as Thomas Edison, Montclair State University, UMDNJ, and New Jersey City University will apply the courses the student has taken toward a bachelor's degree.

❑ What will students learn by studying Dental Hygiene?

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

❑ Are there any special requirements that must be satisfied before taking courses in the major?

- Students must be a U.S. citizen or permanent resident who have been permanently domiciled in the state of New Jersey for at least 12 months prior to the first day of classes.
- Students must have a "C" or better in high school laboratory biology and laboratory chemistry or an equivalent college course.
- Algebra 1 is a pre-requisite for all majors. Algebra 1 competency may be verified with a passing score on the College's placement test of completion of the appropriate course. As a result of the student's performance on the College's placement test, he or she may need developmental coursework. All developmental coursework must be completed before they will be considered for admission to the program.
- Students must have a cumulative GPA of 2.75. High school GPA will be used if the student has less than 12 college credits at the time of application.
- When students apply, they must take a Health Technologies entrance examination.

❑ How long will it take to complete this degree?

Once students complete developmental coursework (if needed), the degree can be completed in two years of full-time study.

❑ Are there any special requirements once the student is admitted to this major?

Students must meet the Academic Standards or Progress outlined to progress through the curriculum. Students are also required to have completed CPR for the Health Care Provider and complete the health physical and required immunizations prior to starting classes.

❑ Are there any other things I should consider before I apply?

Yes, there are practical considerations, health considerations and legal considerations that you should review before making the decision to choose dental hygiene as a career:

Practical Considerations:

The following Practical Considerations are listed so the student may be better able to assess their career choice in terms of ability to succeed in the program and gain employment in the field:

1. Have written and oral communications skills in the English language to effectively and accurately communicate with patients, peers, supervisors, families and other healthcare members.
2. Have sufficient visual acuity to accurately assess patient conditions and treat patients safely.
3. Have motor skills and strength capable of fine and delicate manipulation and adjustments of patient equipment. The student must have the physical capability to withstand prolonged hours in a sitting position and repetitive upper body motions.
4. Demonstrate acceptable affective behaviors required by health care employees such as maintaining excellent attendance and integrity and being able to work under pressure.
5. Comprehend and follow clinical policies and procedures related to the profession you choose.

Health Considerations:

Due to the nature of clinical experiences in the Dental Hygiene Program, students will be participating in a work environment that has the potential of exposure to bloodborne pathogens and infectious diseases. All students accepted into the Dental Hygiene Program are provided with instruction on infection control protocols specific to Dental Hygiene in order to reduce the risk of disease transmission.

Legal Considerations:

A student is required to have a criminal background check performed with satisfactory results acceptable by Middlesex County College and the Dental Hygiene Department and/or participating clinical facilities as a consideration of admission, initial enrollment and/or continued enrollment. An offer of admission will not be final and enrollment not permitted until the completion of a satisfactory criminal background check. Admission may be denied or rescinded or enrollment terminated based on the results of the criminal background check.

❑ Questions?

DENTAL HYGIENE

Contact Name: Professor Hope Holbeck, department chair

Contact Phone: 732.906.2536

Contact Email: HHolbeck@middlesexcc.edu

Department Web: <http://www.middlesexcc.edu/departments/dental>

DENTAL ASSISTING

Contact Name: Carolyn Breen Ed.D, CDA, RDA, RDH, Chair of the UMDNJ Allied Dental Education Program

OR Marilyn Laskowski-Sachnoff, Dean, Division of Professional Studies

Contact Phone: 908.889.2504 (UMDNJ) OR 732.906.3502 (MCC)

Contact Email: breen@umdnj.edu OR MLaskowski-Sachnoff@middlesexcc.edu

Department Web: <http://shrp.umdnj.edu/dept/alliedental/da/index.html>

DENTAL ASSISTING CERTIFICATE - DHY.CER

Below are required courses for program completion.

At Middlesex County College:

<u>Courses</u>	<u>Credits</u>	<u>Requisites / Comments</u>
BIO 111 Anatomy & Physiology I	4	One year of high school laboratory biology or BIO 010 and one year of high school laboratory chemistry or CHM 010 and appropriate score on the College's placement test.
ENG 121 English Composition I	3	A passing score on the College's placement test or a grade of "C" or better in ENG 010.
PSY 123 Introduction to Psychology	3	

Total Credits: 10 (Prior to professional course work)

At the University of Medicine and Dentistry of New Jersey:

<u>Courses</u>	<u>Credits</u>	<u>Requisites / Comments</u>
ADEC 1110 Dental Head & Neck Anatomy	3	
ADEC 1250 Dental Materials	3	
ADEC 1269 Dental Specialties	1	
ADEC 1209 Intro to the Dental Profession	4	
ADEC 1240 Medical Emergencies	1	
DENA 1279 Clinical Dental Assisting	3	
ADEC 1205 Dental Health Education I	1	
ADEC 1219 Dental Radiology	3	
DENA 1232 Dental Science	2	
ADEC 2460 Practice Management	1	
DENA 1309 Internship	1	

Total Credits: 23 (Professional course work)

Total Program Credits: 33

The Dental Assisting Certificate is jointly awarded by Middlesex County College and the School for Health Related Professions (SHRP) of the University of Medicine and Dentistry of New Jersey (UMDNJ). A joint admissions committee will review the application for any MCC student who has successfully taken BIO 111, ENG 121 and PSY 123. The dental assisting portion of the program is held in the Allied Health Technology building at Scotch Plains, NJ. This program begins in the spring and concludes in the fall semester of each year. After a student completes all designated courses, a joint audit committee (MCC/UMDNJ) verifies program completion, and a joint certificate is awarded by both institutions.

Contact Name: Carolyn Breen Ed.D, CDA, RDA, RDH, Chair of the UMDNJ Allied Dental Education Program

OR Marilyn Laskowski-Sachnoff, Dean, Division of Professional Studies

Contact Phone: 908.889.2504 (UMDNJ) OR 732.906.3502 (MCC)

Contact Email: breen@umdnj.edu OR MLaskowski-Sachnoff@middlesexcc.edu

Department Web: <http://shrp.umdnj.edu/dept/alliedental/da/index.html>

Education Practitioner

HISTORY AND SOCIAL SCIENCE DEPARTMENT

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

Graduates may pursue either of two possibilities. First, some students major in Education Practitioner in order to custom tailor a plan of study at Middlesex County College for transfer to a four-year college or university. Second, some students want to take practical and applied courses that prepare them to work immediately after this degree. Indeed, some majors actually work in the field while completing degree requirements.

People already employed in educational settings often receive salary or position upgrades when they complete this degree.

For the student who desires to transfer as an Education major or to go to work immediately in an education-related setting, the Education Practitioner is the right choice. Students should tell their advisor which career path in education they wish to follow, so they can be directed to the proper elective choices. (Note: Some receiving institutions prefer an A.A. degree).

❑ Can students find employment without completing their four-year degree?

Students are eligible for a substitute-teaching license after completion of their 60th credit. Many graduates have worked as paraprofessionals in a wide variety of educational settings (both public and private) as they continue their education at a four-year institution. Whether students choose the transfer or the early employment track, this degree can help obtain CDA certification obtained through the Council for Professional Recognition in Washington, D.C. or "Group Teacher Approval" obtained through the State of New Jersey Department of Human Services - Division of Youth and Family Services (DYFS). (Note: Advisor consultation is recommended. If the student selects applied courses for the approved electives rather than transfer-oriented courses, some of the applied courses may not be transferable).

❑ What will students learn if they study Education Practitioner?

They will have a strong core of general education courses and practical experiences in teaching/learning field settings. Supervision is done by cooperating school personnel as well as by the college supervisor. Students may select to work in early childhood, special education, elementary education or high school level field placements.

❑ Are there any requirements students must satisfy before taking courses in the major?

The student's performance on the College's placement test determines placement in developmental courses. Consultation with the department chairperson about math and science choices is strongly recommended. Often, in addition to the education major, the student's desired future second major at the transfer institution allows the advisor or chairperson to assist him or her with selecting the appropriate math and science courses.

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

❑ How long will it take to complete this degree?

Once students complete developmental coursework (if needed), the degree can be completed in two years of full-time study. They can shorten the amount of time by taking courses in the summer and winter sessions.

❑ Can students complete all requirements by enrolling in evening classes?

Almost all classes are offered at least one time each year during the evening sessions. Some courses are offered in one semester but not in the next.

Students studying on a part-time basis should contact the department chairperson or an advisor to plan when they should take their courses.

❑ Questions?

Contact Name: Dr. Steven Barnhart, department chair **OR** Academic Advising

Contact Phone: 732.906.2590 **OR** 732.906.2596

Contact Email: HSS@middlesexcc.edu **OR** Advising@middlesexcc.edu

Department web: <http://www.middlesexcc.edu/departments/hss>

EDUCATION PRACTITIONER

Associate in Applied Science (A.A.S.) Degree - EDPR.AAS

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

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

Courses	Credits	Requisites / Comments
<i>Semester I</i>		
ENG 121 English Composition I	3	Passing score on the College's placement test or a grade of "C" or better in ENG 010.
PSY 123 Introduction to Psychology	3	
HED 150 Contemporary Health Issues	3	
SPE 121 Fundamentals of Public Speaking	3	
MAT ____ Mathematics Elective I	3-4	Appropriate score on the College's placement test to start any of the following Math sequences: MAT 101-MAT 102, MAT 129-MAT 131, MAT 131-MAT 132 or higher levels.
<hr/>		
<i>Semester II</i>		
ENG 122 English Composition II	3	A grade of "C" or better in ENG 121
PSY 223 Child Psychology	3	PSY 123
HUM ____ General Education Humanities Elective (GE HUM)	3	Students are advised to pick a humanities elective based on upper division receiving institution's requirements. Often recommended: World Literature I or II (ENG 225 or ENG 226).
ART ____ Art Elective	3	Students are advised to pick an art elective based on upper division receiving institution's requirements. Often recommended: ART 105, ART 109, ART 145, ART 201, ART 123, ART 124.
MAT ____ Mathematics Elective II	3-4	Appropriate score on the College's placement test to finish any of the following Math sequences: MAT 101-MAT 102, MAT 129-MAT 131, MAT 131-MAT 132 or higher.
<hr/>		
<i>Semester III</i>		
BIO ____ General Education Biology Elective (GE MST)	3-4	Choices are: BIO 103, or all 4 credit Biology courses with the GE MST designation. Note: Most 4 credit biology courses are best for transfer.
MUS 140 Music Fundamentals	3	Music 131 may be substituted on its acceptance by transfer institution and with chairperson's permission.
PSY 226 Educational Psychology: Classroom Applications	3	PSY 123 PSY 226 is a prerequisite for EDU 280, Education Field Experience.
SOC 121 Introduction to Sociology	3	
____ ____ Elective 1	3	Students are advised to pick an approved elective based on transfer institution's requirements. Often recommended: History course (Consult advisor).
<hr/>		
<i>Semester IV</i>		
____ ____ Elective 2	3	Students are advised to pick an approved elective based on transfer institution's requirements. Often recommended: 4 credit lab science (Not usually a Biology course – Consider SCI 155 or SCI 220 or consult advisor for additional choices).
EDU 280 Education Field Experience	3	PSY 226 & PSY 122 or PSY 125 and approval of department chairperson. Students are required to work in an educational setting for 90 hours.
ENG 212 Children's Literature	3	ENG 121
____ ____ Elective 3	3	This elective is chosen with an advisor. Transfer institutions often require a course in the second major in a subject area (e. g.: English or history). The second major is different from the education major.
____ ____ Elective 4	3	See message for Elective 3
____ ____ Elective 5	3	See message for Elective 3

Total Credits: 63-66

Contact Name: Dr. Steven Barnhart, department chair
Contact Phone: 732.906.2590
Contact Email: HSS@middlesexcc.edu
Department web: <http://www.middlesexcc.edu/departments/hss>

Engineering Science

ENGINEERING TECHNOLOGIES DEPARTMENT

Associate in Science (A.S.) Degree

❑ Why major in Engineering Science?

Engineers are professionals with competency in mathematics and the physical and technical sciences. For students who enjoy solving problems and working with technical or scientific equipment, and do well in mathematics and science, engineering science is a good choice of major. The college has a transfer agreement with Rutgers College of Engineering and the New Jersey Institute of Technology. Articulation agreements with many other engineering colleges facilitate transfer with full credit.

❑ What will students learn by studying Engineering Science?

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

❑ Are there any requirements that must be satisfied before taking courses in the major?

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

❑ Can Engineering Science students transfer to a four-year college or university?

The Statewide Transfer Agreement for New Jersey ensures that students who earn an A.A. or A.S. degree at a community college will have those credits fully transferable to a New Jersey public four-year institution, will have completed half of the credits required for a basic four-year degree and will have completed all of the lower division general education requirements. In addition, articulation agreements with private institutions may provide similar transfer provisions. Students should discuss the transfer process with an advisor.

❑ How long will it take to complete this degree?

Once students complete developmental coursework (if needed), the degree can be completed in two years of full-time study. They can shorten the amount of time by taking courses in the summer and winter sessions.

❑ Questions?

Contact Name: Professor Thomas Sabol, department chair

Contact Phone: 732.906.2586

Contact Email: Tsabol@middlesexcc.edu

Department Web: <http://www.middlesexcc.edu/departments/engineeringtech>

ENGINEERING SCIENCE

Associate in Science (A.S.) Degree - ES.AS

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

Courses	Credits	Requisites / Comments
<i>Semester I</i>		
CHM 121 General Chemistry I – Lecture	3	MAT 014 and one year of high school chemistry or CHM 010.
CHM 125 General Chemistry I – Lab	1	MAT 014 and one year of high school chemistry or CHM 010.
ENR 106 Introduction to Solving Engineering Problems Using Computers	3	Prerequisite(s): MAT 129A and MAT 129 B or MAT 129 ENR 106 is not a required course for graduation at MCC. However, it is required for junior status at most transfer institutions. Transfer students should consult with their academic advisor to select an appropriate course that will satisfy the requirement of the transfer institution.
ENG 121 English Composition I	3	A passing score on the College's placement test or a grade of "C" or better in ENG 010.
MAT 131 Analytic Geometry and Calculus I	4	MAT 129, or MAT 129A/MAT 129B, or appropriate score on the College's placement test and/or satisfactory score on the diagnostic examination, or departmental approval.
MEC 119 Graphic Science	2	
PED ___ Physical Education Elective	1	Students may take a health elective in place of physical education. However, if the total credits exceed 66 upon graduation they may not all transfer.
<hr/>		
<i>Semester II</i>		
CHM 122 General Chemistry II – Lecture	3	CHM 121 with a grade of "C" or better.
CHM 126 General Chemistry II - Lab	1	Prerequisite(s): CHM 121, CHM 125 with a grade of "C" or better Corequisite(s): CHM 122
ENG 122 English Composition II	3	A grade of "C" or better in ENG 121
MAT 132 Analytic Geometry and Calculus II	4	MAT 131, MAT 131B, or equivalent
PHY 133 Analytical Physics I – Lecture	3	Prerequisite(s): One year of high school laboratory physics. Corequisite(s): MAT 131 or equivalent
PHY 135 Analytical Physics I-Lab	1	Prerequisite(s): One year of high school laboratory physics. Corequisite(s): MAT 131 or equivalent
___ ___ General Education Social Science Elective (GE SS)	3	
<hr/>		
<i>Semester III</i>		
___ ___ Technical Elective	3-4	See Technical Electives in list below.
MAT 233 Analytic Geometry and Calculus III	4	MAT 132 or equivalent
MEC 221 Engineering Mechanics I	3	MAT 131 or MAT 131B
PHY 134 Analytical Physics II – Lecture	3	Prerequisite(s):PHY 133 Corequisite(s): MAT 132 or equivalent
PHY 136 Analytical Physics II-Lab	1	Prerequisite(s): PHY 135 Corequisite(s): MAT 132 or equivalent
___ ___ General Education Humanities Elective (GE HUM)	3	
<hr/>		
<i>Semester IV</i>		
___ ___ Technical Elective	4	See Technical Electives in list below.
MAT 234 Differential Equations	4	MAT 233 or approval of department chairperson of mathematics.
PHY 236 Analytical Physics III-Lecture	3	PHY 134, MAT 132
PHY 239 Analytical Physics III-Lab	1	PHY 136 or one year of integral and differential calculus, MAT 132
___ ___ General Education Humanities Elective (GE HUM)	3	
OR		
___ ___ General Education Social Science Elective (GE SS)		

TECHNICAL ELECTIVES

Courses	Credits	Requisites / Comments
CHEMICAL ENGINEERING		
CHM 221 Organic Chemistry I -Lecture AND CHM 227 Organic Chemistry I –Lab	3 1	CHM 122 or equivalent CHM 126 or equivalent
CHM 222 Organic Chemistry I -Lecture AND CHM 228 Organic Chemistry I –Lab	3 1	CHM 221 or equivalent CHM 227 or equivalent
CIVIL ENGINEERING		
ELT 221 Electric Circuits I *	4	MAT 132 or equivalent
MEC 222 Engineering Mechanics II **	3	MEC 221
CIT 253 Mechanics of Materials ***	3	MEC 221
ELECTRICAL ENGINEERING		
ELT 221 Electric Circuits I *	4	MAT 132 or equivalent
ELT 222 Electric Circuits II **	4	ELT 221
CSC 133 Introduction to Computer Science Using C++	4	MAT 014 or appropriate score on the College Placement Test and one year of high school chemistry. CSC 133 is not a required course. Electrical Engineering majors who choose to transfer should consult with their academic advisor to select an appropriate course that will satisfy the requirement of the transfer institution.
CSC 161 Introduction to Computer Science Using Java	4	MAT 014 or appropriate score on the College Placement Test and one year of high school chemistry. CSC 133 is not a required course. Electrical Engineering majors who choose to transfer should consult with their academic advisor to select an appropriate course that will satisfy the requirement of the transfer institution.
MECHANICAL ENGINEERING		
ELT 221 Electric Circuits I *	4	MAT 132 or equivalent
MEC 222 Engineering Mechanics II **	4	MEC 221
CIT 253 Mechanics of Materials ***	3	MEC 221

Total Credits: 64-65

* Only offered in the Fall semester

** Only offered in the Spring semester

*** Only offered in the Summer semester. This is not a required course for graduation; however it may be required at the student's transfer institution.

Contact Name: Professor Thomas Sabol, department chair

Contact Phone: 732.906.2586

Contact Email: Tsabol@middlesexcc.edu

Department Web: <http://www.middlesexcc.edu/departments/engineeringtech>

Fire Science Technology

DEPARTMENT OF NATURAL SCIENCES

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

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

❑ **Can students who major in Fire Science Technology transfer to a four-year college or university?**

Articulation agreements with public and private institutions offer students who earn the A.A.S. degree the opportunity to transfer all of their coursework to the four-year institution. Students in specialized programs, or who earn an A.A.S. degree should discuss the transfer process with an advisor.

❑ **What will students learn in Fire Science Technology?**

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

❑ **Are there any requirements that must be satisfied before taking courses in the major?**

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

❑ **How long will it take to complete this degree?**

Fire Science courses are offered exclusively in the evening. Once students complete developmental coursework (if needed), the degree can be completed in two years of full-time study. They can shorten the amount of time by taking courses in the summer and winter sessions.

❑ **Questions?**

Contact Name: Dr. Diane Trainor, department chair

Contact Phone: 732.906.2587

Contact Email: DTrainor@middlesexcc.edu

Department Web: <http://www.middlesexcc.edu/academi/chm>

FIRE SCIENCE TECHNOLOGY DEGREE
Associate in Applied Science (A.A.S.) Degree - FIRE.AAS

Courses	Credits	Requisites / Comments
<i>Semester I</i>		
FSC 103 Introduction to Fire Protection	3	
SCI 207 Principles of Chemistry & Physics for Fire Science	4	One year of high school laboratory chemistry or CHM 010.
ENG 121 English Composition I	3	A passing score on the College's placement test or a "C" or better in ENG 010.
MAT 107 Mathematics I	3	Appropriate score on the College's placement test, MAT 013 or MAT 013A and MAT 013B, or departmental approval.
___ ___ Physical/Health Education Elective	1-3	
<i>Semester II</i>		
CSC 105 Computer Applications and Systems	3	CSC 105 or higher
ENG 122 English Composition II	3	A grade of "C" or better in ENG 121
MAT 108 Mathematics II	3	MAT 107 or equivalent With advisor approval students may select a higher level mathematics sequence.
FSC 204 Building Construction	3	FSC 103 or permission of department chair
___ ___ General Education Humanities Elective (GE HUM)	3	
<i>Semester III</i>		
FSC 206 Fire Strategy and Tactics	3	FSC 103 or permission of department chair
FSC 207 Hazardous Materials for the Fire Service	3	See department chair
FSC 209 Fire Suppression and Detection Systems	3	FSC 103 or permission of department chair
POS 201 United States State and Local Government	3	
FSC 214 Rescue Company Operations	3	
<i>Semester IV</i>		
FSC 210 Fire and Arson Investigation	3	FSC 103 or permission of department chair
FSC 212 Fire Prevention and Inspection	3	FSC 103 or permission of department chair
MGT 200 Principles of Supervision	3	MGT 200 is offered in the spring semester only
___ ___ General Education Humanities Elective (GE HUM)	3	
OR		
General Education Social Science Elective (GE SS)		
___ ___ Elective	3	Recommended EMT 101 or EMP 100
Electives:		
EMT 101 Emergency Medical Technician	3	
EMP 100 Introduction to Emergency Management	3	

Total Credits: 59-61

Contact Name: Dr. Diane Trainor, department chair
Contact Phone: 732.906.2587
Contact Email: DTrainor@middlesexcc.edu
Department Web: <http://www.middlesexcc.edu/academi/chm>

FIRE SCIENCE CERTIFICATE - FIRE.CER

<u>Courses</u>	<u>Credits</u>	<u>Requisites / Comments</u>
CHM 107 Principles of Chemistry	4	One year of high school laboratory chemistry or CHM 010.
ENG 121 English Composition I	3	A passing score on the College's placement test or a "C" or better in ENG 010.
FSC 103 Introduction to Fire Protection	3	
FSC 204 Building Construction	3	FSC 103 or permission of department chair
FSC 206 Fire Strategy and Tactics	3	FSC 103 or permission of department chair
FSC 207 Hazardous Materials for the Fire Service	3	CHM 107, FSC 103 or permission of department chair
FSC 209 Fire Suppression and Detection Systems	3	FSC 103 or permission of department chair
FSC 210 Fire and Arson Investigation	3	FSC 103 or permission of department chair
FSC 212 Fire Prevention and Inspection	3	FSC 103 or permission of department chair
MAT 107 Mathematics I	3	Appropriate score on the College's placement test, MAT 013 or MAT 013A and MAT 013B, or departmental approval.
Total Credits: 31		

Contact Name: Dr. Diane Trainor
Contact Phone: 732.906.2587
Contact Email: DTrainor@middlesexcc.edu
Department Web: <http://www.middlesexcc.edu/academi/chm>

Java and Web Programming

COMPUTER SCIENCE AND INFORMATION TECHNOLOGY DEPARTMENT
Certificate of Achievement

❑ **Why complete the certificate of achievement in Java & Web Programming?**

This certificate of achievement provides students with an awareness of the internet and the world wide web. Publishing text, pictures, sound, and even video over the internet is becoming easier every day. Individuals who run small businesses with services to sell and people with stories to share will acquire the necessary skills to publish useful, attractive, and quality web pages. Upon completion of this certificate program, students will be able to create web sites and useful web pages.

❑ **Are there any requirements that must be satisfied before students can take courses in the major?**

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

❑ **How long will it take to complete this certificate?**

Once students complete developmental coursework (if needed), the certificate may be completed in 1-2 semesters. They can shorten the amount of time by taking courses in the summer and winter sessions.

❑ **Why take the certificate of achievement in Information Systems Security?**

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

❑ **Questions?**

Contact Name: Dr. Peter Farrett, department chair
Contact Phone: 732.906.2526
Contact Email: PFarrett@middlesexcc.edu
Department Web: <http://www.middlesexcc.edu/departments/csc>

**JAVA AND WEB PROGRAMMING
CERTIFICATE OF ACHIEVEMENT - CSWEB.COA**

This Java and Web Programming Certificate of Achievement is designed for those students with at least two years of college education and knowledge of CSC 161 Introduction to Computer Science In Java and CSC 200 Networking Technologies using Java or permissions of the chairperson.

<u>Courses</u>	<u>Credits</u>	<u>Requisites / Comments</u>
CSC 125 Web Markup Languages	3	Prerequisite(s): CSC 106 and MAT 014
CSC 239 Database System Concepts	3	Prerequisite(s): CSC 133 or CSC 161
CSC 241 Web Programming	4	Prerequisite(s): CSC 134 or CSC 162
CSC 245 UNIX and Shell Programming	4	Prerequisite(s): CSC 133 or CSC 161
CSC 162 Object Orienting Program In Java	4	Prerequisite(s): CSC 161 and MAT 129 or MAT 129A

Total Credits: 18

Contact Name: Dr. Peter Farrett, department chair
Contact Phone: 732.906.2526
Contact Email: PFarrett@middlesexcc.edu
Department Web: <http://www.middlesexcc.edu/departments/csc>

**JAVA PROGRAMMING
CERTIFICATE OF ACHIEVEMENT - CSJAVA.COA.**

This Certificate of Achievement is designed for those students with at least two years of college education and who have completed courses equivalent to ENG 121 and MAT 129. Successful completion of this certificate prepares students to take entry level jobs as Java programmers.

<u>Courses</u>	<u>Credits</u>	<u>Requisites / Comments</u>
CSC 161 Introduction to Computer Science in Java	4	MAT 014 or appropriate score on College's placement test. Corequisite(s): MAT 129 or MAT 129A or higher
CSC 162 Object Oriented Programming in Java	4	Prerequisite(s): CSC 161 and MAT 129 or MAT 129A or higher
CSC ____ 200-Level Programming Elective <i>Approved Programming Elective List (4 credits each):</i>	4	
CSC 211 Programming in Java		Prerequisite(s): CSC 134 or 162
CSC 236 Data Structures in Java		Prerequisite(s): CSC 162 and MAT 129 or MAT 129B or written permission of the Department
CSC 241 Web Programming		Prerequisite(s): CSC 134 or 162
CSC 245 UNIX and Shell Programming	4	CSC 133 or CSC 161

Total Credits: 16

Contact Name: Dr. Peter Farrett, department chair
Contact Phone: 732.906.2526
Contact Email: PFarrett@middlesexcc.edu
Department Web: <http://www.middlesexcc.edu/departments/csc>

**INFORMATION SYSTEMS SECURITY
CERTIFICATE OF ACHIEVEMENT - CSS.COA**

The Information Systems Security Certificate of Achievement is designed for those students with at least two years of college level education who have completed courses equivalent to ENG 121 and MAT 014. Students must complete CSC 105, CSC 134 or CSC 162, and CSC 200 or demonstrate equivalent knowledge prior to beginning the program. Successful completion of this certificate helps prepare students to take the certification test for Information Systems Security.

<u>Courses</u>	<u>Credits</u>	<u>Requisites / Comments</u>
CSC 116 Introduction to Information Systems Security	3	CSC 105 or CSC 106
CSC 239 Database Concepts	3	CSC 133 or CSC 161
CSC 245 UNIX and Shell Programming	4	CSC 133 or CSC 161
CSC 258 Computer Forensics	3	CSC 116 and CSC 245
____ System Administration Technical Elective (3 credits each):	3	All students should consult a Computer Science Advisor.
CSC 246 UNIX and Web Server Administration		CSC 245
CSC 251 Windows Workstation Administration		CSC 200
CSC 252 Windows Server Administration		CSC 251
CSC 261 Information Technology Management	3	CSC 133 or CSC 161 and CSC 200 and ENG 121

Total Credits: 19

Contact Name: Dr. Peter Farrett, department chair
Contact Phone: 732.906.2526
Contact Email: PFarrett@middlesexcc.edu
Department Web: <http://www.middlesexcc.edu/departments/csc>

WINDOWS/PC SUPPORT CERTIFICATE OF ACHIEVEMENT - CSNT.COA

This Windows/PC Support Certificate of Achievement is designed for students who have completed courses equivalent to ENG121 and MAT 014. Students must complete CSC105 or demonstrate the equivalent proficiency prior to beginning this certificate program. Successful completion of this certificate helps prepare students to take the certification tests for Microsoft Windows (MCP) and A+ Certification.

<u>Courses</u>	<u>Credits</u>	<u>Requisites / Comments</u>
CSC 110 Microcomputer Operating Systems and Architecture	3	CSC 105 or CSC 106
CSC 116 Introduction to Information Systems Security	3	CSC 105 or CSC 106
CSC 200 Networking Technologies	3	CSC 110
CSC 251 Windows Workstation Administration	3	Prerequisite(s): CSC 110 Corequisite(s): CSC 200
CSC 252 Windows Server Administration	3	CSC 251
CSC 248 PC Service and Support	3	CSC 110 and CSC 200
____ Elective Required	3-4	
<i>Recommended Electives:</i>		
CSC 160 Introduction to UNIX for Web Development	3	MAT 014 or higher and CSC 133 or CSC 161 or permission of chairperson.
CSC 245 UNIX and Shell Programming	4	CSC 133 or CSC 161

Total Credits: 21

Contact Name: Dr. Peter Farrett, department chair
Contact Phone: 732.906.2526
Contact Email: PFarrett@middlesexcc.edu
Department Web: <http://www.middlesexcc.edu/departments/csc>

Liberal Arts

Associate in Arts (A.A.) Degree

This program provides graduates a foundation for lifelong intellectual development and a fulfilling life. It also develops a powerful knowledge base and set of critical thinking skills they will use over the course of their professional careers.

□ **Why study the Liberal Arts?**

A Liberal Arts education helps students develop strong and ordered minds as they explore the world's collected wisdom in literature, history, mathematics, science, philosophy and the arts. It teaches them to recognize and construct arguments, to appreciate diverse cultures and perspectives, and to have a sense of humility about lives and minds that have gone before. Its emphasis on language helps students broaden their cultural perspective and become more aware of their own identity.

The courses comprising a liberal arts education at Middlesex are the core of all liberal arts programs at the bachelor's level. Students may select the general degree, the most flexible of all our Liberal Arts programs, or one of the many specialized options.

□ **Are there any requirements that must be satisfied before taking courses in the major?**

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

□ **How long will it take to complete this degree?**

Once students complete developmental coursework (if needed), the degree can be completed in two years of full-time study. They can shorten the amount of time by taking courses in the summer and winter sessions.

LIBERAL ARTS - GENERAL

Liberal Arts General - Associate in Arts (A.A.) Degree - LAGEN.AA

Below are required courses for program completion.

Courses	Credits	Requisites / Comments
General Education Communication: ENG 121 English Composition I	3	A passing score on the College's placement test or a grade of "C" or better in ENG 010.
ENG 122 English Composition II	3	A grade of "C" or better in ENG 121
SPE 121 Fundamentals of Public Speaking OR SPE 123 Discussion and Debate	3	
General Education History: HIS 121 History of Western Civilization I	3	
HIS 122 History of Western Civilization II	3	
___ ___ General Education Humanities (GE HUM)	3	Choose one course designated in the course descriptions as general education humanities(GE HUM).
___ ___ Language Elective General Education Humanities (GE HUM)	3	
___ ___ Language Elective General Education Humanities (GE HUM)	3	Choose two modern language courses in sequence from either: FRE, GER, ITA or SPA. For students who completed at least two years of high school study in one modern language, their level of language will be determined by placement test excluding SPA 242.
General Education Mathematics, Science and Technology:		Students must take 12-15 credits in general education mathematics, science, and technology courses. Choose one or two science courses, one or two math courses and one technology course in consultation with an academic advisor. For their technology elective, students should choose either CSC 105 or CSC 106.
___ ___ Technology Elective (GE MST)	3	
___ ___ Mathematics Elective (GE MST)	3-4	
___ ___ Science Elective (GE MST)	3-4	
___ ___ Mathematics or Science Elective (GE MST)	3-4	
General Education Social Sciences:		
___ ___ General Education Social Science Elective (GE SS)	3	Choose courses designated in the course descriptions as general education social sciences (GE SS).
___ ___ General Education Social Science Elective (GE SS)	3	
Liberal Arts Electives:		
___ ___ Liberal Arts Elective	3	Choose four courses from the following areas that are not being taken to satisfy other requirements: AFS, ART, BIO, CHM, COM, DAN, ENG, FRE, GER, HED, HIS, ITA, LNC, MAT, MUS, PED, PHI, PHY, POS, PSY, SOC, SPA, SPE and THE.
___ ___ Liberal Arts Elective	3	
___ ___ Liberal Arts Elective	3	
___ ___ Liberal Arts Elective	3	
___ ___ General Education Diversity Elective (GE DIV)	3	Choose one course designated in the course described as general education diversity (GE DIV).
___ ___ Divisional Elective	3	Choose one course from the following areas: AFS, ART, ASL, BIO, CHM, CJU, COM, COR, DAN, EDU, ENG, FRE, GER, HED, HIS, ITA, LNC, MAT, MUS, PED, PHI, PHY, POL, POS, PSY, SSD, SOC, SPA, SPE and THE.
___ ___ Physical/Health Education Elective	1-3	Students may satisfy this requirement with any HED or PED course.

Total Credits: 61-66

Contact Name: Dean David Edwards, Dean, Division of Arts and Sciences
OR Dr. Kathleen Pearle, Assistant Dean, Division of Arts and Sciences
Contact Phone: 732.906.2533 OR 732.906.4256
Contact Email: Advising@middlesexcc.edu

Mathematics

MATHEMATICS DEPARTMENT

Associate in Science (A.S.) Degree

This program parallels the first two years of a baccalaureate degree program in mathematics. The mathematics major prepares students, upon graduation, to transfer to a four-year college or university to pursue professional careers requiring quantitative reasoning and analytical thinking. Traditional mathematics occupations consist of teaching positions in schools and colleges or research positions in universities or industry. Other related mathematics fields include statistics, survey and market research, operations research, computer systems design and programming, economics and finances, and robotics and aerodynamics. Careers in applied mathematics usually focus on developing mathematical models for technical and scientific data, whether in physics, chemistry, biology, engineering or medicine.

□ Are there any requirements that must be satisfied before taking courses in the major?

Students must demonstrate proficiency in elementary (MAT 013 or MAT 013A/MAT 013B) and intermediate (MAT 014 or MAT 014A/MAT 014B) algebra, as well as precalculus (MAT 129 or MAT 129A/MAT 129B). In addition, they must successfully complete all courses required by the College's placement tests, and fulfill the science course prerequisites. The science courses of biology and chemistry require a high school laboratory course with a minimum grade of "C" or the equivalent developmental science courses (BIO 010, CHM 010).

□ Can students transfer to a four-year college or university?

The Statewide Transfer Agreement for New Jersey ensures that students who earn an A.A. or A.S. degree at a community college will have those credits fully transferable to a New Jersey public four-year institution, will have completed half of the credits required for a basic four-year degree and will have completed all of the lower division general education requirements. In addition, articulation agreements with private institutions may provide similar transfer provisions. Students should discuss the transfer process with an advisor.

□ How long will it take to complete this degree?

Once students complete developmental coursework (if needed), the degree can be completed in two years of full-time study. They can shorten the amount of time by taking courses in the summer and winter sessions.

□ Questions?

Contact Name: Dr. Maria DeLucia, department chair

Contact Phone: 732.906.2585

Contact Email: MDeLucia@middlesexcc.edu

Department Web: <http://www.middlesexcc.edu/academi/mat>

MATHEMATICS - SCIENCE TRANSFER

Associate in Science (A.S.) Degree - MAT.AS

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

Courses may have prerequisite and corequisite requirements. Check course descriptions for details.

Courses	Credits	Requisites / Comments
<i>Semester I</i>		
BIO 123 General Biology I OR	4	One year of high school laboratory biology or BIO 010 and one year of high school laboratory chemistry or CHM 020. Also appropriate score on the College's placement test or MAT 013.
CHM 121 General Chemistry I - Lecture	3	MAT 014 and one year of high school chemistry or CHM 010.
CHM 125 General Chemistry I - Lab	1	MAT 014 and one year of high school chemistry or CHM 010.
ENG 121 English Composition I	3	A passing score on the College's placement test or a grade of "C" or better in ENG 010.
MAT 131 Analytic Geometry & Calculus I OR	4	Appropriate score on the College's placement test and/or satisfactory score on the diagnostic examination, "C" or better in MAT 129 or MAT 129A/MAT 129B, or departmental approval.
MAT 131A		To be followed by MAT 131B.
____ General Education Social Science Elective (GE SS)	3	
____ Physical/Health Education Elective	1-3	
<hr/>		
<i>Semester II</i>		
BIO 124 General Biology II OR	4	BIO 123
CHM 122 General Chemistry II – Lecture	3	CHM 121 with a grade of "C" or better.
CHM 126 General Chemistry II - Lab	1	Prerequisite(s): CHM 121, CHM 125 with a grade of "C" or better Corequisite(s): CHM 122
ENG 122 English Composition II	3	A grade of "C" or better in ENG 121
MAT 132 Analytic Geometry & Calculus II	4	MAT 131, MAT 131A/MAT 131B or equivalent
CSC 106 Intermediate PC Applications with Programming	3	
____ General Education Humanities Elective (GE HUM)	3	
<hr/>		
<i>Semester III</i>		
MAT 233 Analytic Geometry & Calculus III	4	MAT 132 or equivalent
Mathematics Elective	4	Choose from MAT 206, MAT 210, MAT 257, MAT 285
PHY 123 General Physics I – Lecture (GE MST)	3	MAT 129 or MAT 129A/MAT 129B
PHY 125 General Physics I – Lab (GE MST)	1	MAT 129 or MAT 129A/MAT 129B Students may substitute PHY 133/135 - PHY 134/136 for PHY 123/125 - PHY 124/126.
____ Elective	3	Except SSD 101
<hr/>		
<i>Semester IV</i>		
MAT 234 Differential Equations	4	MAT 233 or approval of department chairperson
Mathematics Elective	4	Choose from MAT 206, MAT 210, MAT 257, MAT 285
PHY 124 General Physics II – Lecture (GE MST)	3	PHY 123
PHY 126 General Physics II – Lab (GE MST)	1	PHY 125 Students may substitute PHY 133/135 - PHY 134/136 for PHY 123/125 - PHY 124/126.
____ General Education Humanities Elective (GE HUM) OR ____ General Education Social Sciences Elective (GE SS)	3	
Total Credits: 62-65		

Contact Name: Dr. Maria DeLucia, department chair
Contact Phone: 732.906.2585
Contact Email: MDeLucia@middlesexcc.edu
Department Web: <http://www.middlesexcc.edu/academi/mat>

Mechanical Engineering Technology

ENGINEERING TECHNOLOGIES DEPARTMENT

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

Mechanical Engineering Technology provides the right combination of theory and hands-on training to prepare students for employment opportunities in the design, manufacture and set-up of mechanical equipment such as engines, power generation and control systems, and manufacturing systems (including robots). Specific job responsibilities include working as a designer, computer aided design/drafting, instrumentation and testing of machines and systems, and developing and troubleshooting manufacturing systems.

❑ **Can students who major in Mechanical Engineering Technology transfer to a four-year college or university?**

Students may choose to participate in the Joint Admissions Program with the New Jersey Institute of Technology. Articulation agreements with public and private institutions offer students who earn the A.A.S. degree the opportunity to transfer all of their coursework to the four-year institution. Students in specialized programs, or who earn an A.A.S. degree should discuss the transfer process with an advisor.

❑ **Are there any requirements that must be satisfied before taking courses in the major?**

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

❑ **How long will it take to complete this degree?**

Once students complete developmental coursework (if needed), the degree can be completed in two years of full-time study. They can shorten the amount of time by taking courses in the summer and winter sessions.

❑ **Questions?**

Contact Name: Professor Thomas Sabol, department chair

Contact Phone: 732.906.2586

Contact Email: Tsabol@middlesexcc.edu

Department Web: <http://www.middlesexcc.edu/departments/engineeringtech>

MECHANICAL ENGINEERING TECHNOLOGY

Associate in Applied Science (A.A.S.) Degree - MEC.AAS

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

Courses	Credits	Requisites / Comments
<i>Semester I</i>		
MCT 101 Introduction to Technology	2	MAT 013 or passing score on the College's placement test. Corequisite(s): MAT 014
MAT 129A Precalculus Part A	2	Appropriate score on the College's placement test and/or satisfactory score on the diagnostic examination, "C" or better in MAT 014 or MAT 014A and MAT 014B, or departmental approval. MAT 129 may be substituted for MAT 129A & MAT 129B.
ENG 121 English Composition I	3	A passing score on the College's placement test or a grade of "C" or better in ENG 010.
ELT 105 Foundations of Electronics Technology	4	MAT 013 or appropriate score on College's placement test. Corequisite(s): MAT 014 or higher level
MEC 123 Technical Graphics/CAD I	3	
PED ____ Physical Education Elective	1	Students have the option of substituting Health Education electives in the place of the Physical Education Elective.
<hr/>		
<i>Semester II</i>		
MAT 129B Precalculus Part B	2	MAT 129A or equivalent courses
ENG 122 English Composition II	3	A grade of "C" or better in ENG 121
CIT 105 Statics for Technicians	3	MCT 101, MAT 129A or MAT 129
MEC 125 Advanced Mechanical Drawing/CAD II	3	MEC 123
MEC 130 Manufacturing Process & Materials	3	
<hr/>		
<i>Semester III</i>		
MAT 131A Analytic Geometry & Calculus I Part A	2	MAT 129 or MAT 129B or appropriate score on the College's placement test and/or satisfactory score on the diagnostic examination, or departmental approval. MAT 131 may be substituted for MAT 131A and MAT 131B.
PHY 123 General Physics I – Lecture (GE MST)	3	MAT 129 or MAT 129A/MAT 129B
PHY 125 General Physics I – Lab (GE MST)	1	MAT 129 or MAT 129A/MAT 129B
CIT 203 Strength of Materials	4	CIT 105
MEC 228 Kinematics Design	3	MEC 123 and MAT 129B or MAT 129
MEC 250 Solid Modeling	3	MEC 123
<hr/>		
<i>Semester IV</i>		
MAT 131B Analytic Geometry & Calculus I Part B	2	MAT 131A
PHY 124 General Physics II – Lecture (GE MST)	3	PHY 123
PHY 126 General Physics II – Lab (GE MST)	1	PHY 125
MEC 204 Fluid Mechanics	4	CIT 105, MAT 129B or MAT 129
MEC 260 Mechanical Design Project	2	Prerequisite(s): CIT 203, MEC 228 Corequisite(s): MEC 204, MCT 220
MCT 220 Robotics and Control Systems	3	ELT 105, MEC 123, MAT 129B or MAT 129
____ General Education Humanities Elective (GE HUM)	3	
OR		
____ General Education Social Science Elective (GE SS)		
Total Credits: 63		

Contact Name: Professor Thomas Sabol, department chair
Contact Phone: 732.906.2586
Contact Email: Tsabol@middlesexcc.edu
Department Web: <http://www.middlesexcc.edu/departments/engineeringtech>

Medical Laboratory Technology

MEDICAL LABORATORY TECHNOLOGY DEPARTMENT

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

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

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

What will students learn if they study Medical Laboratory Technology?

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

Are there any requirements that must be satisfied before taking courses in the major?

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

How long will it take to complete this degree?

Once students complete developmental coursework (if needed), the degree can be completed in two years of full-time study. Students who register for an average of 17 credits each semester can complete the degree in two years. Students must register for the summer session following their first year.

Are there any special requirements once the student is admitted to this major?

He or she must meet the academic standards of progress outlined on the next page to stay in the program.

Are there any other things I should consider before I apply?

Yes, there are practical considerations, health considerations and legal considerations that you should review before making the decision to choose medical laboratory technology as a career:

Practical Considerations:

The following Practical Considerations are listed so the student may be better able to assess their career choice in terms of ability to succeed in the program and gain employment in the field:

6. Have written and oral communications skills in the English language to effectively and accurately communicate with patients, peers, and supervisors.
7. Have sufficient visual acuity to determine a specimen's macroscopic characteristics and color. Have sufficient visual acuity to determine microscopic cell characteristics and staining properties.
8. Have motor skills and strength capable of fine and delicate manipulation and adjustments.
9. Demonstrate acceptable affective behaviors required by health care employees such as maintaining excellent attendance and integrity and being able to work under pressure.
10. Comprehend and follow clinical policies and procedures related to the profession you choose.

Health Considerations:

Due to the nature of clinical experiences in the Medical Laboratory Technology Program, students will be participating in a work environment that has the potential of exposure to blood borne pathogens and infectious diseases. All students accepted into the Medical Laboratory Technology Program are provided with instruction on infection control protocols specific to the Program in order to reduce the risk of disease transmission.

Legal Considerations:

A student is required to have a criminal background check performed with satisfactory results acceptable by Middlesex County College and the Medical Laboratory Technology Department and/or participating clinical facilities as a consideration of admission, initial enrollment and/or continued enrollment. An offer of admission will not be final and enrollment not permitted until the completion of a satisfactory criminal background check. Admission may be denied or rescinded or enrollment terminated based on the results of the criminal background check.

*National Accrediting Agency for Clinical Laboratory Science (NAACLS)

5600 N. River Road, Suite 720
Rosemont, IL 60018
Phone: 773.714.8800
Website: www.naacls.org

Questions?

Contact Name: Professor Stephen Larkin, department chair
Contact Phone: 732.906.2581
Contact Email: SLarkin@middlesexcc.edu
Department Web: <http://www.middlesexcc.edu/academi/med>

MEDICAL LABORATORY TECHNOLOGY

Associate in Applied Science (A.A.S.) Degree - MED.AAS

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

Courses may have prerequisite and corequisite requirements. Check course descriptions for details.

Courses	Credits	Requisites / Comments
BIO 117 Biology I ¹	4	Appropriate score on the College's placement test or MAT 013 and one year high school laboratory science or BIO 010 or CHM 010.
CHM 117 Chemistry I ¹	4	MAT 013 or appropriate score on the College's placement test and one year of high school laboratory science or departmental approval.
ENG 121 English Composition I	3	A passing score on the College's placement test or a grade of "C" or better in ENG 010.
MAT 107 Mathematics I ²	3	Appropriate score on the College's placement test, MAT 013 or MAT 013A/MAT 013B or departmental approval.
MED 101 Introduction to Medical Laboratory I	2	Admission to the Medical Laboratory Technology program required or departmental approval. MED 101 is only offered in the fall.
<i>Semester II</i>		
BIO 118 Biology II ¹	4	BIO 117
CHM 118 Chemistry II ¹	4	CHM 117
ENG 122 English Composition II	3	A grade of "C" or better in ENG 121
MAT 108 Mathematics II ²	3	MAT 107
MED 102 Introduction to Medical Laboratory II	3	BIO 117, CHM 117, ENG 121, MAT 107, MED 101. MED 102 is only offered in the spring.
PSY 123 Introduction to Psychology	3	
<i>Semester III</i>		
MED 210 Medical Laboratory Technology I ³	6	BIO 118, CHM 118, ENG 122, MAT 108, MED 102, and departmental approval. MED 210 is only offered in the summer.
<i>Semester IV</i>		
MED 211 Medical Laboratory Technology II ⁵	8	MED 210. MED 211 is only offered in the fall.
BIO 211 Principles of Microbiology ⁴	4	One year of high school laboratory biology or BIO 010 and one year of high school laboratory chemistry or CHM 010. Also appropriate score on the College's placement test or MAT 013.
CHM 201 Principles of Organic Chemistry	4	CHM 118 or equivalent
Physical Education Elective	1	
<i>Semester V</i>		
CHM 202 Biochemistry	4	CHM 201
MED 212 Medical Laboratory Technology III ⁵	8	MED 211, BIO 211. MED 212 is only offered in the spring.

Total Credits: 71

¹ BIO 123-BIO 124 and CHM 121/CHM 125 - CHM 122/CHM 126 may be substituted for BIO 117-BIO 118, CHM 117-CHM 118 for students who meet those course prerequisites and with the chairperson's written approval.

² MAT 123-MAT 124 or MAT 129-MAT 131 may be substituted for MAT 107-MAT 108 for students who have completed two or more years of high school

Algebra, with the Chairperson's written approval.

³ This is an eight week, 40 hour/week summer clinical practicum.

⁴ BIO 221 may be substituted for BIO 211.

⁵ This includes a 16 hour/week clinical practicum.

Medical Laboratory Technology Department Standards of Progress

1. Maintain a cumulative grade point average of 2.0.

2. Must achieve a "C" grade or better in all the Medical Laboratory and science courses. Those not attaining these levels of achievement will be dropped from the program.

3. May retake a science or Medical Laboratory course only once and obtain a passing grade. (i.e. "C" or better) Repeating a Medical Laboratory course is subject to the restrictions as outlined below in #6.

4. Any student achieving a grade less than a "C" in a clinical MED course may not continue in the program. The clinical course with the deficient grade must be repeated, subject to the restrictions of the program as outlined below in #6. Any student failing the practicum portion of the course will fail the course.

5. Must complete the MED sequence of MED 210, MED 211, MED 212, in consecutive sequential semesters as offered, i.e. MED 210 in summer, MED 211 in fall, and MED 212 in spring.

6. A break in the sequence of MED 210, MED 211, MED 212 for any reason will require the student to reapply. Readmission to the MED course(s) will be determined by seat availability.

7. Formal sanctions for cheating in any course will result in dismissal from the MLT program.

8. The goals of the program are consistent with the college's mission of developing competencies for employment and continuing education.

Contact Name: Professor Stephen Larkin, department chair

Contact Phone: 732.906.2581

Contact Email: SLarkin@middlesexcc.edu

Department Web: <http://www.middlesexcc.edu/academi/med>

Nursing

Associate in Science (A.S.) Degree

This program prepares students for entry-level positions in nursing and for taking the National Council Licensure Examination for Registered Nurses (NCLEX-RN). It has been approved by the New Jersey State Board of Nursing, the New Jersey Council of Presidents, and the National League for Nursing Accrediting Commission (NLNAC).

❑ What is the pass rate for the NCLEX?

The pass rate for the NCLEX is as follows:

Class of 2009 – 97.44%

Class of 2010 – 94.12%

❑ What is the role of Raritan Bay Medical Center (RBMC)?

Raritan Bay Medical Center (RBMC) is the primary clinical site for the Nursing program.

❑ Are there any special requirements that must be satisfied before taking courses in the major?

- An applicant must be a U.S. citizen or permanent resident who has been permanently domiciled in the state of New Jersey for at least one year prior to the application process.
- Students must have a “B” or better in high school laboratory biology and laboratory chemistry or an equivalent college course.
- Algebra 1 is a pre-requisite for all majors. Algebra 1 competency may be verified with a passing score on the College’s placement test of completion of the appropriate course. As a result of the student’s performance on the College’s placement test, he or she may need developmental coursework. All developmental coursework must be completed before they will be considered for admission to the program.
- Students must have a cumulative GPA of 2.75. High school GPA will be used if the student has less than 12 college credits at the time of application.
- When students apply, they must take a Health Technologies entrance examination.

❑ Is there a waitlist for the Nursing program?

No, when an applicant is admitted to the nursing program, the student starts the first nursing course and begins clinical within two weeks. If you not admitted, then you reapply for the next class.

❑ How long will it take to complete this degree?

The standard duration of this Associate Degree program is four semesters (two years). Many students elect to take the science and general education courses required in the program before entry into the program. However, the four nursing courses must be taken in sequence and still require four semesters before graduation. Each nursing course may require Monday through Friday attendance.

❑ Are there any special requirements once the student is admitted to this major?

The student must maintain a GPA of 2.0 or higher and meet the academic standards of progress to stay in the nursing program.

❑ Are there additional requirements after graduation to be eligible for licensure?

The New Jersey State Board of Nursing requires that an applicant for licensure as a registered nurse must submit to the Board evidence, in such form as the Board may prescribe, that the applicant is of good moral character, is not a habitual user of drugs and never been convicted or has not pleaded nolo contendere, non vult contendere or non vult to an indictment, information or complaint alleging a violation of any Federal or State law relating to narcotic drugs. Application for licensure may be denied by the Board if violations exist. All licensure candidates must undergo a criminal history record background check, including fingerprinting prior to the issuance of the license.

❑ Can students who major in Nursing transfer to a four-year college or university?

The courses students take may be applied to the Bachelor of Science (BSN) Degree. Any final decision regarding transfer courses will be made by the receiving college. **MCC has articulation agreements with Felician College and Kean University that makes the transfer process as seamless as possible.**

❑ Are there any other things I should consider before I apply?

Yes, there are practical considerations, health considerations and legal considerations that you should review before making the decision to choose nursing as a career:

Practical Considerations:

The following Practical Considerations are listed so the student may be better able to assess their career choice in terms of ability to succeed in the program and gain employment in the field:

1. Have written and oral communications skills in the English language to effectively and accurately communicate with patients, peers, and supervisors.
2. Have sufficient visual acuity to accurately assess patient conditions and treat patients safely.
3. Have motor skills capable of fine and delicate manipulation of patient equipment.
4. The ability to transfer, lift and move patients without restrictions.
5. Demonstrate acceptable affective behaviors required by health care employees such as maintaining excellent attendance and integrity and being able to work under pressure.
6. Comprehend and follow clinical policies and procedures related to the profession you choose.

Health Considerations:

Due to the nature of clinical experiences in the Nursing Program, students will be participating in a work environment that has the potential of exposure to bloodborne pathogens and infectious diseases. All students accepted into the Nursing Program are provided with instruction on infection control protocols specific to the Program in order to reduce the risk of disease transmission.

Legal Considerations:

A student is required to have a criminal background check performed with satisfactory results acceptable by Middlesex County College and the Nursing Department and/or participating clinical facilities as a consideration of admission, initial enrollment and/or continued enrollment. An offer of admission will not be final and enrollment not permitted until the completion of a satisfactory criminal background check. Drug testing is a requirement for the program. Admission may be denied or rescinded or enrollment terminated based on the results of the criminal background check and the drug testing.

❑ Questions?

Contact Name: Michelle Foley, MA, RN, CNE, Director of Nursing Education

OR Marilyn Laskowski-Sachnoff, Dean, Division of Professional Studies

Contact Phone: 732.906.4660 **OR** 732.906.3502

Contact Email: MFoley@middlesexcc.edu **OR** MLaskowski-Sachnoff@middlesexcc.edu

Department Web: <http://www.middlesexcc.edu/departments/nursing>

NURSING

Associate in Science (A.S.) Degree - NRB.AS

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

Courses	Credits	Requisites / Comments
<i>Semester I</i>		
BIO 111 Human Anatomy & Physiology I	4	Prerequisite(s): One year of high school laboratory biology or BIO 010 and one year of high school laboratory chemistry or CHM 010 and appropriate score on the College's placement test or MAT 013.
ENG 121 English Composition I	3	Prerequisite(s): A passing score on the College's placement test or a grade of "C" or better in ENG 010.
PSY 123 Introduction to Psychology	3	
CSC 107 Computers in Health Technologies	1	Students may take other CSC courses with department chairperson's permission.
NRB 121 Nursing Concepts in Health and Wellness	7	Corequisite(s): BIO 111, ENG 121, PSY 123 Prerequisite(s): American Heart Association BLS Certification for the Healthcare provider
<i>Semester II</i>		
BIO 112 Human Anatomy & Physiology II	4	Prerequisite(s): BIO 111
PSY 232 Life-Span Development	3	Prerequisite(s): PSY 123
ENG 122 English Composition II	3	Prerequisite(s): A grade of "C" or better in ENG 121
NRB 122 Nursing Concepts in Health Alterations I	9	Prerequisite(s): NRB 121; BIO 111; PSY 123 Corequisite(s): BIO 112; PSY 232
<i>Semester III</i>		
BIO 211 Principles of Microbiology	4	Prerequisite(s): One year of high school laboratory biology or BIO 010 and one year of high school laboratory chemistry or CHM 010. Also appropriate score on the College's placement test or MAT 013.
HRI 214 Nutrition Fundamentals for Nursing	3	Prerequisite(s): NRB 122, BIO 112
NRB 221 Nursing Concepts Applied to Families	9	Prerequisite(s): NRB 122, PSY 232, BIO 112 Corequisite(s): BIO 211, HRI 214
<i>Semester IV</i>		
___ ___ General Education Humanities Elective (GE HUM)	3	
___ ___ General Education Elective (GE COM, GE DIV, GE HUM, GE MST or GE SS)	3	Choose one course designated in the course descriptions as General Education Communications (GE COM), General Education Diversity (GE DIV), General Education Humanities (GE HUM), General Education Math, Science and Technology (GE MST), or General Education Social Science (GE SS).
PED/HED Physical/Health Education Elective	1-3	
NRB 222 Nursing Concepts in Health Alterations II	10	Prerequisite(s): NRB 221; BIO 112 and BIO 211; HRI 214

Total Credits: 70-72

Standards of Progress:

1. Prior to matriculation, a nursing student must undergo a complete history and physical examination and be in compliance with the MCC and Nursing Department policy on immunizations.
2. A student is required to have a criminal background check and drug test performed with satisfactory results acceptable by MCC and the Nursing Department and/or participating clinical facility as a condition of admission, initial enrollment and/or continued enrollment. An offer of admission will not be final and enrollment not permitted until the completion of a satisfactory criminal background check. Admission may be denied or rescinded or enrollment terminated based on the results of the criminal background check and drug test.
3. Maintain a cumulative GPA of 2.0.
4. Achieve a "C" grade or better in all nursing courses in order to progress in the curriculum. A "C" in nursing is 77-84.
5. Achieve a "C" grade or better for all science courses in the nursing program. If a student receives a grade less than "C" in any science course of the nursing program, the student is allowed to repeat one science course only once. Any other unsatisfactory science grades will result in program dismissal.
6. An unsatisfactory grade (i.e. a grade less than "C") in NRB 121 results in dismissal from the Nursing Program. The student has the option to reapply to the program once.
7. If a student earns a grade less than "C" in any nursing course other than NRB 121, the student may retake the course once and must achieve a grade of "C" or better; any subsequent failure(s) in a nursing course will result in a dismissal from the Nursing Program. The student has the option to reapply to the Nursing Program, in which case the student may retake the course once and must achieve a "C" grade or better.
8. Attendance and participation in all scheduled learning activities of the program are expected.
9. Students must adhere to the policies of MCC and affiliated health care agencies.
10. A student should complete the nursing program within three years of beginning enrollment in the first nursing course, unless written allowance by the nursing director or dean is provided.
11. A student who does not successfully complete the major nursing sequence under the above conditions may not continue in the program.
12. Prior to graduation, the student must achieve a passing score on a NCLEX predictor test.

Contact Name: Michelle Foley, MA, RN, CNE, Director of Nursing Education **OR** Marilyn Laskowski-Sachnoff, Dean, Division of Professional Studies

Contact Phone: 732.906.4660 **OR** 732.906.3502

Contact Email: MFoley@middlesexcc.edu **OR** MLaskowskiSachnoff@middlesexcc.edu

Department Web: <http://www.middlesexcc.edu/departments/nursing>

Paralegal Studies

ACCOUNTING AND LEGAL STUDIES DEPARTMENT

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

Paralegals are trained specialists who, under the supervision of an attorney, perform a wide variety of legal tasks. These tasks may include legal research, law office management and preparation of legal documents. Only an attorney may provide legal services directly to the public. Students can earn the Associate in Applied Science which prepares graduates for employment in law offices, corporate legal departments, legal services corporations, state government offices, title companies and federal and state courts. Students who have already earned an A.A., A.S., A.A.S., B.A. or B.S. degree can earn the certificate. Students with one of these degrees plus three years of full-time paralegal work experience can earn the Certificate of Achievement.

❑ Can students who major in Paralegal Studies transfer to a four-year college or university?

Articulation agreements with public and private institutions offer students who earn the A.A.S. degree the opportunity to transfer all of their coursework to the four-year institution. Students in specialized programs, or who earn an A.A.S. degree should discuss the transfer process with an advisor.

❑ Are there any requirements that must be satisfied before taking courses in the major?

Students must either have a high school diploma or have passed an equivalency examination. Algebra I is a prerequisite for all majors. Algebra I competency may be verified with a passing score on the College's placement test or completion of the appropriate course.

❑ How long will it take to complete this degree?

Once students complete developmental coursework (if needed), the degree can be completed in two years of full-time study. They can shorten the amount of time by taking courses in the summer and winter sessions.

❑ What are the objectives of this program?

1. Provide a rigorous, flexible program for the quality education of the occupationally competent paralegal.
2. Provide a paralegal education program that leads to the opportunity for employment of its graduates by a wide range of employers.
3. Provide paralegals with a well-rounded, balanced education founded on a beneficial mix of general education, theory, and practical courses, stressing understanding and reasoning rather than rote learning of facts.
4. Support the general principle of ethical legal practice, professional responsibility and the prohibitions against the unauthorized practice of law by non-lawyers.
5. Provide an educational program that is responsive to the needs of the State of New Jersey and contributes to the advancement of legal professionals.
6. Provide a program that instills respect for the legal profession and its foundations, institutions, and quest for justice.
7. Maintain equality of opportunity in the educational program without discrimination or segregation on the grounds of race, color, religion, national origin or sex. The program's overall objective is to provide quality education for paralegals so that they might assist the legal profession in rendering more personal, economical services to a greater number of persons.

❑ How are these objectives met?

1. Through flexible curriculum planning which stresses a balance among General Education courses, law related courses, legal specialty courses, and electives.
2. Through continual assessment of the need for the program as evidenced by the legal profession's response to regular surveys and the ability of the program to place graduates.
3. By keeping the enrollment of the program to a size that will ensure a good student-teacher ratio and give graduates a good chance for paralegal employment. This is determined in the same method as number 2 above.
4. By providing the program with a well qualified full-time director with the necessary time to devote to the extensive administrative duties of the position.

❑ When students complete the program, what skills will they have?

1. Use the law library, including encyclopedias, reporter systems, digests, and practice manuals, including updating sources; utilize computer-assisted research including WESTLAW, reporter systems, statutes, administrative codes, updating sources and extended databases.
2. Understand and use rules governing courts and basic litigation procedures including telephone technique, client interviews, complaints, interrogatories, and motions.
3. Use forms and filing procedures relevant to typical legal proceedings.
4. Use forms and filing procedures in real and personal property transactions, including Real Estate Settlement Procedures Act.

NOTE: For students matriculating in this program, degree credit will not ordinarily be given for any course designated PLS which was completed more than six years prior to completion of the degree program.

❑ Questions?

Contact Name: Professor Nancy Bailey, department chair

Contact Phone: 732.906. 2594

Contact Email: ABLS@middlesexcc.edu

Department Web: <http://www.middlesexcc.edu/departments/bam>

PARALEGAL STUDIES

Associate in Applied Science (A.A.S.) Degree - PL.AAS

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

Courses may have prerequisite and corequisite requirements. Check course descriptions for details.

Courses	Credits	Requisites / Comments
<i>Semester I</i>		
CSC 105 Computer Applications and Systems	3	Students may select an alternate Computer Science (GE MST) course for which they have appropriate academic advisement and preparation in mathematics, such as CSC 106.
ENG 121 English Composition I	3	A passing score on the College's placement test or a grade of "C" or better in ENG 010.
PLS 100 Introduction to the Paralegal Profession	2	
PLS 101 Legal Research	3	Prerequisite(s) or corequisite(s): ENG 121 & PLS 100
PLS 113 Legal Writing	2	Prerequisite(s) or corequisite(s): ENG 121, PLS 100 and PLS 101
___ ___ General Education Social Science Elective (GE SS)	3	
<i>Semester II</i>		
PLS 121 Advanced Legal Research	2	Prerequisite(s): PLS 100, PLS 101, PLS 113, CSC 105 or CSC 106
ENG 122 English Composition II	3	A grade of "C" or better in ENG 121
PLS 104 Property Transactions	4	PLS 100, PLS 101, PLS 113 Prerequisite(s) or corequisite(s): PLS 121
PLS 110 Litigation Procedure	4	PLS 100, PLS 101, PLS 113 Prerequisite(s) or corequisite(s): PLS 121
PLS 111 Contracts & the Uniform Commercial Code	3	PLS 100, PLS 101, PLS 113 Prerequisite(s) or corequisite(s): PLS 121
PLS 123 Advanced Legal Writing	2	PLS 100, PLS 101, PLS 113
<i>Semester III</i>		
PLS 108 Torts	3	PLS 100, PLS 101, PLS 113 Prerequisite(s) or corequisite(s): PLS 121
PLS 112 Business Organizations & Government Regulations	3	PLS 100, PLS 101, PLS 113 Prerequisite(s) or corequisite(s): PLS 121 and PLS 123
___ ___ Paralegal Electives	3	
<i>Choose one of the following courses required -3 credits each:</i>		
PLS 105 Family Law		PLS 100, PLS 101, PLS 113 Prerequisite(s) or corequisite(s): PLS 121
PLS 106 Wills and Estate Administration		Prerequisite(s): PLS 100, PLS 101, PLS 113 Prerequisite(s) or corequisite(s): PLS 121
PLS 109 Criminal Law and Procedure		Prerequisite(s): PLS 100, PLS 101, PLS 113 Prerequisite(s) or corequisite(s): PLS 121
PLS 208 Paralegal Field Experience		Prerequisite(s): PLS 100, PLS 101, PLS 110, PLS 113, PLS 121, and PLS 104 or PLS 108 or PLS 109 and permission of the program director.
SPE 121 Fundamentals of Public Speaking	3	
___ ___ Physical/Health Education Elective	1-3	
BUS 115 Mathematics of Finance	3	BUS 115 will satisfy the math requirement. Students considering transfer to a baccalaureate program should consult an academic advisor as to other math choices.
<i>Semester IV</i>		
ECO 201 Economics I	3	A passing score on the algebra portion on the College's placement test or MAT 013.
PLS 225 Portfolio Project for Paralegals	1	PLS 100, PLS 101, PLS 104, PLS 108, PLS 110, PLS 111, PLS 112, PLS 113, PLS 121. Prerequisite(s) or corequisite(s): PLS 121
___ ___ Paralegal Electives	3	
Choose one of the following courses - 3 credits each:		
PLS 105 Family Law		PLS 100, PLS 101, PLS 113 Prerequisite(s) or corequisite(s): PLS 121
PLS 106 Wills and Estate Administration		Prerequisite(s): PLS 100, PLS 101, PLS 113 Prerequisite(s) or corequisite(s): PLS 121
PLS 109 Criminal Law and Procedure		Prerequisite(s): PLS 100, PLS 101, PLS 113 Prerequisite(s) or corequisite(s): PLS 121
PLS 208 Paralegal Field Experience		Prerequisite(s): PLS 100, PLS 101, PLS 110, PLS 113, PLS 121, and PLS 104 or PLS 108 or PLS 109 and permission of the program director.
___ ___ General Education Humanities Elective (GE HUM)	3	
___ ___ General Education Science Elective (GE MST)	3-4	

Total Credits: 63-66

Contact Name: Professor Nancy Bailey, department chair
Contact Phone: 732.906.2594
Contact Email: ABL5@middlesexcc.edu
Department Web: <http://www.middlesexcc.edu/departments/bam>

PARALEGAL STUDIES CERTIFICATE - PLC.CER

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

Courses	Credits	Requisites / Comments
<i>Semester I</i>		
ENG 121 English Composition I	3	A passing score on the College's placement test or a grade of "C" or better in ENG 010.
ENG 122 English Composition II	3	A grade of "C" or better in ENG 121
PLS 100 Introduction to the Paralegal Profession	2	
PLS 101 Legal Research	3	Prerequisite(s) or corequisite(s): ENG 121 (or waiver) and PLS 100
PLS 113 Legal Writing	2	Prerequisite(s) or corequisite(s): ENG 121 (or waiver), PLS 100 and PLS 101
PLS 121 Advanced Legal Research	2	Prerequisite(s): PLS 100, PLS 101, PLS 113
PLS 123 Advanced Legal Writing	2	Prerequisite(s): PLS 100, PLS 101, PLS 113
PLS ___ Electives (see below)	14	

Total Credits: 31**

PARALEGAL ELECTIVES

Select one of the following electives - students may choose to take more than 14 credits of electives.

Courses	Credits	Requisites / Comments
PLS 104 Property Transactions	4	Prerequisite(s): PLS 100, PLS 101, PLS 113 Prerequisite(s) or corequisite(s): PLS 121 and PLS 123
PLS 105 Family Law	3	Prerequisite(s): PLS 100, PLS 101, PLS 113 Prerequisite(s) or corequisite(s): PLS 121 and PLS 123
PLS 106 Wills and Estate Administration	3	Prerequisite(s): PLS 100, PLS 101, PLS 113 Prerequisite(s) or corequisite(s): PLS 121 and PLS 123
PLS 108 Torts	3	Prerequisite(s): PLS 100, PLS 101, PLS 113 Prerequisite(s) or corequisite(s): PLS 121 and PLS 123
PLS 110 Litigation Procedure	4	Prerequisite(s): PLS 100, PLS 101, PLS 113 Prerequisite(s) or corequisite(s): PLS 121 and PLS 123
PLS 111 Contract and the Uniform Commercial Code	3	Prerequisite(s): PLS 100, PLS 101, PLS 113 Prerequisite(s) or corequisite(s): PLS 121 and PLS 123
PLS 112 Business Organizations and Government Regulations	3	Prerequisite(s): PLS 100, PLS 101, PLS 113 Prerequisite(s) or corequisite(s): PLS121 and PLS123
PLS 109 Criminal Law and Procedure	3	Prerequisite(s): PLS 100, PLS 101, PLS 113 Prerequisite(s) or corequisite(s): PLS 121 and PLS 123
PLS 225 Portfolio Project for Paralegals	3	Prerequisite(s): PLS 100, PLS 101, PLS 113, PLS 121, PLS 123 and 15 additional credits of paralegal courses (PLS courses) and permission of the PLS program director or department chair

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

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

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

Contact Name: Professor Nancy Bailey, department chair
Contact Phone: 732.906.2594
Contact Email: ABL5@middlesexcc.edu
Department Web: <http://www.middlesexcc.edu/departments/bam>

PARALEGAL STUDIES CERTIFICATE OF ACHIEVEMENT - PLT.COA

The Paralegal Studies Certificate of Achievement is designed for the person who already has an Associate's, Bachelor's degree or higher and three years full time (or part time equivalent) work experience as a paralegal. The Program is approved by the American Bar Association and the college is a member of the American Association for Paralegal Education.

**Holders of A.S. and A.A.S. degrees must show that they have taken 18 credits of general education courses.*

Holders of A.A. degrees are presumed to have satisfied the general education requirement.

Courses	Credits	Requisites / Comments
PLS 100 Introduction to the Paralegal Profession	2	
PLS 101 Legal Research	3	Prerequisite(s) or corequisite(s): ENG 121 and PLS 100
PLS 113 Legal Writing	2	Prerequisite(s) or corequisite(s): ENG 121, PLS 100 and PLS 101
PLS 121 Advanced Legal Research	2	PLS 100, PLS 101, PLS 113 Prerequisite(s) or corequisite(s): PLS 121
PLS 123-IS Advanced Legal Writing	2	PLS 100, PLS 101, PLS 113
PLS ___ Electives (see below)	7	

Total Credits: 18

PARALEGAL ELECTIVES

Select a minimum of 7 credits from the following electives – students may choose to take more than 7 credits of electives.

Courses	Credits	Requisites / Comments
PLS 104 Property Transactions	4	PLS 100, PLS 101, PLS 113 Prerequisite(s) or corequisite(s): PLS 121 and PLS 123
PLS 105 Family Law	3	PLS 100, PLS 101, PLS 113 Prerequisite(s) or corequisite(s): PLS 121 and PLS 123
PLS 106 Wills and Estate Administration	3	PLS 100, PLS 101, PLS 113 Prerequisite(s) or corequisite(s): PLS 121 and PLS 123
PLS 108 Torts	3	PLS 100, PLS 101, PLS 113 Prerequisite(s) or corequisite(s): PLS 121 and PLS 123
PLS 109 Criminal Law and Procedure	3	PLS 100, PLS 101, PLS 113 Prerequisite(s) or corequisite(s): PLS 121 and PLS 123
PLS 110 Litigation Procedure	4	PLS 100, PLS 101, PLS 113 Prerequisite(s) or corequisite(s): PLS 121 and PLS 123
PLS 111 Contracts & the Uniform Commercial Code	3	PLS 100, PLS 101, PLS 113 Prerequisite(s) or corequisite(s): PLS 121 and PLS 123
PLS 112 Business Organizations and Government Regulations	3	Prerequisite(s) PLS 100, PLS 101, PLS 113 Prerequisite(s) or corequisite(s): PLS 121 and PLS 123
PLS 225-IS Portfolio Project for Paralegals	1	Prerequisite(s): PLS 100, PLS 101, PLS 113, PLS 121, PLS 123 and 3 additional PLS credits

***NOTE: Not all PLS courses are offered every semester, both day and evening. Please contact the department chairperson at 732.906.2594 to discuss course offerings for future semesters**

Contact Name: Professor Nancy Bailey, department chair

Contact Phone: 732.906.2594

Contact Email: ABL5@middlesexcc.edu

Department Web: <http://www.middlesexcc.edu/departments/bam>

Physics

DEPARTMENT OF NATURAL SCIENCES

Associate in Science (A.S.) Degree

This program parallels the first two years of baccalaureate degree programs in physics related fields. The major prepares graduates to transfer to a four-year college or university to pursue studies in physics, applied physics, computational physics, astronomy, astrophysics, geology, meteorology, material sciences, and other related fields.

❑ **What will students learn if they study Science Transfer?**

Students concentrate on theoretical and applied physics, and mathematics. This prepares them to meet the challenges of advanced physics in professional careers.

❑ **Are there any requirements that must be satisfied before taking courses in the major?**

Students must have a grade of "C" or better in high school algebra II, geometry, advanced algebra and trigonometry, laboratory chemistry and laboratory physics. They must also pass the College's placement test.

❑ **Can students transfer to a four-year college or university?**

The Statewide Transfer Agreement for New Jersey ensures that students who earn an A.A. or A.S. degree at a community college will have those credits fully transferable to a New Jersey public four-year institution, will have completed half of the credits required for a basic four-year degree and will have completed all of the lower division general education requirements. In addition, articulation agreements with private institutions may provide similar transfer provisions. Students should discuss the transfer process with an advisor.

❑ **How long will it take to complete this degree?**

Once students complete developmental coursework (if needed), the degree can be completed in two years of full-time study. They can shorten the amount of time by taking courses in the summer and winter sessions.

❑ **Questions?**

Contact Name: Dr. Diane Trainor, department chair

Contact Phone: 732.906.2587

Contact Email: DTrainor@middlesexcc.edu

Department Web: <http://www.middlesexcc.edu/academi/chm>

PHYSICS - SCIENCE TRANSFER
Associate in Science (A.S.) Degree - PHY.AS

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

Courses	Credits	Requisites / Comments
<i>Semester I</i>		
CHM 121 General Chemistry I – Lecture	3	MAT 014 and one year of high school chemistry or CHM 010.
CHM 125 General Chemistry I – Lab	1	MAT 014 and one year of high school chemistry or CHM 010.
ENG 121 English Composition I	3	A passing score on the College's placement test or a grade of "C" or better in ENG 010.
MAT 131 Analytical Geometry and Calculus I	4	MAT 129, or MAT 129A/MAT 129B, or appropriate score on the College's placement test and/or satisfactory score on the diagnostic examination, or departmental approval.
___ ___ General Education Social Science Elective (GE SS)	3	
___ ___ Physical/Health Education Elective	1-3	
<hr/>		
<i>Semester II</i>		
CHM 122 General Chemistry II - Lecture	3	CHM 121 with a grade of "C" or better.
CHM 126 General Chemistry II - Lab	1	Prerequisite(s): CHM 121, CHM 125 with a grade of "C" or better Corequisite(s): CHM 122
MAT 132 Analytical Geometry and Calculus II	4	MAT 131, MAT 131A/MAT 131B, or equivalent
PHY 133 Analytical Physics I – Lecture	3	Prerequisite(s): One year of high school laboratory physics. Corequisite(s): MAT 131 or equivalent.
PHY 135 Analytical Physics I – Lab	1	Prerequisite(s): One year of high school laboratory physics. Corequisite(s): MAT 131 or equivalent.
ENG 122 English Composition II	3	A grade of "C" or better in ENG 121
<hr/>		
<i>Semester III</i>		
MAT 210 Linear Algebra	4	MAT 132
MAT 233 Analytical Geometry and Calculus III	4	MAT 132 or equivalent
PHY 134 Analytical Physics II – Lecture	3	Prerequisite(s): PHY 133 Corequisite(s): MAT 132 or equivalent.
PHY 136 Analytical Physics II – Lab	1	Prerequisite(s): PHY 135 Corequisite(s): MAT 131 or equivalent.
___ ___ General Education Humanities Elective (GE HUM)	3	
<hr/>		
<i>Semester IV</i>		
MAT 234 Differential Equations	4	MAT 233 or approval of department chair of Mathematics
PHY 236 Analytical Physics III – Lecture	3	Prerequisite(s): MAT 132 and PHY 134
PHY 239 Analytical Physics III – Lab	1	Prerequisite(s): MAT 132 and PHY 136 or one year of integral or differential calculus.
CSC 106 Intermediate PC Applications with Programming	3	
___ ___ General Education Social Science (GE SS) OR General Education Humanities Elective (GE HUM)	3	
___ ___ Science Elective	3-4	Select from CHM 221 (lecture) with CHM 227 (lab), SCI 155, SCI 157, SCI 158, SCI 256 or a course with permission of the department chairperson. Please see catalog for appropriate prerequisites.

Total Credits: 62-65

Contact Name: Dr. Diane Trainor, department chair
Contact Phone: 732.906.2587
Contact Email: DTrainor@middlesexcc.edu
Department Web: <http://www.middlesexcc.edu/academi/chm>

Process Technology

DEPARTMENT OF NATURAL SCIENCES

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

Process Technology is a job-oriented program, preparing students for career opportunities in all process-related industries as process technicians. Process technologies such as food, pharmaceutical, oil & gas, chemical and petrochemical, paper mills, and power generation plants all employ process technicians.

□ **What will students learn if they study Process Technology?**

They learn how to monitor and control mechanical, physical and /or chemical changes throughout many processes to produce a final product made from raw materials. Process technicians are responsible for start up, maintenance, troubleshooting, and shutdown of process equipment. Upon successful completion of this program, students will know how to analyze, evaluate, and communicate process-related data, understand various processes, troubleshoot process equipment and instruments, and maintain a safe and healthy work environment.

□ **Are there any requirements that must be satisfied before taking courses in my major?**

Algebra I is a prerequisite for all majors. Algebra I competency may be verified with a passing score on the College's placement test or completion of the appropriate course.

□ **How long will it take to complete this degree?**

Once students complete developmental coursework (if needed), the degree can be completed in two years of full-time study. They can shorten the amount of time by taking courses in the summer and winter sessions.

□ **Questions?**

Contact Name: Dr. Diane Trainor, department chair

Contact Phone: 732.906.2587

Contact Email: DTrainor@middlesexcc.edu

Department Web: <http://www.middlesexcc.edu/academi/chm>

PROCESS TECHNOLOGY

Associate in Applied Science (A.A.S.) Degree - PRT.AAS

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

Courses	Credits	Requisites / Comments
<i>Semester I</i>		
ENG 121 English Composition I	3	A passing score on the College's placement test or a grade of "C" or better in ENG 010.
CHM 117 Chemistry I	4	Appropriate score on the College's placement test of MAT 013 and one year of high school laboratory science, CHM 010 or departmental approval. Students may substitute CHM 121/ CHM125 – CHM 122/CHM 126 for CHM 117-CHM 118 if they have completed a high school chemistry laboratory course.
MAT 107 Mathematics I	3	Appropriate score on the College's placement test, MAT 013 or MAT 013A/MAT 013B or departmental approval. Students may substitute MAT 123-MAT 124 or MAT 129-MAT 131 for MAT 107-MAT 108.
CSC 105 Computer Applications and Systems	3	
CPT 100 Introduction to Chemical Process Technology	3	
<hr/>		
<i>Semester II</i>		
ENG 122 English Composition II	3	A grade of "C" or better in ENG 121
MAT 108 Mathematics II	3	MAT 107
ENV 220 Principles of Occupational Safety/Health	3	CHM 117 or equivalent
CPT 205 Process Technology Instrumentation	3	CHM 117, CPT 100
___ ___ Physical/Health Education Elective	1-3	
___ ___ General Education Social Science Elective (GE SS)	3	
<hr/>		
<i>Semester III</i>		
SPE 121 Fundamentals of Public Speaking	3	
CPT 206 Process Technology Equipment	4	CHM 117, CPT 100
CPT 210 Process Technology Systems	4	CPT 100
PHY 101 Principles of Physics	4	MAT 107 or equivalent
___ ___ Technical Electives:	3-4	
CHM 118 Chemistry II	4	CHM 117 A continuation of CHM 117
UTI 109 Introduction to Gas Distribution	3	UTI 102
<hr/>		
<i>Semester IV</i>		
CPT 212 Process Technology Operations	4	CPT 100
CPT 214 Process Technology Quality	3	CPT 100
CPT 226 Process Technology Co-Op Ed	3	CPT 100, CPT 205
___ ___ Technical Electives:	3-4	
CHM 118 Chemistry II	4	CHM 117 A continuation of CHM 117
UTI 109 Introduction to Gas Distribution	3	UTI 102

Total Credits: 63-67

Contact Name: Dr. Diane Trainor, department chair
Contact Phone: 732.906.2587
Contact Email: DTrainor@middlesexcc.edu
Department Web: <http://www.middlesexcc.edu/academi/chm>

Psychosocial Rehabilitation and Treatment

JOINT PROGRAM WITH THE UNIVERSITY OF MEDICINE AND DENTISTRY OF NEW JERSEY PSYCHIATRIC REHABILITATION AND COUNSELING PROFESSIONS DEPARTMENT

Associate in Science (A.S.) Degree

This is an exciting and innovative field in which service providers assist people in obtaining the skills, support and resources they will need to achieve success and satisfaction in their living, learning, working and social environments. The overall goals of this field are promotion of recovery, community integration, and improved quality of life for people coping with psychiatric disabilities. Graduates can transfer all of their credits to the UMDNJ–Kean

University Bachelor of Science Degree Program in Psychiatric Rehabilitation & Psychology
(Joint program with Kean University, Georgian Court University or Felician College).

❑ What will students learn if they study Psychosocial Rehabilitation and Treatment?

Courses focus on imparting the knowledge, practical skills and attitudes needed to provide support and services to people with psychiatric disabilities in a variety of community settings that provide social, vocational, residential and case management services.

❑ Are there any requirements that must be satisfied before taking courses in the major?

Algebra I is a prerequisite for all majors. Algebra I competency must be satisfied with a passing score on the College's placement test or completion of the appropriate course. Students must have a "C" or better in one year of a high school laboratory science. As a result of the student's performance on the College's placement test, he or she may need developmental coursework. All developmental coursework must be completed before they will be considered for admission to the program. PSR majors need to complete 18 credits of general education and Introduction to Psychosocial Rehabilitation (PSR 101) before beginning the professional phase of the program (PSR 102 and beyond).

❑ Can students transfer to a four-year college or university?

The Statewide Transfer Agreement for New Jersey ensures that students who earn an A.A. or A.S. degree at a community college will have those credits fully transferable to a New Jersey public four-year institution, will have completed half of the credits required for a basic four-year degree and will have completed all of the lower division general education requirements. In addition, articulation agreements with private institutions may provide similar transfer provisions. Students should discuss the transfer process with an advisor.

❑ How long will it take to complete this degree?

The degree can be completed in five semesters. Part time study is also an option.

❑ Are there any special requirements once the student is admitted to this major?

Students must meet the academic standards of progress outlined on the next page to stay in the program. They must meet with the program director each semester prior to registration.

❑ Questions?

Contact Name: Professor Nora Barrett, department chair OR Marilyn Laskowski-Sachnoff, Dean, Division of Professional Studies

Contact Phone: 732.906.4177 (UMDNJ) OR 732.906.3502 (MCC)

Contact Email: barretnm@umdnj.edu OR MLaskowski-Sachnoff@middlesexcc.edu

PSYCHOSOCIAL REHABILITATION AND TREATMENT

Associate in Science (A.S.) Degree - PSR.AS

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

Courses	Credits	Requisites / Comments
<i>Semester I</i>		
ENG 121 English Composition I	3	A passing score on the College's placement test or a grade of "C" or better in ENG 010.
CSC 105 Computer Applications and Systems	3	
PSY 123 Introduction to Psychology	3	
MAT 116 College Algebra	3	MAT 014, MAT 014A/MAT 014B or equivalent
PHI 123 Ethics	3	
___ ___ Physical/Health Education Elective	1-3	
<hr/>		
<i>Semester II</i>		
ENG 122 English Composition II	3	A grade of "C" or better in ENG 121
SOC 121 Introduction to Sociology	3	
PSY ___ General Education Psychology Elective (GE SS or GE DIV)	3	Choose one course designated as general education Social Science (GE SS) or general education diversity (GE DIV)
PSR 101 Introduction to the Principles of Psychosocial Rehabilitation	3	
BIO 106 Human Biology, Biomedical Issues and Society	4	Appropriate score on the College's placement test or MAT 013 and one year high school laboratory science or a 3 credit college-level science course with a grade of "C" or better.
___ ___ General Education Humanities Elective (GE HUM)	3	
NOTE: A minimum of 18 General Education credits and PSR 101 must be taken before entering the professional phase of the program (i.e. PSR 102 and beyond). Students in the professional phase of the program register through UMDNJ and pay the current UMDNJ undergraduate tuition rate and fees. Most PSR courses are offered on the UMDNJ Scotch Plains Campus.		
<hr/>		
<i>Semester III</i>		
<i>Spring</i>		
PSR 102 Communication Techniques in Interviewing and Counseling	3	
PSR 103 Introduction to Group Dynamics	3	
PSR 104 Clinical Principles in Psychosocial Rehabilitation and Treatment	3	
<hr/>		
<i>Semester IV</i>		
<i>Fall</i>		
PSR 207 Community Resource Management	3	Corequisite(s): PSR 210
PSR 210 Clinical Practicum in PSR I	6	PSR 101, PSR 102, PSR 103, PSR 104
<hr/>		
<i>Semester V</i>		
<i>Spring</i>		
PSR 209 Emerging Topics in Psychosocial Rehabilitation	3	Corequisite(s): PSR 211
PSR 211 Clinical Practicum in PSR II	6	PSR 210

Total Credits: 62-64

Standards of Progress:

1. Must achieve a "C" or better in all PSR courses
2. May retake a PSR course only once and obtain a passing grade (i.e. "C" or better)

Contact Name: Professor Nora Barrett, department chair OR Marilyn Laskowski-Sachnoff, Dean, Division of Professional Studies

Contact Phone: 732.906.4177 (UMDNJ) OR 732.906.3502 (MCC)

Contact Email: barretnm@umdnj.edu OR MLaskowski-Sachnoff@middlesexcc.edu

Radiography Education

RADIOGRAPHY EDUCATION

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

The program in Radiography is fully accredited by the Joint Review Committee on Education in Radiologic Technology (JRCERT) and the NJ DEP Radiologic Technology Board of Examiners.

❑ Why major in Radiography Education?

There is a national demand for individuals trained in this allied health discipline. Positions are available in hospitals, industry, with private physicians and chiropractors, and clinics. Related jobs can be found in x-ray equipment, manufacturing firms and medical supply companies. Graduates qualify to take the American Registry of Radiologic Technologists Board examination for National Registration as well as New Jersey State Licensure.

❑ What do students learn by studying Radiography Education?

Extensive study in radiographic principles provides students with comprehensive theoretical and practical knowledge and skills. Instruction takes place in well-equipped classrooms, small group study areas and a laboratory area containing three energized radiographic units with an associated film processing room. The laboratory is also equipped to provide experience in computed radiography, Direct Digital Radiography (DDR) and Patient Archive and Communication Systems (PACS). Clinical practical experience is provided by rotations at affiliated hospitals providing the "hands-on" experience necessary to perform the tasks of an entry-level radiographer. The curriculum also includes the general education and science courses required for the Associate in Applied Science degree.

❑ Are there any requirements that must be satisfied before taking courses in the major?

- Students must be a U.S. citizen or permanent resident who have been permanently domiciled in the state of New Jersey or the borough of Staten Island, New York* for at least one year prior to the application process.
- Students must have a "C" or better in high school laboratory biology or an equivalent college course and students must also have a "C" or better in either laboratory chemistry or laboratory physics or an equivalent college course. For admission to the Radiology program your grade in laboratory physics may be substituted for laboratory chemistry however, laboratory chemistry remains a pre-requisite for admission into the program.
- Algebra 1 is a pre-requisite for all majors. Algebra 1 competency may be verified with a passing score on the College's placement test of completion of the appropriate course. As a result of the student's performance on the College's placement test, he or she may need developmental coursework. All developmental coursework must be completed before they will be considered for admission to the program.
- Students must have a cumulative GPA of 2.75. High school GPA will be used if the student has less than 12 college credits at the time of application.
- When students apply, they must take a Health Technologies entrance examination.

*Middlesex County College has a New York Regents accredited clinical training affiliation with a Staten Island, NY hospital.

❑ Can a student transfer to a four-year college or university?

Articulation agreements with public and private institutions offer students who earn the A.A.S. degree the opportunity to transfer all of their coursework to the four-year institution. Students in specialized programs, or who earn an A.A.S. degree should discuss the transfer process with an advisor.

❑ How long will it take to complete this degree?

In accordance with NJ State law, this program runs for a minimum of 24 consecutive months. Students must register for major coursework in the summer session of both years. Students can complete the degree in a two-year period.

❑ Once the student is admitted to this major, are there any special requirements?

Students must meet the academic standards of progress outlined to progress through the curriculum. Students are also required to have completed CPR for health care providers, a criminal background check, a five panel non-DOT drug screening and complete the health physical and required immunizations prior to entering the clinical practice phase of the program.

❑ Are there any other things I should consider before I apply?

Yes, there are practical considerations, health considerations and legal considerations that you should review before making the decision to choose radiography technology as a career:

Practical Considerations:

The following Practical Considerations are listed so the student may be better able to assess their career choice in terms of ability to succeed in the program and gain employment in the field:

1. Have written and oral communications skills in the English language to effectively and accurately communicate with patients, peers, supervisors, families and other healthcare members.
2. Have sufficient visual acuity to make radiographic technical adjustments to equipment to produce acceptable radiographs and to assess the completed product for technical accuracy.
3. Have motor skills and strength capable of manipulation and adjustments of patients and equipment.
4. Demonstrate acceptable affective behaviors required by health care employees such as maintaining excellent attendance and integrity and being able to work under pressure.
5. Comprehend and follow clinical policies and procedures related to the profession you choose.

Health Considerations:

Due to the nature of clinical experiences in the Radiography Education Program, students will be participating in a work environment that has the potential of exposure to bloodborne pathogens and infectious diseases. All students accepted into Radiography Education are provided with instruction on infection control protocols and Standard Precautions in order to reduce the risk of disease transmission.

Legal Considerations:

A student is required to have a criminal background check performed with satisfactory results acceptable by Middlesex County College and the Radiographic Education Department and/or participating clinical facilities as a consideration of admission, initial enrollment and/or continued enrollment. An offer of admission will not be final and enrollment not permitted until the completion of a satisfactory criminal background check. Drug testing is a requirement for the program. Admission may be denied or rescinded or enrollment terminated based on the results of the criminal background check and the drug testing.

❑ Questions?

Contact Name: Professor James Ferrell, department chair
Contact Phone: 732.906. 2583
Contact Email: JFerrell@middlesexcc.edu
Department Web: <http://www.middlesexcc.edu/departments/rad>

RADIOGRAPHY EDUCATION - CAREER TRACK

Associate in Applied Science (A.A.S.) Degree - RADC.AAS

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

Courses may have prerequisite and corequisite requirements. Check course descriptions for details.

Courses	Credits	Requisites / Comments
<i>Semester I</i>		
RAD 128 Basic Medical Principles	4	
RAD 141 Radiographic Positioning, Anatomy & Pathology I	2	
RAD 142 Radiographic Positioning Laboratory I	1	
RAD 171 Radiographic Imaging and Science I	4	
RAD 190 Clinical Orientation	1	Prerequisite(s): CPR certification for health care professionals, criminal background check, five panel non-DOT drug screening and have completed the health physical and required immunizations.
BIO 131 Human Structure and Function	4	Prerequisite(s): One year of high school laboratory biology or BIO 010 and one year of high school laboratory chemistry or CHM 010 and appropriate score on the College's placement test or MAT 013.
___ ___ General Education Social Sciences Elective (GE SS)	3	
<i>Semester II</i>		
RAD 139 Radiation Protection and Biology	2	Prerequisite(s): RAD 128, RAD 141, RAD 142, RAD 171, RAD 190 Corequisite(s): RAD 143, RAD 144, RAD 172, RAD 210
RAD 143 Radiographic Positioning, Anatomy & Pathology II	2	Prerequisite(s): RAD 128, RAD 141, RAD 142, RAD 171, RAD 190 Corequisite(s): RAD 139, RAD 144, RAD 172, RAD 210
RAD 144 Radiographic Positioning Laboratory II	1	Prerequisite(s): RAD 128, RAD 141, RAD 142, RAD 171, RAD 190 Corequisite(s): RAD 139, RAD 144, RAD 172, RAD 210
RAD 172 Radiographic Imaging and Science II	2	Prerequisite(s): RAD 128, RAD 141, RAD 142, RAD 171, RAD 190 Corequisite(s): RAD 139, RAD 143, RAD 144, RAD 210
RAD 210 Clinical Practicum I	2	Prerequisite(s): RAD 128, RAD 141, RAD 142, RAD 171, RAD 190 Corequisite(s): RAD 139, RAD 143, RAD 144, RAD 172
___ ___ General Education Mathematics Elective (GE MST)	3	
___ ___ General Education Elective (GE COM, GE DIV, GE HUM, GE MST or GE SS)	3	Choose one course designated in the course descriptions as General Education Communications (GE COM), General Education Diversity (GE DIV), General Education Humanities (GE HUM), General Education Math, Science and Technology (GE MST), or General Education Social Science (GE SS).
<i>Summer Session I</i>		
RAD 145 Radiographic Positioning, Anatomy & Pathology III	3	Prerequisite(s): RAD 139, RAD 143, RAD 144, RAD 172, RAD 210 Corequisite(s): RAD 146
RAD 146 Radiographic Positioning Laboratory III	1	Prerequisite(s): RAD 139, RAD 143, RAD 144, RAD 172, RAD 210 Corequisite(s): RAD 145
<i>Summer Session II</i>		
RAD 220 Clinical Practicum II	2	Prerequisite(s): RAD 145, RAD 146

<i>Semester III</i>		
RAD 247 Radiographic Positioning, Anatomy & Pathology IV	2	Prerequisite(s): RAD 145, RAD 146, RAD 220 Corequisite(s): RAD 230, RAD 248, RAD 273
RAD 248 Radiographic Positioning Laboratory IV	1	Prerequisite(s): RAD 145, RAD 146, RAD 220 Corequisite(s): RAD 230, RAD 247, RAD 273
RAD 275 Radiographic Physics and Equipment Maintenance	3	Prerequisite(s): RAD 145, RAD 146, RAD 172, RAD 220 Corequisite(s): RAD 230, RAD 247, RAD 248
RAD 230 Clinical Practicum III	2	Prerequisite(s): RAD 220 Corequisite(s): RAD 247, RAD 248, RAD 273
ENG 121 English I	3	A passing score on the College's placement test or a grade of "C" or better in ENG 010.
___ ___ General Education Humanities Elective (GE HUM)	3	
<i>Semester IV</i>		
RAD 250 Clinical Practicum IV	3	Prerequisite(s): RAD 230, RAD 247, RAD 248, RAD 273 Corequisite(s): RAD 256, RAD 285
RAD 256 Radiographic Seminar I	2	Prerequisite(s): RAD 230, RAD 247, RAD 248, RAD 273 Corequisite(s): RAD 250, RAD 285
RAD 285 Advanced Radiographic Imaging	2	Prerequisite(s): RAD 230, RAD 247, RAD 248, RAD 273 Corequisite(s): RAD 250, RAD 256
ENG 122 English Composition II	3	A grade of "C" or better in ENG 121
___ ___ Physical/Health Education Elective	1-3	
CSC 107 Computers in Health Technologies	1	
<i>Summer Session I</i>		
RAD 260 Clinical Practicum V	3	Prerequisite(s): RAD 250, RAD 256, RAD 285
<i>Summer Session II</i>		
RAD 257 Radiographic Seminar II	2	Prerequisite(s): RAD 256, RAD 260
Total Credits: 71-73		

Standards of Progress:

1. Maintain a cumulative grade point average of 2.0.
2. Must achieve a "C" grade or better in all Radiography courses in order to progress through the curriculum.
3. Must achieve a "C" grade or better in all science courses to satisfy degree requirements.
4. Must complete the Radiography Education program in no fewer than two and no more than five consecutive years from the point of admission to the full-time program track. Students who do not complete the major Radiography course under these conditions may not continue in the program.

Contact Name: Professor James Ferrell, department chair
Contact Phone: 732.906. 2583
Contact Email: JFerrell@middlesexcc.edu
Department Web: <http://www.middlesexcc.edu/departments/rad>

RADIOGRAPHY EDUCATION – TRANSFER TRACK

Associate in Applied Science (A.A.S.) Degree - RADT.AAS

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

Courses	Credits	Requisites / Comments
<i>Semester I</i>		
RAD 128 Basic Medical Principles	4	
RAD 141 Radiographic Positioning, Anatomy & Pathology I	2	
RAD 142 Radiographic Positioning Laboratory I	1	
RAD 171 Radiographic Imaging & Science I	4	
RAD 190 Clinical Orientation	1	Prerequisite(s): CPR certification for health care professionals, criminal background check, five panel non-DOT drug screening and have completed the health physical and required immunizations.
BIO 111 Human Anatomy & Physiology I	4	Prerequisite(s): One year of high school laboratory biology or BIO 010 and one year of high school laboratory chemistry or CHM 010 and appropriate score on the College's placement test or MAT 013.
___ ___ General Education Social Science Elective (GE SS)	3	
<i>Semester II</i>		
RAD 139 Radiation Protection and Biology	2	Prerequisite(s): RAD 128, RAD 141, RAD 142, RAD 171, RAD 190 Corequisite(s): RAD 143, RAD 144, RAD 172, RAD 210
RAD 143 Radiographic Positioning, Anatomy & Pathology II	2	Prerequisite(s): RAD 128, RAD 141, RAD 142, RAD 171, RAD 190 Corequisite(s): RAD 139, RAD 144, RAD 172, RAD 210
RAD 144 Radiographic Positioning Laboratory II	1	Prerequisite(s): RAD 128, RAD 141, RAD 142, RAD 171, RAD 190 Corequisite(s): RAD 139, RAD 144, RAD 172, RAD 210
RAD 172 Radiographic Imaging & Science II	2	Prerequisite(s): RAD 128, RAD 141, RAD 142, RAD 171, RAD 190 Corequisite(s): RAD 139, RAD 143, RAD 144, RAD 210
RAD 210 Clinical Practicum I	2	Prerequisite(s): RAD 128, RAD 141, RAD 142, RAD 171, RAD 190 Corequisite(s): RAD 139, RAD 143, RAD 144, RAD 172
BIO 112 Human Anatomy & Physiology II	4	Prerequisite(s): BIO 111 A continuation of BIO 111. A study of the structure and function of the body is continued by examining the endocrine, reproductive, circulatory, digestive, respiratory and excretory systems.
<i>Summer Session I</i>		
RAD 145 Radiographic Positioning, Anatomy & Pathology III	3	Prerequisite(s): RAD 139, RAD 143, RAD 144, RAD 172, RAD 210 Corequisite(s): RAD 146
RAD 146 Radiographic Positioning Laboratory III	1	Prerequisite(s): RAD 139, RAD 143, RAD 144, RAD 172, RAD 210 Corequisite(s): RAD 145
<i>Summer Session II</i>		
RAD 220 Clinical Practicum II	2	Prerequisite(s): RAD 145, RAD 146

<i>Semester III</i>		
RAD 247 Radiographic Positioning, Anatomy & Pathology IV	2	Prerequisite(s): RAD 145, RAD 146, RAD 220 Corequisite(s): RAD 230, RAD 248, RAD 273
RAD 248 Radiographic Positioning Laboratory IV	1	Prerequisite(s): RAD 145, RAD 146, RAD 220 Corequisite(s): RAD 230, RAD 247, RAD 273
RAD 275 Radiographic Physics and Equipment Maintenance	3	Prerequisite(s): RAD 145, RAD 146, RAD 172, RAD 220 Corequisite(s): RAD 230, RAD 247, RAD 248
RAD 230 Clinical Practicum III	2	Prerequisite(s): RAD 220 Corequisite(s): RAD 247, RAD 248, RAD 273
ENG 121 English I	3	A passing score on the College's placement test or a grade of "C" or better in ENG 010.
___ ___ General Education Humanities Elective (GE HUM)	3	
___ ___ General Education Mathematics Elective (GE MST)	3	
<i>Semester IV</i>		
RAD 250 Clinical Practicum IV	3	Prerequisite(s): RAD 230, RAD 247, RAD 248, RAD 273 Corequisite(s): RAD 256, RAD 285
RAD 256 Radiographic Seminar I	2	Prerequisite(s): RAD 230, RAD 247, RAD 248, RAD 273 Corequisite(s): RAD 250, RAD 285
RAD 285 Advanced Radiographic Imaging	2	Prerequisite(s): RAD 230, RAD 247, RAD 248, RAD 273 Corequisite(s): RAD 250, RAD 256
CSC 107 Computers in Health Technologies	1	
ENG 122 English Composition II	3	A grade of "C" or better in ENG 121
___ ___ Physical/Health Education Elective	1-3	
<i>Summer Session I</i>		
RAD 260 Clinical Practicum V	3	Prerequisite(s): RAD 250, RAD 256, RAD 285
<i>Summer Session I</i>		
RAD 257 Radiographic Seminar II	2	Prerequisite(s): RAD 256, RAD 260

Total Credits: 72-74

Standards of Progress:

1. Maintain a cumulative grade point average of 2.0.
2. Must achieve a "C" grade or better in all Radiography courses in order to progress through the curriculum.
3. Must achieve a "C" grade or better in all science courses to satisfy degree requirements.
4. Must complete the Radiography Education program in no fewer than two and no more than five consecutive years from the point of admission to the full-time program track. Students who do not complete the major Radiography course under these conditions may not continue in the program.

Contact Name: Professor James Ferrell, department chair

Contact Phone: 732.906. 2583

Contact Email: JFerrell@middlesexcc.edu

Department Web: <http://www.middlesexcc.edu/departments/rad>

Respiratory Care

RESPIRATORY CARE JOINT PROGRAM WITH THE UNIVERSITY OF MEDICINE AND DENTISTRY OF NEW JERSEY RESPIRATORY THERAPY DEPARTMENT

Associate in Science (A.S.) Degree

A degree in Respiratory Care is for individuals who like to help people of all ages recover from serious illness and who enjoy working with high tech equipment. All major courses taught at UMDNJ in Newark.

❑ **What do students learn by studying Respiratory Care?**

They learn the latest techniques used to diagnose, treat and prevent cardiopulmonary disorders among infants, children and adults. Students also learn the work skills needed to get and maintain a satisfying job in the fast-paced health care environment.

❑ **Are there any requirements that must be satisfied before taking classes in the major?**

Algebra I is a prerequisite for all majors. Algebra I competency may be verified with a passing score on the College's placement test or completion of the appropriate course. Students must also have a "C" or better in high school laboratory biology and laboratory chemistry and algebra II. As a result of the student's performance on the College's placement test, he or she may need developmental coursework. All developmental coursework must be completed before the student is considered for admission to the program.

❑ **Can a student transfer to a four-year college or university?**

The Statewide Transfer Agreement for New Jersey ensures that students who earn an A.A. or A.S. degree at a community college will have those credits fully transferable to a New Jersey public four-year institution, will have completed half of the credits required for a basic four-year degree and will have completed all of the lower division general education requirements. In addition, articulation agreements with private institutions may provide similar transfer provisions. Students should discuss the transfer process with an advisor.

❑ **How long will it take to complete this degree?**

Students can complete the degree in two years. They must register for the summer session at the end of their first year.

❑ **Are there any special requirements once the student is admitted to this major?**

He or she must meet the academic standards of progress outlined on the next page to stay in the program.

❑ **Questions?**

Contact Name: Narciso Rodriguez, UMDNJ program director OR Marilyn Laskowski-Sachnoff, Dean, Division of Professional Studies
Contact Phone: 973.972.0386 (UMDNJ) OR 732.906.3502 (MCC)
Contact Email: RSTNOR@umdnj.edu OR MLaskowski-Sachnoff@middlesexcc.edu
Department Web: <http://www.umdnj.edu>

RESPIRATORY CARE

Associate in Science (A.S.) Degree - RST.AS

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

Courses may have prerequisite and corequisite requirements. Check course descriptions for details.

Courses	Credits	Requisites / Comments
<i>Semester I</i>		
BIO 111 Human Anatomy and Physiology I	4	One year of high school laboratory biology or BIO 010 and one year of high school laboratory chemistry or CHM 010. Also appropriate score on the College's placement test or MAT 013.
CHM 107 Principles of General, Organic & Biochemistry	4	One year of high school laboratory chemistry or CHM 010.
CSC 107 Computers in Health Technologies	1	
ENG 121 English Composition I	3	A passing score on the College's placement test or a grade of "C" or better in ENG 010.
MAT 107 Mathematics I	3	Appropriate score on the College's placement test, MAT 013, MAT 013A/MAT 013B, or departmental approval.
___ ___ General Education Humanities Elective (GE HUM)	3	
<hr/>		
<i>Semester II</i>		
BIO 112 Human Anatomy and Physiology II	4	BIO 111
BIO 211 Principles of Microbiology	4	One year of high school laboratory biology or BIO 010 and one year of high school laboratory chemistry or CHM 010. Also appropriate score on the College's placement test or MAT 013.
ENG 122 English Composition II	3	A grade of "C" or better in ENG 121
PED/HED Physical/Health Education Elective	1-3	
PSY 123 Introduction to Psychology	3	
___ ___ General Education Humanities Electives (GE HUM)	3	
___ ___ Two additional General Education Social Science Electives (GE SS)	6	
<hr/>		
<i>Summer Session</i>		
RST 100 Core Concepts in Respiratory Care	1	BIO 111 and acceptance into the Respiratory Care Program - Clinical Phase Corequisite(s): RST 102
RST 101 Fundamentals of Respiratory Care	4	Corequisite(s): RST 100, RST 102
RST 102 Clinical Practice I	1	Corequisite(s): RST 100, RST 101
RST 103 Applied Cardiopulmonary Pathophysiology I	2	
<hr/>		
<i>Semester III</i>		
RST 203 Applied Cardiopulmonary Pathophysiology II	2	Prerequisite(s): RST 103
RST 207 Cardiopulmonary Pharmacology	2	Prerequisite(s): RST 103
RST 208 Principles of Ventilatory Support	4	Prerequisite(s): RST 101 Corequisite(s): RST 209
RST 209 Clinical Practice II	2	Prerequisite(s): RST 101, RST 102 Corequisite(s): RST 208
RST 210 Cardiopulmonary Evaluation	2	Prerequisite(s): RST 103
<hr/>		
<i>Semester IV</i>		
RST 201 Patient Management in Critical Care	3	Prerequisite(s): RST 208 Corequisite(s): RST 211
RST 211 Pediatric/Neonatal Respiratory Care	3	Prerequisite(s): RST 208
Corequisite(s): RST 215		
RST 212 Long-Term, Home and Rehabilitation Care	3	
RST 215 Clinical Practice III	3	Prerequisite(s): RST 208, RST 209

Total Credits: 74-76

Standards of Progress:

1. Maintenance of cumulative grade point average of 2.5.
2. Must achieve a "C" grade or better in all Respiratory Care and science courses in order to progress in the curriculum.
3. May have only one (1) unsatisfactory grade (i.e. grade less than "C") in any Respiratory Care or science course for the duration of the program.
4. May retake a Respiratory Care or science course only once and obtain a passing grade i.e. "C" or better).

NOTE: Currently, all Respiratory Care Courses (RST) are offered only at the UMDNJ campus in Newark. In order to continue to the clinical phase of the Respiratory Care Courses, student must have completed almost all the major science and General Education courses prior to the summer session. All RST courses are assessed the UMDNJ tuition and fee rates.

Contact Name: Narcisa Rodriguez, UMDNJ program director OR Marilyn Laskowski-Sachnoff, Dean, Division of Professional Studies

Contact Phone: 973.972.0386 (UMDNJ) OR 732.906.3502 (MCC)

Contact Email: RSTNOR@umdnj.edu OR MLaskowski-Sachnoff@middlesexcc.edu

Department Web: <http://www.umdnj.edu>

Teacher Aide Certificate

HISTORY AND SOCIAL SCIENCE DEPARTMENT

Certificate

This program prepares graduates to become teachers' aides in schools and child care facilities.

❑ **Can students who major in Teacher Aide use the credits they have earned toward a degree?**

They can apply the credits earned toward the Associate in Applied Science Degree in Education Practitioner. (see p.69)

❑ **What will students learn in the Teacher Aide program?**

The program combines general education courses with practical experiences in teaching/learning settings.

❑ **Are there any special requirements that must be satisfied before taking courses in the major?**

Algebra I is a prerequisite for all majors. Algebra I competency may be verified with a passing score on the College's placement test or completion of the appropriate course.

❑ **How long will it take to complete this certificate?**

Students who do not need developmental coursework can complete the certificate in one year.

❑ **Questions?**

Contact Name: Dr. Steven Barnhart, department chair.

Contact Phone: 732.906.2590

Contact Email: HSS@middlesexcc.edu

Department Web: <http://www.middlesexcc.edu/departments/hss>

TEACHER AIDE CERTIFICATE - EDTA.CER

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

Courses	Credits	Requisites / Comments
ENG 121 English Composition I	3	Passing score on the College's placement test or a grade of "C" or better in ENG 010.
PSY 123 Introduction to Psychology	3	
PSY 226 Educational Psychology: Classroom Applications	3	PSY 123 or permission of chairperson. Students with education work experience must see chairperson for possibility of prerequisite waiver. PSY 226 is a necessary prerequisite for EDU 280 Education Field Experience.
EDU or HED Education or Health Education Elective <i>(only choose one course)</i>	3	Recommended: HED 150 or HED 209, or one education elective, such as EDU 121, EDU 207, or EDU 210, etc. Check with chairperson for other possibilities.
EDU 208 Creative Activities for Young Children	3	
<hr/>		
<i>Semester II</i>		
PSY 223 Child Psychology	3	PSY 123
MAT ___ Math Elective I	3-4	Appropriate score on the College's placement test for one of the following math courses: MAT 101, MAT 123, MAT 129, MAT 131, or any higher level math.
SOC 121 Introduction to Sociology	3	
ENG 212 Children's Literature	3	ENG 121
EDU 280 Education Field Experience	3	PSY 226 & PSY 122 or PSY 125 and approval of department chairperson. Students are required to work in an educational setting for 90 hours.

Total Credits: 30-31

Contact Name: Dr. Steven Barnhart, department chair.
Contact Phone: 732.906.2590
Contact Email: HSS@middlesexcc.edu
Department Web: <http://www.middlesexcc.edu/departments/hss>

New Degree Programs

Allied Health Pre-Professional (Designed For Transfer)

DIVISION OF PROFESSIONAL STUDIES

Associate in Science (A.S.) Degree

The need for allied health programs has increased in the last several years. This program was designed for students contemplating a career in nursing, radiography, dental hygiene, medical laboratory technology, and respiratory care as well as other allied health careers. Students who plan on taking this program will be able to apply to one of the selective health technology programs at MCC or will be able to transfer to a program at a four year college or university after completion of the associate's degree.

■ What will students learn if they study Allied Health Pre-Professional?

Students will have a strong core of sciences and general education electives to meet the requirements for a degree and/or a certificate. Students will be able to select courses with the assistance of an advisor in their area of interest.

■ Are there any requirements that must be satisfied before taking courses in the major?

Algebra 1 is a prerequisite for all majors. Algebra 1 competency may be verified with a passing score on the College's placement test or completion of the appropriate course. Students considering nursing must have a "B" or better in high school biology and chemistry both with a lab. Students considering all other allied health fields must have a "C" or better in high school biology and chemistry both with a lab. There may be additional requirements that are required depending on the major chosen.

■ Can students who major in Allied Health Pre-professional transfer to a four-year college or university?

The Statewide Transfer Agreement for New Jersey ensures that students who earn an A.A. or A.S. degree at a community college will have those credits fully transferable to a New Jersey public four-year institution, will have completed half of the credits required for a basic four-year degree and will have completed all of the lower division general education requirements. In addition, articulation agreements with private institutions may provide similar transfer provisions. Students should discuss the transfer process with an advisor.

■ How long will it take to complete this degree?

Once students complete developmental coursework (if needed), the degree can be completed in two years of full-time study. They can shorten the amount of time by taking courses in the summer and winter sessions.

■ Are there any other things I should consider before I apply?

Yes, there are practical considerations, health considerations and legal considerations that you should review before making the decision to choose an allied health career:

Practical Considerations:

The following Practical Considerations are listed so students may be better able to assess their career choice in terms of ability to succeed in the program and gain employment in the field:

1. Have written and oral communication skills in the English language to effectively and accurately communicate with patients, peers and supervisors.
2. Have sufficient visual acuity to accurately assess patient conditions and treat patients safely.
3. Have motor skills capable of fine and delicate manipulation of patient equipment.
4. The ability to transfer, lift and move patients without restrictions.
5. Demonstrate acceptable affective behaviors required by health care employers such as maintaining excellent attendance and integrity and being able to work under pressure.
6. Comprehend and follow clinical policies and procedures related to the profession you choose.

Health Considerations:

Due to the nature of clinical experiences in allied health, students will be participating in a work environment that has the potential of exposure to bloodborne pathogens and infectious diseases. All students accepted into an allied health program are provided with instruction on infection control protocols specific to the program in order to reduce the risk of disease transmission.

Legal Considerations:

A student is required to have a criminal background check performed with satisfactory results acceptable by Middlesex County College, the Department and/or participating clinical facilities as a condition of admission, initial enrollment and/or continued enrollment. An offer of admission will not be final and enrollment not permitted until the completion of a satisfactory criminal background check. Drug testing is a requirement for some of the programs. Admission may be denied or rescinded or enrollment terminated based on the results of the criminal background check and the drug testing for certain programs in Allied Health.

■ Questions?

Contact Name: Marilyn Laskowski-Sachnoff, Dean, Division of Professional Studies **OR** Jeffrey Herron, Assistant Dean, Division of Professional Studies
Contact Phone: 732.906.3502
Contact Email: MLaskowski-Sachnoff@middlesexcc.edu **OR** JHerron@middlesexcc.edu

ALLIED HEALTH PRE-PROFESSIONAL (DESIGNED FOR TRANSFER)

Associate in Science (A.S.) Degree – AHPP.AS

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

Courses	Credits	Requisites/Comments
Semester I		
ENG 121 English Composition I	3	A passing score on the College's placement test or a grade of "C" or better in ENG 010.
PSY 123 Introduction to Psychology	3	
BIO 111 Human Anatomy & Physiology I	4	Prerequisite(s): One year of high school laboratory biology or BIO 010 and one year of high school laboratory chemistry or CHM 010 and appropriate score on the College's placement test or MAT 013. Note: Students selecting courses that are represented on the 'Program Electives' list may not use the course as a program requirement and also as a course elective.
OR		
BIO 117 Biology I		Appropriate score on the College's placement test or MAT 013 and one year high school laboratory science or BIO 010 or CHM 010. Note: Students selecting courses that are represented on the 'Program Electives' list may not use the course as a program requirement and also as a course elective.
BIO 211 Principles of Microbiology	4	One year of high school laboratory biology or BIO 010 and one year of high school laboratory chemistry or CHM 010. Also appropriate score on the College's placement test or MAT 013. Note: Students selecting courses that are represented on the 'Program Electives' list may not use the course as a program requirement and also as a course elective.
OR		
CHM 117 Chemistry I		MAT 013 or appropriate score on the College's placement test and one year of high school laboratory science or departmental approval. Note: Students selecting courses that are represented on the 'Program Electives' list may not use the course as a program requirement and also as a course elective.
____ ____ General Education Humanities Elective (GE HUM)	3	Choose courses designated in the course descriptions as general education humanities (GE HUM).
Semester II		
ENG 122 English Composition II	3	A grade of "C" or better in ENG 121
CSC 105 Computer Applications and Systems	3	Note: Student should check with potential transfer institutions for the appropriate course in this area.
OR		
CSC 106 Intermediate PC Applications with Programming		
Program Electives (see next page)	10	Select courses from the list on the following page. 32 total credits are required from this group. Please review catalog for prerequisites. Program electives should be selected after consultation with academic advisement to discuss career and transfer applicability of the courses.
Semester III		
____ ____ General Education Social Science Elective (GE SS)	3	Choose courses designated in the course descriptions as general education social science (GE SS).
____ ____ General Education Mathematics Elective (GE MST)	3	Choose mathematics courses designated in the course descriptions as general education mathematics, science, technology (GE MST).
Program Electives (see next page)	10	Select courses from the list on the following page. 32 total credits are required from this group. Please review catalog for prerequisites. Program electives should be selected after consultation with academic advisement to discuss career and transfer applicability of the courses.
Semester IV		
HED 150 Contemporary Health Issues	3	
Program Electives (see next page)	12	Select courses from the list on the following page. 32 total credits are required from this group. Please review catalog for prerequisites. Program electives should be selected after consultation with academic advisement to discuss career and transfer applicability of the courses.

Total Credits: 64

PROGRAM ELECTIVES

*Select courses from the following. 32 total credits are required from this group.
Please review catalog for prerequisites. Program electives should be selected after consultation with academic
advisement to discuss career and transfer applicability of the courses.*

Courses	Credits	Notes *	
BIO 111	Human Anatomy & Physiology I	4	D, N, RADT, RC
BIO 112	Human Anatomy & Physiology II	4	D, N, RADT, RC
BIO 117	Biology I	4	M
BIO 118	Biology II	4	M
BIO 131	Human Structure and Function	4	RADC
BIO 211	Principles of Microbiology	4	D, N, M, RC
CHM 107	Principles of General, Organic, and Biochemistry	4	D, RC
CHM 117	Chemistry I	4	M
CHM 118	Chemistry II	4	M
CHM 201	Principles of Organic Chemistry	4	M
CHM 202	Biochemistry	4	M
CSC 107	Computers in Health Technologies	1	N, RADC, RADT, RC
PSY 232	Life Span Development	3	N
SOC 121	Introduction to Sociology	3	D
SPE 121	Fundamentals of Public Speaking	3	

*** Notes:**

- D – Course required for Dental Hygiene Associate of Applied Science Degree Program
- M – Course required for Medical Laboratory Technology Associate of Applied Science Degree Program
- N – Course required for Nursing Associate of Science Degree Program
- RADC – Course required for Radiography Education – Career Track Associate of Applied Science Degree Program
- RADT – Course required for Radiography Education – Transfer Track Associate of Applied Science Degree Program
- RC – Course required for Respiratory Care Associate of Science Degree Program

Contact Name: Marilyn Laskowski-Sachnoff, Dean, Division of Professional Studies
OR Jeffrey Herron, Assistant Dean, Division of Professional Studies
 Contact Phone: 732.906.3502
 Contact Email: MLaskowski-Sachnoff@middlesexcc.edu **OR** JHerron@middlesexcc.edu

ALLIED HEALTH PRE-PROFESSIONAL CERTIFICATE

Academic Certificate – AHPP.CER

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

Courses	Credits	Requisites / Comments
Semester I		
ENG 121 English Composition I	3	A passing score on the College's placement test or a grade of "C" or better in ENG 010.
BIO 111 Human Anatomy & Physiology I	4	Prerequisite(s): One year of high school laboratory biology or BIO 010 and one year of high school laboratory chemistry or CHM 010 and appropriate score on the College's placement test or MAT 013. Note: Students selecting courses that are represented on the 'Program Electives' list may not use the course as a program requirement and also as a course elective.
OR		
BIO 117 Biology I		Appropriate score on the College's placement test or MAT 013 and one year high school laboratory science or BIO 010 or CHM 010. Note: Students selecting courses that are represented on the 'Program Electives' list may not use the course as a program requirement and also as a course elective.
BIO 211 Principles of Microbiology	4	One year of high school laboratory biology or BIO 010 and one year of high school laboratory chemistry or CHM 010. Also appropriate score on the College's placement test or MAT 013. Note: Students selecting courses that are represented on the 'Program Electives' list may not use the course as a program requirement and also as a course elective.
OR		
CHM 117 Chemistry I		MAT 013 or appropriate score on the College's placement test and one year of high school laboratory science or departmental approval. Note: Students selecting courses that are represented on the 'Program Electives' list may not use the course as a program requirement and also as a course elective.
PSY 123 Introduction to Psychology	3	
Program Electives (<i>see next page</i>)	3-4	Select courses from the list on the following page. 16-17 total credits are required from this group, at least 4 credits of which must be a Biology or Chemistry course that has not already been completed successfully. Please review catalog for prerequisites. Program electives should be selected after consultation with academic advisement to discuss career and transfer applicability of the courses.
Semester II		
Program Electives (<i>see next page</i>)	13	Select courses from the list on the following page. 16-17 total credits are required from this group, at least 4 credits of which must be a Biology or Chemistry course that has not already been completed successfully. Please review catalog for prerequisites. Program electives should be selected after consultation with academic advisement to discuss career and transfer applicability of the courses.

Total Credits: 30-31

PROGRAM ELECTIVES

*Select courses from the following. 16-17 total credits are required from this group.
Please review catalog for prerequisites. Program electives should be selected after consultation with academic advisement to discuss career and transfer applicability of the courses.*

Courses	Credits	Notes *	
BIO 111	Human Anatomy & Physiology I	4	D, N, RADT, RC
BIO 112	Human Anatomy & Physiology II	4	D, N, RADT, RC
BIO 117	Biology I	4	M
BIO 118	Biology II	4	M
BIO 131	Human Structure and Function	4	RADC
BIO 211	Principles of Microbiology	4	D, N, M, RC
CHM 107	Principles of General, Organic, and Biochemistry	4	D, RC
CHM 117	Chemistry I	4	M
CHM 118	Chemistry II	4	M
CHM 201	Principles of Organic Chemistry	4	M
CHM 202	Biochemistry	4	M
CSC 107	Computers in Health Technologies	1	N, RADC, RADT, RC
ENG 122	English Composition II	3	D, M, N, RADC, RADT, RC
_____	General Education Diversity (GE DIV)	3	Choose courses designated in the course descriptions as general education diversity (GE DIV). Note: Dental Hygiene, Medical Laboratory Technology, Nursing, Radiography Education – Transfer Track, and Respiratory Care all require a Physical/Health Education Elective. The course HED 150 – Contemporary Health Issues meets this requirement while also serving as a General Education Diversity course. It is recommended for students pursuing the Certificate.
_____	General Education Humanities Elective (GE HUM)	3	RADC, RADT, RC Choose courses designated in the course descriptions as general education humanities (GE HUM).
_____	General Education Mathematics Elective (GE MST)	3	RADC, RADT Choose mathematics courses designated in the course descriptions as general education mathematics, science, technology (GE MST).
_____	General Education Social Science Elective (GE SS)	3	RADC, RADT, RC** Choose courses designated in the course descriptions as general education social science (GE SS).
MAT 107	Mathematics I	3	M, RC
MAT 108	Mathematics II	3	M
MAT 123	Statistics I	3	Prerequisite(s): MAT 014, MAT 014A/MAT 014B, or appropriate score on the College's placement test
PSY 232	Life Span Development	3	N
SOC 121	Introduction to Sociology	3	D
SPE 121	Fundamentals of Public Speaking	3	

*** Notes:**

D – Course required for Dental Hygiene Associate of Applied Science Degree Program

M – Course required for Medical Laboratory Technology Associate of Applied Science Degree Program

N – Course required for Nursing Associate of Science Degree Program

RADC – Course required for Radiography Education – Career Track Associate of Applied Science Degree Program

RADT – Course required for Radiography Education – Transfer Track Associate of Applied Science Degree Program

RC – Course required for Respiratory Care Associate of Science Degree Program

** Two General Education Social Science (GE SS) courses in addition to PSY 123 are required for Respiratory Care.

Contact Name: Marilyn Laskowski-Sachnoff, Dean, Division of Professional Studies

OR Jeffrey Herron, Assistant Dean, Division of Professional Studies

Contact Phone: 732.906.3502

Contact Email: MLaskowski-Sachnoff@middlesexcc.edu OR JHerron@middlesexcc.edu

Dietetics Transfer

HOTEL, RESTAURANT AND INSTITUTION MANAGEMENT DEPARTMENT

Associate in Science (A.S.) Degree

This program parallels the first two years of the bachelor's degree program at a four-year college or university. It is designed to transfer.

■ What will students learn if they study **Dietetic Transfer?**

Students prepare to transfer to a four-year college or university in the study of dietetics after earning their associate degree.

■ Are there any requirements that must be **satisfied before taking courses in the major?**

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

■ What will students learn if they study **Dietetics?**

The program is an intensive one that includes challenging science and dietetics courses, as well as general education.

■ How long will it take to complete this degree?

Once students complete developmental coursework (if needed), the degree can be completed in two years of full-time study.

■ Are there any other things I should consider before I apply?

Yes, there are practical considerations, health considerations and legal considerations that you should review before making the decision to choose dietetics as a career:

Practical Considerations:

The following Practical Considerations are listed so students may be better able to assess their career choice in terms of ability to succeed in the program and gain employment in the field:

1. Have written and oral communication skills in the English language to effectively and accurately communicate with patients, peers and supervisors.
2. Have sufficient visual acuity to accurately assess patient conditions and treat patients safely.
3. Must have the physical capability to withstand prolonged standing and walking, working near mechanical parts, and the ability to lift up to 50 pounds.
5. Demonstrate acceptable affective behaviors required by health care employees such as maintaining excellent attendance and integrity and being able to work under pressure.
6. Comprehend and follow clinical policies and procedures related to the profession you choose.

Health Considerations:

Due to the nature of clinical experiences in Dietetic Technology Program, students will be participating in a work environment that has the potential of exposure to bloodborne pathogens and infectious diseases. All students accepted into the Dietetic Technology Program are provided with instruction on infection control protocols specific to the Program in order to reduce the risk of disease transmission.

Legal Considerations:

A student is required to have a criminal background check performed with satisfactory results acceptable by Middlesex County College, and the Dietetic Technology Program and/or participating clinical facilities as a condition of admission, initial enrollment and/or continued enrollment. An offer of admission will not be final and enrollment not permitted until the completion of a satisfactory criminal background check. Drug testing is a requirement for some of the programs. Admission may be denied or rescinded or enrollment terminated based on the results of the criminal background check and the drug testing.

■ Questions?

Contact Name: Professor Mary-Pat Maciolek, department chair

Contact Phone: 732.906.2538

Contact Email: MMaciolek@middlesexcc.edu

Department Web: <http://www.middlesexcc.edu/departments/hri>

DIETETICS TRANSFER
Associate in Science (A.S.) Degree

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

Courses	Credits	Requisites / Comments
Semester I		
ENG 121 English I	3	A passing score on the College's placement test or a grade of "C" or better in ENG 010; completion of RDG 009 with a "C" or better or a score on the reading portion of the College's Placement Test that exempts the student from RDG 009.
HRI 103 Principles of Food Selection and Preparation	3	
HRI 105 Basic Nutrition	3	
HRI 208 Food Service Sanitation	3	
BIO 123 General Biology I	4	One year of high school laboratory biology or BIO 010 and one year of high school laboratory chemistry or CHM 020. Also appropriate score on the College's placement test or MAT 013 or MAT 013A/ MAT 013B
Semester II		
ENG 122 English Composition II	3	A grade of "C" or better in ENG 121 and a passing score on the reading portion of the College's placement test or a grade of "C" or better in ENG 121 and a grade of "C" or better in RDG 011.
HRI 108 Quantity Food Production	3	HRI 103
BIO 124 General Biology II	4	BIO 123
SOC 121 Introduction to Sociology	3	
CSC 106 Intermediate PC Applications	3	CSC 105 or CSC 107 or BUS 107 or one year of high school computer applications or programming course and MAT 014 or appropriate score on the College's placement test.
Semester III		
HRI 213 Food Service Systems Management in Dietetics	3	
CHM 121 General Chemistry I – Lecture	3	MAT 014 and one year of high school chemistry or CHM 010
CHM 125 General Chemistry I- Lab	1	Prerequisite(s): MAT 014 and one year of high school chemistry or CHM 010
MAT 129 Precalculus	4	Appropriate score on the College's placement test and/or satisfactory score on the Diagnostic Examination, "B" or better in MAT 014, or departmental approval.
PSY 123 Introductory Psychology	3	
_____ Physical/Health Education Elective	1-3	
Semester IV		
HRI 205 Food and Beverage Controls and Purchasing	3	HRI 103
HRI 218 Nutrition Throughout the Life Span	3	HRI 105
CHM 122 General Chemistry II – Lecture	3	CHM 121 with a grade of "C" or better
CHM 126 General Chemistry II - Lab	1	Prerequisite(s): CHM 121, CHM 125 with a grade of "C" or better Corequisite(s): CHM 122
BIO 211 Principles of Microbiology	4	One year of high school laboratory biology or BIO 010, and one year of high school laboratory chemistry or CHM 010, and appropriate score on the College's placement test or MAT 013.
_____ General Education Humanities Elective	3-4	Choose one course designated in the course descriptions as General Education Humanities (GE HUM).

Total Credits: 64 - 66

Contact Name: Professor Mary-Pat Maciolek, department chair
 Contact Phone: 732.906.2538
 Contact Email: MMaciolek@middlesexcc.edu
 Department Web: <http://www.middlesexcc.edu/departments/hri>

Earth Science

DEPARTMENT OF NATURAL SCIENCES

Associate in Science (A.S.) Degree

■ What will students learn if they study Earth Science?

Students will study the Earth as a giant, multi-dimensional system. Because knowledge about our planet and how it works is necessary to our survival and well-being, Earth and its natural resources will be the focus of this program.

■ Are there any requirements that must be satisfied before taking courses in the major?

A passing score on the College's placement mathematics test for both Algebra I and Algebra II or MAT 013 and MAT 014 is required for all Earth Science majors. In addition, a high school laboratory science course with a minimum grade of "C" or better is required.

■ Can Earth Science majors transfer to a four-year college or university?

A New Jersey statewide transfer agreement ensures that students who earn an A.A. or A.S. degree at a community college will have those credits fully transferable to a New Jersey public four-year institution, will have completed half of the credits required for a basic four-year degree, and will have completed all of lower-division general education requirements. In addition, articulation agreements with private institutions may provide similar transfer provisions. Students should discuss the transfer process with an academic advisor.

■ How long will it take to complete this degree?

Once students complete developmental coursework (if needed), the Earth Science degree can be completed in two years of full-time study. Students can shorten the amount of time by taking courses in the summer and winter sessions.

■ Questions?

Contact Name: Professor Diane Trainor, department chair
Contact Phone: 732.906.2587
Contact Email: DTrainor@middlesexcc.edu

EARTH SCIENCE

Associate in Science (A.S.) Degree – EASC.AS

*Below is required courses and recommended course groupings and sequences for program completion.
Courses may have prerequisites and corequisites requirements.*

Courses	Credits	Requisites / Comments
Semester I		
ENG 121 English Composition I	3	A passing score on the College Placement Test or a grade of 'C' or better in ENG 010.
CHM 121 General Chemistry I Lecture	3	MAT 014 and one year of high school laboratory chemistry or CHM 010.
CHM 125 General Chemistry I Lab	1	MAT 014 and one year of high school laboratory chemistry or CHM 010.
MAT 129 Precalculus	4	Appropriate score on the College's placement test and/or satisfactory score on the diagnostic examination, "B" or better in MAT 014, or departmental approval.
CSC 106 Intermediate PC Applications With Programming	3	MAT 014
PED ____ Physical Education Elective	1-3	Students may take a health elective in place of physical education. However, if the total credits exceed 66 upon graduation they may not all transfer.
Semester II		
ENG 122 English Composition II	3	A grade of 'C' or better in ENG 121.
CHM 122 General Chemistry II – Lecture	3	CHM 121 with a grade of "C" or better
CHM 126 General Chemistry II – Lab	1	CHM 121, CHM 125 with a grade of "C" or better
MAT 131 Analytic Geometry and Calculus I	4	MAT 129, or MAT 129A/MAT 129B, or appropriate score on the College's placement test and/or satisfactory score on the diagnostic examination, or departmental approval.
SCI 155 Introduction to Geology	4	MAT 013 or appropriate score on the College's placement test
Semester III		
____ ____ General Education Social Science Elective	3	Choose courses designated in the course descriptions as (GE SS) general education social science (GE SS).
____ ____ General Education Humanities Elective	3	Choose courses designated in the course descriptions as (GE HUM) general education humanities (GE HUM).
SCI 158 Planetary Astronomy	4	One year of high school laboratory science, MAT 014 or appropriate score on the College placement test
PHY 123 General Physics I – Lecture (GE MST)	3	MAT 129 or MAT 129A/MAT 129B
PHY 125 General Physics I – Lab (GE MST)	1	MAT 129 or MAT 129A/MAT 129B
____ ____ Technical Elective	3-4	Select courses from the list below.
Semester IV		
____ ____ General Education Humanities Elective (GE HUM)	3	Choose courses designated in the course descriptions as general education humanities (GE HUM).
OR ____ ____ General Education Social Science Elective (GE SS)		Choose courses designated in the course descriptions as general education social science (GE SS).
SCI 157 Introduction to Meteorology	4	Prerequisite(s): MAT 013 or appropriate score on the College placement test
PHY 124 General Physics II – Lecture (GE MST)	3	PHY 123
PHY 126 General Physics II – Lab (GE MST)	1	PHY 125
____ ____ Technical Elective	3-4	Select courses from the list below.

Total Credits: 61-65

Technical Electives:

SCI 160 Essentials of Oceanography	4	Prerequisite(s): One year high school laboratory science, MAT 013 or appropriate score on the College placement test
SCI 210 Environmental Geology	4	
SCI 224 Atmospheric Pollution Control	3	Prerequisite(s): BIO 118, CHM 118 and MAT 014 or equivalent
SCI 256 Stellar and Galactic Astronomy	4	Prerequisite(s): One year of high school laboratory science, MAT 014 or appropriate score on the College placement test
SCI 258 Climatology	3	Prerequisite(s): MAT 014 or appropriate score on the College placement test

Contact Name: Professor Diane Trainor, department chair

Contact Phone: 732.906.2587

Contact Email: DTrainor@middlesexcc.edu

Liberal Arts

Associate in Arts (A.A.) Degree

This program provides graduates a foundation for lifelong intellectual development and a fulfilling life. It also develops a powerful knowledge base and set of critical thinking skills they will use over the course of their professional careers.

■ Why study the Liberal Arts?

A Liberal Arts education helps students develop strong and ordered minds as they explore the world's collected wisdom in literature, history, mathematics, science, philosophy and the arts. It teaches them to recognize and construct arguments, to appreciate diverse cultures and perspectives, and to have a sense of humility about lives and minds that have gone before. Its emphasis on language helps students broaden their cultural perspective and become more aware of their own identity.

The courses comprising a liberal arts education at Middlesex are the core of all liberal arts programs at the bachelor's level. Students may select the general degree, the most flexible of all our Liberal Arts programs, or one of the many specialized options.

■ Are there any requirements that must be satisfied before taking courses in the major?

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

■ How long will it take to complete this degree?

Once students complete developmental coursework (if needed), the degree can be completed in two years of full-time study. They can shorten the amount of time by taking courses in the summer and winter sessions.

LIBERAL ARTS – CINEMA STUDIES

Associate in Arts (A.A.) Degree

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

Courses	Credits	Requisites / Comments	
General Education Communication			
ENG 121	English Composition I	3	A passing score on the writing portion of the College's placement test or a grade of "C" or better in ENG 010.
ENG 122	English Composition II	3	A grade of "C" or better in ENG 121.
SPE 121	Fundamentals of Public Speaking	3	
	OR		
SPE 123	Discussion and Debate		
General Education History			
HIS 121	History of Western Civilization I	3	
HIS 122	History of Western Civilization II	3	
General Education Humanities			
___	Humanities Elective (GE HUM)	3	Choose one course designated in the course descriptions as General Education Humanities (GE HUM). Recommended: ENG 254 Literature and Film.
___	Language Elective (GE HUM)	3	Choose two modern language courses in sequence from either FRE, GER, ITA or SPA. If you completed at least two years of high school study in one modern language, your level of language will be determined by a placement test excluding SPA 242.
___	Language Elective (GE HUM)	3	
General Education Mathematics, Science and Technology			
___	Technology Elective (GE MST)	3	You must take 12-15 credits in general education mathematics, science, and technology courses.
___	Math Elective (GE MST)	3-4	Choose one or two science courses, one or two math courses and one technology course, in consultation with an academic advisor. For your technology elective, choose either CSC 105 or CSC 106.
___	Science Elective (GE MST)	3-4	
___	Math or Science Elective (GE MST)	3-4	
General Education Social Science			
___	Social Science Elective (GE SS)	3	Choose courses designated in the course descriptions as General Education Social Science (GE SS).
Liberal Arts Electives			
ENG 255	Introduction to Film	3	
ENG 262	Cinema History	3	
ENG 263	Survey of American Cinema	3	
ENG 264	Survey of World Cinema	3	
___ ___	General Education Diversity Elective (GE DIV)	3	Choose one course designated in the course descriptions as General Education Diversity (GE DIV).
Divisional Elective			
ENG 265	Survey of Great Cinema Directors	3	
___ ___	Physical/Health Education Elective	1-3	You may satisfy this requirement with any HED or PED course except PED 270.

Total Credits: 61 - 66

Contact Name: Dr. Kathleen Pearle, interim department chairperson
Contact Phone: 732.906.2591
Contact Email: Kpearle@middlesexcc.edu
Department Web: <http://www.middlesexcc.edu/departments/english>

Surveying Engineering Technology

ENGINEERING TECHNOLOGIES DEPARTMENT

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

Surveying Engineering Technology 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.

■ Can students who major in Surveying Engineering Technology transfer to a four-year college or university?

Students may choose to participate in the Joint Admissions Program with the New Jersey Institute of Technology. Articulation agreements with public and private institutions offer students who earn the A.A.S. degree the opportunity to transfer their coursework to the four-year institution.

■ Are there any requirements that must be satisfied before taking courses in the major?

Algebra I is a prerequisite for all majors. Algebra I competency may be verified with a passing score on the College's placement test or completion of the appropriate class.

■ How long will it take to complete this degree?

Once students complete developmental coursework (if needed), the degree can be completed in two years of full-time study. They can shorten the amount of time by taking courses in the summer and winter sessions.

■ Questions?

Contact Name: Professor Thomas Sabol, department chair
Contact Phone: 732.906.2586
Contact Email: Tsabol@middlesexcc.edu
Department Web: <http://www.middlesexcc.edu/departments/engineeringtech>

SURVEYING ENGINEERING TECHNOLOGY
Associate in Applied Science (A.A.S.) Degree

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

Courses	Credits	Requisites / Comments
Semester I		
MCT 101 Introduction to Technology	2	Prerequisite(s): MAT 013 or passing score on the College's placement test Corequisite(s): MAT 014
MAT 129A Precalculus Part A	2	Prerequisite(s): Appropriate score on the College's placement test and/or satisfactory score on the diagnostic examination, "C" or better in MAT 014 or MAT 014A and MAT 014B, or departmental approval Note: MAT 129 may be substituted for MAT 129A & MAT 129B.
ENG 121 English I	3	A passing score on the College's placement test or a grade of "C" or better in ENG 010; completion of RDG 009 with a "C" or better or a score on the reading portion of the College's placement test that exempts the student from RDG 009.
MEC 123 Technical Graphics/CAD I	3	
_____ General Education Humanities Elective (GE HUM)	3	
_____ Physical Education Elective	1	Students have the option of substituting Health Education Elective in place of the Physical Education Elective.
Semester II		
MAT 129B Precalculus Part B	2	MAT 129A or equivalent courses
ENG 122 English Composition II	3	A grade of "C" or better in ENG 121 and a passing score on the reading portion of the College's placement test or a grade of "C" or better in ENG 121 and a grade of "C" or better in RDG 011.
CSC 105 Computer Applications & Systems	3	
CIT 126 Advanced Civil Drawing/CAD II	3	MEC 123
CIT 104 Construction Surveying I	3	MAT 129 or MAT 129A
BUS 201 Business Law I	3	
Semester III		
MAT 131A Analytic Geometry & Calculus I Part A	2	Prerequisite(s): MAT 129 or MAT 129A/MAT 129B or appropriate score on the College's placement test and/or satisfactory score on the diagnostic examination or departmental approval Note: MAT 131 may be substituted for MAT 131A & MAT 131B.
PHY 123 General Physics I – Lecture (GE MST)	3	MAT 129 or MAT 129A/MAT 129B
PHY 125 General Physics I – Lab (GE MST)	1	MAT 129 or MAT 129A/MAT 129B
CIT 205 Construction Surveying II	3	CIT 104
BUS 202 Business Law II	3	BUS 201
CIT 151 Urban and Suburban Development	3	CIT 205
Semester IV		
MAT 131B Analytic Geometry & Calculus I Part B	2	MAT 131A
PHY 124 General Physics II – Lecture (GE MST)	3	PHY 123
PHY 126 General Physics II – Lab (GE MST)	1	PHY 125
CIT 252 Boundary Law	3	
CIT 212 Water Resources Technology	4	MAT 129 or MAT 129B and CIT 105
_____ General Education Social Science Elective (GE SS)	3	
_____ Elective	3-4	
<i>Choose from the following:</i>		
CIT 125 Construction Estimating	3	
MGT 200 Principles of Supervision	3	
SBM 120 Small Business Management	3	
SCI 108 Natural History of New Jersey	3	
SCI 155 Introduction to Geology	4	
SCI 156 Introduction to Astronomy	4	
SCI 157 Introduction to Meteorology	4	

Total Credits: 65 - 66

Contact Name: Professor Thomas Sabol, department chair
 Contact Phone: 732.906.2586
 Contact Email: Tsabol@middlesexcc.edu
 Department Web: <http://www.middlesexcc.edu/departments/engineeringtech>

General Education Electives

COMMUNICATIONS (GE COM)

ENG 121	English Composition I
ENG 122	English Composition II
SPE 121	Fundamentals of Public Speaking
SPE 123	Discussion and Debate

DIVERSITY (GE DIV)

AFS 123	Introduction to African Civilizations
AFS 231	African-American History
COM 115	Intercultural Communication
ENG 225	World Literature I
ENG 226	World Literature II
ENG 227	Literature of Black America
ENG 239	Women in Literature
ENG 250	Gay and Lesbian Literature
ENG 253	Mythology in Literature
ENG 264	Survey of World Cinema
FRE 224	Contemporary French Literature
FRE 228	French Culture and Civilization
GER 224	Contemporary German Literature
GER 228	German Culture and Civilization
HED 150	Contemporary Health Issues
HED 200	Human Sexuality and Family Life
HIS 123	History of Civilization in East Asia
HIS 124	History of Civilization in the Third World
HIS 245	History of Major World Religions
HIS 258	History of Women
HIS 260	Dimensions of Prejudice, Genocide and the Holocaust
LNC 123	An Introduction to the Study of Human Language
PSY 163	Psychology of the African-American Experience
PSY 217	Psychology of Women
PSY 227	Psychology of the Handicapped
SCI 226	Environmental Issues in Our Diverse Society
SOC 121	Introduction to Sociology I
SOC 123	Introduction to Anthropology
SOC 205	Diversity & Multiculturalism in US Society
SOC 231	Indians of the Americas
SOC 240	Perspectives on Sexual Identity
SPA 223	Main Currents in Hispanic Literature
SPA 224	Contemporary Hispanic Literature
SPA 226	Hispanic Civilization
SPA 228	Spanish Civilization and Culture
SPA 242	Masterpieces of Hispanic Literature in Translation (20th Century)

HUMANITIES (GE HUM)

AFS 123	Introduction to African Civilizations
AFS 231	African American History
ART 104	History of Photography
ART 105	Introduction to Art
ART 115	Survey of Non-Western Art
ART 120	Survey of American Art
ART 123	Art History: Ancient to Renaissance
ART 124	Art History: Renaissance to Modern
ART 125	Art History: Modern & Contemporary
ASL 121 /122	American Sign Language I & II
DAN 132	Dance Appreciation
ENG 221	English Literature I
ENG 222	English Literature II
ENG 225	World Literature I
ENG 226	World Literature II
ENG 227	Literature of Black America
ENG 228	Modern British & American Poetry

HUMANITIES (GE HUM) (Continued)

ENG 233	Introduction to the Novel
ENG 234	Introduction to Shakespeare
ENG 239	Women in Literature
ENG 243	Literature of the U.S. to 1880
ENG 244	Literature of the U.S.: 1880 to 1945
ENG 245	Literature of the U.S.: World War II to Present
ENG 247	Principles of Literary Study: Introduction to Poetry
ENG 248	Introduction to Short Fiction
ENG 249	Biography & Autobiography
ENG 253	Mythology in Literature
ENG 254	Literature and Film
ENG 255	Introduction to Film
ENG 258	Modern Dramatic Literature and Politics
ENG 262	Cinema History
ENG 263	Survey of American Cinema
ENG 264	Survey of World Cinema
FRE 121 /122	Elementary French I & II
FRE 221	Intermediate French I
FRE 222	Intermediate French II
FRE 224	Contemporary French Literature
FRE 228	French Civilization & Culture
FRE 231	French Conversation and Composition I
FRE 232	French Conversation and Composition II
GER 121	Elementary German I
GER 122	Elementary German II
GER 221	Intermediate German I
GER 222	Intermediate German II
GER 224	Modern German Literature
GER 228	German Culture & Civilization
GER 231	German Conversation & Composition I
GER 232	German Conversation & Composition II
HIS 121	History of Western Civilization I
HIS 122	History of Western Civilization II
HIS 123	History of Non-Western Civ. in East Asia
HIS 124	History of Non-Western Civilization in the Third World
HIS 221	United States History I
HIS 222	United States History II
HIS 256	History of Twentieth Century
HIS 258	History of Women
ITA 121	Elementary Italian I
ITA 122	Elementary Italian II
ITA 221	Intermediate Italian I
ITA 222	Intermediate Italian II
MUS 107	Introduction to Music
MUS 123	Music History: Traditional
MUS 124	Music History: Contemporary
MUS 145	Music Appreciation: Jazz History
PHI 121	Philosophy
PHI 122	Logic
PHI 123	Ethics
SPA 121 /122	Elementary Spanish I & II
SPA 210	Spanish for Hispanics
SPA 221	Intermediate Spanish I
SPA 222	Intermediate Spanish II
SPA 223	Main Currents in Hispanic Literature
SPA 224	Contemporary Hispanic Literature
SPA 226	Hispanic Civilization
SPA 228	Spanish Civilization & Culture
SPA 231	Spanish Conversation & Composition I
SPA 232	Spanish Conversation & Composition II
THE 105	Introduction to Theatre
THE 123	Theatre History
THE 124	Contemporary Theatre

MATH, SCIENCE, AND TECHNOLOGY (GE MST)

MATH		
MAT 101	Freshman Mathematics I	[3]
MAT 102	Freshman Mathematics II	[3]
MAT 107	Mathematics I	[3]
MAT 108	Mathematics II	[3]
MAT 116	College Algebra	[3]
MAT 123	Statistics I	[3]
MAT 124	Statistics II	[3]
MAT 129	Precalculus I	[4]
MAT 129A	Precalculus I (Part A)	[2]
MAT 129B	Precalculus I (Part B)	[2]
MAT 131	Analytic Geometry and Calculus I	[4]
MAT 131A	Analytic Geometry and Calculus I (Part A)	[2]
MAT 131B	Analytic Geometry and Calculus I (Part B)	[2]
MAT 132	Analytic Geometry and Calculus II	[4]
MAT 206	Introduction to Discrete Mathematics	[4]
MAT 210	Linear Algebra	[4]
MAT 233	Analytic Geometry and Calculus III	[4]
MAT 234	Differential Equations	[4]
MAT 257	Selected Topics In Mathematics	[3]
MAT 285	Basic Statistics For Business	[4]

SCIENCE

BIO 103	Plants, People & Culture	[3]
BIO 104	Mysteries of the Microbial World	[3]
BIO 105	Heredity, Evolution & Society	[4]
BIO 106	Human Biology, Biomedical Issues and Society	[4]
BIO 108	Essentials of Human Anatomy and Physiology	[4]
BIO 111	Human Anatomy & Physiology I	[4]
BIO 112	Human Anatomy & Physiology II	[4]
BIO 117	College Biology I	[4]
BIO 118	College Biology II	[4]
BIO 123	General Biology I	[4]
BIO 124	General Biology II	[4]
BIO 131	Human Structure & Function	[4]
BIO 140	Biodiversity and Issue in Ecology	[3]
BIO 211	Principles of Microbiology	[4]
CHM 107	Principles of Chemistry	[4]
CHM 117	Chemistry I	[4]
CHM 118	Chemistry II	[4]
CHM 121	General Chemistry I LEC	[3] *
CHM 125	General Chemistry I LAB	[1] *
CHM 122	General Chemistry II LEC	[3] *
CHM 126	General Chemistry II LAB	[1] *
CHM 201	Principles of Organic Chemistry	[4]
CHM 202	Biochemistry	[4]
CHM 203	Principles of Organic Chemistry	[3]
CHM 221	Organic Chemistry I LEC	[3]
CHM 227	Organic Chemistry I LAB	[1]
CHM 222	Organic Chemistry II LEC	[3]
CHM 228	Organic Chemistry II LAB	[1]
PHY 101	Principles of Physics	[4]
PHY 115	College Physics I	[4]
PHY 116	College Physics II	[4]
PHY 123	General Physics I LEC	[3] *
PHY 125	General Physics I LAB	[1] *
PHY 124	General Physics II LEC	[3] *
PHY 126	General Physics II LAB	[1] *
PHY 133	Analytical Physics I LEC	[3] *
PHY 135	Analytical Physics I LAB	[1] *
PHY 134	Analytical Physics II LEC	[3] *
PHY 136	Analytical Physics II LAB	[1] *
PHY 236	Analytical Physics III LEC	[3] *
PHY 239	Analytical Physics III LAB	[1] *

SCIENCE (Continued)

SCI 116	Introduction to Renewable Energy	[3]
SCI 155	Introduction to Geology	[4]
SCI 156	Introduction to Astronomy	[4]
SCI 157	Introduction to Meteorology	[4]
SCI 158	Planetary Astronomy	[4]
SCI 160	Essentials of Oceanography	[4]
SCI 204	Concepts of Physical Science	[3]
SCI 206	Introduction to Forensic Science	[3]
SCI 220	Forensic Science	[4]
SCI 256	Stellar & Galactic Astronomy	[4]

[number of credits]

*Must register for both LEC and LAB

TECHNOLOGY

CSC 105	Computer Applications & Systems
CSC 106	Intermediate Applications and Programming

SOCIAL SCIENCE (GE SS)

ECO 201	Principles of Economics I
ECO 202	Principles of Economics II
POS 121	Introductory Government and Politics
POS 201	United States State and Local Government
POS 220	United States National Government
POS 222	Comparative Government
PSY 123	Introductory Psychology
PSY 223	Child Psychology
PSY 232	Lifespan Development
PSY 255	Adolescent Psychology
PSY 270	Adult Development and Aging
SOC 121	Introduction to Sociology I
SOC 122	Social Institutions
SOC 123	Introduction to Anthropology
SOC 131	Contemporary Social Problems

Course Updates

PROGRAM TO BE REMOVED FROM CATALOG – PROGRAM IS NO LONGER OFFERED

ENERGY UTILITY TECHNOLOGY
ENGINEERING TECHNOLOGIES DEPARTMENT
Associate in Applied Science (A.A.S.) Degree

COURSES TO BE REMOVED FROM CATALOG

CHM 226

- CHEMICAL TECHNOLOGY COOPERATIVE EDUCATION
CREDITS: 3 (1-12)
Prerequisite(s): CHM 201 or CHM 219 and CHM 221, CHM 225 and written permission of the department chairperson and Counseling and Career Services Office

NEW COURSES

ENR 106

- INTRODUCTION TO SOLVING ENGINEERING PROBLEMS USING COMPUTERS
CREDITS: 3 (2-2)
Prerequisite(s): MAT 129A and MAT 129B or MAT 129
This is an introductory course using computers to solve engineering problems and will explore the use of computers for data acquisition and process control. Students will use MAT LAB for engineering analysis and exploring solutions to typical engineering applications.

MAT 113

- MATHEMATICAL STRUCTURES I
CREDITS: 3 (3-0)
Prerequisite(s): MAT 014 or appropriate score on the College Placement Test
This is the first of a two semester sequence. This first course focuses on selected topics from numeration, mathematical systems, real numbers, and number theory. Designed to develop a deep understanding of the processes of mathematical reasoning, problem solving, and communication of mathematics effectively at different levels of formality, using a variety of representations of mathematical concepts and procedures. Develop a fundamental understanding relating to algebraic thinking and reasoning. Physical materials and models will be used to explore fundamental concepts of numeration, mathematical systems, real numbers, and number theory. This course is especially appropriate for those students preparing to be elementary, early childhood, or special education teachers.

MAT 114

- MATHEMATICAL STRUCTURES II
CREDITS: 3 (3-0)
Prerequisite(s): MAT 113
This is the second of a two semester sequence. This second course focuses on selected topics from geometry, measurement, data analysis, statistics, and probability. Designed to develop mathematical reasoning, problem solving, and communication of mathematics effectively at different levels of formality, using a variety of representations of mathematical concepts and procedures. Develop a fundamental understanding relating to algebraic thinking and reasoning. Physical materials and models will be used to explore fundamental concepts of geometry, measurement, data analysis, statistics, and probability. This course is especially appropriate for those students preparing to be elementary, early childhood, or special education teachers.

CHANGE/CORRECTION IN PREREQUISITE

CHM 122

- GENERAL CHEMISTRY II LECTURE
CREDITS: 3 (3-0)
Prerequisite(s): CHM 121 with a grade of "C" or better.

CHM 221

- ORGANIC CHEMISTRY I LECTURE
CREDITS: 3 (4-0)
Prerequisite(s): CHM 122 with a grade of "C" or better.

CHM 222

- ORGANIC CHEMISTRY II LECTURE
CREDITS: 3 (4-0)
Prerequisite(s): CHM 221 Lecture with a grade of "C" or better, CHM 227 Lab

CHM 227

- ORGANIC CHEMISTRY I LAB
CREDITS: 1 (0-3)
Prerequisite(s): CHM 124, CHM 126 with a grade of "C" or better.
Corequisite(s): CHM 221

CHM 228

- ORGANIC CHEMISTRY II LAB
CREDITS: 1 (0-3)
Prerequisite(s): CHM 221, CHM 227 with a grade of "C" or better.
Corequisite(s): CHM 222

CSC 125

- WEB MARKUP LANGUAGES
CREDITS: 3 (2-2)
Prerequisite(s): CSC 106 and MAT 014

EDU 280

- EDUCATION FIELD EXPERIENCE
CREDITS: 3 (3-6)
Prerequisite(s): PSY 226; ENG 122 and approval of department chairperson

MAD 114

- THREE-DIMENSIONAL DESIGN
CREDITS: 3 (2-3)
Prerequisite(s): MAD 113, MAD 117

MAD 118

- GRAPHIC DESIGN SKILLS
CREDITS: 3 (2-3)
Prerequisite(s): MAD 113, MAD 117

PLS 112

- BUSINESS ORGANIZATIONS AND GOVERNMENT REGULATIONS
CREDITS: 3 (3-0)
Prerequisite(s): PLS 100, PLS 101, PLS 113, PLS 121
Prerequisite(s) or corequisite(s): PLS 121 and PLS 123

CHANGE IN PREREQUISITE/ COREQUISITE

CHM 126 (GE MST)

- GENERAL CHEMISTRY II LAB
CREDITS: 1 (0-3)
Prerequisite(s): CHM 121, CHM 125 with a grade of "C" or better.
Corequisite(s): CHM 122

CHANGE IN COURSE TITLE

BIO 140 (GE MST)

- BIODIVERSITY AND ISSUES IN ECOLOGY

CREDITS: 3 (2-2)

CHANGE IN COURSE DESCRIPTION

PLS 123

- ADVANCED LEGAL WRITING

CREDITS: 2 (2-0)

Prerequisite(s): PLS 100, PLS 101, PLS 113

A one semester independent study writing course focusing on the preparation of legal memoranda as well as citation form.

Emphasis will be placed on clarity and precision in the use of language.

CHANGE IN COURSE CODE

SCI 217

- ENVIRONMENTAL HEALTH HAZARDS

CREDITS: 3 (2-2)

SCI 218

- CRITICAL ISSUES IN AIR AND WATER POLLUTION

CREDITS: 4 (3-2)

Prerequisite(s): MAT 013 or appropriate score on the College placement test and one year of high school laboratory science

SCI 219

- GLOBAL ENVIRONMENTAL ISSUES

CREDITS: 4 (3-2)

Prerequisite(s): MAT 013 or appropriate score on the College placement test and one year of high school laboratory science

SCI 221

- HAZARDOUS WASTE MANAGEMENT

CREDITS: 3 (3-0)

SCI 222

- PRINCIPLES OF OCCUPATIONAL SAFETY AND HEALTH

CREDITS: 3 (2-3)

Prerequisite(s): CHM 118 or equivalent

SCI 224

- ATMOSPHERIC POLLUTION CONTROL

CREDITS: 3 (3-0)

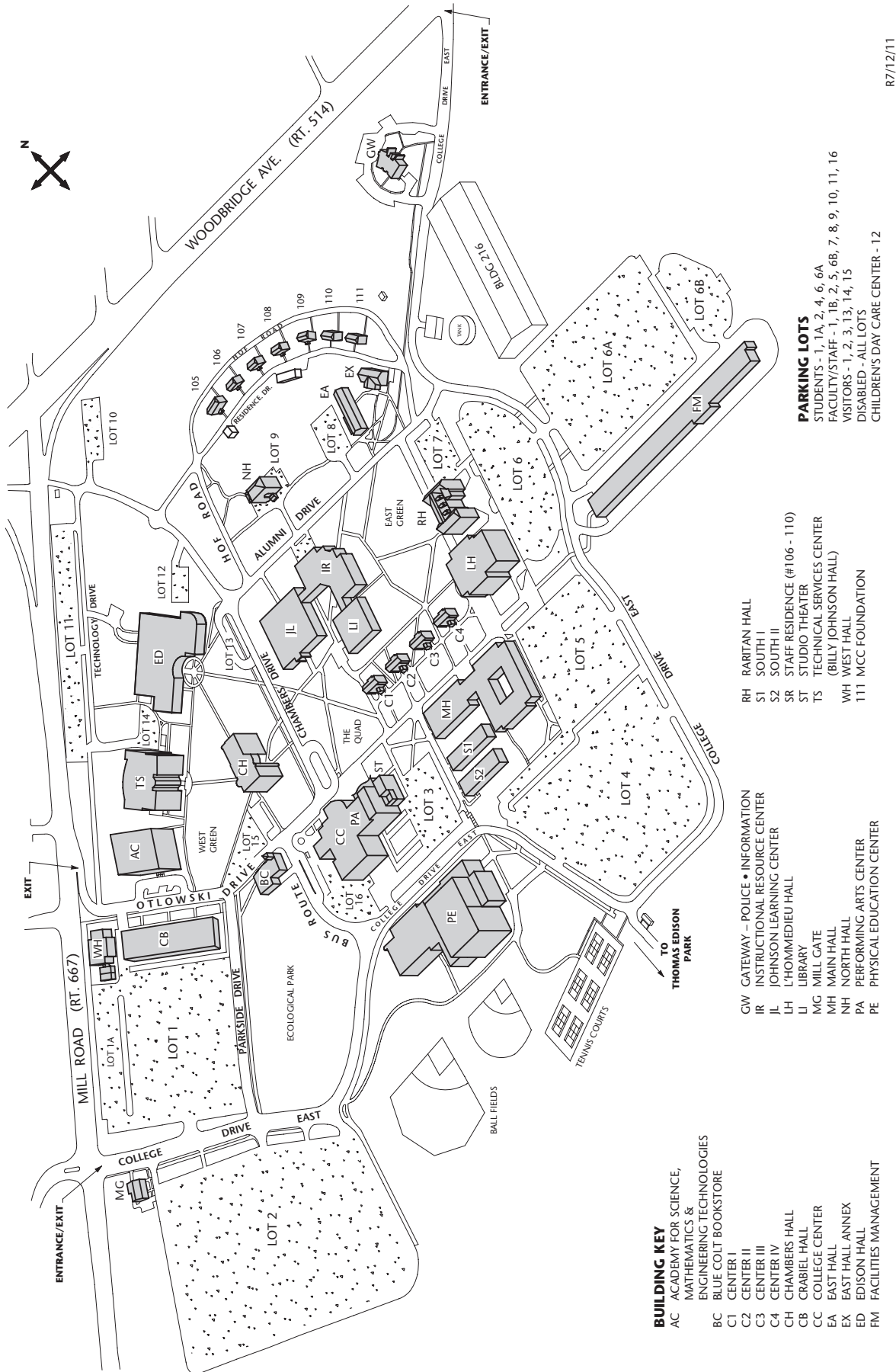
Prerequisite(s): BIO 118, CHM 118 and MAT 014 or equivalent

SCI 226 (GE DIV)

- ENVIRONMENTAL ISSUES IN OUR DIVERSE SOCIETY

CREDITS: 3 (2-2)

Campus Map



BUILDING KEY

- AC ACADEMY FOR SCIENCE, MATHEMATICS & ENGINEERING TECHNOLOGIES
- BC BLUE COLT BOOKSTORE
- C1 CENTER I
- C2 CENTER II
- C3 CENTER III
- C4 CENTER IV
- CH CHAMBERS HALL
- CB CRABIEL HALL
- CC COLLEGE CENTER
- EA EAST HALL
- EX EAST HALL ANNEX
- ED EDISON HALL
- FM FACILITIES MANAGEMENT

- GW GATEWAY - POLICE • INFORMATION
- IR INSTRUCTIONAL RESOURCE CENTER
- JL JOHNSON LEARNING HALL
- LH L'HOMMEDIU HALL
- LI LIBRARY
- MG MILL GATE
- MH MAIN HALL
- NH NORTH HALL
- PA PERFORMING ARTS CENTER
- PE PHYSICAL EDUCATION CENTER

- RH RARITAN HALL
- S1 SOUTH I
- S2 SOUTH II
- SR STAFF RESIDENCE (#106 - 110)
- ST STUDIO THEATER
- TS TECHNICAL SERVICES CENTER (BILLY JOHNSON HALL)
- WH WEST HALL
- 111 MCC FOUNDATION

PARKING LOTS

- STUDENTS - 1, 1A, 2, 4, 6, 6A
- FACULTY/STAFF - 1, 1B, 2, 5, 6B, 7, 8, 9, 10, 11, 16
- VISITORS - 1, 2, 3, 13, 14, 15
- DISABLED - ALL LOTS
- CHILDREN'S DAY CARE CENTER - 12

R7/12/11

Middlesex County College is a Smoke-Free Environment

MIDDLESEX COUNTY
BOARD OF CHOSEN FREEHOLDERS

Christopher D. Rafano, *Freeholder Director*

Ronald G. Rios, *Deputy Director*

Carol Barrett Bellante

Stephen J. Dalina

H. James Polos

Charles E. Tomaro

Blanquita Valenti

MIDDLESEX COUNTY COLLEGE
BOARD OF TRUSTEES

Dorothy K. Power, *Chairman*

Thomas Tighe, *Vice Chairman*

Mark J. Finkelstein, *Treasurer*

Hank Bauer, *Secretary*

Frank T. Antisell

George J. Lisicki

Farah Manzoor '11

John P. Mulkerin

Eileen Palumbo '78

Praful Raja

Robert P. Sica

Samuel B. Stewart

MIDDLESEX COUNTY COLLEGE
ADMINISTRATION

Joann La Perla-Morales, *Ed.D., President*

Karen L. Hays, *Ph.D., Vice President for Academic and Student Affairs*

Susan K. Perkins, *Vice President for Finance and Administration*

Patrick Madama, *Vice President for Institutional Advancement*

Donald R. Drost, Jr., *Executive Director of Facilities Management*

Neil S. Sachnoff, *Executive Director of Information Technology*

Walter DeAngelo, *Director of Human Resources*

Marla Brinson, *Dean of Enrollment and Student Support Services*

Mary Ann Conners, *Dean of Corporate and Community Education*

David Edwards, *Dean of Arts and Sciences*

Marilyn Laskowski-Sachnoff, *Dean of Professional Studies*

2600 Woodbridge Avenue

P.O. Box 3050

Edison, New Jersey 08818-3050

732-548-6000

www.middlesexcc.edu