

# MIDDLESEX COUNTY COLLEGE

CATALOG SUPPLEMENT 2003-2005





# Introduction

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This supplement is an update to the 2003-2005 catalog and should be used in conjunction with it. It contains updated information on the academic programs, calendar, tuition and fees and policies for the 2004-2005 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 Registrar.

## ■ ACCREDITATION (ADDITION)

National Accrediting Agency for Clinical Laboratory Sciences,  
8410 W Bryn Mawr, Suite 670 Chicago, IL 60631, 773.714.8880

# Calendar & General Information

## 2004 - 2005 ACADEMIC CALENDAR

### FALL 2004

August	30	Faculty Orientation & Meetings; First Days of Faculty Obligation
	31	Faculty Development; Mandatory Day for Faculty
September	2 & 3	Final Registration Days; New Student Orientation & Advisement by Faculty
	6	Labor Day - College Closed
	7	Classes Begin - Fall Semester
October	11	Columbus Day - College Closed
November	11	Veteran's Day - College Closed
	25, 26, 27 & 28	Thanksgiving - College Closed
December	17	Last Day of Classes
	18, 20 & 21	Specially Scheduled Final Examinations
	22	Winter Recess Begins

### SPRING 2005

January	17	Martin Luther King Day - College Closed
	18	Faculty Orientation & Meetings; First Day of Faculty Obligation
	19 & 20	Final Registration Days; New Student Orientation & Advisement by Faculty
	24	Classes Begin - Spring Semester
February	21	Presidents' Day - College Closed
March	12	Spring Recess Begins - No classes
	19	Weekend Classes resume and will meet on March 19 & 20
	21	Regular Classes Resume
	25, 26 & 27	Good Friday/Easter - College Closed
May	10	Last day of Classes
	11, 12 & 13	Specially Scheduled Final Examinations
	16	Last day of Faculty Obligation
	26	Graduation

### COLLEGE HOUR (CHANGE)

#### College Hour

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

### THE NJ STARS (NEW)

The NJ STARS\* program ensures all tuition and fees will be covered for two years at your local community college if you graduate in the top 20 percent of your class. You can complete the freshman and sophomore years of college with no tuition costs — and then transfer to a bachelor's degree program for the final two years.

To qualify, you must:

- Graduate in the top 20% of your high school class in 2004
- Maintain full-time enrollment status in an associate's degree program at Middlesex County College. (15 or more college credits)
- Apply for all need-based and merit-based financial aid each year.
- Maintain your academic rank in the top 20% of your college class.
- Be a United States citizen or have permanent residence status in Middlesex County.
- Pending final approval in the NJ State Legislature in June.

Now we are able to invest in new programs - like a program to help our hardest working students go to college. I want to put college within your reach, so I'm going to issue a challenge to you all - if you graduate in the top 20% of your class, we will pay for your tuition at a community college."

-NJ Governor James McGreevey

### FINANCIAL APPEALS

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

**The Tuition Appeals Committee decisions are final.**

### EXPENSES

#### Tuition and Fees

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

#### ■ Tuition

Middlesex County Residents ..... **\$76.80** per credit or credit equivalent  
Out of County Residents ..... **\$153.60** per credit or credit equivalent

#### ■ Fees

##### General Service

Middlesex County Residents ..... **\$11.00** per credit or credit equivalent  
Out of County Residents ..... **\$22.00** per credit or credit equivalent

##### Technology

Middlesex County Residents ..... **\$6.00** per credit or credit equivalent  
Out of County Residents ..... **\$12.00** per credit or credit equivalent

#### General Expenses

■ Course Fees ..... \$30 to \$250  
*per course with clinical, laboratory, computer, or other appropriate non-replaceable materials including energy uses. Refer to the schedule bulletins for specific information.*

### CHANGES

■ Parking decal ..... \$25.00 Valid September-August  
*Parking decal fees are refundable only upon return of the decal.*

■ Parking decal ..... **\$25.00** Valid September-August

#### ■ Insurance

Accident/Health and Sickness ..... \$62.00 per year  
*Required of students registering for 12 or more credits. Students who are covered by their own insurance policy can have the fee waived. The form can be obtained from the cashier's office. The waiver must be returned within 14 days from the first week of class.*

**Malpractice Insurance ..... \$30.00**

*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

**Reinstatement Penalty Fee ..... \$76.80 per credit**

*Students who attend class without being properly registered may be subject to a \$73.50 per credit late registration penalty.*

# Enrollment Services, College Programs and Activities

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## A U D I T

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

## Community Outreach

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The Perth Amboy Center is located at 60 Washington Street, Perth Amboy, NJ 08861. For more information call 732.324.0700 extension 0.

## Academic Standards and Regulations

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### GRADING SYSTEM

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

### Other Grades

*(Not included in cumulative average)*

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

### STANDARDS OF PROGRESS

#### Basis for Academic Dismissal

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

### ACADEMIC STATUSES

#### Academic Dismissal

Students who have been academically dismissed are prohibited from enrolling at the College for a minimum period of two years. A student wishing to be reinstated following dismissal must submit a reinstatement appeal demonstrating his/her readiness to pursue college studies. The Deans' Council will rule on the appeal.

# Business Administration Degree

(DESIGNED FOR TRANSFER)

BUSINESS ADMINISTRATION & MANAGEMENT DEPARTMENT

■ *Why major in Business Administration?*

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

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

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

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

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

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

You must demonstrate proficiency in keyboarding or typewriting by either completing OAD 010, Keyboarding for Computers, or by appropriate waiver of the Office Administration Department Chairperson. Algebra I is a prerequisite for all majors. Algebra I competency must be verified with a passing score on the College's placement test. You also need a grade of "C" or higher in high school algebra II, geometry and in one year of laboratory science.

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

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

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

Contact Professor Bailey, Department Chair, at 732.906.2594.

DEGREE PROGRAM

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

Courses	Credits
ENG 121 ENGLISH COMPOSITION I	3
MAT- Mathematics Elective <sup>1</sup>	3-4
<b>ACC 101 FINANCIAL ACCOUNTING</b>	<b>4</b>
BUS 101 BUSINESS ORGANIZATION AND MANAGEMENT	3
Social Science Elective <sup>2</sup>	3
ENG 122 ENGLISH COMPOSITION II	3
MAT - Mathematics Elective <sup>1</sup>	3-4
<b>ACC 102 MANAGERIAL ACCOUNTING</b>	<b>4</b>
ECO 201 PRINCIPLES OF ECONOMICS I	3
Humanities Elective <sup>2</sup>	3
ECO 202 PRINCIPLES OF ECONOMICS II	3
BUS 201 BUSINESS LAW I	3
Social Science Elective <sup>2</sup>	3
BUS 107 COMPUTER APPLICATIONS FOR BUSINESS <sup>3</sup>	3
Business Elective <sup>4</sup>	3
Physical/Health Ed	1-3
Humanities Elective <sup>2</sup>	3
<b>Science Elective</b>	<b>4</b>
Free Elective	3
Business Elective <sup>4</sup>	3
Business Elective <sup>4</sup>	3

TOTAL CREDITS : 64-66

<sup>1</sup> Students must complete a minimum of 6 credits of Mathematics in one of the following sequences: MAT 123 and MAT 124 or MAT 129 and MAT 131 or MAT 131 and MAT 132 or MAT 131 and MAT 285.

<sup>2</sup> Students must complete six credits of Humanities and six credits of Social Science.

<sup>3</sup> Computer Applications for Business recommended, students may select an alternate Computer Science course for which they have appropriate academic advisement and preparation in Mathematics.

<sup>4</sup> Recommended business electives are as follows: BUS 202, MGT 210, and MKT 201.

**NOTE:** Students are required to attain a passing grade in OAD 010 or must obtain an approved waiver demonstrating proficiency in keyboarding prior to enrolling in BUS 107. Students who have not satisfied the above must enroll in OAD 010 at the same time they enroll in BUS 107.

# Chemistry

## CHEMISTRY & PHYSICS DEPARTMENT

### CHEMISTRY OPTION - SCIENCE TRANSFER DEGREE

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

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

TOTAL CREDITS : 65-67

#### ■ Why major in Chemistry Transfer?

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

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

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

#### ■ What will I learn if I study Chemistry Transfer?

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

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

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

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

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

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

Contact Dr. Trainor, Department Chair, at 732.906.2587.

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

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

<sup>3</sup> Choose CSC 105 or higher.

# Dental Hygiene

## DENTAL AUXILIARIES EDUCATION DEPARTMENT

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

### ■ Why major in Dental Hygiene?

You can become a licensed professional who works under the supervision of a dentist and performs services that detect, prevent and treat diseases of the mouth.

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

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

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

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

### ■ What will I learn?

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

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

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

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

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

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

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

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

Contact Department Chair at 732.906.2580.

## DEGREE PROGRAM

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

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

TOTAL CREDITS : 72-74

### Standards of Progress

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

<sup>1</sup> You must have high school Algebra I or MAT 013 and one year high school laboratory biology and one year high school laboratory chemistry before taking this course.

<sup>2</sup> Credit-by-examination available if you are licensed to take radiographs in New Jersey.

<sup>3</sup> You must have current CPR certification.



# Education Practitioner

## PSYCHOLOGY AND EDUCATION DEPARTMENT

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

Courses	Credits
ENG 121 ENGLISH COMPOSITION I	3
PSY 123 INTRODUCTORY PSYCHOLOGY	3
Mathematics Requirement <sup>1</sup>	3-4
HED 150 CONTEMPORARY HEALTH ISSUES	3
SPE 121 FUNDAMENTALS OF PUBLIC SPEAKING	3
ENG 122 ENGLISH COMPOSITION II	3
OR	
ENG 125 ENGLISH COMPOSITION II: WRITING ABOUT LITERATURE	3
PSY 223 CHILD PSYCHOLOGY	3
<b>Mathematics Requirement <sup>1</sup></b>	<b>3-4</b>
PSY 226 EDUCATIONAL PSYCHOLOGY:	
CLASSROOM APPLICATIONS	3
Humanities Elective	3
SOC 121 INTRODUCTION TO SOCIOLOGY	3
EDU 280 EDUCATION FIELD EXPERIENCE	3
Approved Biology Elective	3-4
Art Elective	3
MUS 140 MUSIC FUNDAMENTALS	3
ENG 212 CHILDREN'S LITERATURE	3
Approved Electives <sup>2</sup>	15

TOTAL CREDITS : 63-66

<sup>1</sup> **MAT 101 and MAT 102** are recommended. You may substitute any one of the following courses for which have the appropriate academic background: **MAT 123 and MAT 124, MAT 129 and MAT 131 and MAT 132.**

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

### ■ Why major in Education Practitioner?

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

**Transfer:** Some students want to major in Education Practitioner in order to custom tailor a plan of study that transfers to an upper-division college.

**Early Employment:** Some students want to take practical and applied courses that prepares them to work immediately after this degree. If your desire is to transfer as an Education major or to go to work immediately in an education-related setting, then the Education Practitioner is the right choice.

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

**Substitute Teaching and Other Employment:** Whether you choose the transfer or the early employment track, this degree can help you obtain a "Group Teacher Approval" for use in private child care centers through the authority of the State of New Jersey - Division of Youth and Family Services (DYFS). Substitute Teaching and Other Employment: Students are also eligible for a substitute-teaching license after completion of their 60th credit, or they may seek work as a paraprofessional.

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

A strong core of general education courses and practical experiences in teaching/ learning settings. Supervision is provided by school personnel as well as by your college supervisor.

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

Consultation with the department chairperson or with an advisor about your math and science choices is strongly recommended.

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

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

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

Contact Professor Gutowski, Department Chair, at 732.906.2590.

# Fine Arts

## VISUAL & PERFORM ARTS DEPARTMENT

### ■ *Why major in Fine Arts?*

The fine arts degree AFA offers the first two years of concentrated study in studio courses for students planning to transfer to a fine arts program baccalaureate or music baccalaureate program. As fine arts major you may choose to concentrate in either the art, music or theatre option.

### ■ *If I major in Fine Arts, what degree can I earn?*

The Associate in Fine Arts Degree. The AFA differs from the Associate in Arts Degree because it requires more hands-on studio courses while reducing the number of courses in mathematics, science and social sciences.

### ■ *What will I learn if I study Fine Arts?*

Fine Arts will provide a well-rounded education with a generous range of liberal arts courses required by baccalaureate fine arts programs. Specifically, you will complete a series of general education "core" requirements upon which to build conceptual and communications skills that make up a large part of every fine arts career or professional program at the baccalaureate level. In addition, you will create a body of work or enhance your skills in your chosen field in ways that will assist you in being accepted into a competitive fine arts program at a senior institution.

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

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

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

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

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

Contact the Professor Siegfried, Department Chair at 732.906.2589.

## ASSOCIATE OF FINE ARTS CORE DEGREE REQUIREMENTS

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

Courses	Credits
ENG 121 ENGLISH COMPOSITION I	3
HIS 121 HISTORY OF WESTERN CIVILIZATION I	3
<b>Physical Education or Health Ed Elective</b>	<b>1 (?)</b>
ENG 122 ENGLISH COMPOSITION II	3
OR	
ENG 125 ENGLISH COMPOSITION II: WRITING ABOUT LITERATURE	3
HIS 122 HISTORY OF WESTERN CIVILIZATION II	3
CSC 105 COMPUTER APPLICATIONS AND SYSTEMS	3
OR	
BUS 107 COMPUTER APPLICATIONS FOR BUSINESS	3
<b>Language <sup>1</sup></b>	<b>6</b>
Diversity Elective	3
Science/Math Elective	3-4
Social Science Elective	3
SPE 121 FUNDAMENTALS OF PUBLIC SPEAKING	3
Science/Math Elective	3-4
Humanities Elective	3
Free Elective	3

TOTAL CREDITS : 40-47

## ART DEGREE OPTION ASSOCIATE OF FINE ARTS

*Below are required courses.*

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

TOTAL CREDITS : 63-66

<sup>1</sup> Choose six credits in sequence of the same modern language from: French, German, Italian or Spanish.

MUSIC DEGREE OPTION  
**ASSOCIATE OF FINE ARTS**

*Below are required courses.*

Courses	Credits
MUS 123 MUSIC HISTORY: TRADITIONAL OR	3
MUS 124 MUSIC HISTORY: CONTEMPORARY	3
MUS 131 KEYBOARD STUDIES I	3
MUS 132 KEYBOARD STUDIES II	3
MUS 140 MUSIC FUNDAMENTALS	3
MUS 201 MUSIC NOTATION AND COMPOSITION I	3
MUS 202 MUSIC NOTATION AND COMPOSITION II	3
<b>Plus one additional art course</b>	<b>3</b>

TOTAL CREDITS : 61-64

THEATRE DEGREE OPTION  
**ASSOCIATE OF FINE ARTS**

*Below are required courses.*

Courses	Credits
THE 123 THEATRE HISTORY OR	3
THE 152 AMERICAN MUSICAL THEATRE	3
THE 124 CONTEMPORARY THEATRE	3
THE 131 ACTING I	3
THE 145 STAGECRAFT	4
THE 146 PLAY PRODUCTION	4
<i>Plus additional three credits in theatre or a course selected from the following:</i>	<i>3</i>

*Modern Drama, Shakespeare, Oral*

*Interpretation of Literature, Music*

*History, Music Fundamentals or any Dance course*

**TOTAL CREDITS : 62-64**

# Media Arts & Design

## MEDIA ARTS & DESIGN DEPARTMENT

### ■ *What will I learn if I study Media Arts & Design?*

Your studies combine computer-linked commercial photography and commercial art with business and general education. The program emphasizes hands-on experience in the laboratory or studio to develop both your creative ability and the mechanical skills essential to business-oriented art and photography careers.

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

The Associate in Applied Science prepares you for a career as a commercial artist, or a photographer.

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

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

### ■ *Why major in Media Arts & Design?*

There is a growing need for computer graphic artists. This program includes a cooperative work experience option. As a senior, if you choose this option, you may be placed in a paid approved position that will enhance your competency by providing hands-on experience with state-of-the-art equipment used by professional designers and photographers.

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

You must demonstrate proficiency in keyboarding or typewriting by either completing OAD 010, Keyboarding for Computers, or by appropriate waiver of the Office Administration Department Chairperson. Algebra I is a prerequisite for all majors. Algebra I competency must be verified with a passing score on the College's placement test.

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

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

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

Contact Professor Stewart, Department Chair, at 732.906.2577.

## DEGREE PROGRAM

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

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

TOTAL CREDITS : 63-65

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

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

<sup>3</sup> Courses may, with the approval on the Department Chairperson, be chosen from both the AGD and the PCP concentrations.

<sup>4</sup> Choice is dependent on the concentration that the student has chosen, and should be selected with the help of the student's academic advisor.

<sup>5</sup> Those students, who are planning to go on to a four-year school, should discuss this choice with their academic advisor. Courses may be elected from the Biology, Chemistry, or Physics Department, depending on the student's academic background.

ADVERTISING GRAPHICS DESIGN DEGREE OPTION

Courses	Credits
AGD 205 LAYOUT DESIGN	2
AGD 206 TYPOGRAPHY	2
AGD 209 PORTFOLIO PROJECT (ADVERTISING GRAPHICS DESIGN)	2
AGD 211 ADVERTISING DESIGN I	2
AGD 212 ADVERTISING DESIGN II	2
AGD 217 MECHANICAL PRINT PRODUCTION	2
AGD 218 COMPUTER PRE-PRESS	2

PROFESSIONAL COMMERCIAL PHOTOGRAPHY DEGREE OPTION

Courses	Credits
PCP 213 PORTFOLIO PROJECT (PROFESSIONAL COMMERCIAL PHOTOGRAPHY)	2
PCP 221 COLOR PRINTING METHODS AND PRACTICE	3
PCP 224 COMPUTER IMAGERY	3
PCP 225 PRODUCT AND STOCK PHOTOGRAPHY	3
PCP 226 PROFESSIONAL/STUDIO PHOTOGRAPHY	3
AGD 222 SEMINAR & CO-OP AND PCP 222 SEMINAR CO-OP	6

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

# Medical Laboratory Technology

## MEDICAL LABORATORY TECHNOLOGY DEPARTMENT

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

### ■ Why major in Medical Laboratory Technology?

The Medical Laboratory program is accredited by the National Accrediting Agency for Clinical Laboratory Sciences, 8410 W Bryn Mawr Suite 670 Chicago, IL 60631, 773.714.8880. Qualified personnel are needed to work for laboratories in the community. You can find positions in hospitals, reference laboratories, research laboratories, pharmaceutical companies, veterinary laboratories, as well as sales and quality control. As a technician you perform scientific analyses that facilitate physicians' diagnoses and treatment of diseases.

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

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

### ■ What will I learn if I study Medical Laboratory Technology?

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

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

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

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

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

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

You must meet the academic "Standards of Progress" outlined at left to stay in the program.

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

Contact Professor Larkin, Department Chair, at 732.906.2581.

## DEGREE PROGRAM

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

Courses	Credits
<b>BIO 119 BIOLOGY FOR LAB TECHNOLOGY I</b> <sup>1</sup>	4
CHM 117 CHEMISTRY I <sup>1</sup>	4
ENG 121 ENGLISH COMPOSITION I	3
MAT 107 MATHEMATICS II <sup>2</sup>	3
MED 101 INTRODUCTION TO THE MEDICAL LABORATORY I	2
<b>BIO 120 BIOLOGY FOR LAB TECHNOLOGY II</b> <sup>1</sup>	4
<b>CHM 118 CHEMISTRY II</b> <sup>1</sup>	4
ENG 122 ENGLISH COMPOSITION II	3
MAT 108 MATHEMATICS II <sup>2</sup>	3
MED 102 INTRODUCTION TO THE MEDICAL LABORATORY II	3
PSY 123 INTRODUCTORY PSYCHOLOGY	3
<b>Summer Session</b>	
MED 210 MEDICAL LABORATORY TECHNOLOGY I <sup>3</sup> (MED 210 is only offered in summer session)	6
BIO 211 PRINCIPLES OF MICROBIOLOGY <sup>4</sup>	4
CHM 203 PRINCIPLES OF ORGANIC CHEMISTRY	4
MED 211 MEDICAL LABORATORY TECHNOLOGY II <sup>5</sup> Physical/Health Ed Elective	8 1-3
CHM 202 BIOCHEMISTRY	4
MED 212 MEDICAL LABORATORY TECHNOLOGY III <sup>5</sup> Humanities Elective	8 3

TOTAL CREDITS : 74-76

### Standards of Progress:

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

<sup>1</sup> BIO 123 - BIO 124 and CHM 123 - CHM 124 may be substituted for BIO 119 - BIO 120, CHM 117 - CHM 118 for students who meet those course prerequisites and with the Chairperson's written approval.

<sup>2</sup> 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.

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

<sup>4</sup> BIO 221 may be substituted for BIO 211.

<sup>5</sup> This includes a 16 hour/week clinical practicum.

# Nursing

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

### DEGREE PROGRAM

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

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

TOTAL CREDITS : 69-71

### Standards of Progress:

- Maintain a cumulative grade point average of 2.0.
- Must achieve a "C" grade or better in all nursing and science courses in order to progress in the curriculum.
- An unsatisfactory grade ( i.e. a grade less than "C" ) in NRS 111 results in dismissal from the Joint A.S. in Nursing Program. The student has the option to reapply to the Nursing Program.
- If a student earns a grade of less than "C" in any science or nursing course other than NRS 111, the student may retake the course once and must achieve a grade of "C" or better; any subsequent failure(s) in a nursing or science course will result in a dismissal from the Nursing Program. The student has the option to reapply to the Nursing Program; This policy begins and applies to science courses taken in the semester the student receives written notification of acceptance into the Nursing Program;
- Attendance and participation in all scheduled learning activities; and
- Adherence to the policies of UMDNJ and MCC and their affiliating health care agencies.
- UMDNJ-SN Students must complete their Academic Nursing Program within 5 years of beginning enrollment in their first nursing course.

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

Each nursing student prior to matriculation must undergo a complete history and physical examination and be in compliance with the UMDNJ Student Policy on Immunizations and Immune Status.

### ■ Are there additional requirements after graduating to be eligible for licensure?

The New Jersey State Board of Nursing requires that an applicant for licensure as a registered nurse must "submit to the Board evidence in such form as the Board may prescribe that the applicant: . . . is of good moral character, is not a habitual user of drugs and has never been convicted or has not pleaded nolo contendere, non vult contendere or non vult to an indictment, information or complaint alleging a violation of any Federal or State law relating to narcotic drugs. . ." Application for licensure may be denied by the Board if violations exist. Application for the Board of Nursing also may deny licensure if an applicant has charges pending or has ever been convicted of a felony or misdemeanor and/or been found guilty of professional misconduct or negligence. These matters and any other concerns should be cleared with the New Jersey Board of Nursing before applying for admission to the Joint Nursing Program.

<sup>1</sup> You must have a high school Algebra I or MAT 013 and one year of high school laboratory biology and one year high school laboratory chemistry before taking this course.

<sup>2</sup> See course descriptions for corequisites.

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

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

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

The Associate in Science Degree prepares you for entry-level positions in nursing and to take the National Council Licensure Examination for Registered Nurses (NCLEX®-RN). This program has full accreditation by the New Jersey Board of Nursing and The National League for Nursing (NLN).

### ■ What does joint program mean?

The Joint Nursing Program is offered collaboratively by the University of Medicine and Dentistry of New Jersey (UMDNJ) and Middlesex County College. All courses are offered on the campus of MCC. The general education courses are taught by the MCC faculty and the nursing courses are taught by the UMDNJ nursing faculty.

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

Algebra I must be verified with a passing score on the College's placement test, math SAT score of 500 within the last 5 years or college level math. You must be a New Jersey resident and have a "C" or better in high school laboratory biology and laboratory chemistry. If you have previous college credit within the last 5 years you must have a GPA of 2.0 or higher to be considered. When you apply, you must take the National League for Nursing RN Pre-entrance Exam. As a result of your performance on the College's placement test, you may need developmental coursework. All developmental coursework must be completed before you will be considered for admission to the program.

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

You must maintain a GPA of 2.0 or higher and meet the academic standards of progress outlined at right to stay in the program.

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

Contact Department Chair at  
732.906.4660

# Psychosocial Rehabilitation and Treatment

JOINT PROGRAM WITH THE UNIVERSITY OF MEDICINE AND DENTISTRY OF  
NEW JERSEY PSYCHIATRIC REHABILITATION AND BEHAVIORAL  
HEALTH CARE DEPARTMENT

## ■ *Why major in Psychosocial Rehabilitation and Treatment?*

It is an exciting and innovative field in which service providers empowers and encourages individuals with a psychiatric disability to become more self-sufficient, improve their quality of life, and move towards recovery.

## ■ *If I major in Psychosocial Rehabilitation and Treatment, what degree can I earn?*

The Associate in Science Degree that prepares you for a career assisting individuals with psychiatric disabilities in community based service settings.

## ■ *What will I learn if I study Psychosocial Rehabilitation and Treatment?*

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

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

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

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

If you register for an average of 15 credits each semester, you can complete the degree in two years. You must register for the summer session at the end of your first year.

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

You must meet the academic standards of progress outlined at right to stay in the program. You must meet with program director each semester prior to registration.

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

Contact Professor Nora Barrett, Program Director, at 732.906.4177.

## DEGREE PROGRAM

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

Courses	Credits
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### Fall

CSC 107	COMPUTERS IN HEALTH TECHNOLOGIES	1
ENG 121	ENGLISH COMPOSITION I	3
PSR 101	INTRODUCTION TO THE PRINCIPLES OF PSYCHOSOCIAL REHABILITATION	3
PSR 102	COMMUNICATION TECHNIQUES IN INTERVIEWING AND COUNSELING	3
PSY 123	INTRODUCTORY PSYCHOLOGY	3

### Spring

BIO 105	HEREDITY, EVOLUTION AND SOCIETY <sup>1</sup>	4
PSR 103	INTRODUCTION TO GROUP DYNAMICS	3
PSR 104	CLINICAL PRINCIPLES IN PSYCHOSOCIAL REHABILITATION AND TREATMENT	3
ENG 122	ENGLISH COMPOSITION II	3
SOC 121	INTRODUCTION TO SOCIOLOGY	3

### Summer Session

PSR 105	REHABILITATION AND THE INDIVIDUAL WITH SEVERE MENTAL ILLNESS I	5
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### Fall

BIO 106	HUMAN BIOLOGY, BIOMEDICAL ISSUES AND SOCIETY <sup>1</sup>	4
PSR 206	REHABILITATION AND THE INDIVIDUAL WITH SEVERE MENTAL ILLNESS II	5
PSR 207	COMMUNITY RESOURCE MANAGEMENT AND THE INDIVIDUAL WITH SEVERE MENTAL ILLNESS	3
PHI 123	ETHICS	3

### Spring

PSR 208	REHABILITATION AND THE INDIVIDUAL WITH SEVERE MENTAL ILLNESS III	5
PSR 209	EMERGING TOPICS IN PSYCHOSOCIAL REHABILITATION AND TREATMENT	3
PSY 235	ABNORMAL PSYCHOLOGY	3
	Humanities Elective	3
	Physical/Health Ed Elective	1-3

TOTAL CREDITS : 64-66

### Standards of Progress:

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

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



# Radiography Education

## RADIOGRAPHY EDUCATION DEPARTMENT

The Program in Radiography is fully accredited by the Joint Review Commission on Education in Radiologic Technology and the NJ DEP Radiologic Technology Board of Examiners.

### DEGREE PROGRAM - TRANSFER TRACK

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

Courses	Credits
<b>Fall</b>	
RAD 128 BASIC MEDICAL PRINCIPLES	4
RAD 141 RADIOGRAPHIC POSITIONING, ANATOMY AND PATHOLOGY I	2
RAD 142 RADIOGRAPHIC POSITIONING LABORATORY I	1
RAD 171 RADIOGRAPHIC IMAGING AND SCIENCE I	4
RAD 190 CLINICAL ORIENTATION	1
BIO 111 HUMAN ANATOMY AND PHYSIOLOGY I	4
<b>PSY 123 INTRODUCTORY PSYCHOLOGY</b>	<b>3</b>
<b>Spring</b>	
RAD 139 RADIATION PROTECTION AND BIOLOGY	2
RAD 143 RADIOGRAPHIC POSITIONING, ANATOMY AND PATHOLOGY II	2
RAD 144 RADIOGRAPHIC POSITIONING LABORATORY II	1
RAD 172 RADIOGRAPHIC IMAGING AND SCIENCE II	2
RAD 210 CLINICAL PRACTICUM I	2
BIO 112 HUMAN ANATOMY AND PHYSIOLOGY II	4
<b>Summer Session</b>	
RAD 145 RADIOGRAPHIC POSITIONING, ANATOMY AND PATHOLOGY III	3
RAD 146 RADIOGRAPHIC POSITIONING LABORATORY III	1
RAD 220 CLINICAL PRACTICUM II	2
<b>Fall</b>	
RAD 247 RADIOGRAPHIC POSITIONING, ANATOMY AND PATHOLOGY IV	2
RAD 248 RADIOGRAPHIC POSITIONING LABORATORY IV	1
<b>RAD 275 RADIOGRAPHIC PHYSICS AND EQUIPMENT MAINTANANCE</b>	<b>3</b>
RAD 230 CLINICAL PRACTICUM III	2
ENG 121 ENGLISH COMPOSITION I	3
Humanities Elective	3
<b>Spring</b>	
RAD 250 CLINICAL PRACTICUM IV	3
RAD 256 RADIOGRAPHIC SEMINAR I	2
RAD 285 ADVANCED RADIOGRAPHIC IMAGING	2
CSC 107 COMPUTERS IN HEALTH TECHNOLOGIES	1
ENG 122 ENGLISH COMPOSITION II	3
Physical Education/Health	1-3
<b>Summer Session</b>	
RAD 260 CLINICAL PRACTICUM V	3
RAD 257 RADIOGRAPHIC SEMINAR II	2

TOTAL CREDITS : 71-73

Continued on next page

### 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.

### ■ Why major in Radiography Education?

There is a national demand for individuals trained in this allied health discipline. Positions are available in hospitals, industry, private physicians', chiropractors' offices and clinics. Related jobs can be found in x-ray equipment, manufacturing firms and medical supply companies.

### ■ If I major in Radiography Education, what degree can I earn?

The Associate in Applied Science Degree. Graduates of this program qualify to take the American Registry of Radiologic Technologists "Board" examination for National Registration as well as New Jersey State Licensure.

### ■ What will I learn if I study Radiography Education?

Extensive study in radiographic principles provides you with comprehensive theoretical and practical knowledge and skills. Instruction takes place in well-equipped classrooms, small group study areas and a laboratory area containing two energized radiographic units with associated film processing area. Clinical practical experience is provided by rotations at our affiliated hospitals providing the "hands-on" experience necessary to perform the tasks of an entry-level radiographer. The curriculum also includes the general education and science courses required for the Associates in Applied Science degree.

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

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

RADIOGRAPHY - CAREER TRACK

Courses	Credits
<b>Fall</b>	
RAD 128 BASIC MEDICAL PRINCIPLES	4
RAD 141 RADIOGRAPHIC POSITIONING, ANATOMY AND PATHOLOGY I	2
RAD 142 RADIOGRAPHIC POSITIONING LABORATORY I	1
RAD 171 RADIOGRAPHIC IMAGING AND SCIENCE I	4
RAD 190 CLINICAL ORIENTATION	1
<b>BIO 131 HUMAN STRUCTURE AND FUNCTION</b>	<b>4</b>
<b>PSY 123 INTRODUCTORY PSYCHOLOGY</b>	<b>3</b>
<b>Spring</b>	
RAD 139 RADIATION PROTECTION AND BIOLOGY	2
RAD 143 RADIOGRAPHIC POSITIONING, ANATOMY AND PATHOLOGY II	2
RAD 144 RADIOGRAPHIC POSITIONING LABORATORY II	1
RAD 172 RADIOGRAPHIC IMAGING AND SCIENCE II	2
RAD 210 CLINICAL PRACTICUM I	2
General Elective	3
<b>Summer Session</b>	
RAD 145 RADIOGRAPHIC POSITIONING, ANATOMY AND PATHOLOGY III	3
RAD 146 RADIOGRAPHIC POSITIONING LABORATORY III	1
RAD 220 CLINICAL PRACTICUM II	2
<b>Fall</b>	
RAD 247 RADIOGRAPHIC POSITIONING, ANATOMY AND PATHOLOGY IV	2
RAD 248 RADIOGRAPHIC POSITIONING LABORATORY IV	1
<b>RAD 275 RADIOGRAPHIC PHYSICS AND EQUIPMENT MAINTANANCE</b>	<b>3</b>
RAD 230 CLINICAL PRACTICUM III	2
ENG 121 ENGLISH COMPOSITION I	3
<b>Humanities Elective</b>	<b>3</b>
<b>Spring</b>	
RAD 250 CLINICAL PRACTICUM IV	3
RAD 256 RADIOGRAPHIC SEMINAR I	2
RAD 285 ADVANCED RADIOGRAPHIC IMAGING	2
Physical Education/Health	1/3
ENG 122 ENGLISH COMPOSITION II	3
<b>CSC 107 COMPUTERS IN HEALTH TECHNOLOGIES</b>	<b>1</b>
<b>Summer Session</b>	
RAD 260 CLINICAL PRACTICUM V	3
RAD 257 RADIOGRAPHIC SEMINAR II	2

TOTAL CREDITS : 71-73

**Standards of Progress:**

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

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

In accordance with NJ State law, this program runs for a minimum of 24 consecutive months. You must register for major coursework in the summer session for both years. If you register for an average of 16 credits each semester, you can complete the degree in a two-year period.

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

You must meet the academic standards of progress outlined at left to progress through the curriculum. Students are also required to have completed CPR for health care providers prior to entering the clinical practice phase of the program.

■ *What is the difference between the transfer and career tracks?*

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

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

Contact Professor Snopek, Department Chair, at 732.906.2583 or [Albert\\_Snopek@middlesexcc.edu](mailto:Albert_Snopek@middlesexcc.edu)

# Course Descriptions

## ADVERTISING GRAPHICS DESIGN

(See Media Arts & Design for prerequisite courses)

### OMITTED IN PREVIOUS CATALOG

AGD 222

#### ■ MEDIA ARTS & DESIGN FIELD EXPERIENCE

Credits: 3

*Prerequisites: Senior status in advertising graphics design option or professional commercial photography option*

A cooperative work experience program whereby students are provided with a job that will enhance their competency by getting practical hands-on experience on state-of-the-art technology utilized by commercial designers and photographers. Students are assigned to work on a one-to-one basis with a professional designer or photographer using the latest techniques and equipment. Supervision of this departmentally approved position is provided by the College through on-the-job visits and individual progress review sessions. Students are required to describe their objectives and attain specific job skills. Students attend a weekly, one-hour seminar on campus and work a minimum of 180 hours during the semester. Open to senior students recommended by the faculty of the department. Career interest and goals taken into account. Marketing Art and Design Field Experience is not a graduation requirement.

## ART

### CHANGE

ART 223 GE HUM

#### ■ SCULPTURE: TRADITIONAL

Credits: 3 (3-0)

An exploration of language and materials of traditional sculpture. Development of skill and understanding the basic elements of sculptural form through modeling, carving and casting. Examination of the works of sculptors through slides, films, books and field trips. A materials fee is assessed to cover the cost of materials required for the course.

ART 224 GE HUM

#### ■ SCULPTURE: CONTEMPORARY

Credits: 3 (3-0)

An exploration of language and materials of contemporary sculpture. Development of skill and understanding of the basic elements of sculptural form through guided projects using the tools and techniques for sculpture in the round. An examination of past and contemporary sculptors and styles through slides, films, books and field trips. A materials fee is assessed to cover the cost of materials required for the course.

## CHEMICAL PROCESS TECHNOLOGY

CPT 100

**NEW COURSE**

#### ■ INTRODUCTION TO CHEMICAL PROCESS TECHNOLOGY

Credits: 3 (3-0)

This course serves as an introduction to the process industries- chemical, petrochemical, pharmaceutical, and food. The course focuses on technician duties, responsibilities and expectations; process terminology; plant organization and a general overview of process equipment, systems and operations. Plant tours will be conducted.

## COMPUTER SCIENCE

CSC 106

**NEW COURSE**

#### ■ INTERMEDIATE PC APPLICATIONS WITH PROGRAMMING

Credits: 4 (3-2)

*Prerequisite(s): BUS107 or CSC105 or CSC107 or MCT 101 or one year of high school computer applications or a programming course AND MAT014 or appropriate score on the College Placement Test*

This course introduces students to a problem solving approach to computer applications through the uses of spreadsheets, database presentation management, a programming language and Internet skills. It emphasizes Visual Basics and Microsoft Excel, in addition to surveying fundamental computer concepts, and is designed for students who already possess a familiarity with computer applications. It is recommended for students planning to transfer to an upper division college that has a computer programming requirement in its computer literacy course. This course is suitable for liberal arts, science and business students.

## DENTAL HYGIENE

### CHANGE

DHY 102

#### ■ DENTAL RADIOLOGY

Credits: 2 (1-2)

The nature, production, and utilization of x-rays as theoretical and technically related to dentistry. Exposure, processing and mounting techniques as well as film interpretation. Introduction to hazards and safeguards.

## MUSIC

MUS 107 GE HUM CHANGE

#### ■ INTRODUCTION TO MUSIC

Credits: 3 (3-0) **CORRECTED CONTACT HOURS**

Contemporary and classical music will be dealt with as integral parts of today's musical scene. Students listen, discuss, analyze, and evaluate music in order to increase appreciation and understanding. Attendance at a minimum of two professional college performances required.

## PHYSICS

**PHY 115 COURSE NO LONGER OFFERED**

**PHY 116 COURSE NO LONGER OFFERED**

### PHY 118

#### ■ TOPICS IN RADIOGRAPHIC PHYSICS

Credits: 4 (4-2) **CORRECTED CONTACT HOURS**

*Prerequisite(s): MAT 013 or equivalent*

An introduction and review of the units of measurements, basic quantities in physics and scientific calculations. Topics include work and energy, basic electricity, electromagnetism, alternating currents and X-ray machine circuitry. The material will focus on the physical principles necessary for an understanding of X-ray equipment operation for Radiography Education students. Laboratory experience is provided.

### PHY 121 GE SCI

#### ■ GENERAL PHYSICS I

Credits: 4 (4-2) **CORRECTED CONTACT HOURS**

*Prerequisite(s): MAT 129*

Emphasizes theoretical models and basic physical principles. The course is precalculus-based and uses some basic calculus in the development and applications of physical principles in a scientific environment. Students will use computers in the laboratory for developing programming skills for the analysis of experimental data. Topics include kinematics, dynamics, conservation of energy and momentum, waves, temperature and heat, and thermodynamics. The first semester of a two-semester College-parallel sequence for liberal arts science and pre-professional students.

### PHY 122 GE SCI

#### ■ GENERAL PHYSICS II

Credits: 4 (4-2) **CORRECTED CONTACT HOURS**

*Prerequisite(s): PHY 121*

Emphasizes theoretical models and basic physical principles. The course is precalculus based and uses some basic calculus in the development and applications of physical principles in a scientific environment. Students will use computers in the laboratory for developing programming skills and for the analysis of experimental data. Topics include electro-statics, direct current circuits, electromagnetism, alternating currents, electromagnetic waves, geometrical and physical optics, quantum theory, atomic physics, and nuclear physics. The second semester of two-semester college-parallel sequence for liberal arts science and pre-professional students.

### PHY 131 GE SCI

#### ■ ANALYTICAL PHYSICS I

Credits: 4 (4-2) **CORRECTED CONTACT HOURS**

*Prerequisite(s): One year of high school laboratory physics*

*Corequisites: MAT 131 or equivalent*

A calculus-based general physics course. Topics include statics, kinematics, dynamics, and the conservation of energy and momenta. Appropriate computer and laboratory experiences are included. The first course in a three-course series consisting of Phy 131, 132, and 231.

### PHY 132 GE SCI

#### ■ ANALYTICAL PHYSICS II

Credits: 4 (4-2) **CORRECTED CONTACT HOURS**

*Prerequisite(s): PHY 131*

*Corequisites: MAT 132 or equivalent*

A continuation of PHY 131. Topics include wave motion, special relativity, thermodynamics, electrostatics and DC circuits. Appropriate computer and laboratory experiences included. The second course in a three-course series consisting of PHY 131, 132 and 231.

### PHY 231 GE SCI

#### ■ ANALYTICAL PHYSICS III

Credits: 4 (4-2) **CORRECTED CONTACT HOURS**

*Prerequisite(s): PHY132, MAT 132*

Continuation of Phy132. Topics include magnetism, AC circuits, electromagnetic waves, optics and atomic and nuclear physics. Appropriate computer and laboratory experiences included. The third course in a three-course series consisting of Phy131, 132, and 231.

## RADIOGRAPHY EDUCATION

*(These courses may not be audited)*

### RAD 171

#### ■ RADIOGRAPHIC IMAGING AND SCIENCE I

Credits: 4 (4-0) **CORRECTED CONTACT HOURS**

*Corequisites: RAD 128, RAD 141, RAD 142, RAD 190*

This course is designed to introduce the student to the basic concepts and practices in radiation protection, equipment operation and maintenance as well as image production and evaluation. Content includes X-ray production, the X-ray tube, filtration, the prime factors, interactions of X-ray with matter, beam restriction, grids, radiographic film, processing and intensifying screens. In addition, an introduction to radiation protection for the patient and radiographer is presented in order to prepare the student for clinical practice.

### RAD 248

#### ■ RADIOGRAPHIC POSITIONING LABORATORY IV

Credits: 1 (0-2) **CORRECTED CONTACT HOURS**

*Prerequisite(s): RAD 145, RAD 146, RAD 220*

*Corequisites: RAD 230, RAD 247, RAD 273*

Practical experience and competency evaluation covering positioning of the cranium, sella turcica, facial bones (nasal bones, zygomatic arch, mandible, and temporomandibular joints), paranasal and mastoid sinuses, orbits, optic foramina and mammography.

**REPLACE COURSE RAD 274 WITH NEW COURSE RAD 275**

### RAD 275

#### ■ RADIOGRAPHIC PHYSICS AND EQUIPMENT MAINTENANCE

Credits: 3 (3-1)

*Prerequisite(s): RAD 145, RAD 146, RAD 172, RAD 220*

*Corequisites: RAD 230, RAD 247, RAD 248*

Radiographic Physics and Equipment Maintenance is designed to build upon previous objectives in Radiographic Imaging and Science I & II and introduce additional concepts and practices in the physics of equipment operation and maintenance as well as image production evaluation. Topics include; basic physical principles, physics of radiographic equipment, advanced circuit theory, radiographic quality control, bone densitometry, digital X-ray imaging and physics of mammography.

## SCIENCE

SCI 155 GE SCI

### ■ INTRODUCTION TO GEOLOGY

Credits: 4 (3-2)

#### **CHANGE IN PREREQUISITES**

*Prerequisite(s): MAT 013 or appropriate score on the College Placement Test*

A one-semester course dealing predominately with Geology and with the physical aspects of the ocean. Topics include a discussion and identification of rocks and minerals, volcanism, the geologic time scale, earthquakes, and their origin. Introduces important topics in Physical Oceanography and the Geology of New Jersey and environs. Students are required to go on an all-day field trip. Provides appropriate laboratory exercises.

SCI 157 GE SCI

### ■ INTRODUCTION TO METEOROLOGY

Credits: 4 (3-2)

#### **CHANGE IN PREREQUISITES**

*Prerequisite(s): Prerequisite(s): MAT 013 or appropriate score on the College Placement Test.*

An introduction to meteorology, providing an overview of the atmosphere, temperature, measurements and energy balance, as it pertains to air gasses, clouds, precipitation, wind, storms, and fronts. Weather predictions and forecasting instrumentation are integral parts of this course, including Internet sources and weather satellite transmissions. How human actions, whether intentional or unintentional, may influence the atmosphere will be discussed. Appropriate laboratory experience is provided.

SCI 216

### ■ CURRENT ISSUES AND OPPORTUNITIES IN LAB TECHNOLOGY

**Credits: 1 (0-0-2)**

#### **CHANGE IN COURSE DESCRIPTION**

Students will explore recent advances in technology which impact job opportunities. An overview of the lab technology field is given through site visits and guest speakers. Students will gain insight on how to write a resume and search and interview for a job.

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