

Middlesex

County College

More Than You Imagine



**2000-2001
Catalog Supplement**

Introduction

This supplement is an update to the 1999-2001 catalog and should be used in conjunction with it. It contains updated information on the academic programs, tuition and fees and policies for the 2000-01 academic year. However, program requirements, courses, policies, tuition, fees and procedures are subject to change as circumstances and exigencies require. Additional information may be obtained from the appropriate office or the Registrar.

ACCESSIBILITY FOR PERSONS WITH DISABILITIES

Middlesex County College provides reasonable accommodation for qualified individuals with disabilities. Students requesting information regarding procedures should contact the Counselor for Students with Disabilities at (732) 906-2546.

ACCREDITATION

Middlesex County College is accredited by the Middle States Association of Colleges and Secondary Schools. Inquiries may be sent to:

Commission on Higher Education
Middle States Association of Colleges and Schools
3624 Market Street
Philadelphia, PA 19104
(215) 662-5606

Expenses and Financial Aid

EXPENSES, PAGE 38

TUITION AND FEES

These rates apply to the Fall 2000 semester. The College reserves the right to change these rates for subsequent semesters.

Tuition

Middlesex County Residents	\$ 67.50 per credit or credit equivalent
Out of County Residents	\$ 135.00 per credit or credit equivalent

Fees

General Service

Middlesex County Residents	\$ 7.50 per credit or credit equivalent
Out of County Residents	\$ 15.00 per credit or credit equivalent

Student Service

Middlesex County Residents	\$ 3.00 per credit or credit equivalent
Out of County Residents	\$ 6.00 per credit or credit equivalent

Technology

Middlesex County Residents	\$ 3.00 per credit or credit equivalent
Out of County Residents	\$ 6.00 per credit or credit equivalent

Drop Fee Discontinued

FITNESS CLUB RATES

MCC Alumni

Individual - Annual	\$123.00
Family - Annual	\$308.00

GENERAL USE FEES

Swimming Pool

The general public is charged \$4.00 per person per session. There is no charge for children under five years of age.

Children 16 years old and younger need parent or guardian, dressed in appropriate swimming attire, to enter pool.

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

SPECIAL FEES

Dental Hygiene Senior Students Licensing Examination Fees

North East Regional Board	\$450.00 (approximately)
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BOOKS AND SUPPLIES

Dietetic Technology

Knives	\$ 20.00 (approximately)
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Academic Standards and Regulations

DEGREE AND CERTIFICATE OF ACHIEVEMENT REQUIREMENTS, PAGE 51

DEGREE REQUIREMENTS

1. Satisfactory completion of all courses in an approved program which requires not fewer than 60 nor more than 66 semester credit hours, except when required for licensure, accreditation, or transfer of full junior status.
2. Minimum grades of C in English composition courses.
3. Minimum cumulative grade point average of 2.0.
4. Residency Requirements: Individual programs may require a minimum number of courses in the major to be taken at MCC. The College may accept up to 45 credits for courses successfully completed at another college.

ASSOCIATE IN ARTS DEGREE

1. A minimum of 6 credits in English composition.
2. A minimum of 3 credits in speech communication.
3. A minimum of 3 credits in computer literacy.
4. A minimum of 15 credits in humanities, including 6 in history of western civilization and 6 in a foreign language.*
5. A minimum of 6 credits in the social sciences.
6. A minimum of 7 credits in the natural sciences.
7. A minimum of 6 credits in a two-semester mathematics sequence.**
8. A minimum of one credit in physical education or health education.
9. A minimum of 12 credits in one area of concentration.
10. Additional credits as detailed in the sample plan of study to comply with general college requirements, including a minimum of 3 credits that satisfy the general education cultural diversity requirement.

* Level of language placement is based on proficiency tests.

** Life sciences are generally recommended. These must be laboratory science courses.

*** Mathematical competency equivalent to MAT 101-102 is required. Demonstration of this level of competency permits this requirement to be waived.

CHANGE: MAT 123-124 MAY NOT BE SUBSTITUTED FOR MODERN LANGUAGE.

Students' Rights and Responsibilities

STUDENT RESPONSIBILITIES, PAGE 56

ACCEPTABLE USE POLICY FOR COMPUTER FACILITIES

The mission of Middlesex County College is to “provide a quality, affordable post-secondary education responsive to the needs of the community and accessible to all who can benefit from it” (Current Middlesex County College catalog). Inherent in our purpose is to provide the college community, including faculty, staff, students and other authorized users, access to the computing resources needed to support academic and instructional activities required for effective learning. Access to these resources assumes they will be used in a professional, ethical, and legal manner.

“In order to provide for the maximum comfort, convenience, and well-being of the total college community, certain standards of behavior have been established at Middlesex County College” (Current Middlesex County College catalog). Upon admission to the college, students accept an unqualified commitment to adhere to such standards and to conduct themselves in a manner that reflects pride in themselves and the college. To ensure adherence to these standards and protect the integrity of its computing resources, the College reserves the right to monitor such resources. Any behavior in violation of College standards is cause for disciplinary action.

Implicit in the use of the college’s computer resources is the user’s obligation to abide by the following rules and regulations:

- Usage is limited to registered students, faculty, staff, administrators, employees or authorized guests.
- Each user is responsible for his or her own account which may not be shared or transferred to another individual.
- Accessing another individual’s account is strictly forbidden.
- No one shall attempt to degrade the performance of the computer resources by: sending mass mailings, introducing computer viruses, using the facilities for commercial purposes, participating in interactive game playing or engaging in any other attempt to degrade the system.
- Each user must refrain from sending, printing, requesting, displaying or storing images, audio files, and/or other materials for purposes unrelated to the mission and goals of the college.
- No one shall attempt to circumvent any system security measure.
- No one shall violate copyright and/or software agreements.
- All federal, state, and local laws will be adhered to when using the College’s computing equipment.
- The college’s computing resources may not be used for commercial purposes including solicitations on behalf of groups or organizations that are not related to the college.

The college will make every effort to ensure the integrity of the computer resources and the information stored thereon. However, MCC is not responsible for the loss of information from computing misuses, malfunction of computing and networking hardware, malfunction of computing and networking software or external contamination of data or programs.

MOPE

Academic Programs

NEW PROGRAM FOR FALL 2001

Fine Arts

Associate Degree (A.F.A.) with options in Art, Music and Theatre

For information, contact Professor Siegfried, Department Chair, at **(732) 906-2589**.

Health Science

GENERAL EDUCATION REQUIREMENTS

COURSES	CREDITS	PREREQUISITES
ENG 121 English Comp I	3	
ENG 122 English Comp II	3	ENG 121
PSY 123 Intro to Psychology	3	
PED Phys Ed - or -	—	
HED 150 Contemporary Health Issues	1-3	
Humanities Elective	3	
SPE 121 Fundamentals of Public Speaking	3	
General Education Credits	16-18	

SCIENCE AND MATH REQUIREMENTS

CSC 107 Computers in Health Technology	1	
Laboratory Science ¹	8	
BIO 211 Principles of Microbiology	4	
Mathematics ²	6	
Science and Math Credits	19	

Allied Health Requirement (*previously completed*) **30 (Maximum)**

Students may receive up to 30 credits for previous allied health training. The determination will be made based upon an evaluation of the total hours of training and the level of training and responsibility.

Electives: **24 (Maximum)**

The number of electives will depend on the number of credits approved from previous training. The student will select electives from a list of courses based on individual goals. The electives may be taken from office administration, small business administration, psychology, or other courses as approved by the department. A list of choices can be provided.

TOTAL CREDITS 65-67

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

² Mathematics: Mathematics I (MAT107) & Mathematics II (MAT108) or higher

Information regarding courses transferring to other colleges, should be obtained by contacting a transfer counselor, the MLT office, or the Academic Advising Center.

THE A.A.S. DEGREE IN HEALTH SCIENCE IS A NEW PROGRAM offered through the Division of Science, Mathematics, and Health Technologies in the Department of Medical Laboratory Technology - (732) 906-2581.

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Who Should Consider This Degree? Any allied health practitioner who holds a certificate or license – Dental, medical and lab assistants, phlebotomists; ultrasound, surgical, and dental technicians; EMTs, paramedics, LPNs, RNs (diploma) and military trained allied health practitioners.

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

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

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

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

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

Where should I direct specific questions about this program? Contact Professor Larkin, Department Chair, at (732) 906-2581.

Hotel, Restaurant and Institution Management

**CLARIFICATION,
PAGE 92**

HOTEL, RESTAURANT AND INSTITUTION MANAGEMENT

Culinary Arts – Certificate of Achievement Program

Liberal Arts

CORE DEGREE REQUIREMENTS

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

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

– Continued –

¹ Choose six credits in sequence of the same modern language from FRE, GER, ITA, SPA. If you completed at least two years of high school study in one modern language, your level of language will be determined by a placement test excluding SPA 242.

² Choose three credits by taking either CSC 105 or BUS 107 (Business Option only – LAB).

³ Choose six credits from courses designated in the course description as GE SS from the following: African-American Studies, Anthropology, Economics, Political Science, Psychology and Sociology.

⁴ Choose a minimum of three credits from courses designated as GE DIV in the course descriptions section of the current catalog. If the course is also designated as GE HUM, GE SS, GE SCI or GE PED, it may also be used to satisfy an additional graduation requirement.

⁵ Choose a minimum of seven credits by choosing two of the following courses: BIO 103, BIO 105, BIO 106, ENV 207, ENV 211, ENV 212, SCI 108, SCI 155, SCI 156, SCI 157 or choose eight credits from a one year laboratory science sequence in Biology, Chemistry or Physics depending on your major: BIO/CHM 117-118 / BIO/CHM 123-124 / PHY 121-122.

⁶ You should choose the mathematics courses in consultation with an academic advisor. You should take the appropriate mathematics courses that will transfer to an upper division college or university and for which you have the appropriate academic background. Choose one of the following sequences: MAT 101 & 102 or MAT 123 & 124 or MAT 129 & 131 or MAT 131 & 132 or MAT 131 & 285. For the business option choose one of the following sequences: MAT 123 & 124 or MAT 129 & 131 or MAT 131 & 132 or MAT 131 & 285 or by advisement.

⁷ Choose a minimum of twelve credits offered in the division with the following designations: AFS, ART, COM, DAN, ENG, FRE, GER, HED, HIS, ITA, LNC, MUS, PED, PHI, POS, PSY, SOC, SPA, SPE and THE. Students who select the business option must complete ACC 101, ACC 102, ECO 201 and EC 202 for a total of fourteen credits.

⁸ You may satisfy this requirement with any HED or PED course except PED 270, HED and PED courses may also satisfy the divisional elective requirement.

⁹ Choose three credits from the following courses: AFS, ART, CIU, COM, COR, DAN, EDU, ENG, FRE, GER, HED, HIS, ITA, LNC, MUS, PED, PHI, POL, POS, PSY, SOC, SPA, SPE, and THE.

¹⁰ Choose three credits in humanities from courses designated in the course descriptions as GE HUM from the following: African-American Studies, Art, Dance, English, History, Modern Language, Music, Philosophy, Speech and Theater.

GENERAL DEGREE OPTION

COURSES	CREDITS	PREREQUISITES
<i>Choose a minimum of 12 credits from the following:</i>	12	
African-American Studies, Art, Communication, Dance, English, French, German, Health Education, History, Italian, Languages and Cultures, Music, Physical Education, Philosophy, Political Science, Psychology, Recreation, Sociology, Spanish, Speech, Social Science and Theater.		
TOTAL CREDITS 62-70		

BUSINESS DEGREE OPTION

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

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

EDUCATION DEGREE OPTION

COURSES	CREDITS	PREREQUISITES
SOC 121 Introduction to Sociology	3	
AND three advised Liberal Arts Electives	9	
<small>(Consult an advisor, transfer counselor, or the department chair for current recommended electives and transfer information related to receiving institutions)</small>		
IN ADDITION you are to fulfill the Social Sciences requirement with:	6	
PSY 123 Introductory Psychology	3	
PSY 223 Child Psychology	3	
<small>You should meet with the chairperson of the of the Psychology and Education Department, an advisor in the Academic Advising Center, or a counselor in the Counseling and Transfer Office to choose the most appropriate courses for transfer to the upper division college or university you plan to attend.</small>		
TOTAL CREDITS 62-70		

Nursing

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STANDARDS OF PROGRESS

9. UMDNJ-SN Students must complete their Academic Nursing Program within 5 years of beginning enrollment in their first nursing course.

Radiography Education

DEGREE PROGRAM

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

COURSES	CREDITS	PREREQUISITES
RAD 128 Basic Medical Principles	4	
RAD 141 Radiographic Positioning, Anatomy and Pathology I	2	
RAD 142 Positioning Laboratory I	1	
RAD 171 Radiographic Imaging and Science I	4	
RAD 190 Clinical Orientation	1	
BIO III Human Anatomy and Physiology I	4	BIO 010 & CHM 010
RAD 139 Radiation Protection and Biology	2	RAD 128, 141, 142, 171 & 190
RAD 143 Radiographic Positioning, Anatomy and Pathology II	2	RAD 128, 141, 142, 171 & 190
RAD 144 Positioning Laboratory II	1	RAD 128, 141, 142, 171 & 190
RAD 172 Radiographic Imaging and Science II	2	RAD 128, 141, 142, 171 & 190
RAD 210 Clinical Practicum I	2	RAD 128, 141, 142, 171 & 190
BIO 112 Human Anatomy and Physiology II	4	BIO 111
PHY 118 Topics in Radiographic Physics	4	MAT 013
Summer Session I		
RAD 145 Radiographic Positioning, Anatomy and Pathology III	3	RAD 139, 143, 144, 172 & 210
RAD 146 Positioning Laboratory III	1	RAD 139, 143, 144, 172 & 210
RAD 220 Clinical Practicum II	2	RAD 145 & 146
RAD 247 Radiographic Positioning, Anatomy and Pathology IV	2	RAD 145, 146 & 220
RAD 248 Positioning Laboratory IV	1	RAD 145, 146 & 220
RAD 273 Radiographic Imaging and Science III	3	RAD 145, 146, 172, 220 & PHY 118
RAD 230 Clinical Practicum III	2	RAD 247, 248 & 273
ENG 121 English I	3	
Humanities Elective	3	
RAD 250 Clinical Practicum IV	3	RAD 230, 247, 248 & 273
RAD 256 Radiographic Seminar I	2	RAD 230, 247, 248 & 273
RAD 285 Advanced Radiographic Imaging	2	RAD 230, 247, 248 & 273
CSC 107 Computers in Health Technologies	1	
ENG 122 English II	3	ENG 121
PSY 123 Introductory Psychology	3	
Physical Education/Health Education	1-3	
Summer Session II		
RAD 260 Clinical Practicum V	3	RAD 250, 256 & 285
RAD 257 Radiographic Seminar II	2	RAD 256 & 260
TOTAL CREDITS 73-75		

Telecommunication Networking Technology

(A Telecommunication Networking Technology Program) Physics/Electrical Engineering Technology Department

DEGREE PROGRAM

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

COURSES	CREDITS	PREREQUISITES
ENG 131 Research, Composition & Presentation I	2	
MAD 121 Graphics for Computer Authors & Presenters	3	
MAT 141 Mathematics for Telecommunications I	2	
MCT 101 Introduction to Engineering Technology	2	
PHY 141 Foundations of Physics I	2	
TCT 103 Product Maintenance I	4	
ENG 132 Research, Composition & Presentation II	2	ENG 131
MAT 142 Mathematics for Telecommunications II	2	MAT 141
PHY 142 Foundations of Physics II	2	PHY 141
TCT 104 Product Maintenance II	4	TCT 103 & MCT 101
CSC 230 Production and Authoring Tools	4	CSC 110 (Recommended – MAD 121)
Humanities Elective	3	
ENG 133 Research, Composition & Presentation III	2	ENG 132
MAT 241 Mathematics for Telecommunications III	2	MAT 142
PHY 241 Foundations of Physics III	2	PHY 142
TCT 201 PC and LAN Hardware	4	TCT 104
TCT 221 Wide-Area Networking I	4	TCT 104 & 122
Social Science Elective (Economics)	3	
PHY 242 Foundations of Physics IV	2	PHY 241
MAT 242 Mathematics for Telecommunications IV	2	MAT 241
CSC 251 Windows NT Workstation Administration	2	CSC 110 or TCT 103
TCT 222 Wide-Area Networking II	4	TCT 221 & 201
Physical/Health Ed Elective	1-3	
Technical Elective or Co-op	3-4	
<i>Technical Elective Choices (select one):</i>		
BUS 101 Business Organization & Management	3	
BUS 201 Business Law I	3	
CSC 247 Novell System Administration	3	CSC 105 or TCT 103
CSC 133 Intro to Computer Science Using C++	4	
CSC 160 Introduction to UNIX	3	
CSC 165 Beginners C-Programming	3	
MCT 208 Meecomtronics & Telemedia		
Tech Field Experience	3	
TOTAL CREDITS 63-66		

Why major in Telecommunication Networking Technology? Telecommunication Networking Technology deals with the transmission of digital information over local and wide-area networks. The telecom industry has an ongoing need for technicians in such areas as computer installation and operations, network installation and troubleshooting, router configuration, video and teleconferencing, cable installation and multimedia authoring.

If I major in Telecommunication Networking Technology, what degree can I earn? The Associate in Applied Science Degree which prepares you to begin your career after graduation. Career opportunities exist in business and industry.

If I major in Telecommunication Networking Technology, can I transfer to an upper division college or university? Many upper division colleges and universities will apply some of the courses you have taken towards a bachelor's degree.

What will I learn if I study Telecommunication Networking Technology? You acquire a background in digital and analog electronics, computer technology, multimedia authoring and presentations, local and wide area networking, videoconferencing and remote and automated testing. Additionally, you study mathematics, science, and general education.

Are there any requirements I must satisfy before I start taking courses in my major? Algebra is a prerequisite for all majors. Algebra I competency must be verified with a passing score on the College placement test. You must also have a grade of C or better in one year of a high school laboratory science.

How long will it take for me to complete this degree? If you do not need developmental coursework and you register for an average of 17 credits each semester, you can complete the degree in two years.

Where should I direct specific questions about this program?
Contact Professor Waintraub, Department Chair, at (732) 906-2584.

MORE Course Descriptions

ART

NEW COURSES

ART 148 ART PORTFOLIO 1 credit (1-0)

Prerequisite: one or more three-credit studio art courses or permission of department.

Student artwork is developed and expanded into a coherent portfolio. The course focuses on the preparation of a body of work for presentation in a professional manner and for effective transfer to senior institutions. Issues of quality, range of style and techniques and methods of representing work in a critical setting are addressed. *Field trip required.*

ART 149 ART STUDIO SEMINAR 1 credit (1-0)

Prerequisite: one or more three-credit studio art courses or permission of department.

Art studio issues are addressed as they relate to the artist in contemporary society. The motivations, relevance and the nature of artmaking in American and global culture are investigated. The creation of subject matter for artistic expression that is personally meaningful is placed in a larger aesthetic context. The conceptual links among all the visual arts are explored. *Field trip required.*

BIOLOGY

CHANGE IN GE DESIGNATION

BIO 103 GE DIV GE SCI PLANTS, PEOPLE AND CULTURE 3 credits (2-2)

CHANGE IN PREREQUISITES

BIO 105 GE SCI HEREDITY, EVOLUTION AND SOCIETY 4 credits (3-2)

Prerequisites: Appropriate score on the College 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.

BIO 106 GE SCI HUMAN BIOLOGY, BIOMEDICAL ISSUES AND SOCIETY 4 credits (3-2)

Prerequisites: Appropriate score on the College 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.

COMPUTER SCIENCE

CHANGE IN PREREQUISITE

CSC 109 GE CSC BASIC PROGRAMMING AND SYSTEMS 3 credits (2-2)

Prerequisite: Two years of high school Algebra or MAT 013 or appropriate score on college placement test

Corequisite: MAT 014

CHANGE IN COURSE DESCRIPTION

CSC 133 INTRODUCTION TO COMPUTER SCIENCE USING C++ 4 credits (3-1-2)

Prerequisite(s): MAT 014 or appropriate score on college placement test
Corequisite(s): MAT 125 or 127 or 129

Presents an introduction to programming and problem solving using an object-oriented programming language C++. Algorithm development and basic problem solving techniques are introduced. Fundamental topics of computer programming including sequence, selection, repetition, input/output, functions, parameter passing, scope, lifetime, and arrays are discussed in detail. This is the first major course in Computer Science and is required of all students pursuing a degree in any of the three options offered by the department. The course is also recommended for students in other programs seeking a rigorous introduction to computer programming.

CSC 134 OBJECT ORIENTED PROGRAMMING USING C++ 4 credits (3-3)

Prerequisite(s): CSC 133 and MAT 125 or 127 or 129

Corequisite(s): MAT 126 or 128 or 131 or 131A

Builds on the C++ foundation developed in CSC 133 and is the second core course required for students in the Computer Information Systems and Computer Science Transfer programs. It discusses the software engineering principles of encapsulation and reuse and how they lead to abstract data types. The object-oriented programming features of classes, inheritance, polymorphism and composition are covered, along with the C++ features of constructors and operator overloading. Students implement programs using these features in the C++ programming language.

CSC 200 NETWORKING TECHNOLOGIES 3 credits (3-0)

Prerequisite: CSC 110

This course will provide the student with a thorough understanding of the basic concepts of data communications, networking and connectivity. This includes the topics covered in the Novell Networking Technologies course and the topics covered in the Microsoft Networking Essentials course. Upon successful completion of the course, the student will be prepared to take the associated certification test in either Novell Networking Technologies or Microsoft Networking Essentials.

CHANGE IN PREREQUISITES

CSC 208 VISUAL BASIC PROGRAMMING 4 credits (3-3)

Prerequisite: CSC 133

CHANGE IN COREQUISITE

CSC 211 PROGRAMMING IN JAVA 4 credits (3-3)

Prerequisite: CSC 134

Corequisite has been eliminated.

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CHANGE IN COURSE DESCRIPTION

CSC 233 COMPUTER ARCHITECTURE AND ASSEMBLY LANGUAGE I

4 credits (3-2)

Prerequisite: CSC 133 or permission of Chairperson

Corequisite: CSC 134 or permission of Chairperson

This course teaches the fundamentals of computer architecture and assembly language programming. Topics include data representation, binary arithmetic, program flow, indexing, addressing and subprogram development. Programs will be developed and run in an assembly language.

CSC 247 NETWARE SYSTEM ADMINISTRATION

3 credits (2-3)

Prerequisite: CSC 105

Corequisite: CSC 110

This course is taught using a NetWare 4.11 environment and will provide the student with the necessary knowledge and skills to become a Certified Novell Administrator (CNA). Topics include the terminology and components of a network, the hardware and software requirements, mapping drives, setting up various types of objects, managing the file system, login scripts, printing, accessing and protecting the server console, security, setting up the client software, managing resources in a multi context environment and application delivery. This course covers the topics included in the Novell course #520-IntranetWare 4.11 Administration. Upon successful completion of this course, the student will be prepared to take the associated certification test.

CSC 248 NETWARE SERVICE AND SUPPORT

3 credits (2-2)

Prerequisite: CSC 200 and 247

This course will provide students with the knowledge necessary to support and service a Novell network. Cabling, Network Interface Cards, Storage Devices and other Novell network hardware components will be studied. Hardware and software installation, troubleshooting and the use of network diagnostic and repair utilities will also be examined. This course includes topics covered in Novell course - #580 NetWare Service and Support. Upon successful completion of this course, the student will be prepared to take the associated certification test.

CHANGE IN CREDITS, PREREQUISITES AND COREQUISITES

CSC 251 WINDOWS NT WORKSTATION ADMINISTRATION

2 credits (1-2)

Prerequisite: CSC 110 or TCT 103

Corequisite: CSC 200 or TCT 201

HEALTH

CHANGE IN COURSE DESCRIPTION AND GE DESIGNATION

HED 150 GE DIV GE PED CONTEMPORARY HEALTH ISSUES

3 credits (3-0)

A survey course designed to enable students to understand the biological, physiological, psychological, social and cross-cultural aspects of wellness. Topics include but are not limited to establishing a basis for wellness, understanding sexuality, making responsible decisions about substance use and abuse, getting fit, protecting oneself against disease and environmental risk factors.

MATHEMATICS

COURSE TITLE CORRECTION

MAT 013B ALGEBRA I (PART B)

4 credit equivalents (4-0)

Prerequisite: MAT 013A or permission of Mathematics Department Chairperson

CHANGE IN CONTACT HOURS

MAT 127 PRECALCULUS I

2 credits (2-1)

MAT 128 PRECALCULUS II

2 credits (2-1)

MUSIC

CHANGE IN TITLE

MUS 103 CHORUS I

1 credit (0-2)

MUS 104 CHORUS II

1 credit (0-2)

MUS 109 CHORUS III

1 credit (0-2)

MUS 110 CHORUS IV

1 credit (0-2)

OFFICE ADMINISTRATION

CHANGE IN COURSE DESCRIPTION

OAD 010 KEYBOARDING FOR COMPUTERS

1 credit equivalent (0-2)

Keyboarding computer skills are developed through hands-on applications. The course teaches the touch operation of the alphabetic, numeric, and command/function keys. Students learn to keyboard rapidly and accurately. Vocabulary and concepts used in keyboarding operations are also incorporated.

PHYSICS

NEW COURSE

PHY 118 TOPICS IN RADIOGRAPHIC PHYSICS

4 credits (2-4)

Prerequisites: MAT 013 or equivalent

An introduction and review of the units of measurement, basic quantities in physics and 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.

RADIOGRAPHY EDUCATION

(These courses may not be audited)

NEW COURSES

RAD 128 BASIC MEDICAL PRINCIPLES 4 credits (4-0)

This course introduces the student to the basic principles necessary for clinical practice. Course content includes general concepts in patient care, medical terminology, medical-legal aspects, vital signs, infection control, medication administration, pharmacology, patient communication and ethical considerations.

RAD 139 RADIATION PROTECTION AND BIOLOGY 2 credits (2-0)

Prerequisites: RAD 128, 141, 142, 171, 190

Corequisites: RAD 143, 144, 172, 210

This course provides students with an understanding of and respect for the recommendations relating to the safe use of ionizing radiation. Students are provided with comprehensive coverage of the physical principles and technical aspects of radiation protection and their relationship to radiobiology.

RAD 141 RADIOGRAPHIC POSITIONING, ANATOMY AND PATHOLOGY I 2 credits (2-0)

Corequisites: RAD 128, 142, 171, 190

A presentation of anatomy, positioning and pathology of the Upper extremity, Shoulder Girdle, Sternum, Sterno Clavicular and Acromio Clavicular Joints, Thoracic Cavity, Rib Cage, Chest, Lungs and Abdomen.

RAD 142 RADIOGRAPHIC POSITIONING LABORATORY I 1 credit (0-3)

Corequisites: RAD 128, 141, 171, 190

Practical experience and competency evaluation covering positioning of the Upper extremity, Shoulder Girdle, Sternum, Rib Cage, Sterno Clavicular and Acromio Clavicular Joints, Abdomen, Thoracic Cavity, Chest and Lungs.

RAD 143 RADIOGRAPHIC POSITIONING, ANATOMY AND PATHOLOGY II 2 credits (2-0)

Prerequisites: RAD 128, 141, 142, 171, 190

Corequisites: RAD 139, 144, 172, 210

A presentation of anatomy, positioning and pathology of the lower extremities, hip, pelvis, sacrum, coccyx, sacroiliac joints and vertebral column including scoliosis studies.

RAD 144 RADIOGRAPHIC POSITIONING LABORATORY II 1 credit (0-3)

Prerequisites: RAD 128, 141, 142, 171, 190

Corequisites: RAD 139, 143, 172, 210

Practical experience and competency evaluation covering positioning of the lower extremities, pelvis and vertebral column.

RAD 145 RADIOGRAPHIC POSITIONING ANATOMY AND PATHOLOGY III

3 credits (3-0)

Prerequisites: RAD 139, 143, 144, 172, 210

Corequisites: RAD 146

A study of the specific anatomy of the digestive, urinary and biliary systems with the appropriate positioning techniques. A discussion of the pharmacological concepts of contrast media and their use in these procedures as well as the theoretical principles of venipuncture are presented. The principles and equipment used for body section radiography are discussed.

RAD 146 RADIOGRAPHIC POSITIONING LABORATORY III 1 credit (0-3)

Prerequisites: RAD 139, 143, 144, 172, 210

Corequisites: RAD 145

Radiographic demonstration of the digestive, urinary and biliary systems with the appropriate positioning techniques. Practical application of various contrast media is demonstrated. Venipuncture techniques are demonstrated using the phantom injectable arm. Discussion of the principles and equipment used for body section radiography using the energized radiographic laboratory and the phantom patient. Practical competency must be demonstrated.

RAD 171 RADIOGRAPHIC IMAGING AND SCIENCE I 4 credits (3-2)

Corequisites: RAD 128, 141, 142, 190

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

RAD 172 RADIOGRAPHIC IMAGING AND SCIENCE II 2 credits (2-0)

Prerequisites: 128, 141, 142, 171, 190

Corequisites: 139, 143, 144, 210

A continuation of Radiographic Imaging and Science I designed to build upon previous objectives and introduce additional concepts and practices in equipment operation and maintenance as well as image production and evaluation. Film/screen combinations, sensitometry, exposure systems, automatic exposure control devices, mobile radiography and fluoroscopy are discussed and analyzed. Students learn to analyze the radiographic image with focus upon the interaction of various radiographic factors such as density, contrast, detail and distortion.

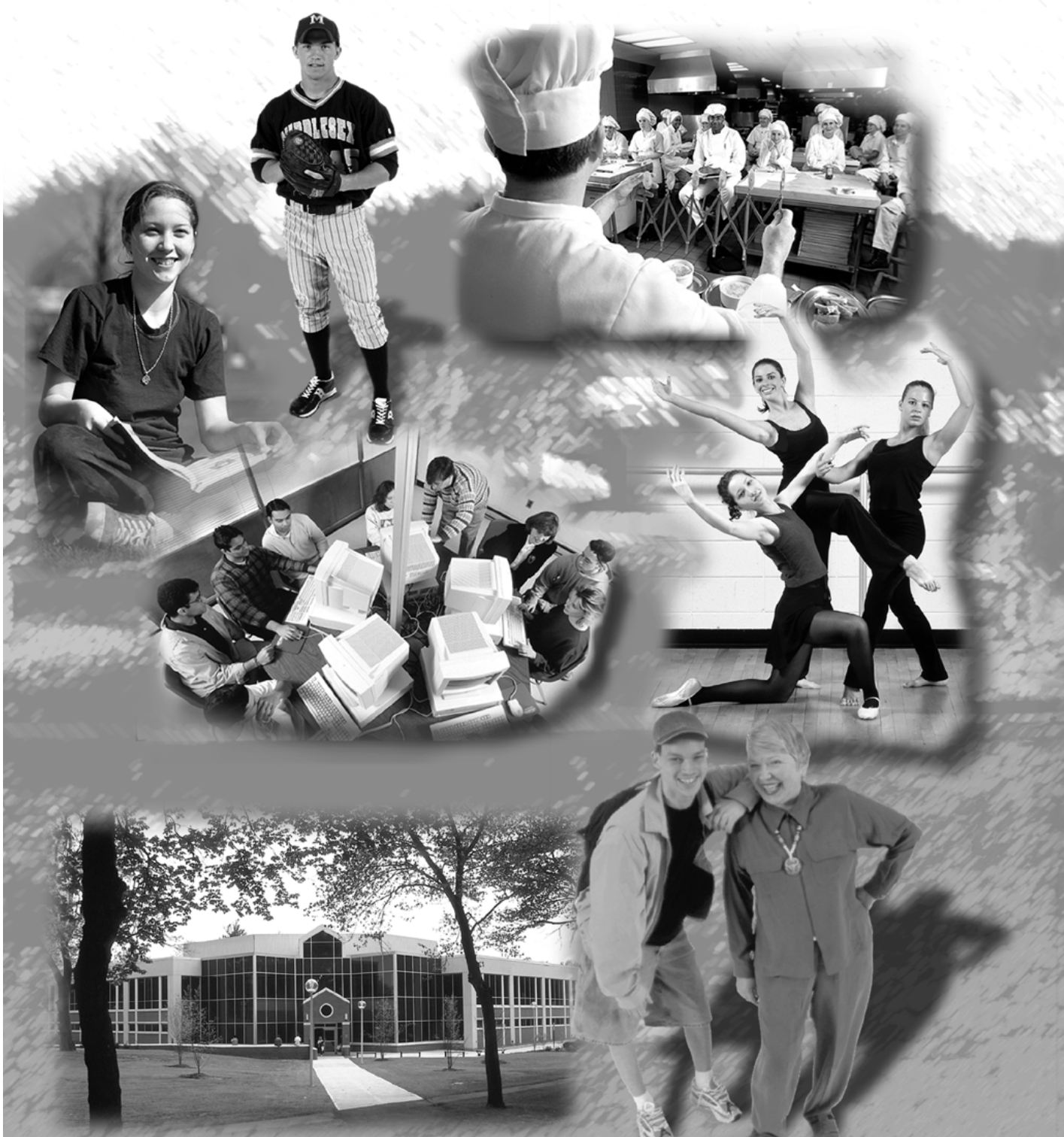
RAD 190 CLINICAL ORIENTATION 1 credit (3-0)

Corequisites: RAD 128, 141, 142, 171

A hands-on clinical experience, introducing the student to the clinical setting. The student will demonstrate basic medical skills by assisting the staff technologists during radiographic examinations.

MIDDLESEX

COUNTY COLLEGE



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