2015 – 2016
Academic Catalog
Programs & Courses
Manchester Community College
Accounting and Business Administration Transfer, A.S.

Program Design
The Accounting and Business Administration Transfer associate degree program is designed for students who plan to earn a bachelor’s degree in accounting, business administration or marketing. This program provides a broad liberal arts background consisting mostly of courses normally taken in the first two years at a baccalaureate college or university. In addition, students will take courses in accounting and business administration. Advanced courses should be taken at the institution to which you transfer. Students should be familiar with the requirements of the institutions to which they will transfer. Therefore, we encourage selection of transfer institutions as early as possible. Students should see an advisor before choosing elective courses because each transfer institution may have specific requirements.

Curriculum
We recommend that students have a sound foundation in mathematics before entering this program. Take the assessment test early to determine your level of mathematical ability. Students must achieve at least a C or better in an accounting course to continue on to the next level. Note: To take a business course numbered 100 or higher, students must be eligible for ENG* 101. To take an accounting course numbered 100 or higher, students must be eligible for ENG* 101 and MAT* 095 or higher.

Learning Outcomes
Upon successful completion of all Accounting and Business Administration Transfer degree program requirements, graduates will
1. Demonstrate relevant content knowledge in required core business disciplines (accounting, business law, management and organizational behavior, and marketing) and apply concepts in problem solving through identifying and evaluating alternative solutions and offering a well-supported conclusion.
2. Recognize proper business acumen and decorum in professional interactions; demonstrate appropriate interpersonal communication and presentation skills and demeanor; demonstrate the ability to use presentation and team interpersonal skills effectively in class presentations.
3. Recognize and respond thoughtfully to situations that present ethical dilemma, demonstrating the ability to identify ethical dilemmas and social responsibilities of business, an ability to confront ethical dilemmas, and apply ethical principles to business situations using concepts learned.
4. Apply concepts in core business disciplines and critical thinking skills to make sound financial decisions.
5. Demonstrate an understanding of the interrelationships between accounting and business courses.

In addition, the graduate will complete the comprehensive learning outcomes identified with the General Education Core.
Accounting & Business Administration Requirements

- BBG* 101: Introduction to Business 3 Credits
- ACC* 115: Financial Accounting 4 Credits
- COM* 173: Public Speaking 3 Credits
- ENG* 101: Composition 3 Credits (Gen Ed - English)
- MAT* 165: Elementary Statistics with Computer Applications 4 Credits (Gen Ed - Mathematics)

Subtotal: 17

- ACC* 117: Principles of Managerial Accounting 3 Credits
- ECN* 101: Principles of Macroeconomics 3 Credits
- Choose one course from Gen Ed - Physical and Natural Sciences 3-4 Credits
- BMG* 204: Managerial Communication 3 Credits or
- ENG* 110: Introduction to Literature 3 Credits (Gen Ed - Humanities)
- BMG* 202: Principles of Management 3 Credits

Subtotal: 15-16

- BMG* 210: Organizational Behavior 3 Credits or
- PSY* 247: Industrial and Organizational Psychology 3 Credits
- ECN* 102: Principles of Microeconomics 3 Credits
- Choose any HIS*, ANT*, SOC*, GEO*, PHL*, PSY*, BIO*, CHE* or PHY* course 3 credits
- MAT* 158: Functions, Graphs & Matrices 3 Credits
- BBG* 234: Legal Environment of Business 3 Credits

Subtotal: 15

- BMK* 201: Principles of Marketing 3 Credits
- BFN* 201: Principles of Finance 3 Credits
- Choose one course from Gen Ed - The Arts 3 credits
- Directed Elective 3 credits
- CST* 201: Introduction to MIS 3 Credits or
- MAT* 230: Applied Calculus with a Modeling Approach 3 Credits

Subtotal: 15

Total Credits Required: 62-63

Note:

A 4-credit laboratory science is recommended by most baccalaureate institutions.
See a faculty advisor.
ART* 101, ART* 102, MUS* 101, MUS* 102 and ART* 206 are recommended by most baccalaureate colleges.
Directed elective options include Honors Capstone, Co-op experience, General Education course, or other directed elective. See a faculty advisor.
Accounting, A.S.

Program Design
The Accounting associate degree program prepares students for employment as junior accountants, bookkeepers, and accounts receivable/payable and payroll associates. Graduates will be able to maintain complete sets of accounting records and prepare financial statements and individual tax returns. Students have the opportunity to participate in the Volunteer Income Tax Assistance (VITA) program, in which they gain practical experience in the preparation of tax returns. Students interested in transferring to earn a bachelor’s degree should enroll in the Accounting and Business Administration Transfer, A.S. degree program. Note: Students should meet with a faculty advisor to plan their program of study.

Curriculum
Students may enroll full- or part-time. Since some courses are not offered in both the fall and spring semesters, see an advisor about your schedule. Note: All business and accounting courses, except for BBG* 108 (formerly QM 110), have prerequisites. Check catalog course description before registering.

Learning Outcomes
Upon successful completion of all Accounting degree program requirements, graduates will
1. Demonstrate relevant content knowledge in required core business disciplines (accounting, business law, management and organizational behavior, and marketing) and apply concepts in problem solving through identifying and evaluating alternative solutions and offering a well-supported conclusion.
2. Recognize proper business acumen and decorum in professional interactions; demonstrate appropriate interpersonal communication and presentation skills and demeanor; demonstrate the ability to use presentation and team interpersonal skills effectively in class presentations.
3. Recognize and respond thoughtfully to situations that present ethical dilemma, demonstrating the ability to identify ethical dilemmas and social responsibilities of business, an ability to confront ethical dilemmas, and apply ethical principles to business situations using concepts learned.
4. Apply accounting concepts and critical thinking skills to make sound financial decisions.
5. Demonstrate an understanding of the interrelationships between accounting and business courses.

In addition, the graduate will complete the comprehensive learning outcomes identified with the General Education Core.
### Accounting Requirements

- **ACC* 115: Financial Accounting** 4 Credits
- **BBG* 101: Introduction to Business** 3 Credits
- **BBG* 234: Legal Environment of Business** 3 Credits
- **ENG* 101: Composition** 3 Credits (Gen Ed - English)
- **BBG* 108: Business & Consumer Finance** 3 Credits (formerly QM 110)

**Subtotal: 16**

- **ACC* 118: Managerial Accounting** 4 Credits
- **BBG* 236: Commercial Law** 3 Credits
- Choose one Business or CSA* Elective    2-3 Credits
- **ACC* 125: Accounting Computer Applications I** 3 Credits
- **ECN* 102: Principles of Microeconomics** 3 Credits (Gen Ed - Social Sciences)
- Choose one course from Gen Ed - Humanities or Gen Ed - Social Sciences 3-4 Credits

**Subtotal: 18-20**

- **BMG* 204: Managerial Communication** 3 Credits or
- **ACC* 290: Cooperative Education/Work Experience** 3 Credits
- **ACC* 275: Principles of Intermediate Accounting I** 4 Credits
- **ACC* 241: Federal Taxes I** 3 Credits
- **COM* 173: Public Speaking** 3 Credits (Gen Ed - Humanities)
- Choose one from Gen Ed - Mathematics 3-4 Credits

**Subtotal: 16-17**

- **ACC* 231: Cost Accounting I** 3 Credits or
- **ACC* 251: Fund Accounting** 3 Credits
- **ACC* 276: Principles of Intermediate Accounting II** 4 Credits
- **BFN* 202: Corporate Finance** 4 Credits
- Choose one course from Gen Ed - The Arts 3 Credits
- Choose one course from Gen Ed - Physical and Natural Sciences 3-4 Credits

**Subtotal: 17-18**

**Total Credits Required: 67-71**

**Note:**

1. Students who receive credit for QM 110 have fulfilled the BBG* 108 requirement.
3. ACC* 290 is offered as an option for students who have a GPA of at least 2.0 and 15 credits completed toward their degrees, including ACC* 115, 102 and 201. Permission of Cooperative Education director is required.
4. Students who are interested in a manufacturing environment should take ACC* 231: Cost Accounting I. Students who want to do local, state, federal, hospital, fundraising or college/university accounting should take ACC* 251: Fund Accounting.
Administrative Assistant, Legal Option, Business Office Technology, A.S.

Program Design
The Administrative Assistant, Legal Option, Business Office Technology associate degree program provides students with a broad understanding of the court systems and the many fields of law. Students become proficient in keyboarding/data-entry, word processing, legal terminology and legal transcription of computerized communication, office applications and procedures. Students are encouraged to develop individual areas of interest through elective courses and through part-time and summer employment. Legal administrative assistants use technology to originate, access, manage and manipulate information. In addition they may function independently in initiating office communications, accessing and tracking records and information, and problem solving the various details of the day-to-day office operations. They participate in the representation of, and communication with, clients and in the preparation of court papers, legal documents and correspondence.

Curriculum
Students may enroll in this program full- or part-time.

Learning Outcomes
Upon successful completion of all Administrative Assistant, Legal Option, BOT degree program requirements, graduates will
1. Create and modify standard types of business communications in both printed and electronic forms.
2. Demonstrate strong interpersonal and human relations skills required for success in a professional setting.
3. Execute business office procedures used in today's technological work environment.
4. Perform and analyze office accounting tasks and activities.
5. Define and apply legal terminology used when preparing forms, documents and transcribed material.
6. Acquire up-to-date technology skills in the following areas: word processing, spreadsheet, database, presentation, computerized accounting, personal information management, web technologies, and speech recognition.
7. Demonstrate keyboarding and data-entry speed and accuracy using industry accepted standards.
8. Recognize and explain the importance of confidentiality in dealing with legal matters.

In addition, the graduate will complete the comprehensive learning outcomes identified with the General Education Core.
Business Office Technology, Legal Option Requirements

- BOT* 122: Writing Procedures 3 Credits
- BOT* 111: Keyboarding for Info Pro I 3 Credits
- CST* 114: Web Essentials 3 Credits
- ENG* 101: Composition 3 Credits (Gen Ed - English)
- Choose one course from Gen Ed - Social Sciences 3 Credits
- MAT* 109: Quantitative Literacy 3 Credits (Gen Ed - Mathematics) or higher

**Subtotal: 18**

- BOT* 112: Keyboarding for Info Pro II 3 Credits or
- BOT* 137: Word Processing Applications 3 Credits
- BOT* 164: Office Accounting 3 Credits or
- ACC* 115: Financial Accounting 4 Credits
- BOT* 171: Legal Documents 3 Credits
- COM* 173: Public Speaking 3 Credits (Gen Ed - Humanities)

**Subtotal: 12-13**

- BOT* 230: Microsoft Office Suite Applications 3 Credits or
- CSA* 105: Introduction to Software Applications 3 Credits
- ACC* 121: Introduction to Accounting Software 1 Credits
- BOT* 251: Administrative Procedures 3 Credits
- ENG* 202: Technical Writing 3 Credits or
- Cross-listed courses (choose one)
- ENG* 203: Grammar, Usage and Style 3 Credits
- BOT* 139: Grammar, Usage and Style 3 Credits
- BOT* 270: Legal Terminology and Transcription 3 Credits
- Choose one course from Gen Ed - The Arts 3 Credits

**Subtotal: 16**

- CSA* 205: Advanced Applications 3 Credits
- BOT* 220: Computerized Communication 3 Credits
- CSA* 135: Spreadsheet Applications 3 Credits
- Choose one course from Gen Ed - Humanities 3 Credits
- Choose one course from Gen Ed - Physical and Natural Sciences 3-4 Credits

**Subtotal: 15-16**

**Total Credits Required: 61-63**

**Note:**

Students may elect to substitute BOT* 296: Cooperative/Work Experience for any equivalent BOT credit course with prior departmental approval.
Administrative Assistant, Medical Option, Business Office Technology, A.S.

Program Design
The Administrative Assistant, Medical Option, Business Office Technology associate degree program prepares students with the skills and knowledge necessary to excel and contribute as a positive team member in the medical office environment. Students become proficient in keyboarding/data-entry, word processing, medical terminology, digital medical transcription, computerized communication, and state-of-the-art medical software simulations integrating Practice Management/EHR, and medical administrative procedures. Sociology and biology courses are also included in this program.

Curriculum
Students may enroll in this program full- or part-time.

Learning Outcomes
Upon successful completion of all Administrative Assistant, Medical Option, BOT Degree program requirements, graduates will
1. Create and modify standard types of business communications in both printed and electronic forms.
2. Demonstrate appropriate interpersonal and human relations skills required for success in a professional setting.
3. Execute medical office procedures used in today's technological work environment.
5. Define and apply medical terminology.
6. Demonstrate accuracy in medical billing and coding procedures.
7. Acquire up-to-date technology skills in the following areas: word processing, spreadsheet, database, presentation, computerized accounting, personal information management, web technologies, and speech recognition.
8. Demonstrate keyboarding and data-entry speed and accuracy using industry accepted standards.
9. Understand and adhere to the importance of federal regulations, medical ethics, legal implications, and patient confidentiality when handling protected health information.

In addition, the graduate will complete the comprehensive learning outcomes identified with the General Education Core.
Business Office Technology, Medical Option Requirements

- COM* 173: Public Speaking 3 Credits (Gen Ed - Humanities)
- BOT* 111: Keyboarding for Info Pro I 3 Credits
- ENG* 101: Composition 3 Credits (Gen Ed - English)
- BOT* 180: Medical Terminology 3 Credits
- CST* 114: Web Essentials 3 Credits or
- BOT* 220: Computerized Communication 3 Credits
- MAT* 109: Quantitative Literacy 3 Credits (Gen Ed - Mathematics) or
- MAT* 165: Elementary Statistics with Computer Applications 4 Credits (Gen Ed - Mathematics)

**Subtotal: 18-19**

- BOT* 288: Medical Practice Management Software Applications 3 Credits
- Choose one course from Gen Ed - Social Science 3 credits *
- BOT* 112: Keyboarding for Info Pro II 3 Credits or
- BOT* 137: Word Processing Applications 3 Credits
- BOT* 164: Office Accounting 3 Credits or
- ACC* 115: Financial Accounting 4 Credits
- ENG* 200: Advanced Composition 3 Credits

**Subtotal: 15-16**

- BOT* 230: Microsoft Office Suite Applications 3 Credits or
- CSA* 105: Introduction to Software Applications 3 Credits
- BOT* 181: Medical Coding I 3 Credits
- BOT* 282: Medical Administrative Procedures 3 Credits
- ACC* 121: Introduction to Accounting Software 1 Credits
- BIO* 115: Human Biology 4 Credits (Gen Ed - Physical and Natural Sciences)
- PSY* 111: General Psychology I 3 Credits (Gen Ed - Social Sciences) or
- SOC* 101: Principles of Sociology 3 Credits (Gen Ed - Social Sciences)

**Subtotal: 17**

- BOT* 182: Medical Coding II 3 Credits
- BOT* 287: Foundations/Management Medical Insurance 3 Credits
- Choose one course from Gen Ed - The Arts 3 Credits
- BOT* 291: Electronic Health Records 3 Credits
- BOT* 296: Cooperative/Work Experience 3 Credits or
- CST* 205: Project Management 4 Credits

**Subtotal: 15-16**

**Total Credits Required: 65-68**

**Note:**

Students may elect to substitute BOT* 296: Cooperative/Work Experience for any equivalent BOT credit course with prior departmental approval.

* HIS* 201 or HIS* 202 are recommended by COSC for Gen Ed - Social Science
Administrative Assistant, Office Option,
Business Office Technology, A.S.

Program Design
The Administrative Assistant, Office Option, Business Office Technology associate degree program provides students with the skills necessary to excel in the office environment. Students become proficient in keyboarding, word processing, computerized communications, and office applications and procedures. Students are encouraged to develop individual areas of interest through elective courses and through part-time and summer employment.
Administrative assistants use technology to originate, access, manage and manipulate information. In addition, they function independently in initiating office communications, accessing and tracking records and information, and problem solving the various details of the day-to-day office operations. As members of management teams, they are able to assume responsibility and work independently to exercise initiative and judgment, and to adapt to new concepts and products.

Curriculum
Students may enroll in this program full- or part-time.

Learning Outcomes
Upon successful completion of all Administrative Assistant, Office Option, BOT degree program requirements, graduates will
1. Create and modify standard types of business communications in both printed and electronic forms.
2. Demonstrate strong interpersonal and human relations skills required for success in a professional setting.
3. Execute business office procedures used in today's technological work environment.
4. Perform and analyze office accounting tasks and activities.
5. Acquire up-to-date technology skills in the following areas: word processing, spreadsheet, database, presentation, computerized accounting, personal information management, web technologies, and speech recognition.
6. Demonstrate keyboarding and data-entry speed and accuracy using industry accepted standards.

In addition, the graduate will complete the comprehensive learning outcomes identified with the General Education Core.
Business Office Technology, Office Option Requirements

- BOT* 122: Writing Procedures 3 Credits
- BOT* 111: Keyboarding for Info Pro I 3 Credits
- CST* 114: Web Essentials 3 Credits
- ENG* 101: Composition 3 Credits (Gen Ed - English)
- PSY* 247: Industrial and Organizational Psychology 3 Credits
- MAT* 109: Quantitative Literacy 3 Credits (Gen Ed - Mathematics)

**Subtotal: 18**

- BOT* 112: Keyboarding for Info Pro II 3 Credits or
- BOT* 137: Word Processing Applications 3 Credits
- BOT* 164: Office Accounting 3 Credits or
- ACC* 115: Financial Accounting 4 Credits
- BOT* 220: Computerized Communication 3 Credits
- COM* 173: Public Speaking 3 Credits (Gen Ed - Humanities)

**Subtotal: 12-13**

- ACC* 121: Introduction to Accounting Software 1 Credits
- BOT* 251: Administrative Procedures 3 Credits
- ENG* 202: Technical Writing 3 Credits or
  Cross-listed courses (choose one)
- ENG* 203: Grammar, Usage and Style 3 Credits
- BOT* 139: Grammar, Usage and Style 3 Credits
- BOT* 230: Microsoft Office Suite Applications 3 Credits or
- CSA* 105: Introduction to Software Applications 3 Credits
- Choose one course from Gen Ed - Physical and Natural Sciences 3-4 Credits
- Choose any course from Gen Ed - Social Sciences 3 Credits

**Subtotal: 16-17**

- BBG* 234: Legal Environment of Business 3 Credits or
- BMG* 204: Managerial Communication 3 Credits
- CSA* 205: Advanced Applications 3 Credits
- CSA* 135: Spreadsheet Applications 3 Credits
- Choose one course from Gen Ed - The Arts 3 Credits
- Choose one course from Gen Ed - Humanities 3 Credits

**Subtotal: 15**

Total Credits Required: 61-63

Note:
Students may elect to substitute BOT* 296: Cooperative/Work Experience for any equivalent BOT credit course with prior departmental approval.

**Business Administration Career, A.S.**

**Program Design**
The Business Administration Career associate degree program prepares graduates for employment as management trainees and for entry-level positions in banks, insurance companies and governmental agencies. It is a general business program requiring students to take courses in accounting, business law, economics, management and corporate finance.

Although many courses in this program may be transferred, it is possible that some will transfer only as electives. Students planning to earn a bachelor’s degree should enroll in the Accounting and Business Administration Transfer program.

This program is of considerable benefit to employed students looking for professional development or students who hold degrees in unrelated areas and are looking for a career specialty or career change.

Note: Students should meet with a faculty advisor to plan their program of study.

**Curriculum**
Students may attend full- or part-time. Students must achieve at least a C- or better in an accounting course to continue on to the next level. Note: All business and accounting courses, except for BBG* 108 (formerly QM 110), have prerequisites. All accounting courses numbered 100 or higher require students to be eligible for ENG* 101 and MAT* 095 or higher.

**Learning Outcomes**
Upon successful completion of all Business Administration Career degree program requirements, graduates will

1. Demonstrate relevant content knowledge in required core business disciplines (accounting, business law, management and organizational behavior, and marketing) and apply concepts in problem solving through identifying and evaluating alternative solutions and offering a well-supported conclusion.
2. Recognize proper business acumen and decorum in professional interactions; demonstrate appropriate interpersonal communication and presentation skills and demeanor; demonstrate the ability to use presentation and team interpersonal skills effectively in class presentations.
3. Recognize and respond thoughtfully to situations that present ethical dilemma, demonstrating the ability to identify ethical dilemmas and social responsibilities of business, an ability to confront ethical dilemmas, and apply ethical principles to business situations using concepts learned.
4. Apply concepts in core business disciplines and critical thinking skills to make sound business and financial decisions.
5. Demonstrate an understanding of the interrelationships between accounting and business courses.

In addition, the graduate will complete the comprehensive learning outcomes identified with the General Education Core.
Business Administration Career Requirements

- ACC* 115: Financial Accounting 4 Credits
- BBG* 101: Introduction to Business 3 Credits
- BBG* 234: Legal Environment of Business 3 Credits
- ENG* 101: Composition 3 Credits (Gen Ed - English)
- BFN* 111: Financial Literacy 3 Credits or
- BBG* 108: Business & Consumer Finance 3 Credits (formerly QM 110) ‡
  Subtotal: 16

- ACC* 117: Principles of Managerial Accounting 3 Credits
- BMG* 202: Principles of Management 3 Credits
- Choose one course from Gen Ed - Mathematics 3-4 Credits ‡‡
- ENG* 110: Introduction to Literature 3 Credits or
- COM* 172: Interpersonal Communication 3 Credits or
- COM* 173: Public Speaking 3 Credits (Gen Ed - Humanities)
- ACC* 125: Accounting Computer Applications I 3 Credits
  Subtotal: 15-16

- BMG* 210: Organizational Behavior 3 Credits
- ECN* 101: Principles of Macroeconomics 3 Credits (Gen Ed - Social Sciences)
- Any ACC*, BBG*, BES*, BFN*, BMG*, or BMK* course 3 Credits
- Choose one course from Gen Ed - Physical and Natural Sciences 3-4 Credits
- Choose one General Education or other general elective course 3 Credits
  Subtotal: 15-16

- BMK* 201: Principles of Marketing 3 Credits
- BMG* 204: Managerial Communication 3 Credits
- Choose one course from Gen Ed - The Arts 3 Credits
- Any ACC*, BBG*, BES*, BFN*, BMG*, BMK*, CST* course or ECN* 102 3 Credits
- Free elective‡‡‡ 3 Credits
  Subtotal: 16-17

Total Credits Required: 61-62

Note:

‡ Students who receive credit for QM 110 have fulfilled the BBG* 108 requirement.
‡‡ Recommended MAT* 138 or MAT* 165
‡‡‡ Free electives include Honors Capstone, Co-op experience, General Education course or other directed elective.
Communication, A.S.

Program Design
The Communication associate degree program prepares students for employment in television as reporters, production assistants, camera operators and video editors; in radio, as on-air personnel and copywriters; in journalism, as reporters and feature writers; and in public relations, as entry-level employees. Students have the opportunity to participate in up to two semesters of media work experience with placement at area media outlets. Students are encouraged to take up to six credits of Cooperative Education/Work Experience. Any Cooperative Education/Work Experience beyond six credits will not be applied towards a degree.

Curriculum
Students may enroll in this program on a full- or part-time basis and attend classes during the day or evening. Note that to enter COM* 222 and continue the program you must receive a grade of at least B in ENG* 101 or have permission from the instructor.

Learning Outcomes
Upon successful completion of all Communication degree program requirements, graduates will
1. Write copy for radio and television.
2. Research and write newspaper and feature stories.
3. Operate video cameras.
4. Use computer-based video editing programs.
5. Conduct interviews for news stories and television programs.
6. Write scripts for radio and television programs.
7. Develop and deliver effective oral presentations.
8. Appreciate the role and effect of mass media upon society.
9. Use computer-based audio programs.
10. Use software to electronically design brochures, newsletters and other printed material.

In addition, the graduate will complete the comprehensive learning outcomes identified with the General Education Core.

Communication Requirements

- ENG* 101: Composition 3 Credits (Gen Ed - English)
- PSY* 111: General Psychology I 3 Credits (Gen Ed - Social Sciences)
- COM* 101: Introduction to Mass Communication 3 Credits
- COM* 173: Public Speaking 3 Credits (Gen Ed - Humanities)
- Choose one course from Gen Ed - Mathematics (MAT*138 or higher) 3 Credits
  **Subtotal: 15**
- COM* 166: Video/Filmmaking 3 Credits or
  ART* 185: Video/Filmmaking 3 Credits
- COM* 108: Contemporary Issues in Media 3 Credits or
  COM* 113: Social Media in Contemporary Society 3 Credits
- Choose one General Education HIS* course 3 Credits
- Choose one course from Gen Ed - Social Science 3 Credits or
  Choose one course from Gen Ed - The Arts 3 Credits
- ENG* 110: Introduction to Literature 3 Credits

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Subtotal: 15

- Choose one course from Gen Ed - Physical and Natural Sciences 4 Credits
- Choose one course from Gen Ed - Social Sciences or Gen Ed - The Arts or a Foreign Language course in Gen Ed - Humanities 3-4 Credits
- COM* 295: Internship I 3 Credits
- COM* 172: Interpersonal Communication 3 Credits or
- COM* 278: Group Communication 3 Credits
  Cross-listed courses (choose one)
- COM* 154: Film Study and Appreciation 3 Credits (Gen Ed - The Arts)
- ART* 206: Film Study 3 Credits (Gen Ed - The Arts)

Subtotal: 16-17

- Choose one course from Gen Ed - Physical and Natural Sciences 3-4 Credits
- Choose one course from Gen Ed - Social Sciences or Gen Ed - The Arts 3 Credits

**Journalism Track - Choose three courses:**
- COM* 222: Reporting and Writing News Stories. 3 Credits
- COM* 201: Introduction to Public Relations 3 Credits or
- COM* 229: Creative Writing, Non Fiction. 3 Credits
  Cross-listed courses (choose one)
- COM* 225: Photojournalism 3 Credits
- ART* 283: Photojournalism 3 Credits
- COM* 213: Electronic Publishing 3 Credits

**TV-Radio track - Choose three courses:**
- COM* 177: Broadcast Performance 3 Credits
- COM* 240: Broadcast/TV Production 4 Credits
- COM* 242: Advanced Broadcast/TV Production 4 Credits
  or COM* 145 Sports on Television 3 Credits
- COM* 247: Television Writing 3 Credits
  or COM* 211 Screenwriting 3 Credits
- COM* 296: Internship II 3 Credits or
- COM* 298: Independent Study in Advanced Video Filmmaking. 3 Credits

Subtotal: 15-17

Total Credits Required: 61-64

Note:

* Students are encouraged to take a language as an elective.
Computer Engineering Technology, A.S.

Program Design
The Computer Engineering Technology associate degree program provides students with a broad background in the underlying disciplines of computer engineering and computer electronics technology including: the fundamentals of computer electronics, including basic AC/DC linear circuit analysis, analog and digital electronics, and microprocessor electronics to enable students to perform component and board level computer electronics analysis and troubleshooting; broad experience in problem solving with computers; the basics of computer architecture and organization; an understanding of the basics of computer operating systems and the integration of computer hardware and software; and an understanding of basic computer networking concepts and technologies including the fundamentals of network design, installation and maintenance.

Students will also acquire a comprehensive educational background in mathematics, physics and general education, in addition to acquired skills and knowledge in the field of computer engineering technology, designed to develop and enhance their critical thinking and problem analysis and resolution skills.

The Computer Engineering Technology A.S. degree program prepares students for transfer to institutions with bachelor’s degree programs in computer science or other related computer science/technology programs, or for entry into computer-based industry positions and further industry-based training. Students planning to transfer to baccalaureate institutions should consult with an advisor regarding the requirements of these institutions and transferability of courses.

Curriculum
Students may enroll in this program full- or part-time. Courses are offered during daytime or evening hours. For students not prepared for the required mathematics or computer technology courses in the program, MCC offers a wide range of preparatory courses. Please consult with a computer science/technology faculty advisor.

Learning Outcomes
Upon successful completion of all Computer Engineering Technology degree program requirements, graduates will

1. Demonstrate the ability to understand a problem and develop logically structured solutions through the use of flowcharts, pseudocode and C++ code.
2. Differentiate and understand the role and function of various current and emerging technologies, including, but not limited to, computer hardware, networking, programming, and database and Internet technologies.
3. Describe basic computer organization and the relationship between hardware components and the operating system.
4. Differentiate and apply the basic technologies used in local- and wide-area networks. Demonstrate competency in installing, repairing, servicing, troubleshooting and upgrading computers and peripheral equipment from the PC technician’s point of view.
5. Demonstrate an understanding of the fundamentals of computer electronics from circuit analysis, including analog and digital electronics.
6. Demonstrate a working knowledge of the internal structure of digital computers.
7. Discuss and explore the relationship between the CPU, assembly language and machine language.
8. Discuss and explore the relationship between ROM, the instruction set, system clock and the internal addressing schemes.
9. Discuss and describe the data path.

In addition, the graduate will complete the comprehensive learning outcomes identified with the General Education Core.
Computer Engineering Technology Requirements

- ENG* 101: Composition 3 Credits (Gen Ed - English)
- MAT* 185: Trigonometric Functions 3 Credits (Gen Ed - Mathematics)
- EET* 108: AC/DC Circuit Analysis 4 Credits
- CST* 141: Computer Hardware 4 Credits
- EGR* 230: C++ For Engineers 3 Credits

Subtotal: 17

- ENG* 202: Technical Writing 3 Credits
- MAT* 186: Precalculus 4 Credits
- EET* 132: Electronics 4 Credits
- CST* 123: Computer Operating Systems 4 Credits
- COM* 173: Public Speaking 3 Credits (Gen Ed - Humanities)

Subtotal: 18

- PHY* 121: General Physics I 4 Credits (Gen Ed - Physical and Natural Sciences)
- EET* 252: Digital Electronics 4 Credits
- Choose one course from Gen Ed - The Arts 3 Credits
- PSY* 111: General Psychology I 3 Credits (Gen Ed - Social Science)

Subtotal: 14

- PHY* 122: General Physics II 4 Credits (Gen Ed - Physical and Natural Sciences)
- CSC* 287: Organization and Architecture 3 Credits
- CST* 131: Networking Theory & Application 4 Credits
- CSC* 286: Microprocessor Assembly Language 4 Credits

Subtotal: 15

Total Credits Required: 64
Computer Game Design, A.S.

Program Design
The purpose of the Computer Game Design program is to provide students who are interested in a career in this industry comprehensive instruction in all aspects of computer game design, programming and production. The specific program objectives include:

- To provide instruction in all production aspects of game design and production including animation, sound design, game level design, 3D modeling, and computer graphics.
- To connect the media creation aspects of game design with the computer science programming necessary to produce functioning gameplay.
- To integrate creative thinking and technical skills in the development of original gaming concepts.
- To offer an overview of the games industry including tracking industry trends, preparation of production proposals and budgets, and the development and responsibilities of production teams.

The program is structured to equip students with a sound foundation in technical skills, design concepts, aesthetics, terminology and vocabulary, and to provide an awareness of the application of creative and critical thinking in the use of technical knowledge. A strong emphasis has been placed on the use of the computer as a production and compositing tool.

Learning Outcomes
Upon successful completion of all program requirements, graduates of the Computer Game Design program will:

- Meet educational standards for entry-level and advanced level employment in the area of game design and development.
- Demonstrate an understanding of the production pipeline for game development (concept, storytelling, character development, level design, programming decisions, network distribution, etc.).
- Integrate creative/artistic skills (drawing, animation, storytelling, level design, etc.) with the computer science programming skills necessary for the development of interactive media.
- Demonstrate the software skills necessary for game development and for potential employment in the game development field.

In addition, the graduate will complete the comprehensive learning outcomes identified with the General Education Core.
Computer Game Design Requirements

- ENG* 101: Composition 3 Credits (Gen Ed - English)
- DGA* 113: Drawing for Animation & Games 3 Credits
- DGA* 109: Introduction to Games 3 Credits
- DGA* 111: Introduction to Computer Graphics 3 Credits
- CSC* 125: Programming Logic and Design with C++ 3 Credits
  **Subtotal 15 credits**

- ENG* 110: Introduction to Literature 3 Credits (Gen Ed - Humanities)
- Choose one from Gen Ed - Mathematics 3 credits
- DGA* 212: Advanced Computer Graphics 3 Credits
- DGA* 261: Computer Animation 3 Credits
- Choose one from Gen Ed - Social Science 3 credits
  **Subtotal 15 credits**

- DGA* 271: 3-D Computer Modeling I 3 Credits
- DGA* 275: Game Level Design 3 Credits
- DGA* 265: Character Animation 3 Credits
- Choose one from Gen Ed - Physical and Natural Sciences 3-4 credits
- Choose one from Gen Ed - Humanities 3-4 credits
  **Subtotal 15-17 credits**

- DGA* 224: Digital Painting 3 Credits
- Choose one History elective 3 credits
- DGA* 277: 3D Game Level Design 3 Credits
- DGA* 276: 3D Animation and Rigging 3 Credits
- Choose one studio (computer) elective 3 credits
  **Subtotal 15 credits**

**Total Credits Required: 60-62**

**Note:**

History elective: choose from HIS* 101: Western Civilization I, HIS* 102: Western Civilization II, HIS* 121: World Civilization I, HIS* 122: World Civilization II, HIS* 201: United States History I, or HIS* 202: United States History II


Recommended Mode 5 Science: PHY* 110: Introductory Physics

†COM* 173 is recommended as the Humanities elective choice for students planning to transfer to a 4-year state university in the future.

Studio (computer) electives:
- DGA* 214: Advanced Computer Graphics II 3 Credits
- DGA* 262: Computer Animation II 3 Credits
- ART* 250: Digital Photography 3 Credits
- ART* 281: Digital Photography II 3 Credits
- CSC* 226: Object-Oriented Programming with Java 4 Credits
Computer Network Technology, A.S.

Program Design
The Computer Network Technology associate degree program provides students with a broad background in the underlying disciplines of computer networking technology including an understanding of computer networking concepts and technologies, an understanding of the administration of networked client-server computer operating systems, an understanding of the fundamentals of computer programming, and an understanding of the fundamentals of computer architecture and organization.

Students will also acquire a comprehensive educational background in mathematics, physics and general education. This program will enhance and develop the student’s critical thinking, problem analysis and resolution skills.

The Computer Network Technology A.S. degree program can serve as either a terminal degree which prepares students for positions in the computer networking and system administration professions or as a transfer degree to baccalaureate institutions with degree programs in computer networking and system administration. Students planning to transfer to baccalaureate institutions should consult with an advisor regarding the requirements of these institutions and transferability of courses.

The Computer Network Technology degree will also begin to prepare students for the CompTIA, Microsoft and CCNA certification exams.

Curriculum
Students may enroll in this program full- or part-time. Courses are offered during daytime and/or evening hours. While there is no required sequence for most courses in the degree, the following five courses have prerequisites which require them to be taken in the following order:

1st Semester  CST*131  Networking Theory & Application
2nd Semester  CST*237  SysAdmin I - Client/Server
3rd Semester  CST*238  SysAdmin II - Client/Server and CST*132  Networking Infrastructure
4th Semester  CST*277  Network Security Implementation

Students who complete the Computer Network Technology certificate program and decide to pursue an Associate in Science degree may apply all of their certificate credits towards the Computer Network Technology A.S. degree program.

Students should consult with a computer science/technology faculty advisor to plan their program and schedule of classes, and to discuss required course prerequisites.

Learning Outcomes
Upon successful completion of all Computer Network Technology degree program requirements, graduates will

1. Demonstrate the ability to understand a problem and develop logically structured solutions through the use of flowcharts, pseudocode, Python and C++ code.
2. Differentiate and understand the role and function of various current and emerging technologies, including, but not limited to, computer hardware, networking, programming, and database and Internet technologies.
3. Describe basic computer organization and the relationship between hardware components and the operating system.
4. Describe the essential operating system components and the operating services.
5. Differentiate and apply the basic technologies used in local- and wide-area networks.
6. Demonstrate and implement advanced networking infrastructure concepts.
7. Demonstrate the use of appropriate tools to administer and troubleshoot server and client computers on a network.
8. Demonstrate skills in installation, configuration, maintenance, troubleshooting and upgrade of computer operating systems at both the workstation and server levels.
9. Demonstrate competency in installing, repairing, servicing, troubleshooting and upgrading computers and peripheral equipment from the PC technician’s point of view.

In addition, the graduate will complete the comprehensive learning outcomes identified with the General Education Core.
Computer Network Technology Requirements

- CST* 131: Networking Theory & Application 4 Credits
- CSC* 124: Programming Logic and Design with Python 3 Credits
- MAT* 172: College Algebra 3 Credits (Gen Ed - Mathematics)
- ENG* 101: Composition 3 Credits (Gen Ed - English)
  
  **Subtotal: 13**

- CST* 237: SysAdmin I - Client/Server 4 Credits
- CST* 141: Computer Hardware 4 Credits
- MAT* 165: Elementary Statistics with Computer Applications 4 Credits (Gen Ed - Mathematics)
- CST* 123: Computer Operating Systems 4 Credits
  
  **Subtotal: 16**

- CST* 238: SysAdmin II - Client/Server 4 Credits
- CST* 132: Networking Infrastructure 3 Credits
- Choose one PHY* course from Gen Ed - Physical and Natural Sciences 4 Credits
- CST* 201: Introduction to MIS 3 Credits
- COM* 173: Public Speaking 3 Credits (Gen Ed - Humanities)
  
  **Subtotal: 17**

- CST* 277: Network Security Implementation 4 Credits
- Elective - Technical Elective 3-4 Credits
- PSY* 111: General Psychology I 3 Credits (Gen Ed - Social Sciences)
- ENG* 202: Technical Writing 3 Credits or
- CST* 205: Project Management 4 Credits
- Choose one course from Gen Ed - The Arts 3 credits
  
  **Subtotal: 16-18**

**Total Credits Required: 62-64**

**Note:**

*Technical Electives:*

- CAD* 110: Introduction to CAD 3 Credits
- CSC* 125: Programming Logic and Design with C++ 3 Credits
- CSC* 215: Object-Oriented Programming with C++ 4 Credits
- CSC* 217: Object-Oriented Programming with C# 3 Credits
- CST* 150: Web Design & Development I 3 Credits
- CST* 205: Project Management 4 Credits
- ENG* 202: Technical Writing 3 Credits
- CSC* 295: Cooperative Education/Work Experience 3 Credits
Computer Programming Technology, A.S.

Program Design
The Computer Programming Technology associate degree program provides students with a broad background and specific skills in the disciplines of computer programming technology including: the fundamentals of, and specific skills in, computer programming; the structured logic and design of computer programs; the fundamentals of algorithm design and analysis of data structures; broad experience in problem solving using computers; the basics of computer organization and architecture; an understanding of the basics of computer operating systems; an understanding of basic computer networking technology; and an emphasis on current, state-of-the-art, object-oriented computer programming languages.

Students will also acquire a comprehensive educational background in mathematics, physics and general education. In addition to acquired skills and knowledge in the field of computer programming technology, this program will enhance and develop the student’s critical thinking, problem analysis and resolution skills. The Computer Programming Technology A.S. degree program prepares students for transfer to institutions with bachelor degree programs in computer science or other related computer science/technology programs, or for entry into computer-based industry positions and further industry-based training. Students planning to transfer to baccalaureate institutions should consult with an advisor regarding the requirements of these institutions and transferability of courses.

Curriculum
Students may enroll in this program full- or part-time. Courses are offered during daytime or evening hours. For students not prepared for the required mathematics or computer technology courses in the program, MCC offers a wide range of preparatory courses. Please consult with a computer technology faculty advisor.

Learning Outcomes
Upon successful completion of all Computer Programming Technology degree program requirements, graduates will
1. Demonstrate the ability to understand a problem and develop logically structured solutions through the use of flowcharts, pseudocode and C++ code.
2. Differentiate and understand the role and function of various current and emerging technologies, including, but not limited to, computer hardware, networking, programming, and database and Internet technologies.
3. Describe basic computer organization and the relationship between hardware components and the operating system.
4. Describe the essential operating system components and the operating services.
5. Identify and apply the major concepts and language requirements to design, code, execute and debug programs in the required programming languages.
6. Demonstrate an understanding of proper database design. Apply System Development Life Cycle concepts to plan, design, develop and code a database.

In addition, the graduate will complete the comprehensive learning outcomes identified with the General Education Core.
Computer Programming Technology Requirements

- CSC* 125: Programming Logic and Design with C++ 3 Credits
- CST* 201: Introduction to MIS 3 Credits
- Choose one course from Gen Ed - The Arts 3 Credits
- MAT* 186: Precalculus 4 Credits (Gen Ed - Mathematics)
- ENG* 101: Composition 3 Credits (Gen Ed - English)

Subtotal: 16

- CST* 131: Networking Theory & Application 4 Credits
- CSC* 215: Object-Oriented Programming with C++ 4 Credits
- MAT* 165: Elementary Statistics with Computer Applications 4 Credits (Gen Ed - Mathematics)
- PSY* 111: General Psychology I 3 Credits or any Gen Ed - Social Sciences course

Subtotal: 15

- CST* 150: Web Design & Development I 3 Credits
- CST* 250: Web Design and Development II 3 Credits
- CST* 205: Project Management 4 Credits
- CST* 123: Computer Operating Systems 4 Credits
- Any Gen Ed-Physical and Natural Sciences PHY* course 4 Credits

Subtotal: 17

- COM* 173: Public Speaking 3 Credits (Gen Ed - Humanities)
- CSC* 217: Object-Oriented Programming with C# 3 Credits
- CSC* 241: Data Structures and Algorithms 4 Credits
- CST* 258: Internet Programming 4 Credits
- CSC* 230: Database Concepts with Web Application 3 Credits

Subtotal: 18

Total Credits Required: 66
Computer Science, A.S.

Program Design
The Computer Science associate degree program provides students with a broad background in the underlying disciplines of computer science including: the fundamentals of computer programming; the fundamentals of algorithm design and analysis of data structures; broad experience in problem solving with computers; the basics of computer architecture, organization and assembly language; an understanding of the basics of computer operating systems; and an understanding of computer networking concepts and technologies including the fundamentals of network design, installation, maintenance and administration. Students will also acquire a comprehensive educational background in mathematics, physics and general education. In addition to acquired skills and knowledge in the field of computer science, this program will enhance and develop the student’s critical thinking, problem analysis and resolution skills. The Computer Science A.S. degree program prepares students for transfer to institutions with bachelor’s degree programs in computer science or other related computer science/technology programs, or for entry into computer-based industry positions and further industry-based training. Students planning to transfer to baccalaureate institutions should consult with an advisor regarding the requirements of these institutions and transferability of courses.

Curriculum
Students may enroll in this program full- or part-time. Courses are offered during daytime and/or evening hours. Some courses are not offered every semester. Consult with a faculty advisor to work out a schedule. For students not prepared for the required mathematics and computer science courses in the program, MCC offers a wide range of preparatory courses. Please consult with a computer science faculty advisor.

Learning Outcomes
Upon successful completion of all requirements of the Computer Science A.S. degree program, graduates will
1. Demonstrate the ability to understand a problem and develop logically structured solutions through the use of flowcharts, pseudocode and C++ code.
2. Differentiate and understand the role and function of various current and emerging technologies, including, but not limited to, computer hardware, networking, programming, and database and Internet technologies.
3. Describe basic computer organization and the relationship between hardware components and the operating system.
4. Describe the essential operating system components and the operating services.
5. Demonstrate an understanding of the relationships between efficient algorithms and data structures and how efficiencies can be measured.
6. Use knowledge of algorithm design and data structures for the solution of problems, including efficient sorting, searching and graph manipulation.
7. Demonstrate a working knowledge of the internal structure of the digital computer.
8. Identify and apply the major concepts and language requirements to design, code, execute and debug programs in the required programming languages.
9. Differentiate and apply the basic technologies used in local- and wide-area networks.

In addition, the graduate will complete the comprehensive learning outcomes identified with the General Education Core.
Computer Science Requirements

- ENG* 101: Composition 3 Credits (Gen Ed - English)
- Choose one course from Gen Ed - The Arts 3 Credits
- MAT* 254: Calculus I 4 Credits (Gen Ed - Mathematics) (formerly MAT* 250)
- COM* 173: Public Speaking 3 Credits (Gen Ed - Humanities)
- CSC* 125: Programming Logic and Design with C++ 3 Credits

**Subtotal: 16**

- CSC* 215: Object-Oriented Programming with C++ 4 Credits
- CST* 131: Networking Theory & Application 4 Credits
- MAT* 256: Calculus II 4 Credits
- ENG* 110: Introduction to Literature 3 Credits (Gen Ed - Humanities)

**Subtotal: 15**

- EET* 252: Digital Electronics 4 Credits
- Choose one course from Gen Ed - Social Sciences 3 Credits
- CSC* 287: Organization and Architecture 3 Credits
- CST* 123: Computer Operating Systems 4 Credits
- PHY* 221: Calculus-Based Physics I 4 Credits (Gen Ed - Physical and Natural Sciences)

**Subtotal: 18**

- MAT* 274: Linear Algebra 4 Credits or
- MAT* 285: Differential Equations 4 Credits or
- MAT* 268: Calculus III: Multivariable 4 Credits
- CSC* 241: Data Structures and Algorithms 4 Credits
- CSC* 286: Microprocessor Assembly language 4 Credits
- PHY* 222: Calculus-Based Physics II 4 Credits

**Subtotal: 15-16**

Total Credits Required: 64-65

Note:

*Students who receive credit for MAT* 250 have fulfilled the MAT* 254 requirement.
Computer Technology, A.S.

Program Design
The Computer Technology associate degree program provides students with a broad background in the diverse fields of computer technology and the opportunity to obtain both broad and in-depth knowledge of the theory, design, installation, maintenance, management and application of modern computer hardware and software including: computer programming skills; Internet and Web page design skills; fundamentals of computer operating systems; basic computer architecture; computer hardware and software installation, upgrading, configuration and maintenance; fundamentals of computer networks; and computer database concepts and applications.

Students will also acquire a comprehensive educational background in mathematics, physics and general education. In addition to acquired skills and knowledge in the field of computer technology, this program will enhance and develop the student’s critical thinking, problem analysis and resolution skills.

The Computer Technology A.S. degree program prepares students for transfer to institutions with bachelor's degree programs in computer science or other related computer science/technology programs, or for entry into computer-based industry positions and further industry-based training. Students planning to transfer to baccalaureate institutions should consult with an advisor regarding the requirements of these institutions and transferability of courses.

Depending on choice of electives, the Computer Technology degree will also begin to prepare students for the CompTIA, Microsoft and CCNA certification exams.

Curriculum
Students may enroll in this program full- or part-time. Courses are offered during daytime and/or evening hours. For students not prepared for the required mathematics or computer technology courses in the program, MCC offers a wide range of preparatory courses. Please consult with a computer technology faculty advisor.

Learning Outcomes
Upon successful completion of all requirements of the Computer Technology A.S. degree program, graduates will

1. Demonstrate the ability to understand a problem and develop logically structured solutions through the use of flowcharts, pseudocode and C++ code.
2. Differentiate and understand the role and function of various current and emerging technologies, including, but not limited to, computer hardware, networking, programming, and database and Internet technologies.
3. Describe basic computer organization and the relationship between hardware components and the operating system.
4. Describe the essential operating system components and the operating services.
5. Identify and apply the major concepts and language requirements to design, code, execute and debug programs in the required programming languages.
6. Differentiate and apply the basic technologies used in local- and wide-area networks.
7. Demonstrate competency in installing, repairing, servicing, troubleshooting and upgrading computers and peripheral equipment from the PC technician’s point of view.

In addition, the graduate will complete the comprehensive learning outcomes identified with the General Education Core.
Computer Technology Requirements

- CST* 131: Networking Theory & Application 4 Credits
- ENG* 101: Composition 3 Credits (Gen Ed - English)
- COM* 173: Public Speaking 3 Credits (Gen Ed - Humanities)
- CSC* 125: Programming Logic and Design with C++ 3 Credits
  **Subtotal: 13**

- CSC* 215: Object-Oriented Programming with C++ 4 Credits
- MAT* 172: College Algebra 3 Credits (Gen Ed - Mathematics)
- CST* 201: Introduction to MIS 3 Credits
- Choose one course from Gen Ed - The Arts 3 Credits
- ENG* 202: Technical Writing 3 Credits
  **Subtotal: 16**

- CST* 150: Web Design & Development I 3 Credits
- CST* 141: Computer Hardware 4 Credits
- Elective - Technical Elective (choose 1) 3-4 Credits
- MAT* 165: Elementary Statistics with Computer Applications 4 Credits (Gen Ed - Mathematics)
- PSY* 111: General Psychology I 3 Credits (Gen Ed - Social Sciences)
  **Subtotal: 17-18**

- CSC* 230: Database Concepts with Web Application 3 Credits
- Elective - Technical Elective (choose 1) 3-4 Credits
- CST* 205: Project Management 4 Credits
- Choose a PHY* course from Gen Ed - Physical and Natural Sciences 4 Credits
  **Subtotal: 14-15**

**Total Credits Required: 62-64**

Note:

*Technical Electives Lists:
  Programming Interest:
  - CSC* 217: Object-Oriented Programming with C# 3 Credits
  - CSC* 124: Programming Logic and Design with Python 3 Credits

  Operating Systems Interest:
  - CST* 237: SysAdmin I - Client/Server 4 Credits
  - CST* 238: SysAdmin II - Client/Server 4 Credits
  - CST* 123: Computer Operating Systems 4 Credits

  Web Interest:
  - CST* 250: Web Design and Development II 3 Credits
  - CST* 258: Internet Programming 4 Credits

  Networking Interest:
  - CST* 132: Networking Infrastructure 3 Credits
  - CST* 277: Network Security Implementation 4 Credits
  - CAD* 110: Introduction to CAD 3 Credits
  - CSC* 295: Cooperative Education/Work Experience 3 Credits
Criminal Justice, A.S.

Program Design
The Criminal Justice associate degree program offers students the opportunity to prepare for work within the various fields of criminal justice in both the public forum and private agencies. The curriculum consists of a strong liberal arts academic base supported by social science electives and criminal justice core courses. The latter are enhanced by electives in criminal justice, corrections and security services. The prescribed program also provides for free electives that may benefit the student’s educational awareness and career choice. Courses are available during the day and evening.
The program has strong relationships with many local and state agencies, colleges and universities. Students have been successful in transferring all program courses. A strong element of the program is a cadre of local professionals who supplement the regular faculty, serving as guest lecturers, adjunct faculty and intern sponsors.
Credit for criminal justice core courses and electives may be obtained by students who submit police and criminal justice-related training and work experience for evaluation.

Learning Outcomes
Upon successful completion of all Criminal Justice degree program requirements, graduates will
1. Have a general understanding and appreciation of the role of the criminal justice system at local, state and federal levels.
2. Demonstrate knowledge of appropriate codes of professional ethics and the capability to critically and reflectively engage ethical issues in criminal justice, particularly questions of social responsibility and professional decision-making.
3. Demonstrate knowledge of theories, principles, judicial and correctional processes, legal institutions, and methods of law enforcement.
4. Have a sound basic education in criminal justice for graduates who choose to pursue a bachelor's degree.

In addition, the graduate will complete the comprehensive learning outcomes identified with the General Education Core.
Criminal Justice Requirements

- CJS* 101: Introduction to Criminal Justice 3 Credits
- Choose one course from Gen Ed - Humanities 3 Credits
- Choose one course from Gen Ed - Mathematics 3 Credits
- ENG* 101: Composition 3 Credits (Gen Ed - English)
- POL* 111: American Government 3 Credits (Gen Ed - Social Sciences)

Subtotal: 15

- CJS* 105: Introduction to Law Enforcement 3 Credits and
- CJS* 120: Police and the Community 3 Credits
  or
- CJS* 102: Introduction to Corrections 3 Credits and
- CJS* 240: Correctional Administration 3 Credits
  or
- CJS* 225: Forensic Science I 3 Credits and
- CJS* 226: Forensic Science II 3 Credits
  or
- CJS* 106: Introduction to Homeland Security 3 Credits and
- CJS* 160: Introduction to Emergency Management 3 Credits

- HIS* 101: Western Civilization I 3 Credits (Gen Ed - Social Sciences) or
- HIS* 102: Western Civilization II 3 Credits (Gen Ed - Social Sciences) or
- HIS* 201: United States History I 3 Credits (Gen Ed - Social Sciences) or
- HIS* 202: United States History II 3 Credits (Gen Ed - Social Sciences)

- Choose one course from Gen Ed - Physical and Natural Sciences 3 Credits
- Choose any ENG* above 101 3 Credits

Subtotal: 15

- CJS* 289: Careers in Criminal Justice 3 Credits or
- CJS* 293: CJ Cooperative Education/Work Experience 3 Credits

- CJS* 211: Criminal Law I 3 Credits
- CJS* 220: Criminal Investigation 3 Credits
- Elective criminal justice 3 Credits
- Choose any course 3 Credits

Subtotal: 15

- CJS* 213: Evidence & Courtroom Procedure 3 Credits
- POL* 212: Constitutional Law and Civil Rights 3 Credits
- CJS* 212: Criminal Law II 3 Credits
- Elective criminal justice 3 Credits
- Choose one course from Gen Ed - The Arts 3 Credits

Subtotal: 15

Total Credits Required: 60

Note:
‡ ENG* 200 or ENG* 202 recommended.

Culinary Arts, A.S.

Program Design
The Culinary Arts degree program will give students the knowledge necessary to be successful in a restaurant or hotel kitchen, or the kitchens of other food services for business and industry dining, health-care facilities and schools. It will also give students the tools and skills to start work for businesses that supply foods at catered events, meeting and conventions centers, and supermarkets.

The Culinary Arts program is accredited by the American Culinary Federation Educational Institute. In addition to classroom and laboratory study, students will participate in an individually-planned, 300-hour cooperative work experience program, earning credit toward graduation while employed.

Students are required to purchase their own official kitchen and table service uniforms, as well as culinary tools and cutlery.

In addition to this degree, students may earn a second associate’s degree in Foodservice Management or Hotel-Tourism Management by taking additional credit hours. Candidates interested in earning double degrees should see a counselor or a hospitality management faculty member.

Curriculum
Students may enroll in this program full- or part-time, day or evening. This program has an active student club that provides a variety of activities to supplement the formal curriculum.

Learning Outcomes

Upon successful completion of all Culinary Arts degree program requirements, graduates will:
1. Analyze theory and techniques of baking and pastry arts.
2. Analyze theory and techniques of food preparation and presentation.
3. Prepare basic foods in quantity, including various regional foods.
4. Prepare ethnic cuisine in quantity.
5. Setup and operate the "front of the house."
7. Decorate layer cakes with molded and sculpted decorations.
8. Create artisan breads.
9. Create and cater events.
10. Summarize basic principles and concepts of the hospitality industry.
11. Summarize managerial techniques and human resources management practice.
12. Demonstrate appropriate problem-solving techniques in addressing management problems.
13. Differentiate styles of marketing, sales analysis and planning for the hospitality industry.
14. Prepare menus incorporating costs, acquisition and inventory controls.
15. Transfer acquired knowledge to the world of work.

In addition, the graduate will complete the comprehensive learning outcomes identified with the General Education Core.
Culinary Arts Degree Requirements

- HSP* 109: Sanitation Certification 1 Credits
- HSP* 135: Service Management 3 Credits
- HSP* 101: Principles of Food Preparation 3 Credits
- HSP* 100: Introduction to the Hospitality Industry 3 Credits
- HSP* 103: Principles of Baking I 3 Credits
- ENG* 101: Composition 3 Credits (Gen Ed - English)

Subtotal: 16

- HSP* 112: Advanced Food Preparation 4 Credits
- HSP* 215: Principles of Baking II 3 Credits
- BIO* 111: Introduction to Nutrition 3 Credits (Gen Ed - Physical and Natural Sciences)
- Choose one course from Gen Ed - Humanities 3 Credits
- Choose one course from Gen Ed - Mathematics 3 Credits

Subtotal: 16

- Choose one course from Gen Ed - The Arts 3 Credits
- HSP* 211: Food and Beverage Cost Control 3 Credits
- HSP* 201: International Foods 4 Credits
- HSP* 230: Sustainable Food Service Management 3 Credits
- Choose one course from Gen Ed - Social Sciences 3 Credits

Subtotal: 16

- HSP* 225: Principles of Baking III 3 Credits or
- HSP* 216: Artisan Bread 3 Credits or
- HSP* 107: Icing Artistry I 3 Credits
- HSP* 290: Classical Cuisine 3 Credits
- HSP* 296: Cooperative Education/Work Experience 3 Credits
- HSP* 210: Buffet Catering 4 Credits
- Choose one course from any Gen Ed Knowledge Area 3 Credits

Subtotal: 16

Total Credits Required: 64

Dual Degree in Foodservice Management

To complete a dual degree in Foodservice Management, students should take the following courses:
- ACC* 115: Financial Accounting 4 Credits
- GEO* 111: World Regional Geography 3 Credits
- HSP* 233: Hospitality Human Resource Management 3 Credits
- HSP* 237: Hospitality Marketing 3 Credits
- HSP* 238: Relationship Marketing 3 Credits
Disability Specialist, A.S.

Program Design
The Disability Specialist associate degree program prepares students to work in a wide range of positions in private and public educational and human service agencies. Through individual consultation, each student will pursue a course of study with an emphasis upon the unique vocational goals he or she wishes to achieve. Every effort will be made to provide specific skill instruction; however, the focus of the curriculum is on building a strong knowledge base coupled with a positive value base that will prepare each student to assist children and adults with disabilities toward the goals of full community inclusion and participation, and the attainment of their potential. This program builds upon the Americans with Disabilities Act of 1990, a landmark piece of legislation that provides basic civil rights to millions of people with disabilities in America. Students will become an important part of this dynamic movement.

Since most work settings are in the schools, workplaces, community associations, apartments and homes in the community, an understanding of “community-building” and “individual capacity-building” techniques and procedures is stressed. Creativity, sensitivity and a capacity to concentrate on the abilities of the whole person are essential characteristics of a disability specialist.

Program Philosophy
People with disabilities are an integral part of the community and should receive necessary integrated community-based support.

Mission Statement
The mission of the Disability Specialist Program is to prepare students for careers in supporting children and adults with disabilities in the community by:
1. recognizing and enhancing the dignity, respect and contribution of every child and adult with a disability;
2. providing information on job opportunities in the disability field to encourage the recruitment of young and continuing education students;
3. emphasizing, throughout the curriculum, community inclusion of all people with disabilities;
4. creating opportunities for interaction among the students, faculty, staff and members of the community with and without disabilities;
5. promoting the value of a Disability Specialist degree or certificate in the job market;
6. introducing students to assistive technology and other innovations in the continuously evolving field of supporting people with disabilities in the community.

Curriculum
Because of the flexible nature of this program, students may select a full- or part-time plan of study for an associate degree or a certificate option.

Learning Outcomes
Upon successful completion of all Disability Specialist degree program requirements, graduates will:
1. Define and discuss basic definitions, causes, psychological characteristics and educational approaches relevant to children with disabilities.
2. Discuss how children and adults with disabilities have unique abilities rather than limitations.
3. Identify current trends and issues, and define the impact of current national and state laws and policies, affecting people with disabilities and their families.
5. Define ethical standards in the disability field and demonstrate confidentiality in written and oral assignments.
In addition, the graduate will complete the comprehensive learning outcomes identified with the General Education Core.
Disability Specialist Requirements

- ENG* 101: Composition 3 Credits (Gen Ed - English)
- HSE* 101: Introduction to Human Services 3 Credits
- PSY* 111: General Psychology I 3 Credits (Gen Ed - Social Science)
- Elective any course 3 Credits
- PSY* 163: Children with Disabilities 3 Credits

**Subtotal: 15**

- Choose one course from Gen Ed - Humanities 3 Credits
- HSE* 251: Work with Individuals and Families 3 Credits
- Choose one course from Gen Ed - Social Science 3 Credits
- PSY* 173: Adults with Disabilities 3 Credits
- Choose one course from Gen Ed - Physical and Natural Science 3 Credits

**Subtotal: 15-16**

- Elective any course 3 Credits
- HSE* 210: Group & Interpersonal Relations 3 Credits
- POL* 111: American Government 3 Credits or
- POL* 112: State and Local Government 3 Credits
- PSY* 183: Learning Process and Disabilities 3 Credits
- Choose one course from Gen Ed - The Arts 3 Credits

**Subtotal: 15**

- HSE* 134: Introduction to the Mental Health System 3 Credits
- PSY* 164: Assistive Technology for Students with Disabilities (K-12) 1 Credits
- PSY* 174: Assistive Technology for Adults in the Workplace, Home and Community. 1 Credits
- SSC* 294: Cooperative Education/Work Experience 3 Credits
- PSY* 193: Issues/Trends in Disabilities 3 Credits
- Choose one course from Gen Ed - Mathematics 3 Credits
- HSE* 294: Disability Specialist Seminar 1 Credits

**Subtotal: 15**

**Total Credits Required: 60-61**

**Note:**

* Students planning to transfer should take a Mode 5 course with a lab.
** Students planning to transfer should take MAT* 165.
Drug & Alcohol Recovery Counselor, A.S.

Program Design

The Drug and Alcohol Recovery Counselor (DARC) associate degree program provides education and training for persons seeking employment or job advancement in the addiction profession; others transfer to upper level colleges to complete bachelor's or graduate degrees in the field of addiction counseling or other transfer opportunities. Students receive education and training in the professional techniques of counseling with a disciplined background in the environmental and psychological causes and effects of alcohol and other substance use disorders.

The DARC program is designed to meet the academic requirement for the State of Connecticut and the CT Certification Board’s requirements for certification as an alcohol and drug/addiction counselor. This program is designed to provide the student with the most up-to-date knowledge in the field of addictions. First-year speciality courses are open to any student wishing to enroll, e.g. DAR* 101, DAR* 111, DAR* 112, DAR* 158.

DARC Internship Admission Process

Registration for the DARC internship courses (DAR* 251 & DAR* 252) and placement into a DARC internship site is based on the submission of an official application packet, an interview/screening process, and the satisfactory completion of DAR* 101, DAR* 111, DAR* 112, DAR* 158 and DAR* 213 with a grade of C or better. Those students seeking admission into the DARC internship must meet with the DARC program coordinator.

DARC internships begin each Fall semester. Internship application packets are accepted each November for the following fall semester. Interviews/screenings of candidates will take place each December for the following Fall semester.

Curriculum

The program consists of 27 semester hours of speciality courses and 33 semester hours of general education credits.

Students may enroll full- or part-time.

Learning Outcomes

Upon successful completion of all Drug and Alcohol Recovery Counselor degree program requirements, graduates will:

1. Understand addiction and a variety of models and theories of addiction and other problems related to addictions. Be able to describe the behavioral, psychological, physical health and social effects of psychoactive substances on the user and significant others.
2. Understand treatment, describe the philosophies, practices, policies, and outcomes of the most generally accepted and scientifically supported models of treatment, recovery, relapse prevention, and continuing care for addiction and other substance-related problems. Recognize the importance of family, social networks, and community systems in the treatment and recovery process.
3. Apply knowledge and understand the established diagnostic criteria for substance use disorders and describe treatment modalities and placement criteria within the continuum of care and provide treatment services appropriate to the personal and cultural identity and language of the client.
4. Demonstrate professionalism and understand the importance of self-awareness in one’s personal, professional and cultural life. Understand the addiction professional’s obligations to adhere to ethical and behavioral standards of conduct in the helping relationship.

In addition, the graduate will complete the comprehensive learning outcomes identified with the General Education Core.
Drug & Alcohol Recovery Counselor Requirements

- DAR* 101: Public Health Issues Abuse and Addiction 3 Credits
- DAR* 111: Addiction Counseling 3 Credits
- ENG* 101: Composition 3 Credits (Gen Ed - English)
- PSY* 111: General Psychology I 3 Credits (Gen Ed - Social Sciences)
- Choose one course from Gen Ed - Physical and Natural Sciences 3-4 Credits

Subtotal: 15-16

- DAR* 112: Group Counseling Theory and Techniques 3 Credits
- DAR* 158: Biology of Addiction 3 Credits
- DAR* 213: Addiction Counseling II 3 Credits
- Choose one course from Gen Ed - Humanities 3 Credits
- Choose one course from Gen Ed - Social Sciences 3 Credits

Subtotal: 15

- DAR* 251: Counseling Internship I 6 Credits
- PSY* 245: Abnormal Psychology 3 Credits
- Choose one course from Gen Ed - The Arts 3 Credits
- HSE* 134: Introduction to the Mental Health System 3 Credits

Subtotal: 15

- DAR* 252: Counseling Internship II 6 Credits
- Choose one course from Gen Ed - Math 3 Credits
- Choose any course 3 Credits
- PSY* 107: Pathways to Personal Growth 3 Credits

Subtotal: 15

Total Credits Required: 60-61

Note:

\[^\text{Courses open only to students formally accepted into this program.}\]
Early Childhood Education, A.S.

Program Design
The Early Childhood Education associate degree program is designed to prepare qualified students to become teachers of young children. The Early Childhood Education program has been accredited by the National Association for the Education of Young Children.

Curriculum
The Early Childhood Education program curriculum focuses on the developmental needs of young children from birth to five years of age, and emphasizes a practical approach to supporting and enhancing growth and development. Course work in theory and methods is enhanced by participation in the field experience segment of the program.

The program is available to the student full- or part-time.

Students who want to teach children in kindergarten, first, second or third grades should plan to transfer to the Early Childhood Education program at a baccalaureate institution after receiving this degree.

Learning Outcomes
Upon successful completion of all Early Childhood Education degree program requirements, graduates will
1. Support young children in early childhood programs using skills in observation, documentation, assessment, and application.
2. Plan, implement, and evaluate developmentally appropriate lesson/activity plans that foster children’s social, emotional, physical, and intellectual development and involve families.
3. Demonstrate effective teaching strategies in an early childhood program, based upon child development theory and family involvement principles, which include setting up the learning environment, letting children practice skills and ideas, interacting positively with children, colleagues, and families, and modeling behavior we want children to emulate.
4. Evaluate the quality of an early childhood program through curriculum activities, routines, and teacher and child engagement, the learning environment, teacher/child interaction, and family involvement.

In addition, the graduate will complete the comprehensive learning outcomes identified with the General Education Core.
Early Childhood Education Requirements

- ECE* 101: Introduction to Early Childhood Education 3 Credits
- ENG* 101: Composition 3 Credits (Gen Ed - English)
- MAT* 109: Quantitative Literacy 3 Credits (Gen Ed - Mathematics) or any higher level MAT* course.
- PSY* 111: General Psychology I 3 Credits (Gen Ed - Social Sciences)

Subtotal: 15

- GEO* 111: World Regional Geography 3 Credits (Gen Ed - Social Sciences) or
- SOC* 101: Principles of Sociology 3 Credits (Gen Ed - Social Sciences)

Subtotal: 16

- ECE* 214: Observation Assessment and Participant Seminar 4 Credits
- PSY* 203: Child Development 3 Credits

Choose two of the following:
- ECE* 103: Creative Experiences/Children 3 Credits
- ECE* 222: Methods and Techniques in Early Childhood Education 3 Credits
- ECE* 241: Methods and Techniques for Infants and Toddlers 3 Credits

Subtotal: 16

Choose one course from Gen Ed - The Arts  3 credits
Choose one course from Gen Ed - Physical and Natural Sciences  3-4 credits

Subtotal: 15-16

- ECE* 224: Advanced Early Childhood Curriculum 3 Credits
- Choose any course  3 Credits
- ECE* 295: Student Teaching Practicum 6 Credits

Subtotal: 15

Total Credits Required: 61-62
Engineering Science, A.S.

Program Design
The Engineering Science associate degree program prepares students for transfer to baccalaureate college and university programs in mechanical engineering, electrical engineering, civil engineering, chemical engineering, industrial engineering and engineering physics, as well as for immediate employment in engineering sciences and high technology fields. The program also offers students currently employed in technical positions in high technology industries the opportunity to retrain and upgrade their technical skills.

College of Technology - Engineering Pathway Program
The Engineering Science program, through the Connecticut College of Technology Pathways program, provides for direct entry into baccalaureate engineering programs at the University of Connecticut and Central Connecticut State University. Students may enter UConn and CCSU engineering programs through the Engineering Science A.S. degree program at MCC and, upon successful completion of the program, continue on to UConn and CCSU as third-year engineering students with a full two years of credit towards a bachelor's degree in engineering.

Curriculum
Students may enroll in this program full- or part-time. Courses are offered during daytime or evening hours. Preparation for the Engineering Science program includes a high school diploma or equivalent with one year of physics and three years of mathematics including Algebra I and Algebra II followed by advanced algebra or precalculus mathematics. For students not prepared for the required mathematics and English courses, MCC offers a wide range of developmental and preparatory courses.

The Engineering Science program includes three required electives allowing students to explore topics of interest. Students may choose to use the three engineering electives to concentrate in mechanical, electrical, biomedical, civil, or chemical engineering. It is recommended that if a student desires to transfer into a degree program in one of these engineering disciplines that they follow the courses prescribed for the corresponding concentration. The purpose of these five concentrations is to help students align their coursework more closely with their discipline of interest, resulting in a more seamless transfer into a four-year institution. Students who choose not to follow a concentration may choose any course from each list of engineering requirements (3) in order to complete the degree.

Learning Outcomes
Upon successful completion of all Engineering Science degree program requirements, graduates will:
1) Be prepared to transfer into a bachelor of science degree program as a continuing student in the Engineering Pathway program. Provided the transferring schools’ credit requirements are met, MCC students will transfer as juniors.
2) Demonstrate the ability to assist in research, development, design, production, testing and various other functions associated with engineering.
3) Demonstrate a good understanding of engineering principles/concepts.
4) Demonstrate a good understanding of mathematical concepts.
5) Demonstrate good working knowledge of state-of-the-art hardware and software in support of engineering design.
6) Demonstrate the ability to think through a problem in a logical manner.
7) Solve engineering problems using critical thinking and problem solving skills.
8) Demonstrate good communication skills.
9) Work as a member of a team.
10) Recognize the need for engaging in life-long learning and remaining current in one’s field.
In addition, the graduate will complete the comprehensive learning outcomes identified with the General Education Core.
Engineering Science Requirements

- ENG* 101: Composition 3 Credits (Gen Ed - English)
- EGR* 111: Introduction to Engineering 3 Credits
- MAT* 254: Calculus I 4 Credits (Gen Ed - Mathematics)
- CHE* 121: General Chemistry I 4 Credits (Gen Ed - Physical and Natural Sciences)
- HIS* 101: Western Civilization I 3 Credits (Gen Ed - Social Sciences)

Subtotal: 17

- ENG* 110: Introduction to Literature 3 Credits (Gen Ed - Humanities)
- MAT* 256: Calculus II 4 Credits
- Choose one course from Gen Ed - The Arts 3 Credits
- PHY* 221: Calculus-Based Physics I 4 Credits
- EGR* 230: C++ For Engineers 3 Credits

Subtotal: 17

- PHY* 222: Calculus-Based Physics II 4 Credits
- Engineering Elective 3-4 Credits‡
- EGR* 211: Engineering Statics 3 Credits
- PHL* 111: Ethics 3 Credits
- MAT* 268: Calculus III: Multivariable 4 Credits

Subtotal: 18

- Choose one course from Gen Ed - Social Sciences 3 Credits
- Engineering Elective 3-4 Credits‡
- Engineering Elective 3-4 Credits‡
- MAT* 285: Differential Equations 4 Credits

Subtotal: 13-15

Total Credits Required: 64-67

Note:

‡ Students who receive credit for MAT* 250 have fulfilled the MAT* 254 requirement.
‡‡ Students are recommended to follow one of the concentrations below. If a student does not elect to fulfill a concentration, they may take any of the courses below as Engineering Electives.

<table>
<thead>
<tr>
<th>Concentration</th>
<th>1st Engineering Elective</th>
<th>2nd Engineering Elective</th>
<th>3rd Engineering Elective</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mechanical Engineering</td>
<td>EGR* 221 Introduction to Electric Circuit Analysis</td>
<td>EGR* 214 Engineering Thermodynamics</td>
<td>EGR* 212 Engineering Dynamics</td>
</tr>
<tr>
<td>Electrical Engineering</td>
<td>EGR* 221 Introduction to Electric Circuit Analysis</td>
<td>EET* 252 Digital Electronics</td>
<td>MAT* 274 Linear Algebra</td>
</tr>
<tr>
<td>Biomedical Engineering</td>
<td>EGR* 221 Introduction to Electric Circuit Analysis</td>
<td>BIO* 121 General Biology I</td>
<td>CHE* 122 General Chemistry II</td>
</tr>
<tr>
<td>Civil Engineering</td>
<td>CAD* 110 Introduction to CAD</td>
<td>EGR* 214 Engineering Thermodynamics</td>
<td>EGR* 212 Engineering Dynamics</td>
</tr>
<tr>
<td>Chemical Engineering</td>
<td>EGR* 203 Introduction to Chemical Engineering</td>
<td>EGR* 214 Engineering Thermodynamics</td>
<td>CHE* 122 General Chemistry II</td>
</tr>
</tbody>
</table>

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Entrepreneurship Option, Business Administration Career, A.S.

Program Design
The Entrepreneurship Option, Business Administration Career associate degree program prepares graduates with the tools necessary to develop and start their own business, grow their existing business or apply entrepreneurial skills to a corporate setting. Students also gain relevant knowledge to enhance their small business management skills. This option is also suitable for students who wish to earn a degree in business administration and may decide to open a small business in the future.

Although many courses in this program may be transferred, it is possible that they will only transfer as electives into a school of Business. Students planning to earn a bachelor's degree should register in the Accounting & Business Administration Transfer Program. In addition, they may earn a certificate in Entrepreneurship. We strongly recommend any student planning on transferring seek advising from Business faculty.

Curriculum
Students may attend full-time or part-time. Students must achieve at least a C or better in an accounting course to continue on to the next level. Note: All business and accounting courses, except for BBG* 108 (formerly QM 110), have prerequisites. All accounting courses numbered 100 or higher require students to be eligible for ENG* 101 and MAT* 095 or higher.

Learning Outcomes
Upon successful completion of all Entrepreneurship Option, Business Administration Career program requirements, graduates will:

1. Demonstrate relevant content knowledge in required core business disciplines (accounting, business law, management and organizational behavior, and marketing) and apply concepts in problem solving through identifying and evaluating alternative solutions and offering a well-supported conclusion.
2. Recognize proper business acumen and decorum in professional interactions; demonstrate appropriate interpersonal communication and presentation skills and demeanor; demonstrate the ability to use presentation and team interpersonal skills effectively in class presentations.
3. Recognize and respond thoughtfully to situations that present ethical dilemma, demonstrating the ability to identify ethical dilemmas and social responsibilities of business, an ability to confront ethical dilemmas, and apply ethical principles to business situations using concepts learned.
4. Apply concepts in core business disciplines and critical thinking skills to make sound financial decisions.
5. Demonstrate an understanding of the interrelationships between accounting and business courses.
6. Recognize the vital role small business plays in the global economy. Develop and apply decision-making skills to strategic business planning.

In addition, the graduate will complete the comprehensive learning outcomes identified with the General Education Core.
Entrepreneurship Option Requirements

- ACC* 115: Financial Accounting 4 Credits
- BBG* 101: Introduction to Business 3 Credits
- BBG* 234: Legal Environment of Business 3 Credits
- Choose one course from Gen Ed - Mathematics 3-4 Credits
- ENG* 101: Composition 3 Credits (Gen Ed - English)

**Subtotal: 16-17**

- ACC* 117: Principles of Managerial Accounting 3 Credits
- BMG* 202: Principles of Management 3 Credits
- BMK* 201: Principles of Marketing 3 Credits
- BFN* 111: Financial Literacy 3 Credits or
- MAT* 165: Elementary Statistics with Computer Applications 4 Credits
- ENG* 110: Introduction to Literature 3 Credits or
- COM* 172: Interpersonal Communication 3 Credits or
- COM* 173: Public Speaking 3 Credits (Gen Ed - Humanities)

**Subtotal: 15-16**

- BES* 218: Entrepreneurship 3 Credits
- ECN* 101: Principles of Macroeconomics 3 Credits (Gen Ed - Social Sciences)
- Choose one course from Gen Ed - Physical and Natural Sciences 3-4 Credits
- Any ACC* or BBG* or BES* or BFN* or BMG* or BMK* 3 Credits
- BMG* 210: Organizational Behavior 3 Credits or
- PSY* 247: Industrial and Organizational Psychology 3 Credits

**Subtotal: 15-16**

- BES* 219: Management and Growth - Small Business 3 Credits
- BMG* 204: Managerial Communication 3 Credits
- Elective 3 Credits ‡
- Choose one course from Gen Ed - The Arts 3 Credits
- ACC* 125: Accounting Computer Applications I 3 Credits

**Subtotal: 15-16**

**Total Credits Required: 61-63**

**Note:**

† Students who receive credit for QM 110 have fulfilled the BBG* 208 requirement.
‡ Electives options include Honors Capstone, Co-op experience, General Education course or other directed elective.
Environmental Science, A.S.

Program Design
The field of environmental science has enjoyed rapid growth since the mid-1980s. Occupational employment projections compiled by the CT State Department of Labor show that job opportunities are expected to be very good for environmental scientists. An increase in local, state and federal laws concerning environmental issues has provided increased opportunity for professionals in this field. Growth is also expected to be fueled by demands for waste regulation and for compliance monitoring. The emerging field of sustainable energy is spurring the growth of job opportunities as a result of the ever-increasing awareness to monitor and improve the quality of the environment, to study the effect that human activity has on terrestrial and aquatic systems, and to find ways to restore them. As the demand for oil and other fuels continues to increase, bringing with it the threat of increased pollution, an increasing amount of research is focusing on the development of alternate renewable and non-polluting energy sources. Finally, data from the Geological Society of America (GSA) show a rapid increase in positions supporting the fields of geohydrology, environmental geology and engineering geology. Increasingly, public policy is requiring that industries comply with environmental regulating air and water quality. (Bureau of Labor Statistics, U.S. Department of Labor, Occupational Outlook Handbook, 2006-07 Edition)

Curriculum
The Environmental Science associate degree program, with its strong foundation in basic sciences and mathematics, will allow students interested in transferring to continue their studies in geosciences (including hydrology, soil, and agricultural resources), ecology (including forestry and wildlife biology), energy resources and sustainability, natural resources management and environmental biology or chemistry.

Learning Outcomes
Upon successful completion of all Environmental Science degree requirements, graduates will:
1. Develop an understanding of the scientific basis for issues affecting the environment and their impact on society as well as an appreciation for the role of sustainable technologies in addressing these issues.
2. Understand and be skilled at collecting, analyzing and presenting scientific data by various means including up-to-date computer technologies.
3. Be able to use the scientific method for problem solving in biology, chemistry, geology, physics and environmental sciences, and be able to use this skill to address issues related to the environment.
4. Research and assess the accuracy of appropriate information sources involving both print literature and electronic sources, including online databases and publications.
5. Communicate knowledge and understanding of environmental sciences and related societal issues in appropriate written, oral and mathematical means.
6. Demonstrate interrelationships and connections with other subject areas associated with a college-level education.
7. Use a wide array of knowledge, principles and skills acquired in laboratory, field and lecture settings for use in transferring to baccalaureate degree program or for use in seeking further training toward a technical degree.

In addition, the graduate will complete the comprehensive learning outcomes identified with the General Education Component.
Environmental Science Requirement

- BIO* 173: Introduction to Ecology 4 Credits
- CHE* 121: General Chemistry I 4 Credits
- EVS* 100: Introduction to Environmental Science 3 Credits
- ENG* 101: Composition 3 Credits (Gen Ed - English)
- Choose one course from Gen Ed - The Arts 3 Credits

**Subtotal: 17**

- CHE* 122: General Chemistry II 4 Credits
- EVS* 130: Sustainable Energy and the Environment 3 Credits
- MAT* 186: Precalculus 4 Credits (Gen Ed - Mathematics)
- GLG* 121: Introduction to Physical Geology 4 Credits

**Subtotal: 15**

- Choose one course from Gen Ed - Social Sciences 3 Credits
- BIO* 121: General Biology I 4 Credits (Gen Ed - Physical and Natural Sciences)
- COM* 173: Public Speaking 3 Credits (Gen Ed - Humanities)
- MAT* 165: Elementary Statistics with Computer Applications 4 Credits
- PHY* 121: General Physics I 4 Credits

**Subtotal: 18**

- BIO* 122: General Biology II 4 Credits
- Choose one Environmental and Earth Science elective from the list below 3-4 Credits
- ECN* 102: Principles of Microeconomics 3 Credits (Gen Ed - Social Sciences)
- PHY* 122: General Physics II 4 Credits

**Subtotal: 14-15**

**Total Credits Required: 64-65**

Environmental and Earth Science Electives

- CAD* 110: Introduction to CAD 3 Credits
- CHE* 211: Organic Chemistry I 4 Credits
- EGR* 111: Introduction to Engineering 3 Credits
- ENG* 202: Technical Writing 3 Credits
- EVS* 131: Sustainable Energy for Your Community 3 Credits
- LGL* 215: Environmental Law 3 Credits
- MAT* 254: Calculus I 4 Credits
- MAT* 256: Calculus II 4 Credits
- OCE* 101: Introduction to Oceanography 3 Credits
Foodservice Management, A.S.

Program Design
The Foodservice Management associate degree program provides education and training in subjects ranging from food production to food protection, marketing and management. Students will also take general education courses to improve employability, job performance and transferability to another college or university.

The Foodservice Management program is accredited by the American Culinary Federation Educational Institute. In addition to classroom and laboratory study, students will participate in an individually-planned, 300-hour cooperative work experience program. Students earn credit toward graduation while working.

Graduates have transferred and earned bachelor’s degrees at such colleges and universities as Central Connecticut State University, Cornell University, Johnson & Wales University, New England Culinary Institute, University of Massachusetts, and the University of Nevada, Las Vegas.

Students are required to purchase their own official kitchen and table service uniforms, as well as culinary tools and cutlery.

In addition to this degree, students may earn a second associate degree in Culinary Arts or Hotel-Tourism Management by taking additional credit hours. Candidates interested in earning double degrees should see a counselor or a hospitality management faculty member.

Curriculum
Students may enroll in this program full- or part-time, day or evening. This program has an active student club that provides a variety of activities to supplement the formal curriculum.

Note: Students should consult individual course descriptions for prerequisite information.

Learning Outcomes
Upon successful completion of all Foodservice Management degree program requirements, graduates will:

1. Analyze theory and techniques of food preparation and presentation.
2. Prepare menus incorporating costs, acquisition and inventory controls.
3. Summarize basic principles and concepts of the hospitality industry.
4. Create and cater events.
5. Prepare basic foods in quantity, including various regional foods.
6. Prepare ethnic cuisine in quantity.
7. Evaluate the establishment and maintenance of a safe and sanitary foodservice operation, including Hazard Analysis Critical Control Point and State of Connecticut law.
8. Setup and operate the ‘front of the house.’
9. Summarize managerial techniques and human resources management practice.
10. Demonstrate appropriate problem-solving techniques in addressing management problems.
11. Evaluate equipment design and layout for a foodservice facility.
12. Apply knowledge of computers to the hospitality industry.
13. Differentiate styles of marketing, sales analysis and planning for the hospitality industry.

In addition, the graduate will complete the comprehensive learning outcomes identified with the General Education Core.
Foodservice Management Requirements

- HSP* 109: Sanitation Certification 1 Credits
- HSP* 135: Service Management 3 Credits
- HSP* 101: Principles of Food Preparation 3 Credits
- HSP* 100: Introduction to the Hospitality Industry 3 Credits
- Choose one course from Gen Ed - Mathematics 3-4 Credits
  **Subtotal: 13-14**

- ENG* 101: Composition 3 Credits (Gen Ed - English)
- HSP* 112: Advanced Food Preparation 4 Credits
- BIO* 111: Introduction to Nutrition 3 Credits (Gen Ed - Physical and Natural Sciences)
- Choose one course from Gen Ed - Humanities 3 Credits
- ACC* 115: Financial Accounting 4 Credits
  **Subtotal: 17**

- HSP* 211: Food and Beverage Cost Control 3 Credits
- Choose one course from Gen Ed - The Arts 3 Credits
- HSP* 230: Sustainable Food Service Management 3 Credits
- HSP* 237: Hospitality Marketing 3 Credits
- HSP* 233: Hospitality Human Resource Management 3 Credits
  **Subtotal: 15**

- Choose one course from Gen Ed - Social Sciences 3 Credits
- HSP* 296: Cooperative Education/Work Experience 3 Credits
- HSP* 210: Buffet Catering 4 Credits or
- HSP* 201: International Foods 4 Credits
- Any Gen Ed Knowledge Area course 3-4 Credits

  Cross-listed courses (choose one)
- HSP* 238: Relationship Marketing 3 Credits
- BMK* 260: Relationship Marketing 3 Credits
  **Subtotal: 16**

**Total Credits Required: 61-62**

Dual Degree in Hotel-Tourism Management Requirements

To complete a dual degree in Hotel-Tourism Management, students should take the following courses:

- GEO* 204: Geography and Tourism Development 3 Credits
- HSP* 242: Hotel Management 3 Credits
- BMG* 204: Managerial Communication 3 Credits
- Electives 6 Credits

Dual Degree in Culinary Arts Requirements

To complete a dual degree in Culinary Arts, students should take the following courses:

- HSP* 103: Principles of Baking I 3 Credits
- HSP* 107: Icing Artistry I 3 Credits
- HSP* 201: International Foods 4 Credits or HSP* 210 Buffet Catering 4 Credits
- HSP* 215: Principles of Baking II 3 Credits or HSP* 216 Sustainable Food Service Management 3 Credits or HSP* 225 Principles of Baking III 3 Credits
- HSP* 290: Classical Cuisine 3 Credits
General Studies, A.S.

Program Design
The General Studies associate degree program leads to an associate in science degree. This program offers the broadest range of electives of any major at the college. General Studies is a concentration that is appropriate for transfer, for employment and for a self-designed independent course of study.

Education
If considering a career in education, students need to select a transfer institution early and consult with a counselor.

Curriculum
Students may enroll in this program full- or part-time. For those students who are not prepared for the mathematics and English courses required in the program, the college offers a wide range of developmental classes.
A minimum of 60 semester hours of credit is required in this program as follows:

Learning Outcomes
Upon successful completion of all General Studies degree program requirements, graduates will:
1. Demonstrate a clear connection among elective choices and their personal, occupational or academic ambitions.
2. Work with others, including culturally and intellectually diverse peoples; think critically; and gain an appreciation for life-long learning.
3. Become adept in written and spoken communication skills.

In addition, the graduate will complete the comprehensive learning outcomes identified with the General Education Core.
General Studies Program Required Courses

General Education Courses

General Education Knowledge Area - English 3 Credits
General Education Knowledge Area - Mathematics 3-4 Credits
General Education Knowledge Area - Physical and Natural Sciences 3-4 Credits
General Education Knowledge Area - Social Sciences 3 Credits
General Education Knowledge Area - Humanities 3-4 Credits
General Education Knowledge Area - The Arts 3 Credits
Another course from one of the seven General Education Knowledge Areas 3-4 Credits

General Studies Requirements

- IDS* 101 The First Year Experience * 3 Credits
- Choose from any course in biology, chemistry, physics or other physical science that includes a laboratory 4 Credits
- Choose any two courses in English, fine arts, foreign languages, humanities, music, philosophy, theater or communication 6-8 Credits
- Choose any course in anthropology, psychology or sociology 3 Credits
- Choose any course in economics, geography, history or political science 3 Credits
- Choose any open elective courses 18-20 Credits

Total Credits Required: 60-65

Notes:

Please note: cooperative education courses are available as an elective to General Studies students. Please see Academic Information or contact the Cooperative Education office for more information.
* IDS101 First Year Experience should be completed during the first semester. Students in the STARS program or AIT may replace this course with elective credits. Students transferring to MCC, or students declaring General Studies, A.S. as their major, who have completed 30 or more credits with a GPA of 2.5 or higher may choose to take IDS* 201 in place of IDS* 101.
Graphic Design, A.S.

Program Design
The purpose of the Graphic Design associate degree program is:
- to provide a graphic design transfer program in the area of design, fine arts, art education, computer graphics and advertising;
- to offer a degree program for those considering an entry-level position in related commercial art fields; and
- to provide greater technical knowledge and awareness of the creative visual arts to the community.

The program is structured to equip students with a sound foundation in technical skills, graphic design concepts, aesthetics, terminology and vocabulary, and to provide an awareness of the application of acquired technical knowledge. Computer use will be an integral part of the program.

Curriculum
Students may enroll in art and graphic design courses full- or part-time. There are no requirements or prerequisites for students wishing to take courses part-time or as electives for other programs. Graphic design/fine arts faculty members are available for consultation with students who wish to enroll in the program and, thereafter, for course selection and transfer information.

Learning Outcomes
Upon successful completion of all Graphic Design degree program requirements, graduates will:
1. Demonstrate an understanding and appreciation of graphic design as a form of communication and art.
2. Demonstrate an ability to use design processes and principles to create visual products that convey a specific message to a targeted audience.
3. Demonstrate creative thinking skills and strategies and use problem-solving techniques across a wide range of media.
4. Demonstrate an understanding of how creative processes and skills are integrated with printing and other reproduction processes found in the graphic design field.
5. Demonstrate knowledge of new technologies such as computer graphics that continue to evolve into important production tools.
6. Demonstrate an awareness of the varied career paths within the graphics industry including, but not limited to, art direction, illustration, project design, production art, graphic design and media direction.

In addition, the graduate will complete the comprehensive learning outcomes identified with the General Education Core.
Graphic Design Requirements

- ENG* 101: Composition 3 Credits (Gen Ed - English)
- GRA* 156: Graphic Design History, Theory and Practice 3 Credits
- ART* 111: Drawing I 3 Credits
- DGA* 111: Introduction to Computer Graphics 3 Credits
- Choose one course from Gen Ed - Social Sciences 3 Credits  
  **Subtotal: 15**

- ENG* 110: Introduction to Literature 3 Credits (Gen Ed - Humanities)
- ART* 151: Painting I 3 Credits or  
  ART* 155 Watercolor I 3 Credits
- GRA* 221: Illustration I 3 Credits
- Choose one course from Gen Ed - Physical and Natural Sciences 3-4 Credits
- Studio Elective 3 Credits  
  **Subtotal: 15-16**

- ART* 103: Art History III 3 Credits or  
  ART* 104 Contemporary Art History 3 Credits
- GRA* 151: Graphic Design I 3 Credits
- GRA* 222: Illustration II 3 Credits
- Choose one course from General Education-Humanities 3 Credits ‡‡
- DGA* 240: Web Page Design 3 Credits  
  **Subtotal: 15-16**

- GRA* 252: Graphic Design II 3 Credits
- DGA* 212: Advanced Computer Graphics 3 Credits
- Elective history 3 Credits‡
- Choose one course from Gen Ed - Mathematics 3 Credits
- Elective studio or
- ART* 292: Cooperative Education 3 Credits  
  **Subtotal: 15**

**Total Credits Required: 60-62**

**Note:**

‡ History elective: choose from any of the Mode 6 History choices: HIS* 101, HIS* 102, HIS* 121, HIS* 122, HIS* 201 or HIS* 202

‡‡COM* 173 is recommended as the Humanities elective choice for students planning to transfer to a 4-year state university in the future.
Health and Exercise Science, A.S.

Program Design
The Health and Exercise Science associate degree program is appropriate for students who plan to transfer to a baccalaureate institution to continue their education in exercise science, kinesiology, physical education, athletic training, recreation and public health. Students who complete this program will also receive a State of Connecticut Coaching Certificate.

Curriculum
Students may select a full- or part-time plan, attending day or evening. The Health and Exercise Science program is designed for students who have an interest in understanding the importance of physical activity and exercise and their direct connection to the prevention of disease, and the promotion of wellness and good health. It offers a mix of theory, applied courses and internships for majors. The courses in the program address the biophysical, physiological, health and socio-cultural aspects of the need for physical activity and exercise in our daily lives. Understanding the human body and the role of exercise in the prevention of disease are important aspects of this degree program. The program includes six core courses that apply specifically to Health and Exercise Science (HPE), eleven liberal arts and science courses with an emphasis on the sciences, and seven elective courses.

Learning Outcomes
Upon successful completion of all Health and Exercise Science degree program requirements, graduates will:
1. Understand the basic concepts of fitness, health and wellness.
2. Evaluate a subject’s wellness profile.
3. Understand the basic concepts of nutrition and prepare diet analyses.
4. Develop a behavioral modification plan to maximize the health and fitness of a subject.
5. Implement a behavioral modification plan to maximize the health and fitness of a subject.
6. Evaluate and develop a recreation program for children and adults with disabilities.
7. Apply concepts of fitness, health and wellness at a fieldwork placement site.

Health and Exercise Science Requirements

- BIO* 115: Human Biology 4 Credits (Gen Ed - Physical and Natural Sciences)
- ENG* 101: Composition 3 Credits (Gen Ed - English)
- Choose any CSA*, CSC* or CST* course 2-3 Credits
- Choose any HPE* 104 – HPE* 193 course 1 Credit
- HPE* 104: Adventure Based Dynamics
- HPE* 110: Aerobics
- HPE* 116: Weight Training
- HPE* 119: Fitness Walking
- HPE* 147: Self Defense
- HPE* 164: Bowling
- HPE* 191: Basketball
- HPE* 192: Softball
- HPE* 193: Soccer
- HPE* 217: Principles & practices of Coaching 3 Credits
- SOC* 101: Principles of Sociology 3 Credits (Gen Ed - Humanities)

Subtotal: 16-17
- HPE* 252: Introduction to Physical Education 3 Credits
- ENG* 200: Advanced Composition 3 Credits (Gen Ed - Mode 3)

Choose any HPE* 104 – HPE* 193 course 1 Credit
- HPE* 104: Adventure Based Dynamics
- HPE* 110: Aerobics
- HPE* 116: Weight Training
- HPE* 119: Fitness Walking
- HPE* 147: Self Defense
- HPE* 164: Bowling
- HPE* 191: Basketball
- HPE* 192: Softball
- HPE* 193: Soccer
- RLS* 101: Introduction to Recreation and Leisure Services 3 Credits
- HPE* 102: Human Performance and Fitness 3 Credits
- HLT* 151: Health and Wellness Promotion 3 Credits

Subtotal: 16

- BIO* 111: Introduction to Nutrition 3 Credits
- HPE* 240: Principles of Fitness 3 Credits

Choose any HPE* 104 – HPE* 193 course 1 Credit
- HPE* 104: Adventure Based Dynamics
- HPE* 110: Aerobics
- HPE* 116: Weight Training
- HPE* 119: Fitness Walking
- HPE* 147: Self Defense
- HPE* 164: Bowling
- HPE* 191: Basketball
- HPE* 192: Softball
- HPE* 193: Soccer
- PSY* 111: General Psychology I 3 Credits (Gen Ed - Social Sciences)
- Choose one course from Gen Ed - The Arts 3 Credits
- Choose any ANT*, ECN*, GEO*, HIS*, PSY*, SOC* or SSC* course 3 Credits

Subtotal: 16

- HLT* 295: Allied Health Coop Work Experience 3 Credits
- Choose one course from Gen Ed - Mathematics 3 Credits
  Choose any HPE* 104 – HPE* 193 course 1 Credit
- HPE* 104: Adventure Based Dynamics
- HPE* 110: Aerobics
- HPE* 116: Weight Training
- HPE* 119: Fitness Walking
- HPE* 147: Self Defense
- HPE* 164: Bowling
- HPE* 191: Basketball
- HPE* 192: Softball
- HPE* 193: Soccer
- HPE* 242: Introduction to Athletic Training 3 Credits
- HPE* 257: Adapted Physical Education 3 Credits
- COM* 173: Public Speaking 3 Credits (Gen Ed - Humanities)

Subtotal: 16
Total Credits Required: 64-65

Hotel-Tourism Management, A.S.

Program Design
The Hotel-Tourism associate degree program provides education and training for students who would like to work full-time after graduation or continue their studies at another institution to earn a bachelor’s degree. In the first year, students are introduced to the hospitality industry, studying quantity foods production and food protection. In the second year students focus on hotel management procedures; food, beverage and labor cost controls; and geography and tourism development. Students must participate in an individually planned 300-hour cooperative work program, earning credit toward graduation while employed. Students of this program have matriculated to Central Connecticut State University with junior status in their Hospitality and Tourism Studies Program. Graduates have also transferred and earned bachelor’s degrees from other colleges and universities such as Cornell University, University of Massachusetts, University of New Hampshire, University of New Haven and the University of Nevada, Las Vegas. Students must purchase official kitchen and table service uniforms, as well as culinary tools and cutlery. In addition to this degree, students may earn a second associate degree in Foodservice Management or Culinary Arts by taking additional credit hours. Candidates interested in earning double degrees should see a counselor or a hospitality management faculty member.

Curriculum
Students may attend full- or part-time, day or evening. This program has an active student club that provides a variety of activities to supplement the formal curriculum. Note: Students should consult individual course descriptions for prerequisite information.

Learning Outcomes
Upon successful completion of all Hotel-Tourism Management degree program requirements, graduates will:

1. Analyze theory and techniques of food preparation and presentation.
2. Prepare menus incorporating costs, acquisition and inventory controls.
3. Summarize basic principles and concepts of the hospitality industry.
4. Prepare basic foods in quantity, including various regional foods.
5. Evaluate the establishment and maintenance of a safe and sanitary foodservice operation, including Hazard Analysis Critical Control Point and State of Connecticut law.
6. Setup and operate the 'front of the house.'
7. Summarize managerial techniques and human resources management practice.
8. Demonstrate appropriate problem-solving techniques in addressing management problems.
9. Evaluate equipment design and layout for a foodservice facility.
10. Apply knowledge of computers to the hospitality industry.
11. Differentiate styles of marketing, sales analysis and planning for the hospitality industry.
12. Demonstrate the practical approach to the various aspects of food and beverage cost control and purchasing.
13. Outline the legal responsibilities and rights of guests and employees.
14. Interpret hospitality sales practices and market analysis from sales to actual activity.
15. Apply office procedures and forms necessary to room guests and control cash.

In addition, the graduate will complete the comprehensive learning outcomes identified with the General Education Core.
Hotel-Tourism Management Requirements

- HSP* 109: Sanitation Certification 1 Credits
- HSP* 135: Service Management 3 Credits
- HSP* 101: Principles of Food Preparation 3 Credits
- HSP* 100: Introduction to the Hospitality Industry 3 Credits
- Choose one course from Gen Ed - Mathematics 3 Credits

Subtotal: 13-14

- HSP* 112: Advanced Food Preparation 4 Credits
- BIO* 111: Introduction to Nutrition 3 Credits (Gen Ed - Physical and Natural Sciences)
- ENG* 101: Composition 3 Credits (Gen Ed - English)
- ACC* 115: Financial Accounting 4 Credits

Cross-listed courses (choose one)
- BMK* 260: Relationship Marketing 3 Credits or
- HSP* 238: Relationship Marketing 3 Credits

Subtotal: 17

- HSP* 211: Food and Beverage Cost Control 3 Credits
- HSP* 233: Hospitality Human Resource Management 3 Credits
- HSP* 237: Hospitality Marketing 3 Credits
- Choose one course from Gen Ed - Social Sciences 3 Credits
- GEO* 111: World Regional Geography 3 Credits

Subtotal: 15

- HSP* 296: Cooperative Education/Work Experience 3 Credits
- Choose one course from Gen Ed - The Arts 3 Credits
- HSP* 242: Hotel Management 3 Credits
- Choose one course from Gen Ed - Humanities 3 Credits
- GEO* 204: Geography and Tourism Development 3 Credits

Subtotal: 15

Total Credits Required: 60-61

Dual Degree in Foodservice Management Requirements

To complete a dual degree in Foodservice Management, students should take the following courses:
- HSP* 201: International Foods 4 Credits
- HSP* 210: Buffet Catering 4 Credits
- HSP* 117: Beverage Management 3 Credits
- Electives 4 Credits
Interpersonal and Organizational Communication, A.A.

Program Design
The International and Organizational Communication degree program will help students develop competence in the practice and analysis of human communication.

Curriculum
Students may enroll in this program on a full- or part-time basis and attend classes during the day or evening.

Learning Outcomes
- Explain major theories in interpersonal and organizational communication.
- Understand how identity is negotiated, enacted, and maintained.
- Analyze how context affects topic and style of interactions.
- Conduct a meeting.
- Demonstrate awareness of cultural forms, patterns, and styles of communication.
Interpersonal and Organizational Communication Requirements

- ENG* 101: Composition 3 Credits (Gen Ed - English)
- COM* 100: Introduction to Communication 3 Credits (Gen Ed - Humanities)
- COM* 172: Interpersonal Communication 3 Credits
- PSY* 111 or SOC* 101 or ANT* 101 or ANT* 105 (Gen Ed - Social Science)
- COM* 173: Public Speaking 3 Credits (Gen Ed - Humanities) or
- COM* 173H: Honors Public Speaking 3 Credits

Subtotal: 15

- ENG* 110: Introduction to Literature 3 Credits
- Choose any course from Gen Ed - Physical and Natural Sciences 3-4 Credits
- COM* 202: Intercultural Communication 3 Credits
- Choose one course from Gen Ed - Mathematics 3 Credits
- COM* 101: Introduction to Mass Communication 3 Credits

Subtotal: 15-16

- COM* 209: Gender and Communication 3 Credits
- COM* 113: Social Media in Contemporary Society 3 Credits
- COM* 278: Group Communication 3 Credits
- THR* 101 or DGA* 111 or GRA* 151 (Knowledge Area - The Arts)
- Any SPA* course or FRE*(112, 211 or 212) or PHL*(101 or 111)

Subtotal: 15

- COM* 201: Introduction to Public Relations 3 Credits
- Any lab course from Gen Ed - Physical and Natural Sciences 4 credits
- COM* 206: Family Communication I 3 Credits or
- COM* 210: Environmental Communication 3 Credits
- Any History (HIS*) course from Gen Ed - Social Science 3 credits
- COM* 295: Internship I 3 Credits

Subtotal: 15-16

Total Credits Required: 60-62
Journalism Option, Communication, A.S.

Program Design
The Journalism Option, Communication associate degree program is designed for students interested in pursuing careers in print journalism as correspondents, reporters or feature writers. Students will be expected to build strong writing and communication skills, as well as a broad understanding of history, government, economics, social science and ethics – all areas critical to the practicing journalist. Cooperative education/work experience is required.

Learning Outcomes
Upon successful completion of all Journalism Option, Communication degree program requirements, graduates will

1. Report and write basic news stories including obituaries, accident/fire/disaster stories, news conferences and town meetings, using standard news style and applying the concepts of fairness and accuracy.
2. Identify, report and write feature stories.
4. Operate under the Society of Professional Journalists Code of Ethics and understand the ethics involved in making journalistic and editorial choices.
5. Choose appropriate sources, conduct interviews and use quotation and attribution correctly.
6. Define and assess the role of the news media within the context of history, government and society.

In addition, the graduate will complete the comprehensive learning outcomes identified with the General Education Core.
Journalism Option Requirements

- ECN* 101: Principles of Macroeconomics 3 Credits or
- ECN* 102: Principles of Microeconomics 3 Credits

- ENG* 101: Composition 3 Credits (Gen Ed - English)
- PSY* 111: General Psychology I 3 Credits (Gen Ed - Social Sciences)
- COM* 173: Public Speaking 3 Credits
- Choose one course from Gen Ed - Humanities 3 Credits

  Subtotal: 15

- COM* 108: Contemporary Issues in Media 3 Credits
- COM* 222: Reporting and Writing News Stories. 3 Credits
- ENG* 110: Introduction to Literature 3 Credits (Gen Ed - Humanities)

- HIS* 102: Western Civilization II 3 Credits or
- HIS* 202: United States History II 3 Credits or
- HIS* 213: The U.S. Since World War II 3 Credits

- POL* 111: American Government 3 Credits or
- POL* 112: State and Local Government 3 Credits

  Subtotal: 15

- ENG* 200: Advanced Composition 3 Credits
- COM* 247: Television Writing 3 Credits
- COM* 201: Introduction to Public Relations 3 Credits
- Choose one course from Gen Ed - Mathematics 3 Credits
- COM* 295: Internship I 3 Credits

  Subtotal: 15

- COM* 229: Creative Writing, Non Fiction. 3 Credits
- COM* 101: Introduction to Mass Communication 3 Credits
- SOC* 101: Principles of Sociology 3 Credits
- Choose one course from Gen Ed - The Arts 3 Credits
- Choose one course from Gen Ed - Physical and Natural Sciences 3-4 Credits

  Subtotal: 15-16

Total Credits Required: 60-61
Liberal Arts and Science, A.A.

Program Design
The Liberal Arts and Science associate in art degree program provides students with a broad background preparing them to move directly into the workforce or for transfer to a bachelor's degree program at another college or university. Students planning to continue their education in a baccalaureate degree major such as English, history, pre-law, French or psychology will be well served by the Liberal Arts curriculum. By following the curriculum guidelines detailed on this page and by working with an advisor to choose courses related to the student’s interests, a student can, in a sense, customize his or her own degree program.

Curriculum
Students may enroll in this program full-or part-time. For any student who is not prepared for the required mathematics and English courses, MCC offers a wide range of developmental classes.

Learning Outcomes
Upon successful completion of all Liberal Arts and Science associate degree program requirements, graduates will

1. Read, write and communicate analytically in forms that involve and document outside sources.
2. Understand the major literary, artistic and philosophical features of western and non-western cultures.
3. Define the concept and function of culture.
4. Demonstrate knowledge of the major developments in western civilization.
5. Understand world events in terms of social scientific theories and paradigms.
6. Demonstrate the ability to conduct meaningful research.
7. Use mathematical tools and technology to create mathematical models.
8. Analyze and solve problems numerically, graphically and symbolically.
9. Use appropriate techniques to gather and analyze data.
10. Apply the scientific method to solving problems.
11. Understand and apply scientific principles.
12. Work with others, including culturally and intellectually diverse peoples; think critically; and gain an appreciation for life-long learning.
13. Demonstrate proficiency in a foreign language at the intermediate level.

In addition, the graduate will complete the comprehensive learning outcomes identified with the General Education Core.

Students interested in pursuing an A.A. degree in Liberal Arts and Science with a humanities or social science emphasis, such as anthropology, economics, English, foreign languages, geography, history, philosophy, political science, psychology, sociology or speech communication, should contact the Liberal Arts Division.

Students selecting Liberal Arts and Science as a major who have completed 16 transferable credits or fewer may be eligible to enroll in the Guaranteed Admissions Program with the University of Connecticut. The Guaranteed Admissions Program is designed for students choosing to transfer to the College of Arts and Sciences, the College of Agriculture and Natural Resources, or the School of Business at UConn.
General Education Requirements

- ENG* 101: Composition 3 Credits (Gen Ed - English)
- Choose one course from the following Gen Ed - Mathematics courses:
  - MAT* 146: Math for Liberal Arts 3 Credits
  - MAT* 165: Elementary Statistics with Computer Applications 4 Credits
  - MAT* 172: College Algebra 3 Credits
  - MAT* 186: Precalculus 4 Credits
  - MAT* 222: Statistics II with Technology Applications 3 Credits
  - MAT* 254: Calculus I 4 Credits
- Choose one course from Gen Ed - The Arts 3 Credits
  - ART* 101, ART* 102, ART* 206/COM* 154, or MUS* 101
- Choose two courses from Gen Ed - Physical and Natural Sciences courses (at least one must be a 4-credit lab course)
  - BIO* 105: Introduction to Biology 4 Credits
  - BIO* 115: Human Biology 4 Credits
  - BIO* 173: Introduction to Ecology 4 Credits
  - CHE* 111: Concepts of Chemistry 4 Credits
  - EAS* 102: Earth Science 3 Credits
  - EAS* 106: Natural Disasters 3 Credits
  - EVS* 100: Introduction to Environmental Science 3 Credits
  - GLG* 121: Introduction to Physical Geology 4 Credits
  - Choose one two-course sequence from the following Gen Ed - Physical and Natural Sciences courses
    - BIO* 121: General Biology I 4 Credits
    - BIO* 122: General Biology II 4 Credits
    - CHE* 121: General Chemistry I 4 Credits
    - CHE* 122: General Chemistry II 4 Credits
    - PHY* 121: General Physics I 4 Credits
    - PHY* 122: General Physics II 4 Credits
    - PHY* 221: Calculus-Based Physics I 4 Credits
    - PHY* 222: Calculus-Based Physics II 4 Credits
- Choose one course from the following Gen Ed - Social Sciences courses
  - ANT* 101: Introduction to Anthropology 3 Credits
  - PSY* 111: General Psychology I 3 Credits
  - SOC* 101: Principles of Sociology 3 Credits
- Choose one course from the following Gen Ed - Humanities courses:
  - PHL* 101: Introduction to Philosophy 3 Credits
  - PHL* 111: Ethics 3 Credits

**Subtotal: 22-24**

Liberal Arts and Science Requirements

- ENG* 110: Introduction to Literature 3 Credits
- ENG* 200: Advanced Composition 3 Credits
Choose one of the following:
- ENG* 221: American Literature I 3 Credits
- ENG* 222: American Literature II 3 Credits
- ENG* 232: British Literature II 3 Credits
- ENG* 245: Early Western Literature 3 Credits
- ENG* 246: Modern Western Literature 3 Credits
- ENG* 262: Women in Literature 3 Credits
- ENG* 263: Women in Poetry 3 Credits
- Choose a single foreign language course  6-8 Credits‡

Choose one of the following:
- HIS* 101: Western Civilization I 3 Credits
- HIS* 102: Western Civilization II 3 Credits
- HIS* 121: World Civilization I 3 Credits
- HIS* 122: World Civilization II 3 Credits

Choose one of the following:
- HIS* 201: United States History I 3 Credits
- HIS* 202: United States History II 3 Credits
- HIS* 215: The History Of Women in the US 3 Credits
- HIS* 224: The American Indian 3 Credits
- HIS* 242: Modern Ireland 3 Credits
- HIS* 272: Modern China 3 Credits
- HIS* 280: Modern Africa 3 Credits
- HIS* 284: South Africa 3 Credits

Choose one of the following:
- ECN* 101: Principles of Macroeconomics 3 Credits
- ECN* 102: Principles of Microeconomics 3 Credits
- GEO* 101: Introduction to Geography 3 Credits
- GEO* 111: World Regional Geography 3 Credits
- POL* 101: Introduction to Political Science 3 Credits
- POL* 111: American Government 3 Credits

**Subtotal: 24-26**

**Electives 15 Credits**

Choose four liberal arts courses from the list below and one free elective:
- ANT*, ART*, AST*, BIO* (with the exception of BIO* 111), CHE*, COM*100, COM*101, COM*173, COM*209, EAS*, ECN*, ENG* (with the exception of ENG* 003, ENG* 093 and ENG*096), EVS*, FRE*, GEO*, GLG*, HIS*, HUM*, IDS*201, MAT* (with the exceptions of MAT* 075, MAT* 095 and MAT* 096), MET*, MUS*, OCE*, PHL*, PHY*, POL*, PSY*, SOC*, SPA*, THR*

**Total Credits Required: 61-65**

**Notes:**

* Transfer students and students changing their major to Liberal Arts or General Studies may not be required to take IDS* 201. IDS*201 may not transfer to other schools as a General Education course. Students may want to consider taking a General Education Mode 1 course in its place. Please consult with an advisor.

‡ The completion of three years of study in a single foreign language at the high school level fulfills the foreign language requirement for the Liberal Arts and Science, A.A. Degree. Some colleges (such as the University of Connecticut) have as a graduation requirement four semesters of study in a single language. It is possible to complete those four semesters of language study at MCC. (Check specific transfer requirements for other colleges and universities). If a student is able to
waive the required 6-8 credits of a foreign language, he/she must still take 6-8 credits in humanities or Liberal Arts courses.

**Additional Courses**

**AFRICAN AMERICAN STUDIES:** In combination with the A.A. degree requirements, students who are interested in an academic emphasis in African American Studies may want to select the following elective courses:

HUM* 172, ENG* 222, ANT* 105, MUS* 107, SSC* 201, HIS* 214, HIS* 218, SOC* 220

**WOMEN'S STUDIES:** In combination with the A.A. degree requirements, students who are interested in an academic emphasis in Women’s Studies may want to select the following elective courses:

ANT* 105, SOC* 212, SOC 262, BIO* 103, COM* 209, ENG* 263, HIS* 215

**PSYCHOLOGY:** In combination with the A.A. degree requirements, students who are interested in an academic emphasis in psychology may want to select the following elective courses:

PSY* 111, PSY* 112 and at least two of the following, PSY* 201 or PSY* 203, PSY* 240, PSY* 243, PSY* 245.

It is also recommended that students take MAT* 165, SOC* 101 or ANT* 101, and BIO* 105 or BIO* 115 or BIO* 121.
Liberal Arts and Science, A.S.

Program Design
The Liberal Arts and Science associate in science degree program provides students with a broad background preparing them for transfer to a bachelor’s degree program at another college or university or to move directly into the workforce. Students planning to continue their education in a baccalaureate degree major such as agriculture, biology, chemistry, environmental science, geology, physics or psychology will be well served by the Liberal Arts curriculum. By following the curriculum guidelines detailed on this page and by working with an advisor to choose courses related to the student’s interests, a student can, in a sense, customize his or her own degree program.

Curriculum
Students may enroll in this program full-or part-time. For any student who is not prepared for the required mathematics and English courses, MCC offers a wide range of developmental classes.

Foreign Language Requirements
Although the associate in science degree does not require the study of a language, the college or university to which a student wishes to transfer may require two to four semesters of the same foreign language. These requirements may be met at MCC.

Learning Outcomes
Upon successful completion of all Liberal Arts and Science associate degree program requirements, graduates will
1. Read, write and communicate analytically in forms that involve and document outside sources.
2. Understand the major literary, artistic and philosophical features of western and non-western cultures.
3. Define the concept and function of culture.
4. Demonstrate knowledge of the major developments in western civilization.
5. Understand world events in terms of social scientific theories and paradigms.
6. Demonstrate the ability to conduct meaningful research.
7. Use mathematical tools and technology to create mathematical models.
8. Analyze and solve problems numerically, graphically and symbolically.
9. Use appropriate techniques to gather and analyze data.
10. Apply the scientific method to solving problems.
11. Understand and apply scientific principles.
12. Work with others, including culturally and intellectually diverse peoples; think critically; and gain an appreciation for life-long learning.

In addition, the graduate will complete the comprehensive learning outcomes identified with the General Education Core.

Students selecting the Liberal Arts and Science as a major who have completed 16 transferable credits or fewer may be eligible to enroll in the Guaranteed Admissions Program with the University of Connecticut (UConn). The Guaranteed Admissions Program is designed for students choosing to transfer to the College of Arts and Sciences, the College of Agriculture and Natural Resources, or the School of Business at UConn.
Liberal Arts and Science Program Required Courses

General Education Requirements

- ENG* 101: Composition 3 Credits (Gen Ed - English)

Choose one course from the following Gen Ed - Mathematics courses: (3-4 Credits)
- MAT* 146: Math for Liberal Arts 3 Credits
- MAT* 148: Geometry 3 Credits
- MAT* 165: Elementary Statistics with Computer Applications 4 Credits
- MAT* 172: College Algebra 3 Credits
- MAT* 186: Precalculus 4 Credits
- MAT* 222: Statistics II with Technology Applications 3 Credits
- MAT* 254: Calculus I 4 Credits
- MAT* 256: Calculus II 4 Credits

Choose ART*101, ART*102, ART*206/COM*154, or MUS*101 from Gen Ed - The Arts 3 Credits

Choose one two-course sequence from the following Gen Ed - Physical and Natural Sciences courses: (7-8 Credits)
- BIO* 121: General Biology I 4 Credits and
- BIO* 122: General Biology II 4 Credits
or
- CHE* 121: General Chemistry I 4 Credits and
- CHE* 122: General Chemistry II 4 Credits
or
- PHY* 121: General Physics I 4 Credits and
- PHY* 122: General Physics II 4 Credits
or
- PHY* 221: Calculus-Based Physics I 4 Credits and
- PHY* 222: Calculus-Based Physics II 4 Credits

Choose one from the following Gen Ed - Social Science courses: (3 Credits)
- ANT* 101: Introduction to Anthropology 3 Credits
- PSY* 111: General Psychology I 3 Credits
- SOC* 101: Principles of Sociology 3 Credits

Choose one course from the following Gen Ed - Humanities courses: (3 Credits)
- PHL* 101: Introduction to Philosophy 3 Credits
- PHL* 111: Ethics 3 Credits

Subtotal: 23-24

Liberal Arts and Science Requirements

- ENG* 110: Introduction to Literature 3 Credits
- ENG* 200: Advanced Composition 3 Credits

Choose one of the following:
- ENG* 221: American Literature I 3 Credits
- ENG* 222: American Literature II 3 Credits
- ENG* 232: British Literature II 3 Credits
• ENG* 245: Early Western Literature 3 Credits
• ENG* 246: Modern Western Literature 3 Credits
• ENG* 262: Women in Literature 3 Credits
• ENG* 263: Women in Poetry 3 Credits

Choose one of the following:
• HIS* 101: Western Civilization I 3 Credits
• HIS* 102: Western Civilization II 3 Credits
• HIS* 121: World Civilization I 3 Credits
• HIS* 122: World Civilization II 3 Credits

Choose one of the following:
• HIS* 201: United States History I 3 Credits
• HIS* 202: United States History II 3 Credits
• HIS* 215: The History Of Women in the US 3 Credits
• HIS* 224: The American Indian 3 Credits
• HIS* 242: Modern Ireland 3 Credits
• HIS* 272: Modern China 3 Credits
• HIS* 280: Modern Africa 3 Credits
• HIS* 284: South Africa 3 Credits

Choose one of the following:
• ECN* 101: Principles of Macroeconomics 3 Credits
• ECN* 102: Principles of Microeconomics 3 Credits
• GEO* 101: Introduction to Geography 3 Credits
• GEO* 111: World Regional Geography 3 Credits
• POL* 101: Introduction to Political Science 3 Credits
• POL* 111: American Government 3 Credits

Choose one Gen Ed course (3 Credits)

Choose one of the following:
• MAT* 146: Math for Liberal Arts 3 Credits
• MAT* 148: Geometry 3 Credits
• MAT* 165: Elementary Statistics with Computer Applications 4 Credits
• MAT* 172: College Algebra 3 Credits
• MAT* 186: Pre-calculus 4 Credits
• MAT* 222: Statistics II with Technology Applications 3 Credits
• MAT* 254: Calculus I 4 Credits
• MAT* 256: Calculus II 4 Credits

Subtotal: 24-26

Electives 15 Credits

Choose four liberal arts courses from the list below or one free elective:
ANT*, ART*, AST*, BIO* (with the exception of BIO* 111), CHE*, COM*100, COM*101, COM*172, COM*209, EAS*, ECN*, ENG* (with the exception of ENG* 003, ENG* 093, and ENG*096), EVS*, FRE*, GEO*, GLC*, MET*, HIS*, HUM*, IDS*201, MAT* (with the exceptions of MAT* 075, MAT* 095 and MAT* 096), MUS*, OCE*, PHL*, PHY*, POL*, PSY*, SOC*, SPA*, THR*

Total Credits Required: 62-65
Additional Courses

In addition to following the requirements for an A.S. degree, the courses listed below are suggestions of applicable courses to take if you are interested in transferring to a certain major. Be sure and meet with the academic chair of the particular department to confirm the selected courses.

**BIOLOGY:** For students who want to transfer into bachelor's degree programs in ecology, human biology, biotechnology and secondary education, as well as pre-medical, pre-dental and pre-veterinary studies. BIO* 211, BIO* 212, ENG* 114, MAT* 254 (formerly MAT* 250), MAT* 256 and MAT* 165. It is also recommended that students take BIO* 121, BIO* 122, and CHE* 121, CHE* 122.

**CHEMISTRY:** For students who want to transfer into a bachelor's degree program leading to job opportunities in such fields as industrial chemistry, chemical and pharmaceutical sales and service, education, dentistry and medicine.

MAT* 165, MAT* 285, MAT* 268, CHE* 211, CHE* 212, CHE* 121, CHE* 122, PHY* 221, PHY* 222

**ENVIRONMENTAL SCIENCE:** For students who want to transfer into bachelor's degree programs in agricultural resource management, environmental studies, earth sciences, or ecology and evolutionary biology.

EVS* 100, GLG* 121, BIO* 121 and BIO* 122, PHY* 221, PHY* 222, CHE* 121, CHE* 122, MAT* 254 (formerly MAT* 250) are strongly recommended. Note that GEO* 246 and MAT* 165 are also suggested.

**MATHEMATICS:** For students who want to transfer into bachelor's degree programs in mathematics, computer science, information services or related fields. Mathematics graduates may find positions in statistics, actuarial science, operations research, computer programming, systems analysis and teaching.

MAT* 274, MAT* 268, MAT* 285, MAT* 287, CSC* 215, PHY* 121, PHY* 122

**PSYCHOLOGY:** For students who want to transfer into bachelor's degree programs in psychology.

PSY* 111, PSY* 112 and at least two of the following, PSY* 201 or PSY* 203, PSY* 240, PSY* 243, PSY* 245. It is also recommended that students take MAT* 165, SOC* 101 or ANT* 101, and BIO* 105 or BIO* 115 or BIO* 121.

**PHYSICS:** For students who want to transfer into bachelor's degree majors in physics, engineering physics, physical science or earth science. Physics graduates are prepared to pursue a wide variety of employment opportunities ranging from basic research and development to technical sales and services.

PHY* 221, PHY* 222, PHY* 223, MAT* 268, MAT* 285

**PRE-MED/PRE-PROFESSIONAL PROGRAM** (Medical, Dental, Veterinary, and Optometry): Students are advised to check with the transfer institution and confer with their advisor.

In addition to following the requirements for an A.S. degree, you may want to include the following suggested courses as electives in your program of study.

**NUTRITION:** For students interested in nutrition or dietetics.

CHE* 121, CHE* 122, BIO* 121, BIO* 122, CHE* 210, BIO* 111, BIO* 211, BIO* 212.

**Notes:**

* Transfer students and students changing their major to Liberal Arts or General Studies may not be required to take IDS* 201. IDS*201 may not transfer to other schools as a General Education course. Students may want to consider taking a General Education Mode 1 course in its place. Please consult with an advisor.
Management Information Systems, A.S.

Program Design
The Management Information Systems associate degree program is offered to students who would like to continue their studies at another college or university to earn a bachelor’s degree. This program requires a mixture of business, information systems and liberal arts and sciences courses, which students would normally take the first two years at a baccalaureate institution. Students planning to transfer should consult a counselor or faculty advisor about their choice of electives before selecting specific courses. Students should be familiar with the requirements of the institution to which they will transfer credits. We encourage you to select your transfer college or university as early as possible. Also, you should see an advisor before choosing elective courses in this associate degree program because each institution may have specific degree requirements.

Curriculum
Students may enroll in this program full- or part-time. Students should have a sound foundation in mathematics, problem solving and communication skills.

Learning Outcomes
Upon successful completion of all Management Information Systems degree program requirements, graduates will

1. Demonstrate relevant content knowledge of core business disciplines; accounting, business law, management, and marketing.
2. Define information systems and describe their importance to organizations.
3. Describe the basic methodologies used to develop and implement information systems.
4. Apply project management concepts, tools and techniques, to prepare basic documents such as a project charter, project schedule and project scope document.
5. Utilize business application software including spreadsheet, database, presentation, and word processing for business decision-making and analysis.
6. Organize and present information effectively through written, oral and electronic channels.
7. Recognize the importance of working in teams to achieve common goals, and collaborate effectively in group assignments.

In addition, the graduate will complete the comprehensive learning outcomes identified with the General Education Core.
Management Information Systems Requirements

- ACC* 115: Financial Accounting 4 Credits
- CST* 201: Introduction to MIS 3 Credits
- ENG* 101: Composition 3 Credits (Gen Ed - English)
- COM* 173: Public Speaking 3 Credits (Gen Ed - Humanities)
- CSC* 124: Programming Logic and Design with Python 3 Credits

Subtotal: 16

- ECN* 102: Principles of Microeconomics 3 Credits or any Gen Ed - Social Sciences course
- ACC* 118: Managerial Accounting 4 Credits
- MAT* 165: Elementary Statistics with Computer Applications 4 Credits (Gen Ed - Mathematics)
- Choose one course from Gen Ed - The Arts 3 Credits
- BMG* 202: Principles of Management 3 Credits

Subtotal: 17

- CSA* 135: Spreadsheet Applications 3 Credits
- MAT* 158: Functions, Graphs & Matrices 3 Credits (Gen Ed - Mathematics)
- CST* 131: Networking Theory & Application 4 Credits
- BMK* 201: Principles of Marketing 3 Credits
- Technical/Business elective 3 Credits

Subtotal: 16

- MAT* 230: Applied Calculus with a Modeling Approach 3 Credits
- CST* 205: Project Management 4 Credits
- BBG* 234: Legal Environment of Business 3 Credits
- Choose one course from Gen Ed - Physical and Natural Sciences 3-4 Credits

Subtotal: 13-14

Total Credits Required: 62-63

Note:

* Eligibility for MAT* 095 or higher and ENG* 101.

** Technical/Business Electives:
- CST* 150: Web Design & Development I 3 Credits
- CSC* 230: Database Concepts with Web Application 3 Credits
- CSC* 295: Cooperative Education/Work Experience 3 Credits
- BMG* 204: Managerial Communication 3 Credits
- BMG* 210: Organizational Behavior 3 Credits
Manufacturing Engineering Technology, A.S.

Program Design
The Manufacturing Engineering Technology associate degree program is designed to be a broad-based engineering science transfer program that provides a foundation of mathematics and basic science, integrated with program components focusing on introductory manufacturing technology and general education. The program emphasizes the application of mathematics and principles of engineering science to technical manufacturing in order to prepare students for transfer to baccalaureate programs in engineering and engineering sciences with a manufacturing engineering focus. The program also prepares students for employment opportunities in entry and second-level positions in manufacturing and industrial technology fields requiring a combination of technical preparation and a strong general education background.

College of Technology—Technology Pathway Program
The Manufacturing Engineering Technology program provides for direct entry into baccalaureate industrial and engineering technology programs. Upon successful completion of the program, MCC technology studies graduates may continue on with a full two years of credit towards a baccalaureate degree in engineering technology or industrial technology at Central Connecticut State University.

Curriculum
Students may enroll in this program full- or part-time. Courses are offered during day and evening hours. Preparation for the Manufacturing Engineering Technology program includes a high school diploma or equivalent with one year of physics and two years of mathematics, including Algebra I and Algebra II. For students not prepared for the required mathematics and English courses, MCC offers a wide range of developmental and preparatory courses.

Learning Outcomes
Upon successful completion of all Manufacturing Engineering Technology degree program requirements, graduates will
1. Demonstrate team-oriented human skills that permit effective participation in multicultural work and social environments.
2. Apply appropriate mathematical and scientific principles to manufacturing applications.
3. Demonstrate proficiency in engineering fundamentals to analyze manufacturing engineering problems and make appropriate decisions.
4. Assist in the design process to meet effective production objectives.
5. Possess knowledge of engineering materials and be able to demonstrate competency in their selection and utilization.
6. Apply knowledge and skills to develop, interpret and select appropriate manufacturing processes.
7. Maintain a practical knowledge of state-of-the-art hardware and software in support of manufacturing systems.
8. Be aware of and use available information and data sources in support of the manufacturing systems.
9. Apply skills and knowledge to effectively and efficiently plan, organize, implement, measure and control manufacturing processes.
10. Demonstrate a thorough knowledge and understanding of engineering graphics as well as conventional drafting practices, such as orthographic and isometric projection, section, detail, auxiliary views and descriptive geometry, as well as geometric dimensioning and tolerancing basics.
11. Demonstrate a high level of proficiency in the use of state-of-the-art computer-aided design (CAD) software and be able to respond positively to continuous software revisions and upgrades.
12. Demonstrate a thorough understanding of two-dimensional and isometric CAD concepts, procedures and applications.
13. Apply knowledge of computer applications in integrating computer-aided manufacturing, computer numerical control, CAD, spreadsheets, graphs and word processing for manufacturing engineering, and technology documentation and support purposes.
In addition, the graduate will complete the comprehensive learning outcomes identified with the General Education Core.

**Manufacturing Engineering Technology Requirements**

- EGR* 111: Introduction to Engineering 3 Credits
- MAT* 186: Precalculus 4 Credits (Gen Ed - Mathematics)
- MFG* 205: Principles of CNC with Mastercam 3 Credits
- EGR* 112: Engineering Drawing Interpretations 3 Credits
- ENG* 101: Composition 3 Credits (Gen Ed - English)

**Subtotal: 16**

- MFG* 239: Geometric Dimension and Tolerancing 3 Credits
- PHY* 121: General Physics I 4 Credits (Gen Ed - Physical and Natural Sciences)
- EGR* 230: C++ For Engineers 3 Credits
- MFG* 230: Statistical Process Control 3 Credits
- COM* 173: Public Speaking 3 Credits (Gen Ed - Humanities)

**Subtotal: 16**

- MAT* 254: Calculus I 4 Credits (formerly MAT* 250) ‡ (Gen Ed - Mathematics)
- PHY* 122: General Physics II 4 Credits
- MFG* 111: Manufacturing Materials and Process I 3 Credits
- MAT* 165: Elementary Statistics with Computer Applications 4 Credits
- Choose one course from Gen Ed - The Arts 3 Credits

**Subtotal: 18**

- EGR* 211: Engineering Statics 3 Credits
- EET* 108: AC/DC Circuit Analysis 4 Credits
- MFG* 112: Manufacturing Materials and Process II 3 Credits
- CAD* 110: Introduction to CAD 3 Credits
- Choose any PSY*, SOC* or ANT* Gen Ed - Social Sciences course 3 credits

**Subtotal: 16**

**Total Credits Required: 66**

**Note:**

‡ Students who receive credit for MAT* 250 have fulfilled the MAT* 254 requirement.
Marketing, A.S.

Program Design
The Marketing associate degree program is for students who wish to enter managerial or proprietary positions in marketing. To complete this program, students will take courses in marketing, business, accounting and general education.
Students interested in transferring to earn a bachelor’s degree should enroll in the Accounting and Business Administration Transfer Program.
Note: Students should meet with a faculty advisor to plan their program of study.

Curriculum
We recommend that students have a sound foundation in mathematics before entering this program. We recommend that all students take the assessment test early to determine their mathematical level. Students must achieve at least a C or better in all accounting courses to continue onto the next level. Note: all business courses numbered 100 or higher require that students must be eligible for ENG* 101, with the exception of BBG* 101. Students are strongly advised to follow the suggested order of courses in the program whenever possible.

Learning Outcomes
Upon successful completion of all Marketing degree program requirements, graduates will
1. Demonstrate relevant content knowledge in required core business disciplines (accounting, business law, management and organizational behavior, and marketing) and apply concepts in problem solving through identifying and evaluating alternative solutions and offering a well-supported conclusion.
2. Recognize proper business acumen and decorum in professional interactions; demonstrate appropriate interpersonal communication and presentation skills and demeanor; demonstrate the ability to use presentation and team interpersonal skills effectively in class presentations.
3. Demonstrate the ability to identify situations that present ethical dilemmas and lapses and understand and apply the concepts related to ethics and the social responsibilities of businesses in order to respond thoughtfully.
4. Apply concepts in core accounting and business disciplines and demonstrate critical thinking skills to make sound business decisions.
5. Demonstrate an understanding of the interrelationships between accounting and business courses.
6. Demonstrate the ability to effectively present marketing and promotion plans and to make an effective sales presentation, all of which reflect an understanding of the target audience, environmental factors, and sound strategic decisions based on thorough research and an understanding of marketing and other business-related principles.

In addition, the graduate will complete the comprehensive learning outcomes identified with the General Education Core.
Marketing Requirements

- ACC* 115: Financial Accounting 4 Credits
- BBG* 101: Introduction to Business 3 Credits
- ENG* 101: Composition 3 Credits (Gen Ed - English)
- BFN* 111: Financial Literacy 3 Credits or
- Business Elective 3 credits

- COM* 173: Public Speaking 3 Credits (Gen Ed - Humanities) or
- COM* 172: Interpersonal Communication 3 Credits or
- ENG* 110: Introduction to Literature 3 Credits

**Subtotal: 16**

- ACC* 117: Principles of Managerial Accounting 3 Credits
- BMG* 202: Principles of Management 3 Credits
- Choose one course from Gen Ed - Mathematics 3 Credits ‡‡
- Choose any General Education course 3 Credits
- ECN* 101: Principles of Macroeconomics 3 Credits (Gen Ed - Social Sciences)

**Subtotal: 16**

- BMK* 201: Principles of Marketing 3 Credits
- BMG* 204: Managerial Communication 3 Credits
- COM* 172 or COM* 173 or COM* 201 or DGA* 111 or DGA* 240 or Business Elective 3 Credits
- BBG* 234: Legal Environment of Business 3 Credits
- Choose one course from Gen Ed - The Arts 3 Credits ‡‡‡

**Subtotal: 15**

- BMK* 220: Sales 3 Credits
- Choose one course from Gen Ed - Physical and Natural Sciences 3-4 Credits ‡‡‡‡
- Any ACC* or BBG* or BFN* or BMG* or BMK* or BES* course 3 Credits
- Select elective courses from list below ‡‡‡‡‡ 3 Credits
- BMG* 210: Organizational Behavior 3 Credits or
- PSY* 247: Industrial and Organizational Psychology 3 Credits

**Subtotal: 15-16**

**Total Credits Required: 61-62**

**Note:**

Any students planning to transfer to other colleges should meet with an MCC academic advisor or faculty advisor and consult the admissions requirements at their chosen transfer institution to plan their program of study.

‡ Students who receive credit for QM 110 have fulfilled the BBG* 108 requirement.

‡‡ Recommend MAT* 138 or higher.

‡‡‡ ART* 101, ART* 102, MUS* 101, MUS* 102, and ART* 206 are recommended by most baccalaureate institutions for Mode 1.

‡‡‡‡ A four-credit laboratory science is recommended by most baccalaureate institutions for Mode 5.

‡‡‡‡‡ Electives include Honors Capstone, Co-op Experience, General Education, or any free elective
Multimedia Studies, A.A.

Program Design
The purpose of the Multimedia Studies associate degree program is:
- to provide a multimedia transfer program in the area of digital design with an emphasis on the computer as a tool for the creation of animated and interactive presentation;
- to offer a degree program for those considering an entry level position in fields related to digital composition (animation, interactive programming, digital illustration, three-dimensional modelling, digital video production);
- to provide greater technical knowledge of the creative visual arts as they apply to multimedia design and production.

The course of study demands students’ time and dedication, and will provide them with transfer and career choices based upon ability and achievement.

The program is structured to equip students with a sound foundation in technical skills, design concepts, aesthetics, terminology and vocabulary and to provide awareness of the application of creative and critical thinking in the use of technical knowledge. A strong emphasis has been placed on the use of the computer as a production and composing tool.

Learning Outcomes
Upon successful completion of all Multimedia Studies degree program requirements, graduates will
1. Demonstrate practical skills in computer-based multimedia production including animation, 3-D modelling, digital video, and interactive design and production.
2. Demonstrate an ability to plan multimedia and interactive projects and produce all the elements involved in such projects (graphics, sound, animations and video).
3. Demonstrate an awareness of a variety of software used in multimedia production and the ways that this software can be integrated in the development of projects.
4. Use their training to pursue employment in digital media development including, but not limited to, digital animation, 3-D modeling, digital sound engineering, digital video production and editing, CD-ROM and computer game development, digital graphic arts and special effects production.

In addition, the graduate will complete the comprehensive learning outcomes identified with the General Education Core.
Multimedia Studies Requirements

- ENG* 101: Composition 3 Credits (Gen Ed - English)
- History Elective 3 Credits *
- ART* 121: Two-Dimensional Design 3 Credits
- DGA* 111: Introduction to Computer Graphics 3 Credits
- COM* 166: Video/Filmmaking 3 Credits or COM* 240 Broadcast/TV Production 4 Credits
  **Subtotal: 15-16**

- ENG* 110: Introduction to Literature 3 Credits (Gen Ed - Humanities)
- Choose one course from Gen Ed - Mathematics 3 Credits
- DGA* 212: Advanced Computer Graphics 3 Credits
- DGA* 261: Computer Animation 3 Credits
- Choose one course from Gen Ed - Social Sciences 3 Credits
  **Subtotal: 15**

- GRA* 156: Graphic Design History, Theory and Practice 3 Credits
- DGA* 262: Computer Animation II 3 Credits or DGA* 224 Digital Painting 3 Credits
- DGA* 271: 3-D Computer Modeling I 3 Credits
- DGA* 240: Web Page Design 3 Credits
- Choose one course from Gen Ed - Humanities 3 Credits **
  **Subtotal: 15-16**

- DGA* 289: Special Effects for Video 3 Credits
- Choose one course from Gen Ed - Physical and Natural Sciences 3-4 Credits
- Computer studio elective 3 Credits ***
- Computer studio elective 3 Credits ***
- DGA* 244: Advanced Web Design 3 Credits
  **Subtotal: 15-16**

**Total Credits Required: 60-63**

**Note:**

* History elective: choose from any of the history choices: HIS* 101, HIS* 102, HIS* 121, HIS* 122, HIS* 201 or HIS* 202

** COM* 173 is recommended as the Humanities elective choice for students planning to transfer to a 4-year state university in the future.

*** Computer studio electives include:
- DGA* 214: Advanced Computer Graphics II 3 Credits
- DGA* 216: Advanced Computer Graphics III 3 Credits
- DGA* 224: Digital Painting 3 Credits
- DGA* 265: Character Animation 3 Credits
- DGA* 275: Game Level Design 3 Credits
- DGA* 276: 3D Animation and Rigging 3 Credits
- ART* 250: Digital Photography 3 Credits
- ART* 281: Digital Photography II 3 Credits
Music Studies, A.A.

Program Design
The Music Studies associate degree program provides students with the knowledge and skills required for direct employment in music-related careers (i.e., music retail, faith-based music worship services) or with a transfer-orientated course of study towards a baccalaureate degree in the music profession. The Music Studies program also serves an ever-expanding population of diverse students seeking personal enjoyment in the study of music. Students may enroll in the program full- or part-time. The credentialed music staff brings an understanding of the community college student to their teaching approach.

Curriculum
The curriculum has been revised as part of the process in seeking national accreditation as a school of music. Additions to the curriculum in the areas of music theory, ear training, piano and history align the program offerings with the first two years of a four-year accredited music degree program.
Specific changes include the following.
- Music theory has been expended to four levels—Music Theory I, II, III, IV.
- Private music instruction allows students to study with assigned private music teachers as part of the applied music course offerings on campus.
- Vocal and instrumental ensembles provide students with performance experiences in a variety of musical styles (i.e., Classical, contemporary, jazz).
- Music history courses include European Classical, American contemporary and jazz.
- Music electives include music technology, beginning vocal and guitar, introduction to conducting and diction for singers.
- Voice students are required to complete one semester of foreign language as a humanities requirement in the fourth semester.
- Students completing the fourth semester of applied music will be required to perform in a group recital for the music faculty and the college community.

Scholastic Preparation and Admission Process
Proper advisement prior to entering the music studies program guarantees success in completing the degree. If you are a high school graduate, hold a state equivalency certificate or are a transfer student from another college, you must submit an official application to the Admissions office.
During the first Tuesday in May, June, July and August, members of the music faculty are available to interview all perspective students to assess skill level and interest. The 45-60 minute interview/audition provides academic guidance and information in course selection, career planning and eligibility to receive college credit by examination for prior work completed. Interviews will be conducted day and evening. To schedule an interview, please call Brenda St. Peters, Administrative Assistant, Division of Liberal Arts, 860-512-2663.

Learning Outcomes
Upon successful completion of Music Studies degree program requirements, graduates will:
- Demonstrate a historical/cross-cultural awareness and appreciation of Western European and American contemporary music.
- Demonstrate skills and techniques that reflect an understanding of the theoretical aspect of music, including: an understanding of music theory fundamentals; exploration and development of voice leading principles; aural skills and accompaniment and improvisation techniques.
- Demonstrate an ability to perform solo music selections and within a music ensemble group (i.e., chorale, madrigal, chamber, jazz).
- Demonstrate technical facility and knowledge on specified instrument or voice (i.e., soprano, tenor, piano, guitar, clarinet, violin).

In addition, the graduate will complete the comprehensive learning outcomes identified with the General Education Core.
Music Studies Requirements

- MUS* 161: Chorale I 1 Credits or
- MUS* 149: Beginning Jazz Concepts 1 Credits or
- MUS* 158: Chamber Music/Jazz Ensemble I 1 Credits

- ENG* 101: Composition 3 Credits (Gen Ed - English)
- MUS* 101: Music History and Appreciation I 3 Credits (Gen Ed - The Arts)
- MUS* 166: Music Ear Training I 1 Credits
- MUS* 190: Group Piano I 1 Credits
- MUS* 185: Applied Lessons I 1 Credits
- MUS* 115: Music Theory I 3 Credits ‡‡
- Choose any General Education course or MUS* elective 3 Credits

**Subtotal: 14-16**

- ENG* 110: Introduction to Literature 3 Credits or
- ENG* 200: Advanced Composition 3 Credits

- Choose one course from Gen Ed - Mathematics 3 Credits
- MUS* 102: Music History and Appreciation II 3 Credits

- MUS* 162: Chorale II 1 Credits ‡ or
- MUS* 159: Chamber Music/Jazz Ensemble II 1 Credits ‡

- MUS* 186: Applied Lessons II 1 Credits
- MUS* 191: Group Piano II 1 Credits
- MUS* 116: Music Theory II 3 Credits ‡‡

**Subtotal: 16**

- Choose one course from Gen Ed - Physical and Natural Sciences 3-4 Credits

- MUS* 270: Chorale III 1 Credits ‡ or
- MUS* 258: Chamber Music/Jazz Ensemble III 1 Credits ‡

- MUS* 107: Today’s Music 3 Credits
- MUS* 213: Music Theory III 3 Credits
- MUS* 252: Group Piano III 1 Credits
- MUS* 260: Music Ear Training III 1 Credits
- MUS* 285: Applied Lessons III 1 Credits
- Choose any General Education course or MUS* elective 3 Credits

**Subtotal: 14-17**

- Choose one course from Gen Ed - Humanities 3-4 Credits
- Choose one course from Gen Ed - Social Sciences 3 Credits

- MUS* 271: Chorale IV 1 Credits ‡ or
- MUS* 259: Chamber Music/Jazz Ensemble IV 1 Credits ‡

- MUS* 214: Music Theory IV 3 Credits
- MUS* 255: Group Piano IV 1 Credits
- MUS* 261: Ear Training IV 1 Credits
- MUS* 286: Applied Lessons IV 1 Credits
- Visual Art elective 3 Credits ‡‡‡
Subtotal: 16-17

Total Credits Required: 60-67

Note:

First semester jazz students will be assigned to MUS* 159 or MUS* 149 based upon skill level. The jazz concepts course is credited as Jazz Ensemble I in the jazz sequence.

Jazz/chamber students should follow the sequence of MUS* 158, MUS* 159, MUS* 258 and MUS* 259.

Instrumental students should choose instrumental sequence MUS* 158, MUS* 159, MUS* 258 and MUS* 259.

It is recommended that Piano Performance students take 2 semesters of choir.

Voice students should choose from chorus sequences:

Chorale: MUS* 161, MUS* 162, MUS* 270 and MUS* 271. No previous experience necessary but being able to match pitch is a requirement for this course.

or

Madrigal/Chamber Singer: MUS* 174, MUS* 175, MUS* 275 and MUS* 276 (For students signed up for this ensemble: Choral is a co-requisite). This ensemble requires an audition, basic knowledge of music notation and sight-reading skills, good intonation and aural memory, and previous experience singing in a choir.

Piano Class: Students demonstrating keyboard competency through an examination may be exempt from taking any or all of the Piano Classes. Instructor’s permission required. These students must make sure they choose other Music elective courses to achieve the number of music credits needed for the degree.

Visual Art Elective List:
- ART* 101: Art History I: Prehistory to the Renaissance 3 Credits
- ART* 102: Art History II: Renaissance to the Modern Era 3 Credits
- ART* 107: Introduction to Studio Art 3 Credits
- ART* 111: Drawing I 3 Credits
- ART* 131: Sculpture I 3 Credits
- ART* 141: Photography I 3 Credits
- ART* 155: Watercolor I 3 Credits
- ART* 161: Ceramics I 3 Credits
- ART* 167: Printmaking I 3 Credits
- ART* 204: History of Women in the Arts 3 Credits
- ART* 206: Film Study 3 Credits

Music Elective List:
- MUS* 108: Today’s Music Gospel, Ragtime, Blues, Jazz 3 Credits
- MUS* 145: Class Guitar I 1 Credits
- MUS* 167: Language for Singers 1 Credits
- MUS* 173: Voice Class I 1 Credits
- MUS* 188: Introduction to Conducting 3 Credits
- MUS* 218: Electronic Music Composition I 3 Credits
- MUS* 219: Electronic Music Composition II 3 Credits
Occupational Therapy Assistant, A.S.

Program Design
The Occupational Therapy Assistant associate degree program enables the graduate to treat patients who are impaired by a physical illness or injury, an emotional disorder, a developmental disability or the aging process. Working under the supervision of an occupational therapist, an occupational therapy assistant uses activities and modalities as treatment to help people gain optimal function in their everyday life tasks. Specific services that an occupational therapy assistant provides may include training in activities of daily living, fabrication of splints, adapting home and work environments and tools, and therapeutic use of crafts and games.

Scholastic Preparation and Admission Process
If you are a high school graduate or hold a state equivalency certificate, you may submit an official application to the Admissions office. Admission to a Health Careers Program requires a separate application. You may request this application by contacting the Admissions office or by calling 860-512-3210 or by contacting the Mathematics, Science and Health Careers division at 860-512-2704. To qualify for admission to the Occupational Therapy Assistant Program, students must have a grade point average at or above 2.5., be eligible for ENG* 101, MAT* 109, and have taken a college level biology course. Interested students are required to attend an informational session about the OTA Program. The OTA program coordinator may be reached by email at mmoriarty@mcc.commnet.edu or 860-512-2719.

Curriculum
Because of the flexible nature of the program, students may select an accelerated, a full-time or a part-time plan of study. Courses with an OTA designator are offered only during the day. Students with prior college credit may complete the program in a three-semester sequence. All course work must be completed with a grade of C or better and a GPA of 2.5 must be maintained throughout the program. The clinical semester, which is offered both semesters, provides a four-month, full-time, supervised learning experience with a focus on psychosocial, physical and developmental areas of practice. Students must complete the clinical semester within 18 months of the completion of academic work. Due to standards set by the Joint Commission on Accreditation of Healthcare Organizations (JCAHO), students are advised that the fieldwork sites to which they are assigned for clinical rotations, as well as state regulations, may require that they submit to a criminal background check before beginning their clinical experiences. Manchester Community College cannot be responsible for finding an alternate clinical placement for a student who fails to pass the background check. A student who is unable to complete the required clinical experience will be unable to complete the requirements for the associate degree in Occupational Therapy Assistant but may be able to apply some or all of the credits completed to an associate degree in General Studies. Students are advised to meet with an MCC counselor to discuss degree completion requirements.

Accreditation
The Occupational Therapy Assistant program is accredited by the Accreditation Council for Occupational Therapy Education (ACOTE). They can be contacted at ACOTE c/o Accreditation Dept. American Occupational Therapy Association (AOTA) which is located at 4720 Montgomery Lane, Suite 200, Bethesda, MD 20824-3449. The ACOTE website is http://www.acoteonline.org. Graduates of the program will be eligible to sit for the national certification examination for the occupational therapy assistant, administered by the National Board for Certification in Occupational Therapy (NBCOT). After successful completion of this exam, the individual will be a Certified Occupational Therapy Assistant (COTA). In addition, Connecticut, as well as most states, requires licensure in order to practice. Note that a felony conviction may affect a graduate’s ability to sit for the NBCOT certification examination or attain state licensure.

NBCOT Certification Results
For the three most recent calendar years (2010, 2011, and 2012) the performance of the graduates of the occupational therapy assistant program at Manchester Community College, on the national certification exam, was as follows:

- Total number of graduates: 46
- Total number of first-time test takers of the NBCOT certification exam: 45
- Total number first-time test takers who passed the NBCOT certification exam: 45
- First time test taker percentage pass rate: 100%

Click on secure.nbcot.org/data/schoolstats.aspx to compare Manchester Community College’s OTA Graduates’ performance on the NBCOT Certification Exam with exam pass rates for all OTA programs. Additionally, MCC’s past 3 years, as reported in the aggregate, remains at 100%, well above the national average.

Learning Outcomes
Upon successful completion of all Occupational Therapy Assistant degree program requirements, graduates will
1. Sit for the national certification exam.
2. Demonstrate the clinical skills required for working as an Occupational Therapy Assistant.
3. Demonstrate the interpersonal skills necessary to function as a Certified Occupational Therapy Assistant.
4. Comprehend the scope of occupational therapy practice.
5. Apply principles in analysis and application of occupational therapy treatment in the spectrum of human occupation.

In addition, the graduate will complete the comprehensive learning outcomes identified with the General Education Core.

**Occupational Therapy Assistant Requirements**

- OTA* 102: Foundation of Occupational Therapy 3 Credits
- OTA* 120: Neurologic Intervention in Occupational Therapy 4 Credits
- ENG* 101: Composition 3 Credits (Gen Ed - English)
- BIO* 115: Human Biology 4 Credits (Gen Ed - Physical and Natural Sciences)
- PSY* 201: Life Span Development 3 Credits (Gen Ed - Social Sciences)
  *Subtotal: 17*

- OTA* 208: Healthcare Management in Occupational Therapy 3 Credits
- OTA* 210: Occupational Therapy Practice in Pediatrics 3 Credits
- OTA* 210L: Occupational Therapy Practice in Pediatrics Lab 1 Credits
- OTA* 216: Occupational Therapy Practice in Physical Dysfunction 3 Credits
- OTA* 216L: Occupational Therapy Practice in Physical Dysfunction Lab 1 Credits
- OTA* 218: Occupational Therapy Practice in Mental Health 3 Credits
- OTA* 218L: Occupational Therapy Practice in Mental Health Lab 3 Credits
- OTA* 206: Level I Advanced Fieldwork 0 Credits
  *Subtotal: 15*

- OTA* 234: Documentation in Occupational Therapy 3 Credits
- MAT* 109: Quantitative Literacy 3 Credits (Gen Ed - Mathematics)
- ANT* 118: Health, Healing and Culture. 3 Credits (Gen Ed - Social Sciences)
- COM* 173: Public Speaking 3 Credits (Gen Ed - Humanities)
- Choose any course from Gen Ed - The Arts 3 Credits
- Elective computer 2-3 Credits
  *Subtotal: 17-18*

- OTA* 242: Level II Fieldwork 11 Credits
- OTA* 244: Clinical Seminar in Occupational Therapy 1 Credits
  *Subtotal: 12*

**Total Credits Required: 61-62**

**Professional-Level Occupational Therapy Program**

These courses are recommended for students who plan to transfer to a professional-level occupational therapy program.

- BIO* 211: Anatomy and Physiology I 4 Credits
- BIO* 212: Anatomy and Physiology II 4 Credits
- MAT* 165: Elementary Statistics with Computer Applications 4 Credits
- CSC* 101: Introduction to Computers 3 Credits

**Note:**
**Paralegal, A.S.**

**Program Design**

A paralegal or legal assistant is a person—qualified through education, training or work experience—who is employed or retained by a lawyer, law office, governmental agency or other entity. The paralegal performs specifically delegated, substantive legal work for which a lawyer is responsible. Paralegals may not provide legal services directly to the public except as permitted by law.

Paralegals may be asked to conduct research and prepare memoranda; to draft pleadings, deeds or contracts; to interview clients or witnesses; to prepare answers to interrogatories; or to digest depositions. They may prepare inventories, accounts and tax returns in connection with estates and trusts; perform real estate title searches and UCC searches; calendar and track important deadlines; or organize and maintain client files. Paralegals may not give legal advice or engage in the unauthorized practice of law.

The Paralegal associate degree program includes specialized courses in the paralegal profession as well as related courses in business and liberal arts. An option in the program is a cooperative education/work experience course in which students gain practical experience in a legal setting while earning academic credit. The Paralegal program has been approved by the American Bar Association since 1984. It is a member of the American Association for Paralegal Education.

The MCC Paralegal Association is an active student club that offers networking opportunities and guest speakers for its members.

**Curriculum**

The Paralegal program is primarily an evening program of study, offering legal courses during the academic year. Many students work full-time while attending classes at night. Students should note that not all courses are offered every semester, and only some courses are offered in the day. Part-time students should see a counselor for suggested course sequencing.

Note: Course prerequisites are listed in the course descriptions.

**Learning Outcomes**

Upon successful completion of all Paralegal degree program requirements, graduates will

1. Recognize and describe the proper role of the paralegal in the delivery of legal services to the public and apply the ethical rules that govern the conduct of the legal profession.
2. Demonstrate critical thinking, reasoning and analytical skills, conduct factual and legal research using print and computerized methods, and organize and present information effectively, both orally and in writing.
3. Describe the organization of the American legal system, apply procedural law to litigation and administrative agency law, and demonstrate substantive knowledge of principles of law.
4. Draft and interpret legal documents, including pleadings, deeds, mortgages, probate documents, court forms, business documents, and contracts for review by the supervising attorney.
5. Perform file and case management tasks in accordance with office policy and court procedures, using problem-solving, organizational and computer skills.
6. Recognize opportunities for professional development through continuing education and affiliation with professional organizations.

In addition, the graduate will complete the comprehensive learning outcomes identified with the General Education Core.
Paralegal Requirements

- POL* 120: Introduction to Law 3 Credits
- LGL* 103: Legal Ethics and Professional Responsibility 1 Credits
- ENG* 101: Composition 3 Credits (Gen Ed - English)
- Choose any course 3 Credits

- BBG* 231: Business Law I or
- BBG* 234: Legal Environment of Business 3 Credits
- POL* 111: American Government 3 Credits (Gen Ed - Social Sciences)

Subtotal: 16

- LGL* 102: Legal Research and Writing 3 Credits
- LGL* 208: Litigation 3 Credits
- Choose one course from Gen Ed - Humanities 3 Credits
- Choose one course from Gen Ed - Mathematics 3 Credits
- ACC* 115: Financial Accounting 4 Credits

Subtotal: 16

- Legal elective 3 Credits ‡
- LGL* 209: Probate Practice 3 Credits
- LGL* 220: Computer Applications in Law 4 Credits ‡‡
- Choose one course from Gen Ed - Social Sciences 3 Credits
- Choose one course from Gen Ed - The Arts 3 Credits

Subtotal: 16

- LGL* 104: Real Estate Practice 3 Credits
- LGL* 211: Business Organization 3 Credits
- Choose one course from Gen Ed - Physical and Natural Sciences 3-4 Credits
- Legal elective 3 Credits pitfalls
- LGL* 240: Legal Studies Capstone Course 3 Credits

Subtotal: 15-16

Total Credits Required: 63-64

Note:

‡ Legal Electives
- LGL* 210: Family Law
- LGL* 212: Commercial Law
- LGL* 215: Environmental Law
- LGL* 216: Administrative Law
- LGL* 270: Cooperative Education/Work Experience

‡‡ Students without a strong foundation in computer skills should take CSA* 105 prior to enrolling in LGL* 220.
Pathway to Teaching Careers, A.A.

Program Design
The Pathway to Teaching Careers associate degree program was developed in response to the state of Connecticut’s need for new teachers in shortage areas. The Pathway to Teaching Careers program will transfer to Eastern Connecticut State University. Students who successfully complete this program with a cumulative grade point average of 2.8 or higher, earn the associate degree, and pass the Praxis I examination will be considered for admission to the baccalaureate program at ECSU on an equal basis with native students at ECSU. Students interested in transferring to schools of education at other colleges should meet with an advisor to ensure that the proper courses are taken for transfer. Students include individuals interested in a career as a teacher including those currently working as paraprofessionals, high school graduates, and individuals seeking a career change.

Curriculum
The Pathway to Teaching Careers program is the basis for the first two years of undergraduate work at Eastern Connecticut State University. Students may enroll in this program full- or part-time, during the day or in the evening. Students must seek the advice of a transfer counselor to ensure that they meet all requirements of the program and the state with regard to becoming a teacher in Connecticut. This program is for students who are interested in teaching students in elementary or secondary school. Students who are interested in teaching preschool age children or children in kindergarten, first, second, or third grades should follow the Early Childhood Education Program.

Learning Outcomes
Upon successful completion of all Pathway to Teaching Careers degree requirements, graduates will
1. Describe the role of the teacher in the classroom.
2. Demonstrate an understanding of the requirements for earning teacher certification based on academic program requirements and state certification requirements.
3. Demonstrate the ability to think critically, evaluate information and sources, use that information ethically, and write clearly and effectively.
4. Demonstrate the ability to work within a group effectively.
In addition, the graduate will complete the comprehensive learning outcomes identified with the General Education Component.
Pathways to Teaching Requirements

- ENG* 101: Composition 3 Credits (Gen Ed - English)
- PSY* 111: General Psychology I 3 Credits (Gen Ed - Social Sciences)
- COM* 173: Public Speaking 3 Credits (Gen Ed - Humanities)
- EDU* 104: Pathways to Education 1 Credits
- Choose one Gen Ed - The Arts course 3 Credits
- Choose any Content Major course 3-4 Credits

**Subtotal: 16-17 credits**

- ENG* 110: Introduction to Literature 3 Credits
- SOC* 101: Principles of Sociology 3 Credits (Gen Ed - Social Sciences)
- MAT* 138: Intermediate Algebra: A Modeling Approach 3 Credits (Gen Ed - Mathematics)
- Choose any Content Major course 3 Credits
- Choose any Content Major course 3 Credits

**Subtotal: 15-17 credits**

- EAS* 102: Earth Science 3 Credits or
- EVS* 100: Introduction to Environmental Science 3 Credits or
- EVS* 130: Sustainable Energy and the Environment 3 Credits

- HIS* 201: United States History I 3 Credits or
- HIS* 202: United States History II 3 Credits

- FRE* 111: Elementary French I 4 Credits or
- SPA* 111: Elementary Spanish I 4 Credits or
- Choose any Content Major course 3 Credits

- PSY* 203: Child Development 3 Credits or
- PSY* 206: Adolescent & Adult Development 3 Credits

- Choose any General Education course 3 credits

**Subtotal: 15-16 credits**

- BIO* 115: Human Biology 4 Credits (Gen Ed - Physical and Natural Sciences)
- HLT* 151: Health and Wellness Promotion 3 Credits

- EDU* 110: Teaching in the Twenty-First Century 3 Credits or
- PSY* 201: Life Span Development 3 Credits or
- PSY* 220: Educational Psychology 3 Credits

- FRE* 112: Elementary French II 4 Credits or
- SPA* 112: Elementary Spanish II 4 Credits

- HIS* 101: Western Civilization I 3 Credits or
- HIS* 102: Western Civilization II 3 Credits

**Subtotal: 16 credits**

**Total Credits Required: 62-66**

**Notes:** Students with two years of a high school foreign language are exempt from the language requirement.
Teacher candidates in Connecticut must have an academic or content major other than education to be eligible for teacher certification. Please contact the Social Science & Hospitality Division at 860-512-2753 to locate faculty advisors in this program.

Photography Option, Visual Fine Arts, A.A.

Program Design
The Photography Option, Visual Fine Arts associate degree program provides students with a series of courses that introduces fundamental photographic concepts and techniques and the necessary skills to transfer to the institution of their choice or succeed in an entry-level photography position. The cornerstone to the Photography Option is a portfolio that can be used for transfer to a vocational training program, art school or baccalaureate photography program, or for use as part of the job search process.

Curriculum
Students may enroll in this program full or part-time.

Learning Outcomes
Upon successful completion of the Photography Option, Visual Fine Arts degree program requirements, graduates will
1. Demonstrate an understanding of terminology, concepts and techniques relating to photography.
2. Demonstrate the ability to use a camera's creative controls to manifest intent.
3. Demonstrate proficiency at traditional silver darkroom techniques including 35mm and medium format film processing and printing.
4. Demonstrate proficiency at digital image capture, editing and output with an emphasis on developing up-to-date Adobe Photoshop skills.
5. Be able to use a variety of situation-specific natural and studio lighting techniques.
6. Make informed and meaningful aesthetic decisions, with an emphasis on critical thinking and problem solving.
7. Develop an appreciation of the many vocational and creative applications of the medium and an understanding of its cultural, historical and contemporary context.
8. Be able to articulate and explain the decisions made as part of the image production process.
9. Develop an exhibition-quality portfolio that can be used for transfer to a college or university offering a bachelor's degree in art and/or photography or for use by those seeking immediate employment in a variety of entry-level positions in the field of photography.

In addition, the graduate will complete the comprehensive learning outcomes identified with the General Education Core.
Photography Option Requirements

- ENG* 101: Composition 3 Credits (Gen Ed - English)
- ART* 141: Photography I 3 Credits
- ART* 121: Two-Dimensional Design 3 Credits
- Choose any course from Gen Ed - Social Science 3 Credits
- ART* 103: Art History III 3 Credits or
- ART* 104: Contemporary Art History 3 Credits

**Subtotal: 15**

- ENG* 110: Introduction to Literature 3 Credits (Gen Ed - Humanities)
- ART* 122: Three-Dimensional Design 3 Credits
- ART* 142: Photography II 3 Credits
- Choose one course from Gen Ed - Physical and Natural Sciences 3 Credits
- ART* 101: Art History I: Prehistory to the Renaissance 3 Credits or
  Studio course elective 3 Credits
- ART* 111: Drawing I 3 Credits

**Subtotal: 18**

- ART* 113: Figure drawing I 3 Credits
- ART* 102: Art History II: Renaissance to the Modern Era 3 Credits or
  Studio course elective 3 Credits
- ART* 250: Digital Photography 3 Credits
- Studio course elective 3 Credits
- Liberal arts and science elective 3 Credits
- Choose one course from Gen Ed - Social Sciences 3 Credits

**Subtotal: 15**

- ART* 281: Digital Photography II 3 Credits
- Studio course elective 3 Credits
- Choose one course from Gen Ed - The Arts 3 Credits
- Studio course elective 3 Credits
- MAT* 109: Quantitative Literacy 3 Credits (Gen Ed - Mathematics)

**Subtotal: 15**

**Total Credits Required: 63**

**Note:**

† Any 6-hour ART*, DGA*, or GRA* studio course. Recommended studio courses include:
- ART* 151: Painting I
- ART* 131: Sculpture I
- ART* 167: Printmaking I
- ART* 161: Ceramics I
- ART* 242: Photography III

‡ Recommended Mode 1: ART* 283: Photojournalism
Radiation Therapy, A.S.

Program Design
The Radiation Therapy associate degree program enables graduates to work as radiation therapists. Radiation therapy uses high energy X-rays to treat diseases, primarily cancer. Using highly specialized computerized equipment, the radiation is targeted to abnormal cells while minimizing the side effects. The Radiation Therapist is a vital member of the health care team in the Radiation Oncology Department. This individual is responsible for administering, monitoring, and documenting the prescribed course of treatment from the radiation oncologist. The Radiation Therapist is involved in assessing the physical and emotional needs of the patients and making the appropriate referrals. This unique profession combines technical and interpersonal skills and offers many career possibilities available to trained radiation therapists, including management, dosimetry, education, applications specialist, sales, and technology-related fields.

Scholastic Preparation and Admission Process
Radiation Therapy Program relies on a selective admission, which uses specific admissions criteria. The admission criteria require that the students have completed the following prerequisites:
- BIO 211 and 212 Anatomy & Physiology (2 semesters with a lab)
- MAT 186 Pre-Calculus
- COM 173 Effective Speaking or COM 172 Interpersonal Communication
- ENG 101 English Composition
Also required for admission to the Radiation Therapy Program is a health care application, a clinical shadow to be scheduled by program faculty and an interview. Technical standards for the program are available upon request. More information or questions on specific criteria for program acceptance and the admission process is available from the Admissions Office at 860-512-3210 or the Mathematics, Science & Health Careers division office at 860-512-2704.

Accreditation
This program is accredited by the Joint Review Committee on Education in Radiologic Technology and prepares graduates for certification by the American Registry of Radiologic Technologists (ARRT). The JRCERT has been authorized by the United States Office of Education to accredit educational programs for Radiography and Radiation Therapy. The standards are located at JRCERT.org. If students do not feel the program is in compliance with the JRCERT standards may call or write to the JRCERT at:
The Joint Review Committee on Education in Radiologic Technology
20 North Wacker Drive, Suite 2850
Chicago, IL 60606-3182
Phone: (312) 704-5300
Fax: (312) 704-5304
Web: www.jrcert.org
eMail: mail@jcert.org

Curriculum
The program begins each August and continues through two years, including the summer semester. Classes with a RDT and RAD designation and clinical experience are offered during the day. After a short orientation students begin the clinical experience in conjunction with classes held at the college.
Clinical Instruction will take place at the following sites:
- Hartford Hospital Radiation Oncology Department, Hartford, CT
- Mid State Medical Center Radiation Oncology Department, Meriden, CT
- UConn Health Center - John Dempsey Hospital, Farmington, CT
- Middlesex Memorial Hospital, Middlesex, CT.
- Phoenix Community Cancer Care, Enfield, CT
- DeQuattro Community Cancer Care, Manchester, CT
- St. Francis Care, Hartford, CT
Note: Students are responsible for their own transportation to and from class and clinical assignments.
Due to standards from The Joint Commission, students are advised that the healthcare facilities to which they are assigned for clinical rotations may require that they submit a criminal background check, required immunization records and other documentation needed to meet the standards. Manchester Community College cannot be responsible for finding an alternate clinical placement for a student who fails to meet the required
hospital requirements. A student who is unable to complete the required clinical experience will be unable to complete the requirements for the associate degree in Radiation Therapy but may be able to apply some or all of the credits completed to an associate degree in General Studies. Students are advised to meet with an MCC Counselor to discuss degree completion requirements. Upon successful completion of the program, the graduate is eligible to apply for participation in the American Registry of Radiologic Technology Certification Exam. For specific requires for eligibility please visit ARRT.org. Once you have received certification from the ARRT by successfully completing the national exam, you will be eligible to work in any state. Many states require licensure prior to your employment. You can access licensure information on each state by contacting the state’s department of labor. Students are responsible for hospital parking fees, uniforms and miscellaneous expenses.

Learning Outcomes

Program Mission
The mission of the Radiation Therapy Program is to provide a learner centered JRCERT accredited educational process that will render qualified and compassionate radiation therapists for the community.

Goals
GOAL 1: Provide the profession and community with trained qualified therapists. (Program Effective Measures)
- Graduates will pass the ARRT exam.
- Graduates will pass the ARRT exam with an average score > National Average.
- Graduates will obtain employment in radiation therapy.
- The program will provide competent graduates for the community.
- Employers of graduates will indicate overall satisfaction with how the program prepared the graduate for employment.
- Graduates will indicate overall program satisfaction.
- Students will be satisfied with course instruction.
- Students will be satisfied with clinical instruction received from instructors.

GOAL 2: Provide a comprehensive education program that promotes critical thinking.

Student Learning Outcomes
- Employers of graduates will report that the program prepared them for problem solving and critical thinking.
- Students will demonstrate critical thinking and problem solving.
- Students will demonstrate basic simulation skills including problem solving and critical thinking.

GOAL 3: Provide a comprehensive education program that promotes communication skills.

Student Learning Outcomes
- Employers of graduates will report that the program prepared the student to communicate effectively in the health care environment.
- Students will demonstrate good oral communication skills
- Students will demonstrate written communication skills.

GOAL 4: Students will demonstrate quality patient care skills including professionalism and ethical behaviors as specified in the ARRT Code of Ethics.

Student Learning Outcomes
- Employers will report that the program prepared the student to be sensitive to patient needs.
- Employers will report that the students modeled the ARRT Code of Ethics in the workplace.
- Students demonstrate professionalism and ethical behaviors.
- Graduates demonstrate professional growth through participation in continuing education and professional activities.
- Students will demonstrate strong patient care skills.
- Students will possess knowledge of patient care including ethics and professionalism.

GOAL 5: Graduate students with specific skills necessary to be competent entry level Radiation Therapy Professionals.

Student Learning Outcomes
- Students will accurately set up patients.
- Students will operate treatment unit console and record the treatment accurately in the chart.
- Students will demonstrate ability to perform new patient set-ups.
Students will demonstrate the ability to function as an effective team member.
Students will demonstrate the ability to put clinical theory into practice.
Students will possess the required skills of an entry level Radiation Therapist.
Students will demonstrate radiation protection.

Radiation Therapy Requirements

Program Prerequisites
- BIO* 211: Anatomy and Physiology I 4 Credits
- BIO* 212: Anatomy and Physiology II 4 Credits
- ENG* 101: Composition 3 Credits
- MAT* 186: Precalculus 4 Credits
- COM* 173: Public Speaking 3 Credits
Subtotal: 18

Fall Semester
- RAD* 117: Introduction to Radiologic Sciences 3 Credits
- RAD* 121: Radiologic Science Patient Care 3 Credits
- PHY* 105: Radiologic Physics 3 Credits
- BIO* 218: Understanding Cancer 3 Credits
- RDT* 114: Principles and Practices of Radiation Therapy I 4 Credits
- RAD* 197: Clinical Practices I 1-2 Credits
Subtotal: 17

Spring Semester
- RDT* 140: CT Imaging and Sectional Anatomy 3 Credits
- RDT* 116: Treatment Planning I 3 Credits
- RAD* 222: Radiobiology & Protection 3 Credits
- RDT* 115: Principles and Practices of Radiation Therapy II 4 Credits
- RAD* 198: Clinical Practices II 1-2 Credits
Subtotal: 14

Summer Semester
- RDT* 145: Radiation Therapy Equipment 2 Credits
- RDT* 117: Treatment Planning II 3 Credits
- Choose one course from Gen Ed - The Arts 3 Credits
- RAD* 199: Clinical Practice III 1-2 Credits
Subtotal: 9

Fall Semester
- RDT* 216: Principles and Practice of Radiation Therapy III 4 Credits
- RDT* 201: Radiation Oncology I 3 Credits
- RDT* 213: Radiation Therapy Physics I 2 Credits
- RDT* 240: Operational & Quality Management in Radiation Therapy 2 Credits
- PSY* 111: General Psychology I 3 Credits
- RAD* 297: Clinical Practice IV 2-3 Credits
Subtotal: 16

Spring Semester
- RDT* 217: Principles and Practice of Radiation Therapy IV 3 Credits
- RDT* 203: Radiation Oncology II 3 Credits
- RDT* 223: Radiation Therapy Physics II 2 Credits
- RDT* 295: Radiologic Science Seminar 2 Credits
- RAD* 298: Clinical Practice V 2-3 Credits
Subtotal: 13
Total Credits Required: 69

Radiography, A.S.

Program Design
The Radiography associate degree program enables graduates to work as radiographers. Radiographers provide patient services with the use of imaging equipment, as directed by physicians qualified to order radiologic procedures. They are responsible for exercising independent judgment in the technical performance of medical imaging procedures by adapting the variable technical parameters of the procedure to the condition of the patient, and by initiating lifesaving first aid and basic life support procedures as necessary during medical emergencies.

Scholastic Preparation and Admission Process
Radiography Program relies on a selective admission, which uses specific admissions criteria. The admission criteria require that the students have completed the following prerequisites:
- BIO 211 and 212 Anatomy & Physiology (2 semesters with a lab)
- MAT 172 College Algebra
- COM 173 Effective Speaking or COM 172 Interpersonal Communication
- ENG 101 English Composition
Also required for admission to the Radiography Program is a health care application, a clinical observation is required and an interview. Technical standards for the program are available upon request. More information or questions on specific criteria for program acceptance and the admission process is available from the Admissions Office at 860-512-3210 or the Mathematics, Science & Health Careers division office at 860-512-2704.

Accreditation
This program is accredited by the Joint Review Committee on Education in Radiologic Technology and prepares graduates for certification by the American Registry of Radiologic Technologists (ARRT). The JRCERT has been authorized by the United States Office of Education to accredit educational programs for Radiography and Radiation Therapy. The standards are located at JRCERT.org. If students do not feel the program is in compliance with the JRCERT standards may call or write to the JRCERT at:
- The Joint Review Committee on Education in Radiologic Technology
  20 North Wacker Drive, Suite 2850
  Chicago, IL 60606-3182
  Phone: (312) 704-5300
  Fax: (312) 704-5304
  Web: www.jrcert.org
  eMail: mail@jcert.org

Curriculum
The program begins each August and continues through two years, including the summer semester. Classes with a RAD designation and clinical experience are offered during the day. After a short orientation students begin the clinical experience in conjunction with classes held at the college. Clinical Instruction will take place at the following sites:
- Hartford Hospital Radiation Oncology Department, Hartford, CT
- Mid State Medical Center Radiation Oncology Department, Meriden, CT
- Connecticut Children’s Medical Center
- Connecticut Children’s Medical Center Glastonbury Satellite Office
- Jefferson Radiology, P.C.
Note: Students are responsible for their own transportation to and from class and clinical assignments. Due to standards from The Joint Commission, students are advised that the healthcare facilities to which they are assigned for clinical rotations may require that they submit a criminal background check, required immunization records and other documentation needed to meet the standards. Manchester Community College cannot be responsible for finding an alternate clinical placement for a student who fails to meet the required hospital requirements. A student who is unable to complete the required clinical experience will be unable to complete the requirements for the associate degree in Radiation Therapy but may be able to apply some or all of the credits completed to an associate degree in General Studies. Students are advised to meet with an MCC Counselor to discuss degree completion requirements. Upon successful completion of the program, the graduate
is eligible to apply for participation in the American Registry of Radiologic Technology Certification Exam. For specific requirements for eligibility please visit ARRT.org. Once you have received certification from the ARRT by successfully completing the national exam, you will be eligible to work in any state. Many states require licensure prior to your employment. You can access licensure information on each state by contacting the state's department of labor. Students are responsible for hospital parking fees, uniforms and miscellaneous expenses.

Learning Outcomes

Program Mission
The mission of the program is to provide students with the necessary academic and clinical knowledge to function as competent Radiographers who are eligible to achieve ARRT certification and gain employment in the community and region.

Goals
The program’s mission will be achieved by attainment of the following goals and student learning and program effectiveness outcomes:

1. Students will apply knowledge gained through didactic and clinical experiences to achieve ARRT certification.
   - Students will successfully complete the program within 22 months.
   - Graduates will pass the ARRT exam on the 1st attempt and score at or above the national average.
   - Graduates will indicate overall satisfaction with the program.

2. Students will demonstrate competence in the performance of entry-level radiographic procedures.
   - Students will provide quality patient care during the performance of radiographic procedures.
   - Students will accurately position patients for radiographic examinations.
   - Students will accurately set exposure factors for radiographic examinations.
   - Students will utilize appropriate radiation protection measures for the patient, themselves and others during performance of radiographic procedures.
   - Students will be competent in the overall performance of entry-level radiographic procedures.

3. Students will exhibit the ethical and professional behaviors appropriate of a health care professional.
   - Students will demonstrate professional and ethical behavior in the clinical setting.
   - Students will recognize the need for continued professional growth and seek continuing education.

4. Students will communicate professionally.
   - Students will utilize appropriate communication skills when interacting with patients, families and medical staff.
   - Students will demonstrate effective oral and written communication.

5. Students will integrate critical thinking into the performance of radiographic procedures.
   - Students will accurately identify diagnostic quality radiographs and make appropriate changes to correct non-diagnostic images.
   - Students will utilize critical thinking skills when performing procedures on non-routine patients.
   - Graduates will demonstrate appropriate critical thinking skills for entry-level practice.

6. Graduates will possess the skills in current imaging procedures and technology that are necessary to gain employment in the field of Radiography.
   - Graduates will obtain employment in the field of Radiography.
   - Graduates will be knowledgeable in current imaging procedures and technology.
   - Employers will be satisfied with program graduates.
Radiography Requirements

Program Prerequisites
- BIO* 211: Anatomy and Physiology I 4 Credits
- BIO* 212: Anatomy and Physiology II 4 Credits
- ENG* 101: Composition 3 Credits
- MAT* 172: College Algebra 3 Credits
- COM* 173: Public Speaking 3 Credits
Subtotal: 17

Fall Semester
- RAD* 117: Introduction to Radiologic Sciences 3 Credits
- RAD* 121: Radiologic Science Patient Care 3 Credits
- PHY* 105: Radiologic Physics 3 Credits
- RAD* 120: Radiographic Procedures I 3 Credits
- RAD* 197: Clinical Practices I 1-2 Credits
Subtotal: 14

Spring Semester
- RDT* 140: CT Imaging and Sectional Anatomy 3 Credits
- RAD* 125: Radiographic Imaging I 3 Credits
- RAD* 130: Radiologic Procedures II 3 Credits
- RAD* 222: Radiobiology & Protection 3 Credits
- Choose one course from Gen Ed - The Arts 3 Credits
- RAD* 198: Clinical Practices II 1-2 Credits
Subtotal 17

Summer Semester
- RAD* 126: Radiographic Imaging II 2 Credits
- PSY* 111: General Psychology I 3 Credits
- RAD* 199: Clinical Practice III 1-2 Credits
Subtotal: 7

Fall Semester
- RAD* 136: Radiographic Imaging III 3 Credits
- RAD* 225: Radiologic Procedures III 3 Credits
- RAD* 297: Clinical Practice IV 2-3 Credits
- RAD* 260: Radiographic Pathology 3 Credits
Subtotal: 12

- RAD* 233: Advanced Imaging Procedures 4 Credits
- RAD* 255: Medical Radiation Physics 4 Credits
- RAD* 298: Clinical Practice V 2-3 Credits
- RDT* 295: Radiologic Science Seminar 2 Credits
Subtotal: 14

Total Credits Required: 64
Respiratory Care, A.S.

Program Design
The Respiratory Care associate degree program provides training in respiratory care, a healthcare specialty that concentrates on the areas of prevention, treatment, management and rehabilitation of people with lung disorders. Respiratory therapists are involved in a variety of life-saving situations, working side-by-side with nurses, doctors and other healthcare providers and treating patients ranging in age from the newborn to the elderly. Using sophisticated equipment, therapists help people with such diseases as asthma, bronchitis and emphysema. Respiratory therapists are regarded as experts on the respiratory and cardiac systems and are often called upon for advice and help in deciding which course of care to prescribe.

Scholastic Preparation and Admission Process
The Respiratory Care program relies on a selective admission process, which uses specific admissions criteria. These criteria are available through the Mathematics, Science and Health Careers division office. The admission criteria require that the students are eligible for the equivalent of MAT* 109, ENG* 101 and BIO* 211. Interested candidates will be expected to have a history of academic success, with the completion of a lab science course. Admission to the Respiratory Care program requires a separate application. Complete information on specific criteria for acceptance and the admission process is available from the Mathematics, Science and Health Careers division office at 860-512-2704. A tour of one of the hospital affiliates is strongly recommended. Students will need to demonstrate the skills necessary to become a Respiratory Therapist; technical standards for the program are available upon request.

Accreditation
The program is accredited by the Committee on Accreditation for Respiratory Care. For information write to: Committee on Accreditation for Respiratory Care, 1248 Harwood Road, Bedford, Texas 76021-4244 or phone 817-283-2835 or www.coarc.com. Division of Mathematics, Science and Health Careers: 860-512-2700

Curriculum
The program begins each September and continues through two years, including the summer semester. Classes with an RSP* designation and clinical experience are offered during the day. Beginning with the second semester of the program, students will train at the hospitals every week in conjunction with classes held at the college. Beginning with the second year, the clinical component requires full-time study. Hospital affiliates include Professional Homecare, Hartford Hospital, Hospital of Central Connecticut, the Hospital for Special Care, Manchester Memorial Hospital, Gaylord Hospital, St. Francis Hospital and Medical Center, University of Connecticut Health Center and Yale New Haven Hospital. All hospital training is supervised by trained clinical instructors. Due to standards set by the Joint Commission on Accreditation of Healthcare Organizations (JCAHO), students are advised that the healthcare facilities to which they are assigned for clinical rotations may require that they submit to a criminal background check before beginning their clinical experiences. Manchester Community College cannot be responsible for finding an alternate clinical placement for a student who fails to pass the background check. A student who is unable to complete the required clinical experience will be unable to complete the requirements for the associate degree in Respiratory Care but may be able to apply some or all of the credits completed to an associate degree in General Studies. Students are advised to meet with an MCC Counselor to discuss degree completion requirements. After graduating from the program, students are eligible to take the entry level examination offered by the National Board for Respiratory Care (NBRC). A physical examination and an immunization record are required of all students prior to beginning clinical rotations. Students are responsible for hospital parking fees; uniforms; clinical supplies, e.g. stethoscopes; assessment examination and miscellaneous expenses.

Learning Outcomes
Upon successful completion of all Respiratory Care degree program requirements, graduates will

1. Sit for the National Board for Respiratory Care entry-level examination for Certified Respiratory Therapist (CRT).
2. Sit for the NBRC advanced-level examination for Registered Respiratory Therapist (RRT).
3. Demonstrate the ability to comprehend, apply and evaluate information relevant to their role as an advanced level respiratory therapist.
4. Demonstrate technical proficiency in the skills necessary to fulfill the role of advanced level respiratory therapist.
5. Demonstrate professional behavior consistent with the practice of respiratory care.
In addition, the graduate will complete the comprehensive learning outcomes identified with the General Education Core.

Respiratory Care Requirements

- BIO* 211: Anatomy and Physiology I 4 Credits
- MAT* 109: Quantitative Literacy 3 Credits (Gen Ed - Mathematics)
- ENG* 101: Composition 3 Credits (Gen Ed - English)
- RSP* 121: Cardiopulmonary Anatomy & Physiology 3 Credits
- RSP* 140: Principles of Respiratory Care 3 Credits
- RSP* 140L: Principles of Respiratory Care Lab 1 Credits

**Subtotal: 17**

- BIO* 212: Anatomy and Physiology II 4 Credits (Gen Ed - Physical and Natural Sciences)
- RSP* 180: Clinical Practicum 1 Credits
- RSP* 131: Applied Pharmacology 3 Credits
- RSP* 160: Diagnostic & Therapy Principles 3 Credits
- CHE* 111: Concepts of Chemistry 4 Credits 

**Subtotal: 15**

- COM* 173: Public Speaking 3 Credits (Gen Ed - Humanities)
- RSP* 181: Clinical Practicum II 1 Credits
- RSP* 260: Advanced Principles of Ventilator Therapy 3 Credits

**Subtotal: 7**

- Choose one course from Gen Ed - Social Sciences 3 Credits

- PHY* 110: Introductory Physics 4 Credits (Gen Ed - Physical and Natural Sciences) or
- PHY* 111: Physics for Life Sciences 4 Credits

- RSP* 281: Advanced Clinical Practicum 2 Credits
- RSP* 274: Diagnostic Respiratory Care 3 Credits
- RSP* 251: Respiratory Pathophysiology 3 Credits

**Subtotal: 15**

- BIO* 235: Microbiology 4 Credits
- Choose one course from Gen Ed - The Arts 3 Credits
- RSP* 282: Advanced Clinical Practicum II 2 Credits
- RSP* 261: Advanced Respiratory Care II 3 Credits
- RSP* 252: Respiratory Pathophysiology II 2 Credits

**Subtotal: 14**

Total Credits Required: 68

Note:

*Students planning to transfer to a Respiratory Care baccalaureate program are encouraged to take CHE* 121 and CHE* 122.
Social Service, A.S.

Program Design
The Social Service associate degree program is designed to prepare students for diverse employment opportunities and to provide a foundation for further academic pursuit. Additionally, the program includes field placement opportunities that provide students with “hands-on” exposure to the helping professions.

Curriculum
Students may enroll in this program full- or part-time. They can begin the program any semester and include field work at off-campus sites as part of their program.

Learning Outcomes
Upon successful completion of all Social Service degree program requirements, graduates will
1. Understand the past, present and future of human services.
2. Be prepared for group facilitation and participation, grant proposal writing, and oral and written expressions appropriate to human services.
3. Conduct interviews, assessments, and basic human service research.
4. Be prepared to address the needs of client populations during the internship experience.
5. Demonstrate knowledge of human service skills necessary to interact effectively with individuals, families or groups.

In addition, the graduate will complete the comprehensive learning outcomes identified with the General Education Core.
Social Service Requirements

- ENG* 101: Composition 3 Credits (Gen Ed - English)
- HSE* 101: Introduction to Human Services 3 Credits
- PSY* 111: General Psychology I 3 Credits (Gen Ed - Social Sciences)
- HLT* 151: Health and Wellness Promotion 3 Credits
- Choose one course from Gen Ed - Physical and Natural Sciences 3-4 Credits

**Subtotal: 15-16**

- ENG* 200: Advanced Composition 3 Credits
- HSE* 210: Group & Interpersonal Relations 3 Credits
- HSE* 251: Work with Individuals and Families 3 Credits
- Choose one course from Gen Ed - Mathematics 3-4 Credits
- Choose any ECN*, GEO*, HIS*, POL*, PSY*, SOC* or SSC* course 3 Credits

**Subtotal: 15-16**

- ENG* 110: Introduction to Literature 3 Credits (Gen Ed - Humanities)
- HSE* 281: Human Services Field Work I 3 Credits
- POL* 112: State and Local Government 3 Credits
- PSY* 201: Life Span Development 3 Credits
- Choose one course from Gen Ed - The Arts 3 Credits

**Subtotal: 15**

- HSE* 282: Human Services Field Work II 3 Credits or
- SSC* 294: Cooperative Education/Work Experience 3 Credits
- HSE* 241: Human Services Agencies and Organizations 3 Credits
- Choose any two courses 6 Credits
- ANT* 101: Introduction to Anthropology 3 Credits (Gen Ed - Humanities)

**Subtotal: 15**

Total Credits Required: 60-62

Note:

*Students are to meet with the program coordinator before selecting a field placement site.*
Speech-Language Pathology Assistant Option, Disability Specialist, A.S.

Program Design
The Speech-Language Pathology Assistant (SLPA) Option, Disability Specialist associate degree program is designed to prepare graduates for careers working in elementary and secondary schools with children who have communication disorders. SLPAs work under the supervision of a licensed, certified Speech-Language Pathologist. The SLPA option provides students with a specialized career path as a paraprofessional. The array of courses and programs offered in this option will help to ensure learner success in the program and will meet local and state workforce demands in a field where there is a great need for qualified staff at the assistant level.

The program is designed for individuals currently working as paraprofessionals who wish to become Speech-Language Pathology Assistants, people seeking a career change, and all students interested in a career as an SLPA.

The SLPA option is guided by the program philosophy and mission statement of the Disability Specialist program. Students will receive specific skill instruction to prepare them to become effective SLPAs coupled with a positive value base that will prepare them to assist individuals with disabilities toward the goals of community inclusion and participation and the attainment of their potential.

Curriculum
The SLPA option is a career program and the academic preparation is at the associate degree level. In addition to General Education and other required courses, SLPA option students will complete specialty courses including a supervised internship.

Students may enroll in this program full- or part-time.

Learning Outcomes
Upon successful completion of all Speech-Language Pathology Assistant Option, Disability Specialist program degree requirements, graduates will

1. Describe the process of communication and the characteristics of effective communication.
2. Define the differences between communication disorders and communication differences.
3. Describe the stages of language and literacy development and distinguish among language delays, language disorders and culturally-based language differences.
4. Explain and differentiate among the characteristics, etiologies, and impact of phonology, voice, fluency and language disorders.
5. Explain the effect of hearing loss on the development of communication skills.
6. Describe the role of the speech language pathology assistant in supporting therapy plans for students in educational settings.

In addition, the graduate will complete the comprehensive learning outcomes identified with the General Education Core.
Speech-Language Pathology Assistant Option Requirements

- ENG* 101: Composition 3 Credits (Gen Ed - English)
- SLP* 111: Communication Development 3 Credits
- PSY* 111: General Psychology I 3 Credits (Gen Ed - Social Sciences)
- PSY* 163: Children with Disabilities 3 Credits
- Choose any course 3 Credits

Subtotal: 15

- Choose one course from Gen Ed - Humanities 3 Credits
- SLP* 112: Speech and Language Services in the Educational Setting 3 Credits
- Choose one course from Gen Ed - Social Sciences 3 Credits
- SLP* 120: Communication Disorders and Intervention I 3 Credits
- Choose one course from Gen Ed - Physical and Natural Sciences 3-4 Credits

Subtotal: 15-16

- SLP* 121: Communication Disorders and Intervention II 3 Credits
- POL* 111: American Government 3 Credits or
- POL* 112: State and Local Government 3 Credits
- PSY* 183: Learning Process and Disabilities 3 Credits
- Choose one course from Gen Ed - The Arts 3 Credits
- Choose any course 3 Credits

Subtotal: 15

- ECE* 231: Early Language and Literacy Development 3 Credits
- PSY* 164: Assistive Technology for Students with Disabilities (K-12) 1 Credits
- PSY* 174: Assistive Technology for Adults in the Workplace, Home and Community. 1 Credits
- PSY* 193: Issues/Trends in Disabilities 3 Credits
- SSC* 294: Cooperative Education/Work Experience 3 Credits
- HSE* 294: Disability Specialist Seminar 1 Credits
- Choose one course from Gen Ed - Mathematics 3 Credits

Subtotal: 15

Total Credits: 60-61

Note:

Students planning to transfer should take MAT* 165.
Technology Studies, A.S. - Electronics Technology

Program Design
The Connecticut College of Technology Pathways program allows students to complete an associate in science degree program in Technology Studies at MCC, and continue on to complete a bachelor of science degree in Industrial Technology, Engineering Technology, Electronic Technology, Computer-Aided Design or Technology Education at Central Connecticut State University's (CCSU) School of Technology. The curriculum offers a broad range of studies and topics in: mathematics, physics, chemistry, engineering drawing and computer-aided design (CAD), electronics, computer technologies, advanced manufacturing technologies (robotics, automation, computer-aided manufacturing (CAM) and other courses in special areas of technology. The program also includes a solid core of courses in general education. Each of the courses is directly transferable to CCSU. Successful completion of the program allows students to enter their junior year at Central Connecticut State University.

Curriculum
Students may enroll in this program either full or part-time. Courses are offered both during the day or evenings. For students not yet prepared for the required mathematical courses, MCC offers a wide range of developmental course offerings.
The Electronics Technology Option, Technology Studies associate degree program prepares students to pursue a career as an electronics technician or to transfer to complete a B.S. degree in electronics technology. Consultation with a faculty advisor is strongly recommended.

Learning Outcomes
Upon successful completion of all Technology Studies options program requirements, graduates will
1. Apply appropriate mathematical and scientific principles to engineering and technology applications.
2. Demonstrate proficiency in technical fundamentals to analyze and resolve technology problems.
3. Apply knowledge and skills to develop, interpret, and select appropriate technological processes.
In addition, the graduate will complete the comprehensive learning outcomes identified with the General Education Core.
Electronics Technology Option Requirements

- ENG* 101: Composition 3 Credits (Gen Ed - English)
- EGR* 111: Introduction to Engineering 3 Credits
- MAT* 185: Trigonometric Functions 3 Credits or
- MAT* 186: Precalculus 4 Credits
- HIS* 101: Western Civilization I 3 Credits or
  - any Gen Ed - Social Sciences HIS* course 3 Credits
- ECN* 102: Principles of Microeconomics 3 Credits or
  - any ECN* course 3 Credits

**Subtotal: 15-16**

- CHE* 111: Concepts of Chemistry 4 Credits (Gen Ed - Physical and Natural Sciences) or
- CHE* 121: General Chemistry I 4 Credits (Gen Ed - Physical and Natural Sciences)
- CAD* 110: Introduction to CAD 3 Credits
- MAT* 165: Elementary Statistics with Computer Applications 4 Credits (Gen Ed - Mathematics)
- EET* 108: AC/DC Circuit Analysis 4 Credits
- Choose any GEO* or POL* from Gen Ed - Social Sciences 3 Credits

**Subtotal: 18**

- ENG* 202: Technical Writing 3 Credits
- PHY* 121: General Physics I 4 Credits
- EET* 132: Electronics 4 Credits
- COM* 173: Public Speaking 3 Credits
- PHL* 111: Ethics 3 Credits or
  - any Gen Ed - Humanities PHL* course 3 Credits

**Subtotal: 17**

- PHY* 122: General Physics II 4 Credits
- Choose one course from Gen Ed - The Arts 3 Credits
- EET* 252: Digital Electronics 4 Credits
- PSY* 247: Industrial and Organizational Psychology 3 Credits or
- SOC* 101: Principles of Sociology 3 Credits or
  - any Gen Ed - Social Sciences PSY* or SOC* course 3 Credits

**Subtotal: 14**

Total Credits Required: 64-65
Technology Studies, A.S. - Engineering Technology

Program Design
The Connecticut College of Technology Pathways program allows students to complete an associate in science degree program in Technology Studies at MCC, and continue on to complete a bachelor of science degree in Industrial Technology, Engineering Technology, Electronic Technology, Computer-Aided Design or Technology Education at Central Connecticut State University's (CCSU) School of Technology. The curriculum offers a broad range of studies and topics in: mathematics, physics, chemistry, engineering drawing and computer-aided design (CAD), electronics, computer technologies, advanced manufacturing technologies (robotics, automation, computer-aided manufacturing (CAM) and other courses in special areas of technology. The program also includes a solid core of courses in general education. Each of the courses is directly transferable to CCSU. Successful completion of the program allows students to enter their junior year at Central Connecticut State University.

Curriculum
Students may enroll in this program either full or part-time. Courses are offered both during the day or evenings. For students not yet prepared for the required mathematical courses, MCC offers a wide range of developmental course offerings.
The Engineering Technology Option, Technology Studies associate degree program prepares students primarily to transfer to complete a B.S. degree in civil or mechanical engineering technology. Consultation with a faculty advisor is strongly recommended.

Learning Outcomes
Upon successful completion of all Technology Studies options program requirements, graduates will
1. Apply appropriate mathematical and scientific principles to engineering and technology applications.
2. Demonstrate proficiency in technical fundamentals to analyze and resolve technology problems.
3. Apply knowledge and skills to develop, interpret, and select appropriate technological processes.
In addition, the graduate will complete the comprehensive learning outcomes identified with the General Education Core.
Engineering Technology Option Requirements

- ENG* 101: Composition 3 Credits (Gen Ed - English)
- EGR* 111: Introduction to Engineering 3 Credits
- EGR* 230: C++ For Engineers 3 Credits
- CHE* 121: General Chemistry I 4 Credits (Gen Ed - Physical and Natural Sciences)
- HIS* 101: Western Civilization I 3 Credits (Gen Ed - Social Sciences) or
  Choose any Gen Ed - Social Sciences HIS* course 3 Credits

  **Subtotal: 16**

- ECN* 102: Principles of Microeconomics 3 Credits or
  Choose any ECN* course 3 Credits
- CAD* 110: Introduction to CAD 3 Credits
- MAT* 165: Elementary Statistics with Computer Applications 4 Credits (Gen Ed - Mathematics)
- MAT* 254: Calculus I 4 Credits (formerly MAT* 250)‡
  Choose any Gen Ed - Social Sciences GEO* or POL* course 3 Credits

  **Subtotal: 17**

- PHY* 121: General Physics I 4 Credits or
  PHY* 221: Calculus-Based Physics I 4 Credits
- EGR* 211: Engineering Statics 3 Credits
- PHL* 111: Ethics 3 Credits (Gen Ed - Humanities) or
  Choose any Gen Ed - Humanities PHL* course 3 Credits
- COM* 173: Public Speaking 3 Credits (Gen Ed - Humanities)
- MAT* 256: Calculus II 4 Credits

  **Subtotal: 17**

- ENG* 202: Technical Writing 3 Credits
- Choose one course from Gen Ed - The Arts 3 Credits
- EGR* 212: Engineering Dynamics 3 Credits
- PHY* 122: General Physics II 4 Credits or
  PHY* 222: Calculus-Based Physics II 4 Credits
- PSY* 247: Industrial and Organizational Psychology 3 Credits or
  SOC* 101: Principles of Sociology 3 Credits or
  Choose any Gen Ed - Social Science PSY* or SOC* course 3 Credits

  **Subtotal: 16**

**Total Credits Required: 66**

**Note:**

‡ Students who receive credit for MAT* 250 have fulfilled the MAT* 254 requirement.
Technology Studies, A.S. - Industrial Technology

Program Design
The Connecticut College of Technology Pathways program allows students to complete an associate in science degree program in Technology Studies at MCC, and continue on to complete a bachelor of science degree in Industrial Technology, Engineering Technology, Electronic Technology, Computer-Aided Design or Technology Education at Central Connecticut State University's (CCSU) School of Technology. The curriculum offers a broad range of studies and topics in: mathematics, physics, chemistry, engineering drawing and computer-aided design (CAD), electronics, computer technologies, advanced manufacturing technologies (robotics, automation, computer-aided manufacturing (CAM) and other courses in special areas of technology. The program also includes a solid core of courses in general education. Each of the courses is directly transferable to CCSU. Successful completion of the program allows students to enter their junior year at Central Connecticut State University.

Curriculum
Students may enroll in this program either full or part-time. Courses are offered both during the day or evenings. For students not yet prepared for the required mathematical courses, MCC offers a wide range of developmental course offerings.

The Industrial Technology Option, Technology Studies associate degree program prepares students to pursue a career as an engineering technician or to transfer to complete a B.S. degree in industrial technology. Consultation with a faculty advisor is strongly recommended.

Learning Outcomes
Upon successful completion of all Technology Studies options program requirements, graduates will
1. Apply appropriate mathematical and scientific principles to engineering and technology applications.
2. Demonstrate proficiency in technical fundamentals to analyze and resolve technology problems.
3. Apply knowledge and skills to develop, interpret, and select appropriate technological processes.

In addition, the graduate will complete the comprehensive learning outcomes identified with the General Education Core.

Industrial Technology Option Requirements

- ENG* 101: Composition 3 Credits (Gen Ed - English)
- EGR* 111: Introduction to Engineering 3 Credits
- Choose any GEO* or POL* course 3 Credits
- MAT* 185: Trigonometric Functions 3 Credits or
- MAT* 186: Precalculus 4 Credits
- HIS* 101: Western Civilization I 3 Credits (Gen Ed - Social Science) or
  Choose any Gen Ed - Social Sciences HIS* course 3 Credits
- ECN* 102: Principles of Microeconomics 3 Credits or
  Choose any ECN* course 3 Credits

**Subtotal: 18-19**
- CAD* 110: Introduction to CAD 3 Credits
- MAT* 165: Elementary Statistics with Computer Applications 4 Credits (Gen Ed - Mathematics)
- Choose one Technical Elective course 3 Credits

- PHL* 111: Ethics 3 Credits or
- Choose any Gen Ed - Humanities PHL* course 3 Credits

- CHE* 111: Concepts of Chemistry 4 Credits (Gen Ed - Physical and Natural Sciences) or
- CHE* 121: General Chemistry I 4 Credits (Gen Ed - Physical and Natural Sciences)

**Subtotal: 17**

- PHY* 110: Introductory Physics 4 Credits or
- PHY* 121: General Physics I 4 Credits

- EGR* 230: C++ For Engineers 3 Credits
- Choose one Technical Elective course 3 Credits
- COM* 173: Public Speaking 3 Credits (Gen Ed - Humanities)
- Choose one Technical Elective course 3 Credits

**Subtotal: 16**

- ENG* 202: Technical Writing 3 Credits
- Choose one course from Gen Ed - The Arts 3 Credits
- Choose one Technical Elective course 3 Credits
- Choose one Technical Elective course 3 Credits

- PSY* 247: Industrial and Organizational Psychology 3 Credits or
- SOC* 101: Principles of Sociology 3 Credits or
- Choose any Gen Ed - Social Sciences PSY* or SOC* course 3 Credits

**Subtotal: 15**

**Total Credits Required: 66-67**

Note:

Technical Electives:
A total of 15 credits of technical electives must be completed from those courses listed below. Consultation with a faculty member is strongly advised.

- EGR* 240: Current Topics in Sustainable Engineering 1 Credits
- EGR* 241: Sustainable Electrical Systems 4 Credits
- EGR* 242: Sustainable Building Systems 4 Credits
- EVS* 130: Sustainable Energy and the Environment 3 Credits
- EVS* 131: Sustainable Energy for Your Community 3 Credits
- MFG* 106: Computer-Aided Manufacturing I 3 Credits
- MFG* 111: Manufacturing Materials and Process I 3 Credits
- MFG* 112: Manufacturing Materials and Process II 3 Credits
- MFG* 171: Introduction to Lean Manufacturing 3 Credits
- MFG* 172: Introduction to Lean Supply Chain Management 3 Credits
- MFG* 205: Principles of CNC with Mastercam 3 Credits
- MFG* 230: Statistical Process Control 3 Credits
- MFG* 239: Geometric Dimension and Tolerancing 3 Credits
Technology Studies, A.S. - Lean Manufacturing Option

Program Design
The Connecticut College of Technology Pathways program allows students to complete an associate in science degree program in Technology Studies at MCC, and continue on to complete a bachelor of science degree in Industrial Technology, Engineering Technology, Electronic Technology, Computer-Aided Design or Technology Education at Central Connecticut State University's (CCSU) School of Technology. The curriculum offers a broad range of studies and topics in: mathematics, physics, chemistry, engineering drawing and computer-aided design (CAD), electronics, computer technologies, advanced manufacturing technologies (robotics, automation, computer-aided manufacturing (CAM) and other courses in special areas of technology. The program also includes a solid core of courses in general education. Each of the courses is directly transferable to CCSU. Successful completion of the program allows students to enter their junior year at Central Connecticut State University.

Curriculum
Students may enroll in this program either full or part-time. Courses are offered both during the day or evenings. For students not yet prepared for the required mathematical courses, MCC offers a wide range of developmental course offerings.

The Lean Manufacturing Option, Technology Studies associate degree program prepares students to work in the 21st century world of Lean Manufacturing. Companies are now employing these techniques to reduce waste, cut costs and compete globally.

Consultation with an academic advisor/technical faculty is strongly recommended.

Curriculum
Students may enroll in this program either full or part-time. Courses are offered both during the day or evenings. For students not yet prepared for the required mathematical courses, MCC offers a wide range of developmental course offerings.

Learning Outcomes
Upon successful completion of all Technology Studies options program requirements, graduates will

1. Apply appropriate mathematical and scientific principles to engineering and technology applications.
2. Demonstrate proficiency in technical fundamentals to analyze and resolve technology problems.
3. Apply knowledge and skills to develop, interpret, and select appropriate technological processes.

In addition, the graduate will complete the comprehensive learning outcomes identified with the General Education Core.
Lean Manufacturing Option

- MAT* 186: Precalculus 4 Credits or
- MAT* 185: Trigonometric Functions 3 Credits
- Choose any Gen Ed - Social Sciences GEO* or POL* course 3 Credits
- ENG* 101: Composition 3 Credits (Gen Ed - English)
- ECN* 102: Principles of Microeconomics 3 Credits
- MFG* 171: Introduction to Lean Manufacturing 3 Credits

**Subtotal: 15-16**

- MAT* 165: Elementary Statistics with Computer Applications 4 Credits (Gen Ed - Mathematics)
- CHE* 121: General Chemistry I 4 Credits (Gen Ed - Physical and Natural Sciences)
- MFG* 271: Advanced Lean Manufacturing 3 Credits
- CAD* 110: Introduction to CAD 3 Credits
- PHL* 111: Ethics 3 Credits or any Gen Ed - Humanities PHL* course 3 Credits

**Subtotal: 17**

- HIS* 101: Western Civilization I 3 Credits or
- Choose any Gen Ed - Social Sciences HIS* course 3 Credits
- PHY* 121: General Physics I 4 Credits
- CST* 205: Project Management 4 Credits
- COM* 173: Public Speaking 3 Credits (Gen Ed - Humanities)
- MFG* 111: Manufacturing Materials and Process I 3 Credits

**Subtotal: 17**

- ENG* 202: Technical Writing 3 Credits
- Choose one course from Gen Ed - The Arts 3 Credits
- MFG* 112: Manufacturing Materials and Process II 3 Credits
- MFG* 230: Statistical Process Control 3 Credits
- CST* 201: Introduction to MIS 3 Credits or
- BMK* 201: Principles of Marketing 3 Credits
- PSY* 247: Industrial and Organizational Psychology 3 Credits or
- SOC* 101: Principles of Sociology 3 Credits or
- Choose any Gen Ed - Social Science PSY* or SOC* course 3 Credits

**Subtotal: 18**

Total Credits Required: 67-68
Technology Studies, A.S. - Technology Education Option

Program Design
The Connecticut College of Technology Pathways program allows students to complete an associate in science degree program in Technology Studies at MCC, and continue on to complete a bachelor of science degree in Industrial Technology, Engineering Technology, Electronic Technology, Computer-Aided Design or Technology Education at Central Connecticut State University’s (CCSU) School of Technology. The curriculum offers a broad range of studies and topics in: mathematics, physics, chemistry, engineering drawing and computer-aided design (CAD), electronics, computer technologies, advanced manufacturing technologies (robotics, automation, computer-aided manufacturing (CAM) and other courses in special areas of technology. The program also includes a solid core of courses in general education. Each of the courses is directly transferable to CCSU. Successful completion of the program allows students to enter their junior year at Central Connecticut State University.

Curriculum
Students may enroll in this program either full or part-time. Courses are offered both during the day or evenings. For students not yet prepared for the required mathematical courses, MCC offers a wide range of developmental course offerings.
The Technology Education Option, Technology Studies associate degree program prepares students for a career teaching technology, K-12, upon completion of a B.S. degree in technology and engineering education. Consultation with a faculty advisor is strongly recommended.

Technology Education Option Requirements

- ENG* 101: Composition 3 Credits (Gen Ed - English)
- EGR* 111: Introduction to Engineering 3 Credits
- MAT* 186: Precalculus 4 Credits (Gen Ed - Mathematics)
- HIS* 201: United States History I 3 Credits (Gen Ed - Social Sciences)
- ECN* 102: Principles of Microeconomics 3 Credits

**Subtotal: 16**

- CAD* 110: Introduction to CAD 3 Credits
- PHL* 111: Ethics 3 Credits or any Gen Ed - Humanities PHL* course
- MAT* 165: Elementary Statistics with Computer Applications 4 Credits (Gen Ed - Mathematics)
- CHE* 111: Concepts of Chemistry 4 Credits (Gen Ed - Physical and Natural Sciences)
- MFG* 111: Manufacturing Materials and Process I 3 Credits

**Subtotal: 17**

- EGR* 230: C++ For Engineers 3 Credits
- PHY* 110: Introductory Physics 4 Credits
- EET* 108: AC/DC Circuit Analysis 4 Credits
- COM* 173: Public Speaking 3 Credits
- EGR* 112: Engineering Drawing Interpretations 3 Credits

**Subtotal: 17**
• ENG* 202: Technical Writing 3 Credits
• Choose one course from Gen Ed - The Arts 3 Credits
• Choose one Technical Elective course 3 Credits\(^{\dagger}\)
• Choose one Technical Elective course 3 Credits\(^{\dagger}\)
• Choose any Gen Ed - Social Sciences GEO* or POL* course 3 Credits

• PSY* 247: Industrial and Organizational Psychology 3 Credits or
• SOC* 101: Principles of Sociology 3 Credits or
• Choose any Gen Ed - Social Science PSY* or SOC* course 3 Credits

Subtotal: 18

Total Credits Required: 68

Note:

\(^{\dagger}\)Technical Electives:
A total of six credits are required from among the technical elective courses listed below.
• CAD* 218: CAD 3d Mechanical (AutoCAD) 3 Credits
• CAD* 220: Parametric Design (Solidworks) 3 Credits
• CAD* 271: CAD Solids Mechanical Pro/ENGINEER 3 Credits
• EGR* 112: Engineering Drawing Interpretations 3 Credits
• EET* 108: AC/DC Circuit Analysis 4 Credits
• EET* 132: Electronics 4 Credits
• EET* 252: Digital Electronics 4 Credits
• EET* 118: Electrical Power Systems 3 Credits
• MFG* 106: Computer-Aided Manufacturing I 3 Credits
• MFG* 112: Manufacturing Materials and Process II 3 Credits
• MFG* 171: Introduction to Lean Manufacturing 3 Credits
• MFG* 172: Introduction to Lean Supply Chain Management 3 Credits
• MFG* 205: Principles of CNC with Mastercam 3 Credits
• MFG* 230: Statistical Process Control 3 Credits
• MFG* 239: Geometric Dimension and Tolerancing 3 Credits
• MFG* 271: Advanced Lean Manufacturing 3 Credits
• MFG* 272: Implementation of Lean Supply Chain Management 3 Credits
Technology Studies, A.S. - Technology Management Option

Program Design
The Connecticut College of Technology Pathways program allows students to complete an associate in science degree program in Technology Studies at MCC, and continue on to complete a bachelor of science degree in Industrial Technology, Engineering Technology, Electronic Technology, Computer-Aided Design or Technology Education at Central Connecticut State University’s (CCSU) School of Technology. The curriculum offers a broad range of studies and topics in: mathematics, physics, chemistry, engineering drawing and computer-aided design (CAD), electronics, computer technologies, advanced manufacturing technologies (robotics, automation, computer-aided manufacturing (CAM) and other courses in special areas of technology. The program also includes a solid core of courses in general education. Each of the courses is directly transferable to CCSU. Successful completion of the program allows students to enter their junior year at Central Connecticut State University.

Curriculum
Students may enroll in this program either full or part-time. Courses are offered both during the day or evenings. For students not yet prepared for the required mathematical courses, MCC offers a wide range of developmental course offerings.

The Connecticut College of Technology Pathways program allows students to earn an associate in science degree in Technology Studies at Manchester Community College, and continue on to complete a bachelor of science degree in Technology and Construction Management at Central Connecticut State University’s (CCSU) School of Industrial and Engineering Technology.

Learning Outcomes
Upon successful completion of all Technology Studies options program requirements, graduates will
1. Apply appropriate mathematical and scientific principles to engineering and technology applications.
2. Demonstrate proficiency in technical fundamentals to analyze and resolve technology problems.
3. Apply knowledge and skills to develop, interpret, and select appropriate technological processes.

In addition, the graduate will complete the comprehensive learning outcomes identified with the General Education Core.

Technology Management Option Requirements

- ENG* 101: Composition 3 Credits (Gen Ed - English)
- EGR* 111: Introduction to Engineering 3 Credits
- Choose any Gen Ed - Social Science GEO* or POL* course 3 Credits
- MAT* 185: Trigonometric Functions 3 Credits (Gen Ed - Mathematics) or
- MAT* 186: Precalculus 4 Credits (Gen Ed - Mathematics)
- HIS* 121: World Civilization I 3 Credits or
- HIS* 122: World Civilization II 3 Credits or
- Choose any Gen Ed - Social Science HIS* course 3 Credits

Subtotal: 15-16
- CHE* 111: Concepts of Chemistry 4 Credits (Gen Ed - Physical and Natural Sciences) or
- CHE* 121: General Chemistry I 4 Credits (Gen Ed - Physical and Natural Sciences)

- CAD* 110: Introduction to CAD 3 Credits
- PHL* 111: Ethics 3 Credits or any Gen Ed - Humanities) PHL* course
- MAT* 165: Elementary Statistics with Computer Applications 4 Credits
- ACC* 115: Financial Accounting 4 Credits

**Subtotal: 18**

- BMG* 202: Principles of Management 3 Credits
- PHY* 110: Introductory Physics 4 Credits or
- PHY* 121: General Physics I 4 Credits

Choose one Business/Technical Elective 3 Credits†
- COM* 173: Public Speaking 3 Credits

- ECN* 102: Principles of Microeconomics 3 Credits or
- Choose one Gen Ed - Social Science  ECN* course 3 Credits

**Subtotal: 16**

- ENG* 202: Technical Writing 3 Credits
- Choose one course from Gen Ed - The Arts  3 Credits
- Choose one Business/Technical Elective 3-4 Credits‡
- CST* 205: Project Management 4 Credits

- PSY* 247: Industrial and Organizational Psychology 3 Credits or
- Choose any Gen Ed - Social Sciences  PSY* or SOC* course 3 Credits

**Subtotal: 16-17**

**Total Credits Required: 66-67**

**Note:**

† Business/Technical Electives:
- ACC* 118: Managerial Accounting 4 Credits
- BMK* 201: Principles of Marketing 3 Credits
- CST* 201: Introduction to MIS 3 Credits
- MFG* 111: Manufacturing Materials and Process I 3 Credits
- MFG* 112: Manufacturing Materials and Process II 3 Credits
- MFG* 171: Introduction to Lean Manufacturing 3 Credits
- MFG* 172: Introduction to Lean Supply Chain Management 3 Credits
- MFG* 205: Principles of CNC with Mastercam 3 Credits
- MFG* 230: Statistical Process Control 3 Credits
- MFG* 271: Advanced Lean Manufacturing 3 Credits
- MFG* 272: Implementation of Lean Supply Chain Management 3 Credits
Technology Studies, A.S., Computer-Aided Design Option

Program Design
The Connecticut College of Technology Pathways program allows students to complete an associate in science degree program in Technology Studies at MCC, and continue on to complete a bachelor of science degree in Industrial Technology, Engineering Technology, Electronic Technology, Computer-Aided Design or Technology Education at Central Connecticut State University's (CCSU) School of Technology. The curriculum offers a broad range of studies and topics in: mathematics, physics, chemistry, engineering drawing and computer-aided design (CAD), electronics, computer technologies, advanced manufacturing technologies (robotics, automation, computer-aided manufacturing (CAM) and other courses in special areas of technology. The program also includes a solid core of courses in general education. Each of the courses is directly transferable to CCSU. Successful completion of the program allows students to enter their junior year at Central Connecticut State University.

Curriculum
Students may enroll in this program either full or part-time. Courses are offered both during the day or evenings. For students not yet prepared for the required mathematical courses, MCC offers a wide range of developmental course offerings. The Computer-Aided Design Option, Technology Studies associate degree program prepares students to pursue a career as a computer-aided design specialist or to transfer to complete a B.S. degree in technology. Consultation with a faculty advisor is strongly recommended. The Computer-Aided Design Option, Technology Studies associate degree program prepares students to pursue a career as a computer-aided design specialist or to transfer to complete a B.S. degree in technology. Consultation with a faculty advisor is strongly recommended.

Learning Outcomes
Upon successful completion of all Technology Studies options program requirements, graduates will
1. Apply appropriate mathematical and scientific principles to engineering and technology applications.
2. Demonstrate proficiency in technical fundamentals to analyze and resolve technology problems.
3. Apply knowledge and skills to develop, interpret, and select appropriate technological processes.
In addition, the graduate will complete the comprehensive learning outcomes identified with the General Education Core.
Computer-Aided Design Option Requirements

- ENG* 101: Composition 3 Credits (Gen Ed - English)
- CAD* 110: Introduction to CAD 3 Credits
- EGR* 111: Introduction to Engineering 3 Credits
- Any Gen Ed - Social Sciences GEO* or POL* course 3 Credits
- MAT* 185: Trigonometric Functions 3 Credits or
  MAT* 186: Precalculus 4 Credits
- HIS* 101: Western Civilization I 3 Credits or
  Any Gen Ed - Social Sciences HIS* course 3 Credits

Subtotal: 18-19

- ECN* 102: Principles of Microeconomics 3 Credits or
  any ECN* course
- CHE* 111: Concepts of Chemistry 4 Credits (Gen Ed - Physical and Natural Sciences) or
  CHE* 121: General Chemistry I 4 Credits (Gen Ed - Physical and Natural Sciences)
- PHL* 111: Ethics 3 Credits or any Gen Ed - Mode 3 PHL* course
- MAT* 165: Elementary Statistics with Computer Applications 4 Credits (Gen Ed - Mathematics)
- CAD* 218: CAD 3d Mechanical (AutoCAD) 3 Credits

Subtotal: 17

- PHY* 110: Introductory Physics 4 Credits or
  PHY* 121: General Physics I 4 Credits
- EGR* 230: C++ For Engineers 3 Credits
- CAD* 220: Parametric Design (Solidworks) 3 Credits
- COM* 173: Public Speaking 3 Credits (Gen Ed - Humanities)
- EGR* 112: Engineering Drawing Interpretations 3 Credits

Subtotal: 16

- ENG* 202: Technical Writing 3 Credits
- Choose one course from Gen Ed - The Arts 3 Credits
- MFG* 239: Geometric Dimension and Tolerancing 3 Credits
- MFG* 205: Principles of CNC with Mastercam 3 Credits
- PSY* 247: Industrial and Organizational Psychology 3 Credits or
  SOC* 101: Principles of Sociology 3 Credits or
  any Gen Ed - Social Sciences PSY* or SOC* course 3 Credits

Subtotal: 15

Total Credits Required: 66-67
Therapeutic Recreation, A.S.

Program Design
The Therapeutic Recreation associate degree program is designed to address the need for a degree beyond the Therapeutic Recreation certificate for students pursuing careers as a therapeutic recreation director or supervisor in long-term care facilities. The associate degree in therapeutic recreation will also prepare students to work in a variety of therapeutic recreation settings such as rehabilitation facilities, penal institutions, group homes, and facilities for individuals with developmental disabilities. Students can expect to obtain employment upon completion of this degree program or transfer to a baccalaureate institution in therapeutic recreation. Therapeutic recreation is a specialized allied health field within the recreation profession. Associated with leisure aspects of medical treatment, therapeutic recreation attempts to physically and socially rehabilitate patients who have chronic physical, psychological and social disabilities. It involves recreation services that give the patient an opportunity to participate in recreational, leisure and group activities specifically designed to aid in the recovery or adjustment to illness, disability or a specific social problem. Due to standards set by the Joint Commission on Accreditation of Healthcare Organizations (JCAHO), students are advised that the healthcare facilities to which they are assigned for clinical rotations may require that they submit to a criminal background check before beginning their clinical experiences. Manchester Community College cannot be responsible for finding an alternate clinical placement for a student who fails to pass the background check. The program coordinator may assist students in finding a placement for their practicum, but it will be up to the student to do well during the interview and secure a placement. A student who is unable to complete the required clinical experience will be unable to complete the requirements for the associate degree in Therapeutic Recreation but may be able to apply some or all of the credits completed to an associate degree in General Studies. Students are advised to meet with an MCC counselor to discuss degree completion requirements.

Curriculum
Students may enroll in this program full-time or part-time and attend classes days or evenings.

Learning Outcomes
Upon successful completion of all Therapeutic Recreation degree program requirements, graduates will

1. Meet the state health code requirements to hold the position of a therapeutic recreation director in the State of Connecticut.
2. Demonstrate the ability to successfully assess, plan, implement and evaluate therapeutic recreation programs for individuals with special needs both in a clinical and community setting.
3. Have developed leadership, interpersonal and communication skills necessary to work in a healthcare or community-based setting.
4. Demonstrate professional behavior consistent with the therapeutic recreation code of ethics.

In addition, the graduate will complete the comprehensive learning outcomes identified with the General Education Core.
Therapeutic Recreation Requirements

- Elective CSA* or CSC* course 1-2 Credits
- ENG* 101: Composition 3 Credits (Gen Ed - English)
- PSY* 111: General Psychology I 3 Credits (Gen Ed - Social Sciences)
- RLS* 101: Introduction to Recreation and Leisure Services 3 Credits
- HLT* 151: Health and Wellness Promotion 3 Credits
- RLS* 121: Introduction to Therapeutic Recreation Services 3 Credits

**Subtotal: 16-17**

- Elective gerontology 3 Credits
- MAT* 109: Quantitative Literacy 3 Credits Gen Ed - Mathematics) or
- MAT* 165: Elementary Statistics with Computer Applications 4 Credits (Gen Ed - Mathematics)
- PSY* 163: Children with Disabilities 3 Credits or
- PSY* 173: Adults with Disabilities 3 Credits
- SSC* 294: Cooperative Education/Work Experience 3 Credits
- RLS* 122: Processes and Techniques in Therapeutic Recreation 3 Credits

**Subtotal: 15-16**

- BIO* 115: Human Biology 4 Credits (Gen Ed - Physical and Natural Sciences) 
- Choose one course from Gen Ed - The Arts 3 Credits
- Choose one course from Gen Ed - Humanities 3 Credits
- PSY* 201: Life Span Development 3 Credits (Gen Ed - Social Sciences)
- RLS* 221: Therapeutic Recreation Programming 3 Credits

**Subtotal: 16**

- COM* 173: Public Speaking 3 Credits
- Choose any ANT*, ECN*, GEO*, HIS*, POL*, PSY*, SOC* or SSC* course or GERN 161 3 Credits
- RLS* 223: Leisure and Aging 3 Credits
- RLS* 295: Professional Practicum in Therapeutic Recreation 4 Credits

**Subtotal: 13**

**Total Credits Required: 60-62**

**Note:**

‡ Students planning to transfer to a baccalaureate program should take BIO* 211 and BIO* 212.
Visual Fine Arts, A.A.

Program Design
For those students seeking a professional career, the Visual Fine Arts associate degree program offers a transfer-oriented course of study that leads to enrollment in an art school or other baccalaureate institution. Careers in commercial art, art education and fine arts are open to graduates with bachelor’s degrees.
The Visual Fine Arts program also serves an ever-expanding population of students seeking personal enjoyment in the creative process. Technical expertise and aesthetic theory are offered to those who pursue art as an avocation.

Curriculum
Students may enroll in this program full- or part-time. There are no requirements or prerequisites for students wishing to take art courses part-time or as electives for other programs.
Fine arts faculty members are available for consultation with students who wish to enroll in the program and thereafter for course selection and transfer information.

Learning Outcomes
Upon successful completion of all Visual Fine Arts degree program requirements, graduates will
1. Execute skills and techniques necessary for studio art and demonstrate dexterity with tools, knowledge of equipment specific to various media, and the safe use of all materials and equipment.
2. Demonstrate an historical, cross-cultural appreciation and awareness of the field of visual art.
3. Demonstrate creative thinking; the ability to solve aesthetic, technical and conceptual problems; and critical awareness.
4. Demonstrate an understanding of the principles and elements of two- and three-dimensional design and their applications to various studio disciplines.
5. Compile a comprehensive portfolio of work that reflects the breadth of their study and prepares them for transfer to baccalaureate institutions.
In addition, the graduate will complete the comprehensive learning outcomes identified with the General Education Core.
Visual Fine Arts Requirements

- ENG* 101: Composition 3 Credits (Gen Ed - English)
- ART* 103: Art History III 3 Credits or
  ART* 104: Contemporary Art History 3 Credits
- ART* 111: Drawing I 3 Credits *
- ART* 121: Two-Dimensional Design 3 Credits
- Choose any Gen Ed course 3 Credits
  **Subtotal: 15**
- ENG* 110: Introduction to Literature 3 Credits (Gen Ed - Humanities)
- ART* 101: Art History I: Prehistory to the Renaissance 3 Credits (Gen Ed - The Arts) ** or
  studio course 3 Credits
- ART* 122: Three-Dimensional Design 3 Credits
- ART* 151: Painting I 3 Credits
- ART* 131: Sculpture I 3 Credits
- Choose one course from Gen Ed - Physical and Natural Sciences 3 Credits
  **Subtotal: 18**
- ART* 102: Art History II: Renaissance to the Modern Era 3 Credits ** or (Gen Ed - The Arts)
  studio course 3 Credits
- ART* 167: Printmaking I 3 Credits or
- ART* 161: Ceramics I 3 Credits or
- ART* 141: Photography I 3 Credits
- Elective studio course 3 Credits ***
- Elective liberal arts and science 3 Credits
- Choose one course from Gen Ed - Social Sciences 3 Credits
  **Subtotal: 15**
- Elective studio course 3 Credits***
- Elective studio course 3 Credits***
- Gen Ed - The Arts course 3 Credits
- Elective studio course 3 Credits
- MAT* 109: Quantitative Literacy 3 Credits (Gen Ed - Mathematics)
  **Subtotal: 15**

Total Credits Required: 63

Note:

* At least two semesters of Drawing are strongly recommended.
** Either ART* 101 or ART* 102 is required, but not both.
*** A studio course is any 6-hour ART*, DGA* or GRA* course.

The Visual Fine Arts program strongly recommends that students take all of the following before taking any other Visual Fine Arts course work. This will provide students with the essential foundations for all other Visual Fine Arts program course work.

- ART* 111: Drawing I 3 Credits
- ART* 121: Two-Dimensional Design 3 Credits
Certificate Programs

- ART* 122: Three-Dimensional Design 3 Credits
Accounting Certificate

Program Design
The Accounting certificate program is designed for students who are interested in specialized accounting and/or those who already have a bachelor’s degree and would like to change careers. This program also serves individuals currently employed who are not seeking a degree or career change but would like formal training or professional development.

Curriculum
Students may enroll full- or part-time. Students must achieve at least a C- or better in an accounting course to continue on to the next level. Note: All business and accounting courses, except for BBG* 108 (formerly QM 110), have prerequisites. Check course description before registering.

Learning Outcomes
Upon successful completion of all Accounting certificate program requirements, graduates will:
1. Demonstrate mastery of generally accepted accounting principles and their manual and computerized spreadsheet applications to all phases of the accounting cycle.
2. Complete relatively complex accounting problems and be familiar with current financial accounting standards and practices.
3. Apply accounting concepts and critical thinking skills to produce accurate financial statements.
4. Prepare the 1040 tax return and supporting schedules under simulated conditions.
5. Explain how budgeting, activity-based costing and strategic cost management foster the effective use of resources and help an organization accomplish its goals.
6. Possess computer competencies for maximum efficiency including the use of accounting, spreadsheet and presentation software. Use the Internet for business purposes, including research, marketing and stock market analysis.
7. Work with others, including culturally and intellectually diverse people; think critically; and gain an appreciation for life-long learning.
8. Demonstrate a responsible attitude in relationships with employers, peers and toward the working environment.
9. Understand the interrelationships between accounting and all other areas within a business, including working with other departments to achieve overall strategic goals.
10. Develop sound ethical and moral professional characteristics.

Required Courses
- ACC* 115: Financial Accounting 4 Credits
- ACC* 118: Managerial Accounting 4 Credits
- ACC* 125: Accounting Computer Applications I 3 Credits
- ACC* 275: Principles of Intermediate Accounting I 4 Credits
- ACC* 276: Principles of Intermediate Accounting II 4 Credits
- ACC* 231: Cost Accounting I 3 Credits or
- ACC* 251: Fund Accounting 3 Credits ‡
- ACC* 241: Federal Taxes I 3 Credits
- BBG* 234: Legal Environment of Business 3 Credits

Total Credits Required: 28

Note:
‡ Students who are interested in a manufacturing environment should take ACC* 231: Cost Accounting I. Students who are interested in local, state, federal, hospital, fundraising, or college or university accounting should take ACC* 251: Fund Accounting.
Accounting. Students without a strong foundation in computer skills should take CSA* 105: Introduction to Software Applications.

Business Office Technology Certificate - Medical Insurance Specialist

Program Design
Business Office Technology certificate programs allow students to specialize in areas of interest and obtain entry-level office positions. Course credit may be applied toward an associate degree. Advanced placement in keyboarding is available for students with prior training. These certificate programs may be taken on a full- or part-time basis. They are designed for high school graduates, persons desiring to reenter the work place and college graduates seeking employment.

Curriculum
With the numerous changes in the health care industry due to federal incentives for the conversion to electronic automation of managing healthcare information through 2016, the Medical Insurance Specialist will continue to play an important part in the role of the physician office through proper documentation oversight. This certificate program is designed to prepare students to manage the medical insurance specialist process along with coding and billing insurance claims in doctors' offices, hospitals, HMOs and other health care facilities.

Learning Outcomes
Upon successful completion of all Medical Insurance Specialist certificate program requirements, graduates will:
1. Create and modify standard types of business communications in both printed and electronic forms.
2. Demonstrate strong interpersonal and human relations skills required for success in a professional setting.
3. Demonstrate proficiency in the use of ICD-10 and CPT coding in entering and/or processing medical insurance claims.
4. Acquire up-to-date technology skills using medical office computer applications.
5. Understand and adhere to the importance of federal regulations, medical ethics, legal implications, and patient confidentiality when handling protected health information.

Required Courses

- BOT* 111: Keyboarding for Info Pro I 3 Credits
- BIO* 115: Human Biology 4 Credits
- BOT* 180: Medical Terminology 3 Credits
- BOT* 181: Medical Coding I 3 Credits

Subtotal: 13

- BOT* 220: Computerized Communication 3 Credits
- BOT* 182: Medical Coding II 3 Credits
- BOT* 287: Foundations/Management Medical Insurance 3 Credits

Subtotal: 9

Total Credits Required: 22

Note:
Completion of BOT* 181 Medical Coding I and BOT* 182 Medical Coding II will begin to prepare students to sit for the Certified Professional Coder (CPC) exam for physician and outpatient coding. This certification is offered through the American Academy of Professional Coders.
Business Office Technology Certificate - Medical Transcription

Program Design
Business Office Technology certificate programs allow students to specialize in areas of interest and obtain entry-level office positions. Course credit may be applied toward an associate degree. Advanced placement in keyboarding is available for students with prior training. Students can modify their programs depending upon experience. These certificate programs may be taken on a full- or part-time basis. They are designed for high school graduates, persons desiring to reenter the work place and college graduates seeking employment.

Curriculum
A medical transcriptionist translates, from oral to written form, highly technical information summarizing medical histories, diagnoses and treatments for patients, and can find employment in a variety of health care settings: doctors’ offices, HMOs, medical transcription services, clinics, insurance companies and various other medical-related agencies and organizations.

Learning Outcomes
Upon successful completion of all Medical Transcription certificate program requirements, graduates will
1. Create and modify standard types of business communications in both printed and electronic forms.
2. Demonstrate strong interpersonal and human relations skills required for success in a professional setting.
3. Execute medical office procedures used in today's technological work environment.
4. Demonstrate correct medical terminology in transcribing various documents.
5. Acquire up-to-date technology skills in the area of word processing.
6. Demonstrate keyboarding and data-entry speed and accuracy using industry accepted methods.
7. Understand and adhere to the importance of federal regulation, medical ethics, legal implications, and patient confidentiality when handling protected health information.

Required Courses

- BOT* 111: Keyboarding for Info Pro I 3 Credits
- BOT* 280: Medical Transcription and Document Production 3 Credits
- BIO* 115: Human Biology 4 Credits
- BOT* 180: Medical Terminology 3 Credits

Subtotal: 13

- BOT* 137: Word Processing Applications 3 Credits or
- BOT* 112: Keyboarding for Info Pro II 3 Credits
- BOT* 122: Writing Procedures 3 Credits or
  Cross-listed courses (choose one)
- BOT* 139: Grammar, Usage and Style 3 Credits
- ENG* 203: Grammar, Usage and Style 3 Credits
- BOT* 289: Practical Pharmacology for the Medical Office 3 Credits
- BOT* 286: Medical Machine Transcription 3 Credits

Subtotal: 12

- BOT* 296: Cooperative/Work Experience 3 Credits or
- BOT* 220: Computerized Communication 3 Credits

Subtotal: 3
Total Credits Required: 28

Business Office Technology Certificate - Office Support Specialist

Program Design
Business Office Technology certificate programs allow students to specialize in areas of interest and obtain entry-level office positions. Course credit may be applied toward an associate degree. Advanced placement in keyboarding is available for students with prior training. Students can modify their programs depending upon experience. These certificate programs may be taken on a full- or part-time basis. They are designed for high school graduates, persons desiring to reenter the work place and college graduates seeking employment.

Curriculum
This certificate program is recommended for students interested in upgrading their skills to become more marketable in an increasingly technological work environment. Coursework focuses on business writing, office procedures, and computer applications providing students with the skills necessary to secure entry-level administrative employment opportunities.

Learning Outcomes
Upon successful completion of all Office Support Specialist certificate program requirements, graduates will

1. Create and modify standard types of business communications in both printed and electronic forms.
2. Demonstrate strong interpersonal and human relations skills required for success in a professional setting.
3. Execute business office procedures used in today's technological work environment.
4. Perform and analyze office accounting tasks and activities.
5. Acquire up-to-date technology skills in the following areas: word processing, spreadsheet, database, presentation, computerized accounting, personal information management, web technologies, and speech recognition.
6. Demonstrate keyboarding and data-entry speed and accuracy using industry accepted standards.

Required Courses

- BOT* 164: Office Accounting 3 Credits or
- ACC* 115: Financial Accounting 4 Credits

- BOT* 230: Microsoft Office Suite Applications 3 Credits or
- CSA* 105: Introduction to Software Applications 3 Credits

- BOT* 111: Keyboarding for Info Pro I 3 Credits
- BOT* 122: Writing Procedures 3 Credits
- CST* 114: Web Essentials 3 Credits

Subtotal: 15-16

- BOT* 112: Keyboarding for Info Pro II 3 Credits or
- BOT* 137: Word Processing Applications 3 Credits

- ACC* 121: Introduction to Accounting Software 1 Credits
- BOT* 220: Computerized Communication 3 Credits
- CSA* 205: Advanced Applications 3 Credits
- BOT* 251: Administrative Procedures 3 Credits
- CSA* 135: Spreadsheet Applications 3 Credits

Subtotal: 16
Total Credits Required: 31-32

Computer Maintenance Technology Certificate

Program Design
The Computer Maintenance Technology certificate program is for students seeking specific skills in the installation, configuration and maintenance of computers and basic-to-complex computer networks. Students will acquire background and skills to enable them to understand and work with digital machines connected to networks. Students will learn to: install, configure, maintain and upgrade stand-alone computers or computers within networks; troubleshoot basic hardware and software problems on computers and within computer networks; understand the fundamentals of computer operating systems; describe and understand the basic technologies used in local and wide area networks, including logical and physical technologies as well as hardware and software associated with computer networks; and demonstrate sufficient knowledge in computer and computer networking technology to secure career placement in the field. Classroom discussion is supplemented with hands-on computer network laboratory experience and projects. The Computer Maintenance Technology certificate will also begin to prepare students for the CompTIA, Microsoft and CCNA certification exams.

Curriculum
Students may enroll in this program full- or part-time. Courses are offered during daytime and/or evening hours. Students who complete the Computer Maintenance Technology Certificate program and decide to pursue an associate in science degree may apply all of their credits towards the Computer Network Technology A.S. degree program. Students should consult with a computer science/technology faculty advisor to plan their program and schedule of classes, and to discuss required course prerequisites.

Learning Outcomes
Upon successful completion of all Computer Maintenance Technology certificate program requirements, graduates will
1. Differentiate and understand the role and function of various current and emerging technologies, including, but not limited to, computer hardware and networking.
2. Describe basic computer organization and the relationship between hardware components and the operating system.
3. Differentiate and apply the basic technologies used in local- and wide-area networks.
4. Demonstrate skills in installation, configuration, maintenance, troubleshooting and upgrade of computer operating systems at both the workstation and server levels.
5. Demonstrate competency in installing, repairing, servicing, troubleshooting and upgrading computers and peripheral equipment from the PC technician’s point of view.
6. Demonstrate proficiency in installation, maintenance, upgrade and troubleshooting of computer operating systems from the PC technician’s point of view.

Required Courses
- CST* 131: Networking Theory & Application 4 Credits
- CST* 237: SysAdmin I - Client/Server 4 Credits
- CST* 238: SysAdmin II - Client/Server 4 Credits
- CSC* 124: Programming Logic and Design with Python 3 Credits
- CST* 141: Computer Hardware 4 Credits
- CST* 201: Introduction to MIS 3 Credits

Total Credits Required: 22
Computer Network Technology Certificate

Program Design
The Computer Network Technology certificate program is for students seeking a broad and in-depth knowledge of the theory, design, installation, configuration, maintenance and administration of basic-to-complex computer networks. Students will acquire background and skills to enable them to understand and work with digital machines from microprocessors to microcomputers to mainframe systems configured in local-area network or wide-area network configurations. Students will learn to: describe and understand the various aspects of computer network operating systems and their design and implementation; describe and understand the theory involved in computer networks; describe and understand the basic technologies used in local- and wide-area networks, including logical and physical technologies as well as hardware and software associated with computer networks; demonstrate a working knowledge of computer networks by describing design and technologies used in computer networks including: transmission media, topologies, protocols, interface performance analysis, bridges, gateways, data integrity, and network security; and demonstrate sufficient knowledge in computer network theory, technology, and administration to secure career placement in the field. Classroom discussion is supplemented with “hands-on” computer network laboratory experience and projects.

The Computer Network Technology certificate will also begin to prepare students for the CompTIA, Microsoft and CCNA certification exams.

Curriculum
Students may enroll in this program full- or part-time. Courses are offered during daytime and/or evening hours. Students who complete the Computer Network Technology certificate program and decide to pursue an associate in science degree may apply all of their credits towards the Computer Network Technology A.S. degree program. Students should consult with a computer science/technology faculty advisor to plan their program and schedule of classes, and to discuss required course prerequisites.

Learning Outcomes
Upon successful completion of all Computer Network Technology certificate program requirements, graduates will
1. Differentiate and understand the role and function of various current and emerging technologies, including, but not limited to, computer hardware, networking, programming, and database and Internet technologies.
2. Describe basic computer organization and the relationship between hardware components and the operating system.
3. Describe the essential operating system components and the operating services.
4. Differentiate and apply the basic technologies used in local- and wide-area networks.
5. Demonstrate and implement advanced networking infrastructure concepts.
6. Demonstrate the use of appropriate tools to administer and troubleshoot server and client computers on a network.
7. Demonstrate skills in installation, configuration, maintenance, troubleshooting and upgrade of computer operating systems at both the workstation and server levels.
8. Demonstrate competency in installing, repairing, servicing, troubleshooting and upgrading computers and peripheral equipment from the PC technician’s point of view.

Required Courses
- CST* 131: Networking Theory & Application 4 Credits
- CST* 237: SysAdmin I - Client/Server 4 Credits
- CST* 238: SysAdmin II - Client/Server 4 Credits
- CST* 132: Networking Infrastructure 3 Credits
- CST* 277: Network Security Implementation 4 Credits
- CSC* 124: Programming Logic and Design with Python 3 Credits
- CST* 141: Computer Hardware 4 Credits
- CST* 201: Introduction to MIS 3 Credits

Total Credits Required: 29
Computer Programming Technology Certificate

Program Design
The Computer Programming Technology certificate program provides students with broad and in-depth knowledge of the theory, design and applications of digital computers and information processing technologies with a particular emphasis on programming skills. Students will acquire the background and skills to enable them to work with digital machines from microprocessors to microcomputers to mainframe systems configured in local-area network or wide-area network configurations. Students will learn: the concepts of efficient programming design, both traditional and object-oriented; to understand the role and function of computers and learn to effectively use the computer to solve complex problems; to describe and understand the various aspects of computer operating systems; to design, code, run and debug computer programs in the predominant computer industry and Internet programming languages (C++, Visual Basic, Java); to understand good database design by designing, developing forms and reports, and writing the code to prepare working databases; and to apply critical thinking and analytical skills to the computer programming solution of complex problems. Classroom discussion is supplemented with “hands-on” computer laboratory programming experience and problem-solving programming projects.

Curriculum
Students may enroll in this program full- or part-time. Courses are offered during daytime and/or evening hours. Students who complete the Computer Programming Technology certificate program and decide to pursue an associate in science degree may apply all of their credits towards the Computer Programming Technology A.S. degree program. Students should consult with a computer technology faculty advisor to plan their program and schedule of classes, and to discuss required course prerequisites.

Learning Outcomes
Upon successful completion of all Computer Programming Technology certificate program requirements, graduates will
1. Demonstrate the ability to understand a problem and develop logically structured solutions through the use of flowcharts, pseudo-code and C++ code.
2. Differentiate and understand the role and function of various current and emerging technologies, including, but not limited to, computer hardware, networking, programming, database and Internet technologies.
3. Describe basic computer organization and the relationship between hardware components and the operating system.
4. Identify and apply the major concepts and language requirements to design, code, execute and debug programs in the required programming languages.
5. Demonstrate an understanding of proper database design. Apply System Development Life Cycle concepts to plan, design, develop and implement a database.

Required Courses

- CSC* 124: Programming Logic and Design with Python 3 Credits
- CSC* 125: Programming Logic and Design with C++ 3 Credits
- CSC* 215: Object-Oriented Programming with C++ 4 Credits
- CSC* 241: Data Structures and Algorithms 4 Credits
- CSC* 217: Object-Oriented Programming with C# 3 Credits
- CSC* 230: Database Concepts with Web Application 3 Credits
- CST* 201: Introduction to MIS 3 Credits

Total Credits Required: 23
Computer-Aided Design (CAD) Certificate

Program Design
The Computer-Aided Design (CAD) certificate program provides students with career-based training in mechanical design using computer-aided drafting/design technology. To provide the necessary technical education base, the program also includes education and training in applied technical mathematics, engineering drawing, and geometric dimensioning and tolerancing skills. Basic training in computer technology is included to prepare students for the two-dimensional, three-dimensional and solid-modeling computer-aided design technology in the program. CAD technology in the core of the certificate program is AutoCAD integrated with Pro/ENGINEER solid-modeling and rendering technology, both predominant technology leaders in CAD/solid-modeling.

All technical manufacturing and engineering design in today’s high-technology business and industry uses computer-based, computer-aided design technologies that integrate the design, engineering and manufacturing design analysis—and manufacturing of complex products and product parts, sub-assemblies, and assemblies—into a single, technically coherent process.

Curriculum
Students may enroll in this program full- or part-time. Courses are offered during daytime and/or evening hours. Students who complete the Computer-Aided Design (CAD) certificate program and decide to pursue an associate in science degree may apply all of their credits towards the Industrial Technology A.S. degree program or the Connecticut College of Technology Technological Studies A.S. degree pathways program, both of which are articulated technology programs within Central Connecticut State University’s School of Engineering and Technology. Students should consult with an engineering/technology faculty advisor to plan their program and schedule of classes, and to discuss required course prerequisites.

Learning Outcomes
Upon successful completion of all Computer-Aided Design certificate program requirements, graduates will
1. Interpret complex engineering drawings including geometric dimensioning and tolerancing.
2. Perform competently in solving technical manufacturing and engineering mathematics problems.
3. Exhibit competency in two-dimensional, three-dimensional and solid-modeling skills as applied to complex computer-aided design technology.
4. Demonstrate an understanding of the role and function of computers and effectively use the computer to solve complex technical problems.

Required Courses
- EGR* 112: Engineering Drawing Interpretations 3 Credits
- MFG* 239: Geometric Dimension and Tolerancing 3 Credits
- CAD* 110: Introduction to CAD 3 Credits
- CAD* 218: CAD 3d Mechanical (AutoCAD) 3 Credits
- MFG* 205: Principles of CNC with Mastercam 3 Credits or
- CAD* 220: Parametric Design (Solidworks) 3 Credits

Total Credits Required: 15
Criminal Justice Certificate - Corrections

Program Design
The program helps prepare students for entry into the State of Connecticut’s Department of Correction as a Correctional Trainee.

Learning Outcomes
Upon successful completion of all Corrections certificate program requirements, graduates will
1. Explain the history and development of the system of corrections in America and around the world.
2. Explain contemporary correctional issues, including but not limited: prisoner rights, overcrowding, prison construction, gangs and “families” hierarchy, early release programs/recidivism, cost of correctional programs/buildings, and changing the emphasis of corrections from punishment/security to rehabilitation/treatment.
3. Explore the sociological/economic effects of privatization in our correctional institutions.
4. Identify and explore the problems and concerns of managing staff and inmates in a modern day correctional institution on both the federal and state levels.

Required Courses
- COM* 173: Public Speaking 3 Credits
- CJS* 102: Introduction to Corrections 3 Credits
- ENG* 101: Composition 3 Credits
- CJS* 240: Correctional Administration 3 Credits
- CJS* 293: CJ Cooperative Education/Work Experience 3 Credits or
- CJS* 289: Careers in Criminal Justice 3 Credits
- Any CJS* course 1-3 credits

Total Credits Required: 16-18
Criminal Justice Certificate - Criminal Justice

Program Design
This certificate offers those employed, or desiring to be employed, in law enforcement a way to improve career opportunities and placement through academic study.

Learning Outcomes
Upon successful completion of all Criminal Justice certificate program requirements, graduates will

1. Demonstrate a general understanding and appreciation of the role of the criminal justice system at local, state, and federal levels.
2. Demonstrate knowledge of appropriate ethics and the capability to critically and reflectively engage ethical issues in criminal justice, particularly questions of social responsibility and professional decision-making.
3. Demonstrate knowledge of the theories and principles of judicial, correctional, and legal methods of law enforcement.

Required Courses

- CJS* 101: Introduction to Criminal Justice 3 Credits
- CJS* 211: Criminal Law I 3 Credits
- CJS* 220: Criminal Investigation 3 Credits

- POL* 111: American Government 3 Credits or
- POL* 112: State and Local Government 3 Credits

- SOC* 101: Principles of Sociology 3 Credits or
- PSY* 111: General Psychology I 3 Credits

**Subtotal: 15**

- CJS* 105: Introduction to Law Enforcement 3 Credits
- CJS* 120: Police and the Community 3 Credits
- CJS* 213: Evidence & Courtroom Procedure 3 Credits
- POL* 212: Constitutional Law and Civil Rights 3 Credits

- SOC* 240: Criminology 3 Credits or
- SOC* 241: Juvenile Delinquency 3 Credits or
- SOC* 242: Sociology of Deviance 3 Credits or
  Cross-listed courses (choose one)
- PSY* 217: Psychology of Criminal Behavior 3 Credits
- CJS* 272: Social Psychology of Criminal Behavior 3 Credits

**Subtotal: 15**

Total Credits Required: 30
Criminal Justice Certificate - Forensic Science

Program Design
The Forensic Science certificate program is designed for students who want to obtain knowledge in the area of forensics for their work in criminal investigation. The certificate is recommended for students who are already working in the field of criminal investigation, those who would like to specialize in this area, or those who have a particular interest in the field of study.

Learning Outcomes
Upon successful completion of all Forensic Science certificate program requirements, graduates will
1. Define forensic science and describe its importance in criminal investigation.
2. Define physical evidence and how it is used to provide investigative leads.
3. Describe the various approaches to different types of crime scenes.
4. Define specialized fields of forensic sciences.
5. Collect evidence at crime scenes, including photographic evidence.
6. Examine forensic evidence including fingerprints and firearms evidence.
7. Reconstruct shooting-related cases and measure bullet trajectories.
8. Interpret blood stain patterns at crime scenes.

Required Courses

- CJS* 225: Forensic Science I 3 Credits
- CJS* 226: Forensic Science II 3 Credits
- CJS* 220: Criminal Investigation 3 Credits
- CJS* 213: Evidence & Courtroom Procedure 3 Credits
- PSY* 217: Psychology of Criminal Behavior 3 Credits
- POL* 111: American Government 3 Credits or
- POL* 112: State and Local Government 3 Credits
- CHE* 111: Concepts of Chemistry 4 Credits or
- BIO* 115: Human Biology 4 Credits
- Elective Criminal Justice 3 Credits
- CJS* 227: Forensic Photography 3 Credits

Total Credits Required: 28
Criminal Justice Certificate - Homeland Security

Program Design
The Homeland Security certificate program offers students an in-depth understanding of the issues and concerns surrounding homeland security and emergency management. This certificate also provides students with practical solutions in the management of natural and man-made threats and emergency events. Upon completion of the certificate, students will be better equipped to lead their agency, department, organization, company and community in the preparedness, response, recovery and mitigation of both natural and man-made disasters.

The Homeland Security certificate is Manchester Community College's answer to the growing need of trained professionals in the area. It provides the learner with the up-to-date technical and theoretical training required to fulfill the increasing demands of emergency providers.

Learning Outcomes
Upon completion of the all Homeland Security certificate program requirements, students will be able to:
1. Demonstrate an understanding of the nature and extent of the terrorist threat to the United States, including the motives and methods of various foreign and domestic terrorist organizations.
2. Analyze and study the historical and political efforts of terrorist cell groups.
3. Gain knowledge and understanding of the proactive and reactive responses to a variety of scenarios by law enforcement, judicial agencies, intelligence organizations and the military.
4. Study and analyze historical, ideological, and cultural differences among a variety of foreign and domestic terrorist groups.
5. Understand the legal and ethical challenges presented by efforts to control various terrorist threats through border control, surveillance, detention, interrogation and disciplinary actions.
6. Demonstrate an understanding of the challenges presented to the various domestic agencies charged with maintaining the security of the homeland and responding to natural disasters.
7. Demonstrate an understanding of organizational design, management and inter-agency coordination and cooperation at the local, state and national level in response to natural and man-made disasters.
8. Develop an understanding of response incidents through academic and pragmatic scenarios.

Required Courses
- CJS* 101: Introduction to Criminal Justice 3 Credits
- CJS* 106: Introduction to Homeland Security 3 Credits
- PHL* 111: Ethics 3 Credits
- CJS* 160: Introduction to Emergency Management 3 Credits
- CJS* 220: Criminal Investigation 3 Credits
- CJS* 133: Police Response to Tactical/Hostile Situations 1 Credits

Total Credits Required: 16
Culinary Arts Certificate - Culinary Arts

Program Design
The Culinary Arts certificate program is designed for both full- and part-time students pursuing a career in commercial food preparation. Academic credits from this program may be transferred to MCC’s associate degree programs in Culinary Arts, Foodservice Management or Hotel-Tourism Management. Students have also earned advanced placement status in the Culinary Arts program at Johnson & Wales University and at the New England Culinary Institute.

Classroom, laboratory and volume food experience are combined in one of the largest and most comprehensively equipped foodservice laboratory facilities in Connecticut, including two commercial production kitchens and three dining rooms. Students participate in a 300-hour externship in a cooperative education environment that combines classroom theory with practical on-the-job training.

Students are required to purchase their own official kitchen and table service uniforms as well as culinary tools and cutlery.

Graduates from this program may apply to the American Culinary Federation (ACF) to become a Certified Cook, a nationally recognized certification.

Note: Students seeking certification from the American Culinary Federation should take HSP* 225: Advanced Pastry Arts III (3 credits).

Learning Outcomes
Upon successful completion of all Culinary Arts certificate program requirements, graduates will
1. Analyze theory and techniques of food preparation and presentation.
2. Analyze theory and techniques of baking and pastry arts.
3. Prepare menus, incorporating costs, acquisition and inventory controls.
4. Summarize basic principles and concepts of the hospitality industry.
5. Create and cater events.
6. Prepare basic foods in quantity, including various regional foods.
7. Prepare ethnic cuisine in quantity.
8. Evaluate the establishment and maintenance of a safe and sanitary foodservice operation including Hazard Analysis Critical Control Point and State of Connecticut law.
9. Set-up and operate the 'front of the house.'
10. Summarize managerial techniques and human resource management practice.
11. Demonstrate appropriate problem-solving techniques in addressing management problems.

Required Courses

- HSP* 135: Service Management 3 Credits
- HSP* 101: Principles of Food Preparation 3 Credits
- HSP* 112: Advanced Food Preparation 4 Credits
- HSP* 109: Sanitation Certification 1 Credits
- HSP* 103: Principles of Baking I 3 Credits
  **Subtotal: 13**

- HSP* 296: Cooperative Education/Work Experience 3 Credits
  **Subtotal: 3**

- BIO* 111: Introduction to Nutrition 3 Credits
- HSP* 210: Buffet Catering 4 Credits
- HSP* 215: Principles of Baking II 3 Credits
- HSP* 201: International Foods 4 Credits
  **Subtotal: 14**
Culinary Arts Certificate - Food Store

Program Design
The Food Store certificate program gives students the opportunity to begin to formalize the training they receive in supermarkets. In addition, it provides them with additional education and skills in the areas of food preparation, sanitation, customer service and management. Students who obtain the Food Store certificate are able to pursue additional education in Foodservice Management or a business field. Graduates also have advantage when competing for management positions and training within supermarket corporations.

Learning Outcomes
Upon successful completion of all Food Store certificate program requirements, graduates will
1. Describe the history, development and classifications of the modern food store industry.
2. Analyze the food store operations with regards to its segments and divisions, including meat management, produce management, deli operations, bakery operations and grocery management.
3. Evaluate issues and trends within the food store industry.
4. Analyze the role of service within the food store industry.
5. Evaluate general marketing and merchandising strategies.
6. Analyze the role of management in food store operations.

Required Courses

- HSP* 101: Principles of Food Preparation 3 Credits
- HSP* 112: Advanced Food Preparation 4 Credits or
- HSP* 233: Hospitality Human Resource Management 3 Credits
- HSP* 109: Sanitation Certification 1 Credits
- HSP* 115: Food Store Systems 3 Credits
- HSP* 238: Relationship Marketing 3 Credits
- HSP* 296: Cooperative Education/Work Experience 3 Credits

Total Credits Required: 16-17
Culinary Arts Certificate - Professional Baker

Program Design
The Professional Baker certificate program is designed to further education and training for those already in the field, as well as accommodate people entering careers in the Culinary Arts. Course work in both the Professional Baker and Professional Cook certificate programs transfer to the Culinary Arts certificate program, enabling the student to become an American Culinary Federation (ACF) Certified Cook.

Learning Outcomes
Upon successful completion of all Professional Baker certificate program requirements, graduates will
1. Analyze theory and techniques of baking and pastry arts.
2. Evaluate the establishment and maintenance of a safe and sanitary foodservice operation including Hazard Analysis and Critical Control Point and State of Connecticut law.
3. Decorate layer cakes with molded and sculpted decorations.
4. Transfer acquired knowledge to the world of work.

Required Courses

- HSP* 109: Sanitation Certification 1 Credits
- HSP* 107: Icing Artistry I 3 Credits
- HSP* 103: Principles of Baking I 3 Credits
- HSP* 215: Principles of Baking II 3 Credits

Subtotal: 12

- HSP* 296: Cooperative Education/Work Experience 3 Credits
- HSP* 216: Artisan Bread 3 Credits
- HSP* 225: Principles of Baking III 3 Credits
- HSP* 207: Icing Artistry II 3 Credits

Subtotal: 12

Total Credits: 22
Dental Assistant Certificate

Program Design

The objective of the Dental Assistant Certificate Program is to provide students with the knowledge and skills to obtain employment as a dental assistant in private dental practices or specialty practices or public health clinics. Graduates will be prepared to assist during procedures, expose dental radiographs, perform laboratory procedures and perform front office duties.

Scholastic Preparation and Admission Process

The Dental Assistant program relies on a selective admission process which uses specific admissions criteria. These criteria are available through the Mathematics, Science and Health Careers division office. In order to be eligible for this program, the following prerequisites must be met: successful completion of ENG* 101 and MAT* 109 or higher, and attendance at a Dental Assistant information session held at the college. The admission criteria require that the students are eligible for the equivalent of BIO* 115, PSY* 111, and COM* 173. Interested candidates will be expected to have a history of academic success. Admission to the Dental Assistant program requires a separate application. Complete information on specific criteria for acceptance and the admission process is available from the Mathematics, Science and Health Careers division office at 860-512-2704.

Accreditation

This is a new program that will seek accreditation through the Commission on Dental Accreditation of the American Dental Association.

Curriculum

The program begins each September and includes two semesters of preclinical study and laboratory work. Courses include the study of dental anatomy, radiography, infection control, chairside assisting, materials, oral health promotion, and practice management. In addition, students are required to obtain 300 hours of clinical training at area dental offices and clinics on a part-time basis during the second semester, and a full-time basis during the summer session until the requirement is met.

Due to standards set by the Joint Commission on Accreditation of Healthcare Organizations (JCAHO), students are advised that the healthcare facilities to which they are assigned for clinical rotations may require that they submit to a criminal background check before beginning their clinical experiences. Manchester Community College cannot be responsible for finding an alternate clinical placement for a student who fails to pass the background check. Students are advised to meet with the Dental Assistant Program Director to discuss degree completion requirements.

The program will prepare students for the Radiation Health and Safety and the Infection Control components of the Dental Assisting National Board (DANB) examinations. It is a requirement that all dental assistants exposing radiographs in the state of Connecticut possess radiation health and safety certification through DANB.

A physical examination and current immunizations are required of all students prior to beginning clinical rotations. Students are responsible for parking fees; uniforms; clinical supplies and miscellaneous expenses.

Learning Outcomes

Upon successful completion of all Dental Assistant Certificate Program requirements, graduates will:

- Demonstrate acquired knowledge and skills necessary to obtain an entry level position as a dental assistant.
- Demonstrate professionalism and effective communication.
- Be prepared for the Radiation Health and Safety component of the Dental Assisting National Board Examination to become qualified to take dental x-rays in the state of Connecticut.
• Be prepared for the Infection Control Examination component of the Dental Assisting National Board Examination.
• Demonstrate acquired knowledge and skills as a chairside dental assist. Upon meeting the eligibility requirements of the Dental Assisting National Board Examination, be prepared for the chairside component of the Dental Assisting National Board Examination.
• Upon successful completion of all three components of the Dental Assisting National Board Examination, earn the national distinction of Certified Dental Assistant (CDA).
• Be introduced to the employment opportunities available in the field of dental assisting.

Required Courses

• BIO* 115: Human Biology 4 Credits
• PSY* 111: General Psychology I 3 Credits
• COM* 173: Public Speaking 3 Credits
  Subtotal: 10
• DAS* 131: Oral Anatomy and Pathophysiology 3 Credits
• DAS* 136: Infection Control in Dentistry 1 Credits
• DAS* 133: Dental Radiography I 4 Credits
• DAS* 135: Dental Practice Management 2 Credits
  Subtotal: 10
• DAS* 123: Chairside Dental Assisting 4 Credits
• DAS* 132: Dental Materials 4 Credits
• DAS* 143: Dental Radiography II 4 Credits
• DAS* 134: Oral Health Promotion 1 Credits
• DAS* 200: Dental Assistant Clinical Practicum I 1 Credits
  Subtotal: 14
• DAS* 201: Dental Assistant Practicum II 2 Credits
  Subtotal: 2

Total Credits Required: 36
Disability Specialist Certificate

Program Philosophy
People with disabilities are an integral part of the community and should receive necessary community-based supports. This certificate program provides a concentration in on-the-job training in direct service situations, as well as specialized courses that relate to developmental disabilities.

Learning Outcomes
With the addition of experience in the field of disability and upon successful completion of all Disability Specialist certificate program requirements, graduates will
1. Define and discuss basic definitions, causes, psychological characteristics and educational approaches relevant to children with disabilities.
2. Discuss how children and adults with disabilities have unique abilities rather than limitations.
3. Compare various learning theories and their application to children and adults with disabilities.
4. Demonstrate an understanding of ethical standards including confidentiality.
5. Define ethical standards in the disability field and demonstrate confidentiality in written and oral assignments.

Required Courses

- HSE* 101: Introduction to Human Services 3 Credits
- HSE* 210: Group & Interpersonal Relations 3 Credits
- PSY* 111: General Psychology I 3 Credits
- PSY* 163: Children with Disabilities 3 Credits
- PSY* 183: Learning Process and Disabilities 3 Credits

Subtotal: 15

- HSE* 251: Work with Individuals and Families 3 Credits
- HSE* 241: Human Services Agencies and Organizations 3 Credits
- HSE* 294: Disability Specialist Seminar 1 Credits
- PSY* 164: Assistive Technology for Students with Disabilities (K-12) 1 Credits
- PSY* 173: Adults with Disabilities 3 Credits
- PSY* 174: Assistive Technology for Adults in the Workplace, Home and Community. 1 Credits
- PSY* 193: Issues/Trends in Disabilities 3 Credits

Subtotal: 15

Total Credits Required: 30
Early Childhood Education Child Development Associate Certificate

Program Design
The Child Development Associate (CDA) credential training program is a two-semester, 12-credit program for child care teachers who want to enhance their professional skills and learn more about the development of young children. The program emphasizes practical information that can be used in working with young children. Students learn how to observe children and plan developmentally appropriate activities and to design safe, healthy learning environments. They learn to work effectively with families, and to support and encourage children’s social, emotional, physical and intellectual development.

Curriculum
Students must meet the following eligibility requirements to enroll in the CDA certificate program: they must be 18 years of age, hold a high school diploma or its equivalent, be currently employed or regularly volunteer in a state-licensed child care program, meet state immunization requirements and successfully complete an interview with the CDA program coordinator.

Learning Outcomes
Upon successful completion of all Child Development Associate certificate program requirements, graduates will
1. Support young children in early childhood programs using skills in observation, documentation, assessment and application.
2. Plan, implement, and evaluate developmentally appropriate lesson/activity plans that foster children’s social, emotional, physical and intellectual development and involve families.
3. Demonstrate effective teaching strategies in an early childhood program, based upon child development theory and family involvement principles, which include setting up the learning environment; letting children practice skills and ideas; interacting positively with children, colleagues, and families; and modeling behavior we want children to emulate.
4. Evaluate the quality of an early childhood program through curriculum activities, routines, and teacher and child engagement; the learning environment; teacher/child interaction; and family involvement.

Required Courses

- ECE* 222: Methods and Techniques in Early Childhood Education 3 Credits
- ECE* 103: Creative Experiences/Children 3 Credits
- ECE* 290: Student Teaching I 3 Credits
- ECE* 291: Student Teaching II 3 Credits

Total Credits Required: 12
Electronic Health Records Specialist Certificate

Program Design
According to the Bureau of Labor Statistics, employment of medical records and health information technicians is expected to increase by 21 percent from 2010 to 2020, faster than the average for all occupations. This growth is a direct result of the Health Information Technology for Economic and Clinical Health (HITECH) Act of 2009 which was passed to promote and expand the adoption of health information technology. Subsequently, the extensive use of electronic health records by all types of healthcare providers will lead to an increased need for technicians to organize and manage the associated information in all areas of the healthcare industry. Upon completion of this certificate, graduates can elect to take a national credentialing exam to become a Certified Electronic Health Record Specialist (CEHRS) via the National Healthcareer Association (NHA).

A Career as an EHR Specialist
An entry-level Electronic Health Records Specialist works in the medical office, clinic, or information services/medical records division(s) of a hospital. The primary role of this employee is to maintain, collect, analyze and secure health information.
Graduates are trained to apply for job positions such as:
Health Information Technician
Medical Records Technician
Medical Records Clerk
HIM Associate
Release of Information Coordinator
Data Quality Specialist
Data Integrity Specialist

Curriculum
This hands-on certificate utilizes a computer lab for 15 out of 21 credits. Students will demonstrate proficiency via:
Hands-On Labs
Software Simulations
Integrated Projects

Learning Outcomes
Graduates of this program will:
- Demonstrate advanced keyboarding speed and accuracy using industry accepted methods
- Demonstrate competency in the use of standard medical office equipment including bar code and scanning devices
- Use the common features and functions of specialized EHR applications
- Review electronic health records for timeliness, completeness, accuracy, and appropriateness of health data
- Protect health information for confidentiality, authorized release of information, and data security
- Demonstrate professionalism and positive work habits necessary for success in today's medical office

Required Courses
- BOT* 111: Keyboarding for Info Pro I 3 Credits
- BOT* 112: Keyboarding for Info Pro II 3 Credits
- BOT* 180: Medical Terminology 3 Credits
- BOT* 181: Medical Coding I 3 Credits
- BOT* 282: Medical Administrative Procedures 3 Credits
- BOT* 288: Medical Practice Management Software Applications 3 Credits
- BOT* 291: Electronic Health Records 3 Credits
Total Credits Required: 21

Electronic Publishing Certificate

Program Design
The Electronic Publishing certificate program develops students’ competency in computer-assisted design and production of brochures, fliers, newsletters and related materials. Students will attain the skills needed to perform electronic publishing duties in a variety of business and public relations settings. This program is ideal for those who work in public relations and advertising communications and wish to achieve computer fluency. Electronic publishing students will take six credit hours on the Apple Macintosh, using programs such as InDesign to complete sophisticated projects. Students who wish to enter the program should have an interest in communications and/or graphics. Keyboard competency is necessary.

Curriculum
The certificate program can be completed in two or more semesters by enrolling full- or part-time.

Learning Outcomes
Upon successful completion of all Electronic Publishing certificate program requirements, graduates will
1. Develop, write and design brochures, newsletters and related print material.
2. Demonstrate the writing conventions associated with technical reports and other institutional publications.
3. Write articles in an acceptable journalistic style.
4. Understand the principles of graphic design and apply design techniques to a variety of documents.
5. Effectively use the Macintosh computer and design-related software.

Required Courses

- COM* 222: Reporting and Writing News Stories. 3 Credits
- COM* 213: Electronic Publishing 3 Credits or
- DGA* 111: Introduction to Computer Graphics 3 Credits
- DGA* 212: Advanced Computer Graphics 3 Credits
- ENG* 101: Composition 3 Credits
- ENG* 202: Technical Writing 3 Credits
- GRA* 151: Graphic Design I 3 Credits

Total Credits Required: 18
Entrepreneurship/Small Business Certificate

Program Design
This program will provide students the technical skills associated with becoming an entrepreneur, and/or a small business owner. This program will give students the option of gaining more concentrated knowledge in this discipline. The student will be able to pursue a career or apply courses to an associate in science degree. This certificate will prepare the student with the tools necessary to develop and start their own business. If one is considering opening their own business, regardless of their program of study, this certificate will help them get started.

This certificate is available to students wishing to take their courses completely online. Courses are scheduled so that the certificate may be completed in less than eight months, provided that students are able to take courses in the summer and winter intercessions.

Curriculum
The courses within this certificate are available both as on-ground and online courses.

Learning Outcomes
Upon successful completion of all Entrepreneurship/Small Business certificate program requirements, graduates will
1. Apply accounting concepts and critical thinking skills to produce accurate financial statements.
2. Apply basic principles of the legal system to the operations of American business using analytical and critical thinking skills and describe the role of fiduciary duties and ethical and social responsibilities from the perspective of decision-makers and stakeholders using principles of tort law, criminal law and government regulation.
3. Understand marketing methods and institutions, including analysis and interrelationship of the marketing mix with consumer behavior, technology, and an ever-changing business climate and marketing environment.
4. Demonstrate proficiencies in reading, writing, listening, and presentation and analytical skills.
5. Work with others, including culturally and intellectually diverse people; think critically; and gain an appreciation for life-long learning.
6. Demonstrate an understanding of the interrelationships between business courses.
7. Understand the classification of what determines a small business and recognize the vital role small business plays in our economy.
8. Determine the differences between starting a business, buying an existing business and opening a franchise.
9. Apply decision-making skills by exploring opportunity analysis and developing a potential business opportunity.
10. Identify and properly utilize competitive advantages within existing small businesses;
11. Demonstrate an understanding how a small business owner properly prepares for and manages growth.

Required Courses
- ACC* 115: Financial Accounting 4 Credits
- BMK* 201: Principles of Marketing 3 Credits
- BES* 218: Entrepreneurship 3 Credits
- BES* 219: Management and Growth - Small Business 3 Credits
- BBG* 234: Legal Environment of Business 3 Credits
- Choose one:
  - CST* 201: Introduction to MIS 3 Credits
  - BMK* 220: Sales 3 Credits
  - ACC* 125: Accounting Computer Applications I 3 Credits

Total Credits Required: 19
Fitness Specialist Certificate

Program Design
Fitness specialists typically work for organizations such as universities, health clubs, professional gymnasiums, resorts, country clubs and hospitals. They work with individuals and groups to help improve clients’ fitness levels. Before designing an exercise program, fitness specialists assess the physical condition of the participants. They lead warm-up and cool-down activities as well as full conditioning programs for their clients. A fitness specialist also motivates and educates clients in health and fitness. In addition to exercise duties, a fitness specialist also performs administrative work, which may include leading tours of fitness facilities, registering new members, monitoring the front desk, writing articles or supervising exercise rooms.

Curriculum
Fitness Specialist courses are offered in the regular semester and in an 8 week accelerated format. All of the credits in the certificate program can be used to fulfill requirements for the Associate Degree in Health and Exercise Science for students who wish to pursue advanced study. Students should consult with an advisor to discuss course requirements and prerequisites.

Learning Outcomes
Upon successful completion of all Fitness Specialist certificate requirements, graduates will
1. Acquire the knowledge and skills necessary to obtain an entry level position as a fitness or wellness specialist.
2. Demonstrate professional appearance, conduct and effective communication skills.
3. Be eligible and prepared to pass a national examination in order to qualify as a Certified Personal Trainer.
4. Be knowledgeable about the employment opportunities available in the fitness field.

Required Courses

- HPE* 210: Sports Nutrition 3 Credits
- HLT* 151: Health and Wellness Promotion 3 Credits
- HPE* 102: Human Performance and Fitness 3 Credits
- HPE* 240: Principles of Fitness 3 Credits
- HPE* 242: Introduction to Athletic Training 3 Credits
- HPE* 116: Weight Training 1 Credits
- HPE* 211: Fitness Specialist Certification 1 Credits

Total Credits Required: 17
Gerontology Certificate

Program Design
The Gerontology certificate program is designed for persons who seek short-term academic and in-service professional development, and for those with experience working with senior citizens or who have an academic degree in a related area. Students working toward a certificate in gerontology should consult with an advisor or counselor before planning the total program.

Curriculum
Students may enroll in the certificate program full- or part-time.

Learning Outcomes
Upon successful completion of all Gerontology certificate program requirements, graduates will
1. Comprehend the physiological, psychological and socio-economic factors relating to the aging process.
2. Demonstrate the ability to comprehend the needs of an elderly person and identify sources of assistance to meet those needs.
3. Demonstrate the ability to identify the need for advocacy for the elderly and sources of assistance.
4. Identify factors necessary for successful aging.
5. Demonstrate interpersonal and communication skills necessary to work in a health care or community-based setting serving an elderly population.

Required Courses

- HSE* 101: Introduction to Human Services 3 Credits
- HSE* 251: Work with Individuals and Families 3 Credits
- PSY* 210: Death and Dying 3 Credits
- GERN 161: Aging America: Issues and Dilemmas 3 Credits
- SSC* 294: Cooperative Education/Work Experience 3 Credits
- PSY* 111: General Psychology I 3 Credits
- RLS* 223: Leisure and Aging 3 Credits
- HLT* 151: Health and Wellness Promotion 3 Credits
- SOC* 101: Principles of Sociology 3 Credits
- PSY* 125: Psychology of Aging and Mental Health 3 Credits

Total Credits Required: 30
Health Career Pathways Certificate

Program Design
This program is designed to assist the student to achieve success in health care programs. Students will be provided with the foundation necessary for health care professions. Credits from this program may be applied toward health care programs requirements within Connecticut’s community college system. However, completion of this program does not guarantee an automatic acceptance into any health care program. Students are responsible for verifying specific requirements of their program of interest.

Curriculum
Students may enroll in the program on a full- or part-time basis.

Learning Outcomes
Upon successful completion of all Health Career Pathways program requirements, graduates will
1. Demonstrate competence in written and oral communication.
2. Demonstrate critical thinking, logical reasoning and problem-solving skills.
3. Effectively use and interpret medical terminology.
4. Identify a variety of career opportunities and roles available in health care professions.
5. Meet most requirements for entrance into health care programs.
6. Demonstrate an understanding of the impact of psychological principles and how they relate to the health care field.
7. Use and apply scientific methods.

Required Courses
- HLT* 103: Investigations in Health Careers 3 Credits
- ENG* 101: Composition 3 Credits
- MAT* 138: Intermediate Algebra: A Modeling Approach 3 Credits
- BIO* 115: Human Biology 4 Credits or
- BIO* 121: General Biology I 4 Credits
- CHE* 111: Concepts of Chemistry 4 Credits
- PSY* 111: General Psychology I 3 Credits
- BIO* 211: Anatomy and Physiology I 4 Credits
- BIO* 212: Anatomy and Physiology II 4 Credits

Total Credits Required: 28

Note:

Participating colleges have prerequisites for above courses. Please consult the catalog at the community college you are attending for prerequisites and eligibility for the courses.
Hotel-Tourism Certificate

Program Design
Students will be exposed to a broad range of subjects covering the inter-related areas of the tourism industry, both by means of theoretical and practical work within the college, and by internships in recognized hotels, restaurants or related institutions, as an integral part of the program. The objective is to train students to a level of all-around competence in the varied operations of the hospitality industry by confronting students with the contemporary issues and challenges that face the industry and by developing their abilities to initiate and manage change and to produce a solid foundation on which a future management career may be built. Graduates will be prepared to embark upon their careers with confidence, armed with the knowledge, the basic experience and the interpersonal skills that will allow them to succeed in the hotel-tourism industry.

Learning Outcomes
Upon successful completion of all Hotel-Tourism certificate program requirements, graduates will
1. Analyze theory and techniques of food preparation and presentation.
2. Prepare menus incorporating costs, acquisition and inventory controls.
3. Evaluate the establishment and maintenance of a safe and sanitary food service operation including Hazard Analysis and Critical Control Point (HACCP) and State of Connecticut law.
5. Demonstrate creativity and sound thinking in solving management problems.
6. Apply knowledge of computers to the hospitality industry.
7. Differentiate styles of marketing, sales analysis and planning for the hospitality industry.
8. Demonstrate the practical approach to the various aspects of food and beverage cost control and purchasing.
9. Outline the legal responsibilities and rights of guests and employees.
10. Interpret hospitality sales practices and market analysis from sales to actual activity.
11. Apply office procedures and forms necessary to room guests and control cash.
12. Apply techniques that enhance customer satisfaction and build loyalty.

Required Courses
- HSP* 101: Principles of Food Preparation 3 Credits
- ENG* 101: Composition 3 Credits
- HSP* 233: Hospitality Human Resource Management 3 Credits
- HSP* 237: Hospitality Marketing 3 Credits
- HSP* 211: Food and Beverage Cost Control 3 Credits

Subtotal: 15

- HSP* 238: Relationship Marketing 3 Credits
- HSP* 242: Hotel Management 3 Credits
- GEO* 204: Geography and Tourism Development 3 Credits
- HSP* 108: Sanitation and Safety 3 Credits
- HSP* 296: Cooperative Education/Work Experience 3 Credits

Subtotal: 15

Total Credits: 30

Division of Social Science and Hospitality: 860-512-2750

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Lean Manufacturing Certificate

Program Design
The Lean Manufacturing certificate program provides a detailed understanding of Lean practices in the industrial workplace for those planning on entering the workforce or for those looking to re-tool themselves in Lean principles. These principles seek to continuously improve all processes and reduce all unnecessary steps in any industrial or business operation making that operation as lean or efficient as possible. The curriculum was developed by leading experts in the field and combines both principles and theory with implementation in the workplace.

Learning Outcomes
Upon successful completion of all Lean Manufacturing certificate program requirements, graduates will
1. Apply appropriate mathematical and scientific principles to engineering and technology applications.
2. Demonstrate proficiency in technical fundamentals to analyze and resolve technology problems.
3. Apply knowledge and skills to develop, interpret and select appropriate technological and business processes using Lean principles.

Required Courses
- MFG* 171: Introduction to Lean Manufacturing 3 Credits
- MFG* 271: Advanced Lean Manufacturing 3 Credits

Total Credits Required: 6
Marketing Certificate

Program Design
The Marketing certificate program is designed for students who are interested in a career change or who already have a degree and are looking for a career specialty.

Curriculum
Students may enroll full- or part-time. Since some courses are not offered in both the fall and spring semesters, see an advisor about your schedule. Note: All business courses numbered 100 or higher require students to be eligible for ENG* 101 except BBG* 101, which requires students to be eligible for ENG* 093.

Learning Outcomes
Upon successful completion of all Marketing certificate program requirements, graduates will
1. Demonstrate relevant content knowledge in required core business disciplines (accounting, business law, management and organizational behavior, and marketing) and apply concepts in problem solving through identifying and evaluating alternative solutions and offering a well-supported conclusion.
2. Recognize proper business acumen and decorum in professional interactions, demonstrate appropriate interpersonal communication and presentation skills and demeanor, and demonstrate the ability to use presentation and team interpersonal skills effectively in class presentations.
3. Demonstrate the ability to identify situations that present ethical dilemmas and lapses and understand and apply the concepts related to ethics and the social responsibilities of businesses in order to respond thoughtfully.
4. Apply concepts in core accounting and business disciplines and demonstrate critical thinking skills to make sound business decisions.
5. Demonstrate an understanding of the interrelationships between accounting and business courses.
6. Demonstrate the ability to effectively present marketing and promotion plans and to make an effective sales presentation, all of which reflect an understanding of the target audience, environmental factors, and sound strategic decisions based on thorough research and an understanding of marketing and other business-related principles.

Required Courses
- BMG* 202: Principles of Management 3 Credits
- BMK* 201: Principles of Marketing 3 Credits
- BMK* 220: Sales 3 Credits
- BMG* 204: Managerial Communication 3 Credits
- ECN* 102: Principles of Microeconomics 3 Credits or
- MAT* 165: Elementary Statistics with Computer Applications 4 Credits
- PSY* 111: General Psychology I 3 Credits or
- ANT* 101: Introduction to Anthropology 3 Credits or
- SOC* 101: Principles of Sociology 3 Credits

Choose two electives from the list below 6-8 Credits

Total Credits Required: 24-27

Select one of the following elective courses:
- BMK* 241: Principles of Advertising 3 Credits or
- BMK* 245: Integrated Marketing Communications 3 Credits or
- COM* 201: Introduction to Public Relations 3 Credits

Select remaining elective from the following:
- BES* 218: Entrepreneurship 3 Credits
- BFN* 202: Corporate Finance 4 Credits
- CST* 201: Introduction to MIS 3 Credits
- DGA* 111: Introduction to Computer Graphics 3 Credits
- DGA* 240: Web Page Design 3 Credits
- ECN* 101: Principles of Macroeconomics 3 Credits (If not already taken)
- ECN* 102: Principles of Microeconomics 3 Credits (If not already taken)
• MAT* 165: Elementary Statistics with Computer Applications 4 Credits (If not already taken)

**Media Technology Certificate**

**Program Design**
The Media Technology certificate program provides an intensive exposure to a range of current communication technologies. It is intended for students who are technically-oriented and wish to work in technical positions in the fields of radio, television, photography, desktop publishing and cable television. It concentrates on skills that are necessary for working behind-the-scenes in media and communications. Classes are highly practical and provide significant hands-on opportunity, allowing the student to apply classroom theory to real-life projects. In developing this certificate program, extensive effort was made to provide skills that are currently in high demand in the Connecticut labor market.

**Curriculum**
The program can be completed in two semesters of rigorous, full-time study, but will take longer for the student attending part-time.

**Learning Outcomes**
Upon successful completion of all Media Technology certificate program requirements, graduates will
1. Write copy for radio and television.
2. Effectively use the Macintosh computer and design-related software.
3. Understand and apply the basic principles of graphic arts and design techniques.
4. Operate still and video cameras and edit videotape.
5. Conduct interviews for newspaper stories and television programs.
6. Write scripts for radio and television programs.

**Required Courses**

• COM* 177: Broadcast Performance 3 Credits or
• COM* 240: Broadcast/TV Production 4 Credits
• COM* 108: Contemporary Issues in Media 3 Credits
• COM* 213: Electronic Publishing 3 Credits
• COM* 242: Advanced Broadcast/TV Production 4 Credits
• COM* 295: Internship I 3 Credits
• COM* 247: Television Writing 3 Credits
  Cross-listed courses (choose one)
• COM* 166: Video/Filmmaking 3 Credits
• ART* 185: Video/Filmmaking 3 Credits

**Total Credits Required: 22-23**

**Note:**

* Students may enroll in COM* 242 even if they have not taken COM* 241.
Paralegal Certificate

Program Design
The Paralegal certificate program is designed for students who have or will concurrently receive an educational (not vocational) associate or baccalaureate degree in a major other than paralegal or legal studies from an accredited institution. The certificate program provides them with the opportunity to enroll in a paralegal studies program that meets guidelines set by the American Bar Association. An option in the program is a cooperative education/work experience course in which students gain practical experience in a legal setting while earning academic credit. Students must submit official transcripts showing prior degrees must be sent directly to the Admissions office for review.

A paralegal or legal assistant is a person—qualified through education, training or work experience—who is employed or retained by a lawyer, law office, governmental agency or other entity. The paralegal performs specifically-delegated, substantive legal work, for which a lawyer is responsible. Paralegals may not provide legal services directly to the public except as permitted by law. Paralegals may be asked to conduct research and prepare memoranda; to draft pleadings, deeds or contracts; to interview clients or witnesses; to prepare answers to interrogatories; or to digest depositions. They may prepare inventories, accounts and tax returns in connection with estates and trusts; perform real estate title searches and UCC searches; calendar and track important deadlines; or organize and maintain client files. Paralegals may not give legal advice or engage in the unauthorized practice of law.

The MCC Paralegal Certificate program has been approved by the American Bar Association since 1998. It is a member of the American Association for Paralegal Education. The MCC Paralegal Association is a student club that offers networking opportunities and guest speakers to members.

Curriculum
The Paralegal program is primarily an evening program of study, offering legal courses during the academic year. Many students work full-time while attending classes at night. Students should note that not all courses are offered every semester, and only some courses are offered in the day. Part-time students should see a counselor for suggested course sequencing.
Note: Course prerequisites are listed in the course descriptions.

Learning Outcomes
Upon successful completion of all Paralegal certificate requirements, graduates will be able to:
1. Recognize and describe the proper role of the paralegal in the delivery of legal services to the public and apply the ethical rules that govern the conduct of the legal profession.
2. Demonstrate critical thinking, reasoning and analytical skills; conduct factual and legal research using print and computerized methods; and organize and present information effectively, both orally and in writing.
3. Describe the organization of the American legal system, apply procedural law to litigation and administrative agency law, and demonstrate substantive knowledge of principles of law.
4. Draft and interpret legal documents, including pleadings, deeds, mortgages, probate documents, court forms, business documents, and contracts for review by the supervising attorney.
5. Perform file and case management tasks in accordance with office policy and court procedures, using problem-solving, organizational and computer skills.
6. Recognize opportunities for professional development through continuing education and affiliation with professional organizations.
Required Courses

- BBG* 231: Business Law I or
- BBG* 234: Legal Environment of Business 3 Credits
- POL* 120: Introduction to Law 3 Credits
- LGL* 103: Legal Ethics and Professional Responsibility 1 Credits
- LGL* 220: Computer Applications in Law 4 Credits
- LGL* 209: Probate Practice 3 Credits

Subtotal: 14

- LGL* 102: Legal Research and Writing 3 Credits
- LGL* 104: Real Estate Practice 3 Credits
- LGL* 211: Business Organization 3 Credits
- LGL* 208: Litigation 3 Credits
- Legal Elective (Choose one from list)‡‡ 3 Credits

Subtotal: 15

Total Credits Required: 29

Note:

‡ Students without a strong foundation in computer skills should take CSA* 105 prior to enrolling in LGL* 220.
‡‡ Legal Electives
- LGL* 210: Family Law 3 Credits
- LGL* 212: Commercial Law 3 Credits
- LGL* 215: Environmental Law 3 Credits
- LGL* 216: Administrative Law 3 Credits
- LGL* 240: Legal Studies Capstone Course 3 Credits
- LGL* 270: Cooperative Education/Work Experience 3 Credits
Polysomnography Certificate

Program Design
The objective of the Polysomnography Certificate program is to provide students with the knowledge and skills to obtain employment as a Polysomnography Technician in sleep labs associated with medical practices and hospitals. Graduates will be prepared to assist the doctor in performing sleep test and in the interpretation of the data obtained during testing. The program will prepare students for the national examination offered by the Board of Registered Polysomnographic Technologists.

Scholastic Preparation and Admission Process
The Polysomnography Certificate program relies on a selective admission process, which uses specific admissions criteria. These criteria are available through the Mathematics, Science and Health Careers division office. The admission criteria require that the students are eligible for the equivalent of BIO* 115, MAT* 109, and ENG* 101. Interested candidates will be expected to have a history of academic success. Admission to the Polysomnography Certificate program requires a separate application. Complete information on specific criteria for acceptance and the admission process is available from the Mathematics, Science and Health Careers division office at 860-512-2704.

Accreditation
The program is currently seeking accreditation as a new program.

Curriculum
The program begins each September and continues through two semesters. In each semester of the program, students will train at the hospitals in conjunction with classes held at the college. All hospital training is supervised by trained clinical instructors. Due to standards set by the Joint Commission on Accreditation of Healthcare Organizations (JCAHO), students are advised that the healthcare facilities to which they are assigned for clinical rotations may require that they submit to a criminal background check before beginning their clinical experiences. Manchester Community College cannot be responsible for finding an alternate clinical placement for a student who fails to pass the background check. Students are advised to meet with an MCC Counselor to discuss degree completion requirements. After graduating from the program, students will be eligible to take the entry level examination offered by the Board of Registered Polysomnographic Technologists (BRPT).

A physical examination and an immunization record are required of all students prior to beginning clinical rotations. Students are responsible for hospital parking fees; uniforms; clinical supplies, e.g. stethoscopes; assessment examination and miscellaneous expenses. Note that clinical rotations for the program take place during the overnight hours.

Learning Outcomes
Upon successful completion of all Polysomnography Certificate Program requirements, graduates will
1. Perform the tasks and skills necessary to fulfill the role of an entry level polysomnographic technician, using equipment basic to the profession.
2. Identify pathology and etiology of sleep disorders and the relationship of oxygenation and ventilation.
3. Interpret and use information (medical records, acquisition and analysis system information) to draw reasonable conclusions and provide safe therapy.
4. Model the skills necessary to work in a multicultural world as a medical professional.
5. Meet the educational requirements for professional certification and registration eligibility.

Required Courses
- BIO* 115: Human Biology 4 Credits
- PSG* 101: Polysomnography I 2 Credits
- PSG* 102: Polysomnography Lab I 1 Credits
- PSG* 150: Polysomnography Clinical I 2 Credits
- BOT* 101: Basic Keyboarding 1 Credits
- BOT* 180: Medical Terminology 3 Credits
  Subtotal: 13
- RSP* 121: Cardiopulmonary Anatomy & Physiology 3 Credits
- PSG* 201: Polysomnography II 2 Credits
- PSG* 202: Polysomnography Lab II 1 Credits
- PSG* 250: Polysomnography Clinical II 2 Credits
- COM* 173: Public Speaking 3 Credits
  Subtotal: 11

Total Credits Required: 24
Public Relations Certificate

Program Design
The certificate program in Public Relations, bridging the disciplines of communications and business, is designed to appeal to several populations: new students considering a degree program in communications, employees in other areas of communications seeking retraining, and students with associate or bachelor's degrees seeking rapid certification in the skills necessary for entry-level positions in public relations. The program is designed for maximum flexibility. Students who are already proficient in specific areas of communication or technology will be able to fill in the voids in their training by customizing their courses to their individual needs. Similarly, students seeking a broad range of training in all areas relevant to public relations—including marketing, written and oral communications, videography, desktop publishing and graphics—will achieve a generalist’s knowledge.

Transfer Opportunities
Most courses in the certificate program would be transferable to an associate or baccalaureate degree program and all are transferable to the Communication degree program.

Learning Outcomes
Upon successful completion of all Public Relations certificate program requirements, graduates will
1. Design, implement and evaluate a marketing/PR campaign.
2. Write for internal and external publications with an understanding of the needs of the target audiences.
3. Apply basic graphic design principles to newsletters, brochures, reports and related PR projects.
4. Establish media contacts.
5. Serve as an effective spokesperson for an organization or business.
6. Apply ethical principles to decision making and crisis management.
7. Understand the role of the public relations practitioner within the context of mass communication.
8. Understand the effects of print and broadcast media on the practice of public relations.

Required Courses

- Business elective — Choose one course
  - BMK* 201: Principles of Marketing 3 Credits or
  - BMG* 202: Principles of Management 3 Credits or
  - BMG* 210: Organizational Behavior 3 Credits

- COM* 166: Video/Filmmaking 3 Credits
- COM* 201: Introduction to Public Relations 3 Credits
- COM* 173: Public Speaking 3 Credits
- COM* 295: Internship I 3 Credits
- COM* 222: Reporting and Writing News Stories. 3 Credits
- COM* 213: Electronic Publishing 3 Credits
- GRA* 151: Graphic Design I 3 Credits
- COM* 108: Contemporary Issues in Media 3 Credits

- English composition elective — Choose one course
  - ENG* 101: Composition 3 Credits or
  - ENG* 200: Advanced Composition 3 Credits or
  - ENG* 202: Technical Writing 3 Credits

Total Credits Required: 30

Note:
Because many courses in this program are offered on an occasional basis, students should meet with an academic advisor or faculty advisor to plan their program of study.

**Social Service Certificate**

**Program Design**
The Social Service certificate program is designed for students seeking short-term academic and in-service professional development, and for those with extensive social service experience or an academic degree.

**Learning Outcomes**

1. Become familiar with the past, present and future of human services.
2. Become prepared to facilitate groups.
3. Be able to communicate orally and in writing in a manner appropriate to the profession of human services.
4. Be prepared to service recipient populations in the profession.

**Required Courses**

- HSE* 101: Introduction to Human Services 3 Credits
- HSE* 251: Work with Individuals and Families 3 Credits
- HSE* 210: Group & Interpersonal Relations 3 Credits
- HSE* 241: Human Services Agencies and Organizations 3 Credits
- Choose any three courses 9 Credits
- Choose any two ANT*, ECN*, GEO*, HIS*, POL*, PSY*, SOC* or SSC* courses 6 Credits
- HSE* 281: Human Services Field Work I 3 Credits or
- SSC* 294: Cooperative Education/Work Experience 3 Credits

**Total Credits Required:** 30

**Note:**

* Students are to meet with the program coordinator before selecting a field placement site.

** Students are encouraged to meet with the program coordinator before choosing electives.
Speech-Language Pathology Assistant Certificate

Program Design
The Speech-Language Pathology Assistant (SLPA) certificate program is designed to prepare graduates for careers working in elementary and secondary schools with children who have communication disorders. SLPAs work under the direct supervision of a licensed, certified Speech-Language Pathologist. The SLPA Certificate provides students with a specialized career path as a paraprofessional.

The array of courses offered in this certificate program will help to ensure learner success in the program and will meet local and state workforce demands in a field where there is a great need for qualified staff at the assistant level.

This program is designed for individuals who currently hold an associate or baccalaureate degree from an accredited institution and who wish to become Speech-Language Pathology Assistants.

The SLPA certificate program is guided by the program philosophy and mission statement of the Disability Specialist Program. Students will receive specific skill instruction to prepare them to become effective SLPAs coupled with a positive value base that will prepare them to assist individuals with disabilities toward the goals of community inclusion and participation and the attainment of their potential.

A student applying for graduation from the Speech-Language Pathology certificate program must provide proof that s/he has received an educational associate or baccalaureate degree from an accredited institution.

Curriculum
The SLPA certificate program is a career program. SLPA certificate program students will complete specialty courses including a supervised internship. Students may select a full-or part-time plan of study.

Learning Outcomes
Upon successful completion of all Speech-Language Pathology Assistant certificate program requirements, graduates will
1. Describe the process of communication and the characteristics of effective communication.
2. Identify the differences between communication disorders and communication differences.
3. Describe the stages of language and literacy development and distinguish among language delays, language disorders and culturally-based language differences.
4. Explain and differentiate among the characteristics, etiologies, and impact of phonology, voice, fluency and language disorders.
5. Explain the effect of hearing loss on the development of communication skills.
6. Describe the role of the Speech-Language Pathology Assistant in supporting therapy plans for students in educational settings.

Required Courses

- SLP* 111: Communication Development 3 Credits
- PSY* 163: Children with Disabilities 3 Credits
- SLP* 112: Speech and Language Services in the Educational Setting 3 Credits
- SLP* 120: Communication Disorders and Intervention I 3 Credits
- SLP* 121: Communication Disorders and Intervention II 3 Credits
- PSY* 183: Learning Process and Disabilities 3 Credits
- ECE* 231: Early Language and Literacy Development 3 Credits
- PSY* 193: Issues/Trends in Disabilities 3 Credits
- SSC* 294: Cooperative Education/Work Experience 3 Credits
- PSY* 164: Assistive Technology for Students with Disabilities (K-12) 1 Credits
- PSY* 174: Assistive Technology for Adults in the Workplace, Home and Community. 1 Credits
- HSE* 294: Disability Specialist Seminar 1 Credits

Total Credits Required: 30
Technology Management Certificate

Program Design
The Technology Management certificate is designed for students who wish to prepare for a future career managing a technology operation, in either an engineering, manufacturing or information technology environment. Course work provides students with the fundamental knowledge of how management decisions are made and carried out. This certificate would provide an excellent foundational knowledge for those considering a graduate degree in business administration in the future.
Two electives course is provided such that students can customize a particular specialization area.

Curriculum
This certificate program can be completed in two or more semesters by enrolling either full or part-time.

Learning Outcomes
Upon successful completion of all Technology Management certificate program requirements, graduates will
1. Apply appropriate mathematical and scientific principles to engineering and technology applications.
2. Demonstrate proficiency in technical fundamentals to analyze and resolve technology problems.
3. Apply knowledge and skills to develop, interpret and select appropriate technological and business processes using lean principles.

Required Courses

- ACC* 115: Financial Accounting 4 Credits
- BMG* 202: Principles of Management 3 Credits
- CST* 205: Project Management 4 Credits
- Elective business/technical 3 Credits
- Elective business/technical 3 Credits

Total Credits: 17

Note:

‡ Business/Technical Elective (choose two)
- BMG* 210: Organizational Behavior 3 Credits
- CSC* 230: Database Concepts with Web Application 3 Credits
- CST* 201: Introduction to MIS 3 Credits
- MFG* 111: Manufacturing Materials and Process I 3 Credits
- MFG* 171: Introduction to Lean Manufacturing 3 Credits
- MFG* 172: Introduction to Lean Supply Chain Management 3 Credits
- MFG* 230: Statistical Process Control 3 Credits
Therapeutic Recreation Certificate

Program Design
The Therapeutic Recreation certificate program is designed for persons who seek academic and in-service professional development in the field of therapeutic recreation. This program enables the student to meet standards established in the Public Health Code of the State of Connecticut to work in chronic and convalescent nursing homes and other facilities with nursing supervision. Therapeutic recreation is a specialized allied health field within the recreation profession. Associated with leisure aspects of medical treatment, therapeutic recreation attempts to physically and socially rehabilitate patients who have chronic physical, psychological and social disabilities. It involves recreation services that give the patient an opportunity to participate in recreational, leisure and group activities specifically designed to aid in the recovery or adjustment to illness, disability or a specific social problem.

Curriculum
Students may enroll in this certificate program full- or part-time and attend classes days or evenings.

Learning Outcomes
Upon successful completion of all Therapeutic Recreation certificate program requirements, graduates will
1. Meet the state health code requirements to hold the position of a therapeutic recreation director in the State of Connecticut.
2. Demonstrate the ability to comprehend and apply the necessary skills required of a therapeutic recreation director.
3. Demonstrate the ability to comprehend the needs of individuals with special needs and the positive outcomes of therapeutic recreation intervention.
4. Demonstrate the ability to successfully assess, plan, implement and evaluate therapeutic recreation programs for individuals with special needs both in a clinical and community setting.
5. Have developed leadership, interpersonal and communication skills necessary to work in a health care or community-based setting.

Required Courses

- Elective Gerontology 3 Credits
- Elective Gen Ed - Mode 1 or
- HLT* 151: Health and Wellness Promotion 3 Credits
- ENG* 101: Composition 3 Credits
- PSY* 111: General Psychology 1 3 Credits
- SSC* 294: Cooperative Education/Work Experience 3 Credits
- RLS* 101: Introduction to Recreation and Leisure Services 3 Credits
- RLS* 121: Introduction to Therapeutic Recreation Services 3 Credits
- RLS* 122: Processes and Techniques in Therapeutic Recreation 3 Credits
- RLS* 221: Therapeutic Recreation Programming 3 Credits
- RLS* 223: Leisure and Aging 3 Credits

Total Credits Required: 30
Web Technology Certificate

Program Design
The Web Technology certificate program prepares students with the programming techniques for web application development and the critical skills needed to conceive, build and maintain sophisticated web sites. Students will be provided with a comprehensive look at the administration of web content and its complexities. This certificate program also serves individuals in the current high-tech industry the opportunity to upgrade their skills in the web area for possible advancement or new career opportunities.

Curriculum
Students may enroll in this program full or part-time. Students should consult with an Information Management & Office Technology faculty advisor to plan their program and discuss required course prerequisites. Courses are offered in both on-line and on-ground formats.

Learning Outcomes
Upon successful completion of all Web Technology certificate program requirements, graduates will
1. Use the core technologies of current markup languages such as HTML5 and CSS3 for web development and design.
2. Write code effectively and build easily navigable sites.
3. Demonstrate competency in programming languages commonly used in developing and servicing Internet web sites, both client-side and server-side.
4. Demonstrate an understanding of proper database design and its application over a distributed network.
5. Demonstrate proficiency in developing complex web sites incorporating database driven technologies.
6. Understand the role of project management, and how to set and manage client expectations, support client interaction activities, and track progress throughout the project lifecycle.

Required Courses

- CST* 150: Web Design & Development I 3 Credits
- CST* 250: Web Design and Development II 3 Credits
- CSC* 230: Database Concepts with Web Application 3 Credits ‡
- CST* 258: Internet Programming 4 Credits ‡
- CST* 205: Project Management 4 Credits

Total Credits Required: 17

Note:
‡ A prerequisite of CSC*124, CSC*125, EGR*230 or other programming experience is required for these courses.
Accounting

ACC* 098: Introduction to Accounting
0 Credits
(Formerly ACCT 098)
This course is designed to introduce students to accounting theory. Emphasis in the course includes the accounting cycle, bank checking accounts and payroll.
Prerequisites: None
Offered: Occasionally

ACC* 115: Financial Accounting
4 Credits
(Formerly ACCT 101)
Theory and practice of accounting applicable to the accumulation, external reporting, and external uses of financial accounting information.
Prerequisites: Eligible for ENG* 101 and MAT* 095 or higher
Offered: Fall, Spring, Summer

ACC* 117: Principles of Managerial Accounting
3 Credits
Basic concepts and practice of accounting’s role in providing information to managers to assist in their planning, control and decision-making activities. Topics include cost accounting, cost behavior relationships, analyses for managerial decisions and the budget process.
Prerequisites: Eligible for ENG* 101 and MAT* 095 or higher, and completion of ACC* 115 with a ‘C-’ or higher
Offered: Fall, Spring

ACC* 118: Managerial Accounting
4 Credits
(Formerly ACCT 102)
Basic concepts and practice of accounting’s role in providing information to managers to assist in their planning, control and decision-making activities. Topics include cost accounting, cost behavior relationships, analyses for managerial decisions and the budget process.
Prerequisites: Eligible for ENG* 101 and MAT* 095 or higher, and C- or better in ACC* 115
Offered: Fall, Spring, Summer

ACC* 121: Introduction to Accounting Software
1 Credits
(Formerly ACCT 110)
Includes software for a complete accounting cycle and is available to students via the BOT lab using automated accounting software such as QuickBooks.
Prerequisites: C- or better in BOT* 164 or ACC* 115
Offered: Fall, Spring

ACC* 125: Accounting Computer Applications I
3 Credits
(Formerly ACCT 105)
This course teaches students to build a company’s accounting system in QuickBooks. Students will learn to download QuickBooks data into an Excel spreadsheet and build linked statements, footnotes and graphs. Students will also learn PowerPoint and TurboTax.
Prerequisites: Eligible for ENG* 101 and MAT* 095 or higher, and completion of ACC* 115
Offered: Fall, Spring

ACC* 231: Cost Accounting I
3 Credits
(Formerly ACCT 213)
This course covers principles of cost accounting for manufacturing and business.
Prerequisites: Eligible for ENG* 101 and MAT* 095 or higher, and C or better in ACC* 118
Offered: Spring

ACC* 241: Federal Taxes I
3 Credits
(Formerly ACCT 223)
Theories and laws of individual income tax returns will be taught.
Prerequisites: Eligible for ENG* 101 and MAT* 095 or higher, and C or better in ACC* 115
Offered: Fall

ACC* 242: Federal Taxes II
3 Credits
(Formerly ACCT 224)
Corporation, partnership, estate and trust taxation, including tax administration and practice, will be taught.
Prerequisites: Eligible for ENG* 101 and MAT* 095 or higher, and C or better in ACC* 241
Offered: Occasionally

ACC* 243: Tax Planning I
3 Credits
(Formerly ACCT 226)
This course focuses on the provisions of current tax laws and the business and investment decisions they affect.
Prerequisites: ACC* 241 or BFP* 210 or permission of instructor
Offered: Occasionally

ACC* 244: Tax Planning II
3 Credits
(Formerly ACCT 227)
This course focuses on tax problems and sets out the multiple alternatives that must be analyzed.
Prerequisites: Eligible for ENG* 101 and MAT* 095 or higher, and ACC* 243
Offered: Occasionally

ACC* 251: Fund Accounting
3 Credits
This course is designed to provide the accounting student a foundation for working in non-profit organizations. This foundation includes federal, state and local governmental fund accounting principles. In addition, this course will include accounting for schools, hospitals and fund-raising organizations. Students may take this course as a substitute for cost accounting or may wish to take this course to add to their accounting skills and to broaden their job opportunities in these accounting fields.
Prerequisites: Eligible for ENG* 101 and MAT* 095 or higher, and C- or better in ACC* 118 and ACC* 125
Offered: Occasionally
ANT* 105: Introduction to Cultural Anthropology.
3 Credits
(Formerly ANTH 150)
This course is designed to provide students with an anthropological lens through which they may simultaneously view humanity’s kinship with one another and its uniqueness among cultures. The aim is to understand people whose ways of life are different from our own but with whom we share common needs, planet Earth and a common destiny.
Prerequisites: Eligibility for ENG* 101
Offered: Fall, Spring
Fulfills General Education - Knowledge of Social Science

Art

ART* 101: Art History I: Prehistory to the Renaissance
3 Credits
(Formerly FA 101)
The history and appreciation of fine arts painting, sculpture, architecture, etc. from prehistoric through medieval eras. Outside reading and visits to galleries and museums are required.
Prerequisites: Eligibility for ENG* 101
Offered: Fall
Fulfills General Education - Knowledge of The Arts
ART* 102: Art History II: Renaissance to the Modern Era
3 Credits
(formerly FA 102)
The history and appreciation of fine arts painting, sculpture, architecture, etc. from the Renaissance through the 20th century. Outside reading and visits to galleries and museums are required.
Prerequisites: Eligibility for ENG* 101
Offered: Spring
Fulfills General Education - Knowledge of The Arts

ART* 103: Art History III
3 Credits
(formerly FA 103)
Visual art movements of the past 100 years from Impressionism and Cubism to today's art. Outside reading and visits to galleries and museums are required.
Prerequisites: Eligibility for ENG* 101
Offered: Fall, Spring
Fulfills General Education - Knowledge of The Arts

ART* 104: Contemporary Art History
3 Credits
An introduction to developments in 21st-century art, with attention to the theoretical, social and historical forces that shape artistic practice. Newer artistic practices like installation, new media, and performance are studied along with traditional media. Includes field trips to area art museums.
Prerequisites: Eligibility for ENG* 101
Offered: Fall, Spring
Fulfills General Education - Knowledge of The Arts

ART* 107: Introduction to Studio Art
3 Credits
(formerly FA 115)
A course covering the fundamentals of visual art through hands-on experience. The course includes basic design and composition, color theory, drawing and a thorough exploration of the creative process through the use of a wide variety of media and techniques including drawing, water media, collage and fiber.
Prerequisites: None
Offered: Occasionally

ART* 111: Drawing I
3 Credits
(formerly FA 121)
This course covers the basic elements, media and processes of drawing including composition and perspective. Extensive drawing from still-life, landscape and the live model will emphasize development of students' manual, perceptual and conceptual skills. Studio: 6 hours per week.
Prerequisites: Eligibility for ENG* 096
Offered: Fall, Spring
Fulfills General Education - Knowledge of The Arts

ART* 112: Drawing II
3 Credits
(formerly FA 122)
This course covers the basic elements, media and processes of drawing including composition and perspective. Extensive drawing from still-life, landscape and the live model will emphasize development of students' manual, perceptual and conceptual skills. Studio: 6 hours per week.
Prerequisites: C or better in ART* 111 and eligibility for ENG* 096
Offered: Fall, Spring

ART* 113: Figure drawing I
3 Credits
(formerly FA 127)
This in-depth course is based in both anatomical and expressive approaches to human figure drawing. A variety of media will be explored, including color and wet media, along with instruction in composition, proportion and foreshortening principles. Students will work extensively from the live model. Studio: 6 hours per week.
Prerequisites: C or better in ART* 111 and eligibility for ENG* 096
Offered: Fall, Spring

ART* 114: Figure drawing II
3 Credits
(formerly FA 128)
This in-depth course is based in both anatomical and expressive approaches to human figure drawing. A variety of media will be explored, including color and wet media, along with instruction in composition, proportion and foreshortening principles. Students will work extensively from the live model. Studio: 6 hours per week.
Prerequisites: C or better in ART* 111 and eligibility for ENG* 096
Offered: Fall, Spring

ART* 121: Two-Dimensional Design
3 Credits
(formerly FA 125)
The theory and practice of design principles: compositional problems, color and the interrelationships of space, planes and volumes are examined in two dimensional projects using a variety of media. Studio: 6 hours per week.
Prerequisites: Eligibility for ENG* 096 or permission of instructor
Offered: Fall, Spring

ART* 122: Three-Dimensional Design
3 Credits
(formerly FA 126)
Investigation of spatial design as a decision-making and problem-solving process bounded by criteria such as human sensory systems, basic structural systems and materials. Class activities will include studio assignments, demonstrations, lectures, slide presentations, museum visits and critiques. Studio problems will be worked on during and outside of class time. Studio: 6 hours per week.
Prerequisites: Eligibility for ENG* 096 or permission of instructor
Offered: Fall, Spring

ART* 131: Sculpture I
3 Credits
(formerly FA 151)
A course in the principles, techniques, and materials of sculpture metal fabrication/welding, casting, plaster, wood, etc.. Students will concentrate on controlling sculptural media and examining the fundamentals of three-dimensional design. Studio: 6 hours per week.
Prerequisites: Eligibility for ENG* 096 or permission of instructor
Offered: Fall, Spring
Fulfills General Education - Knowledge of The Arts
ART* 132: Sculpture II
3 Credits
(Formerly FA 152)
A course in the principles, techniques, and materials of sculpture metal fabrication/welding, casting, plaster, wood, etc. Students will concentrate on controlling sculptural media and examining the fundamentals of three-dimensional design. Studio: 6 hours per week.
Prerequisites: Eligibility for ENG* 096 or permission of instructor
Offered: Fall, Spring

ART* 141: Photography I
3 Credits
An introduction to black and white film photography, including camera operation, creative controls, composition, film processing, printing and print finishing techniques. Emphasis is on photography as a fine art and as a means of communication. Through demonstrations, assignments, critiques, supervised and independent lab work, a final portfolio and looking at a broad range of photographic imagery, students will develop technical skills and explore the creative/expressive side of photography. Students must purchase film, photographic paper and other supplies. Projects and final portfolio require extensive hands-on darkroom work in and outside of class hours. Studio: 6 hours per week.
Prerequisites: Eligibility for ENG* 096 or permission of instructor
Offered: Fall, Spring
Fulfills General Education - Knowledge of The Arts

ART* 142: Photography II
3 Credits
Through demonstrations, assignments, critiques, supervised and independent lab work and looking at a broad range of photographic imagery, students will refine basic and develop new technical skills and further explore the creative/expressive side of black and white film photography. Students will review the fundamentals of exposure, development and print-making, refine camera-handling and printing techniques, use a medium format camera and hand-held light meter, experiment with flash, studio lighting and "toy" cameras. Students will be encouraged to develop a personal, expressive style in addition to mastering a range of practical photographic techniques while they assemble a cohesive, thematic, exhibition-quality portfolio. Students must purchase film, photographic paper and other supplies. Studio: 6 hours per week.
Prerequisites: ART* 141 with a C or better, and eligibility for ENG* 096 or permission form instructor.
Offered: Spring

ART* 151: Painting I
3 Credits
(Formerly FA 131)
A course in the technical and aesthetic fundamentals of painting, covering construction of a canvas, selection and use of materials, basic color theory, and realistic and expressive paint handling. Students will work in both traditional and experimental painting styles. Studio: 6 hours per week.
Prerequisites: C or better in ART* 111 and eligibility for ENG* 096 or permission of instructor
Offered: Fall, Spring

ART* 152: Painting II
3 Credits
(Formerly FA 132)
A course in the technical and aesthetic fundamentals of painting, covering construction of a canvas, selection and use of materials, basic color theory, and realistic and expressive paint handling. Students will work in both traditional and experimental painting styles. Studio: 6 hours per week.
Prerequisites: C or better in ART* 111 and eligibility for ENG* 096 or permission of instructor
Offered: Fall, Spring

ART* 155: Watercolor I
3 Credits
(Formerly FA 137)
An introduction to the technical and aesthetic principles of painting with water media, primarily water color. This course will cover the selection and use of water media materials in a variety of styles and deal with varied subject matter from the still life to the landscape. Design elements and compositional problems are also included. Studio: 6 hours per week.
Prerequisites: Eligibility for ENG* 096
Offered: Fall, Spring

ART* 156: Watercolor II
3 Credits
(Formerly FA 138)
An introduction to the technical and aesthetic principles of painting with water media, primarily water color. This course will cover the selection and use of water media materials in a variety of styles and deal with varied subject matter from the still life to the landscape. Design elements and compositional problems are also included. Studio: 6 hours per week.
Prerequisites: Eligibility for ENG* 096
Offered: Fall, Spring

ART* 161: Ceramics I
3 Credits
(Formerly FA 165)
Experimentation with, and development of, basic skills in a variety of hand-forming, wheel-throwing, firing and glazing techniques. The class focuses on processes involved in creating both utilitarian and sculptural works. Studio: 6 hours per week.
Prerequisites: Eligibility for ENG* 096 or permission of instructor.
Offered: Fall, Spring
Fulfills General Education - Knowledge of The Arts

ART* 162: Ceramics II
3 Credits
(Formerly FA 166)
Experimentation with, and development of, basic skills in a variety of hand-forming, wheel-throwing, firing and glazing techniques. The class focuses on processes involved in creating both utilitarian and sculptural works. Studio: 6 hours per week.
Prerequisites: Eligibility for ENG* 096 or permission of instructor.
Offered: Fall, Spring

ART* 167: Printmaking I
3 Credits
(Formerly FA 141)
A course in the materials, design and techniques of printmaking: monoprinting, intaglio, relief, planographic and serigraph. Studio: 6 hours per week.
Prerequisites: Eligibility for ENG* 096
Offered: Fall, Spring
Fulfills General Education - Knowledge of The Arts
ART* 168: Printmaking II
3 Credits
(Formerly FA 142)
A course in the materials, design and techniques of printmaking: monoprinting, intaglio, relief, planographic and serigraph. Studio: 6 hours per week.
Prerequisites: Eligibility for ENG* 096
Offered: Fall, Spring

ART* 171: Fiber Arts I
3 Credits
(Formerly FA 161)
A course in contemporary and traditional means of making art with fibers including weaving, soft sculpture, batik, tapestries, paper making and coiling. Studio: 6 hours per week.
Prerequisites: None
Offered: Occasionally

ART* 172: Fiber Arts II
3 Credits
(Formerly FA 162)
A course in contemporary and traditional means of making art with fibers including weaving, soft sculpture, batik, tapestries, paper making and coiling. Studio: 6 hours per week.
Prerequisites: None
Offered: Occasionally

ART* 182: The History of African American & African European Art: Renaissance to the 20th Century
3 Credits
This course will focus on the history of art produced from the beginning of the European slave trade in the 15th century to the 21st century, focusing on images of blacks and/or work by black artists. Topics will include the creation of power dynamics and stereotypes of blacks in the early modern era and move towards the creation of identity and expression by African European and African American artists in the modern era. All museum trips are mandatory.
Prerequisites: Eligibility for ENG* 101
Offered: Fall, Spring

ART* 185: Video/Filmmaking
3 Credits
(Formerly FA 176)
A creative workshop in which students will work in groups and make their own movies. Students work with video camcorders and editors. Students will learn scripting, shooting, editing and audio production techniques.
Prerequisites: None
Offered: Fall, Spring
Cross listed as: COM* 166

ART* 204: History of Women in the Arts
3 Credits
(Formerly FA 106)
This course will address the cultural biases that have relegated women artists to the ‘back burner’ of mainstream cultural aesthetics. A historical survey of women’s contributions to the visual and performing arts will augment, inquiry into philosophical questions such as: “Is there a ‘Feminist’ Aesthetic?” or “Who determines what is ‘great’ art?” Class: 3 hours per week.
Prerequisites: None
Offered: Occasionally

ART* 205: History of Photography
3 Credits
This course surveys the nearly 200-year history of photography from early experiments and the daguerreotype to the digital revolution and the present day. Students will learn about photography’s major practitioners, applications, movements, and the technological developments that changed the way images were made, distributed and viewed. Photography will be examined in social and cultural context, giving students a broad understanding of the medium’s impact and significance.
Prerequisites: Eligibility for ENG* 101
Offered: Fall, Spring

ART* 206: Film Study
3 Credits
(Formerly FA 171)
The viewing, discussion and analysis written and oral of representative films from the early years of the industry to the present will be taught.
Prerequisites: Eligibility for ENG* 101
Offered: Fall, Spring, Summer
Cross listed as: COM* 154
Fulfills General Education - Knowledge of The Arts

ART* 211: Drawing III
3 Credits
(Formerly FA 223)
This course covers the basic elements, media and processes of drawing including composition and perspective. Extensive drawing from still-life, landscape and the live model will emphasize development of students' manual, perceptual and conceptual skills. Studio: 6 hours per week.
Prerequisites: C or better in ART* 111 and eligibility for ENG* 096
Offered: Fall, Spring

ART* 212: Drawing IV
3 Credits
(Formerly FA 224)
This course covers the basic elements, media and processes of drawing including composition and perspective. Extensive drawing from still-life, landscape and the live model will emphasize development of students' manual, perceptual and conceptual skills. Studio: 6 hours per week.
Prerequisites: C or better in ART* 111 and eligibility for ENG* 096
Offered: Fall, Spring

ART* 213: Figure drawing III
3 Credits
(Formerly FA 227)
This in-depth course is based in both anatomical and expressive approaches to human figure drawing. A variety of media will be explored, including color and wet media, along with instruction in composition, proportion and foreshortening principles. Students will work extensively from the live model. Studio: 6 hours per week.
Prerequisites: C or better in ART* 111 and eligibility for ENG* 096
Offered: Fall, Spring
ART* 214: Figure drawing IV
3 Credits
(Formerly FA 228)
This in-depth course is based in both anatomical and expressive approaches to human figure drawing. A variety of media will be explored, including color and wet media, along with instruction in composition, proportion and foreshortening principles. Students will work extensively from the live model. Studio: 6 hours per week.
Prerequisites: C or better in ART* 111 and eligibility for ENG* 096
Offered: Fall, Spring

ART* 231: Sculpture III
3 Credits
(Formerly FA 253)
A course in the principles, techniques, and materials of sculpture metal fabrication/welding, casting, plaster, wood, etc.. Students will concentrate on controlling sculptural media and examining the fundamentals of three-dimensional design. Studio: 6 hours per week.
Prerequisites: Eligibility for ENG* 096 or permission of instructor
Offered: Fall, Spring

ART* 232: Sculpture IV
3 Credits
(Formerly FA 254)
A course in the principles, techniques, and materials of sculpture metal fabrication/welding, casting, plaster, wood, etc. Students will concentrate on controlling sculptural media and examining the fundamentals of three-dimensional design. Studio: 6 hours per week.
Prerequisites: Eligibility for ENG* 096 or permission of instructor
Offered: Fall, Spring

ART* 242: Photography III
3 Credits
Students will work independently and in small groups with film or digital cameras, in the darkroom or computer lab, on projects and portfolios. Through experimenting, practice and critique students will produce a cohesive, themed portfolio appropriate for transfer applications, exhibition or the job search. Students must purchase film, paper and other supplies. Studio: 6 hours per week.
Prerequisites: Eligibility for ENG* 096, ART* 142 or ART* 281. Note: for ART* 242, C or better in ART* 142 or ART* 281. Runs concurrently with ART* 142: Photography II Fa and ART* 281: Digital Photography II Sp.
Offered: Fall, Spring

ART* 244: Photography IV
3 Credits
Students will work independently and in small groups with film or digital cameras, in the darkroom or computer lab, on projects and portfolios. Through experimenting, practice and critique students will produce a cohesive, themed portfolio appropriate for transfer applications, exhibition or the job search. Students must purchase film, paper and other supplies. Studio: 6 hours per week
Prerequisites: Completion of ART* 242
Offered: Fall, Spring

ART* 250: Digital Photography
3 Credits
An introduction to digital photography including hardware and software, camera handling and creative controls, file formats and management, image editing, manipulation and output options using Adobe Photoshop. Through demonstrations and assignments, a survey of imagery and a final portfolio, students will be introduced to the basic vocabulary, concepts, tools and expressive possibilities of digital photography. Students must own a digital camera with manual, aperture priority and/or shutter priority exposure modes. Basic computer and photographic experience preferred. Studio: 6 hours per week.
Prerequisites: Eligibility for ENG* 096 or permission of instructor
Offered: Fall, Spring
Fulfills General Education - Knowledge of The Arts

ART* 251: Painting III
3 Credits
(Formerly FA 233)
A course in the technical and aesthetic fundamentals of painting, covering construction of a canvas, selection and use of materials, basic color theory, and realistic and expressive paint handling. Students will work in both traditional and experimental painting styles. Studio: 6 hours per week.
Prerequisites: C or better in ART* 111 and eligibility for ENG* 096 or permission of instructor
Offered: Fall, Spring

ART* 252: Painting IV
3 Credits
(Formerly FA 234)
A course in the technical and aesthetic fundamentals of painting, covering construction of a canvas, selection and use of materials, basic color theory, and realistic and expressive paint handling. Students will work in both traditional and experimental painting styles. Studio: 6 hours per week.
Prerequisites: C or better in ART* 111 and eligibility for ENG* 101 or permission of instructor
Offered: Fall, Spring

ART* 255: Watercolor III
3 Credits
(Formerly FA 237)
An introduction to the technical and aesthetic principles of painting with water media, primarily water color. This course will cover the selection and use of water media materials in a variety of styles and deal with varied subject matter from the still life to the landscape. Design elements and compositional problems are also included. Studio: 6 hours per week.
Prerequisites: Eligibility for ENG* 101
Offered: Fall, Spring

ART* 256: Watercolor IV
3 Credits
(Formerly FA 238)
An introduction to the technical and aesthetic principles of painting with water media, primarily water color. This course will cover the selection and use of water media materials in a variety of styles and deal with varied subject matter from the still life to the landscape. Design elements and compositional problems are also included. Studio: 6 hours per week.
Prerequisites: Eligibility for ENG* 101
Offered: Fall, Spring
ART* 261: Ceramics III
3 Credits
(Formerly FA 267)
Experimentation with, and development of, basic skills in a variety of hand-forming, wheel-throwing, firing and glazing techniques. The class focuses on processes involved in creating both utilitarian and sculptural works. Studio: 6 hours per week.
Prerequisites: Eligibility for ENG* 101 or permission of instructor.
Offered: Fall, Spring

ART* 262: Ceramics IV
3 Credits
(Formerly FA 268)
Experimentation with, and development of, basic skills in a variety of hand-forming, wheel-throwing, firing and glazing techniques. The class focuses on processes involved in creating both utilitarian and sculptural works. Studio: 6 hours per week.
Prerequisites: Eligibility for ENG* 101 or permission of instructor.
Offered: Fall, Spring

ART* 267: Printmaking III
3 Credits
(Formerly FA 143)
A course in the materials, design and techniques of printmaking: monoprinting, intaglio, relief, planographic and serigraph. Studio: 6 hours per week.
Prerequisites: Eligibility for ENG* 101
Offered: Fall, Spring

ART* 268: Printmaking IV
3 Credits
(Formerly FA 144)
A course in the materials, design and techniques of printmaking: monoprinting, intaglio, relief, planographic and serigraph. Studio: 6 hours per week.
Prerequisites: Eligibility for ENG* 101
Offered: Fall, Spring

ART* 281: Digital Photography II
3 Credits
Through demonstrations, assignments, critiques, supervised and independent lab work and looking at and talking about a broad range of photographic imagery, students will develop new skills and further explore the creative/expressive side of photography. Students will review the fundamentals of exposure and creative camera controls, learn a non-destructive workflow, advanced masking techniques, and how to process RAW files. Other projects will explore studio lighting, high dynamic range HDR imaging and fine art inkjet output. Students will be encouraged to develop a personal, expressive style in addition to mastering a range of practical photographic techniques while they assemble a cohesive, thematic, exhibition-quality, hard-copy portfolio. Students must own their own digital single lens reflex or prosumer digital camera with RAW capability and purchase their own storage media, inkjet paper, mat board and other supplies.
Prerequisites: ART* 250 with a C or better, eligibility for ENG* 101 or permission from Instructor
Offered: Fall

ART* 282: New Media
3 Credits
An introduction to artistic thinking in terms of the moving image. Students work towards discovering a personal way of working in video as a fine art medium. We will take into account current and historical approaches to video art and the place video occupies in the general field of Art. Half of the classes consist of viewing and critiquing previously assigned homework projects, the other half of lab sessions in the editing room. Students are expected to shoot and do most of the editing in their own time. Assignments will begin with the exploration of the self and the immediate environment and gradually expand in scope and complexity. The final project will be a personal artistic statement by the student and will be worked out on an individual basis. Students will have access to camcorders and editing facilities. NOTE: This is a fine arts class. It is not designed for those primarily interested in the commercial use of video advertisements, music videos, etc.
Studio: 6 hours per week.
Prerequisites: Eligibility for ENG* 096.
Offered: Fall, Spring

ART* 283: Photojournalism
3 Credits
An introduction to photojournalism and digital photography including hardware and software, camera handling and creative controls, file management and image editing using Adobe Photoshop. History, ethics, composition, lighting and visual communication will be investigated. Through demonstrations and assignments including assignments for the student newspaper, a survey of imagery and a final project, students will be introduced to the basic vocabulary, concepts, tools and techniques of photography and photojournalism. Students must own a digital camera with manual and/or aperture priority and shutter priority exposure modes.
Prerequisites: Basic computer experience preferred
Offered: Fall, Spring

ART* 287: Visual Fine Arts Professional Practices
3 Credits
This course is a practical guide for students who want to transfer to a baccalaureate institution or pursue a career in the Visual Fine Arts. Students will work to develop a portfolio suitable for transfer or career, write an artist’s statement, write a resume, make digital slides, and discuss the transfer application process as well as grant and exhibition possibilities. Class discussions, group critiques, guest lectures and presentations, and field trips will be part of the curriculum. This course is strongly recommended for all Visual Fine Arts majors. Enrollment is limited to VFA majors who have completed at least 30 credits.
Prerequisites: Eligibility for ENG* 101
Offered: Fall, Spring

ART* 292: Cooperative Education
3 Credits
(Formerly FA 270)
This course provides students the opportunity to apply classroom theory in an actual work setting. Students may be placed in a variety of work settings as related to their programs of study including corporations, publishing/graphic design firms and newspapers.
Prerequisites: 15 completed credit hours in Graphic Design
Offered: Fall, Spring
BIO* 105: Introduction to Biology
3 Credits
(Formerly BIO 101)
This course is a study of the fundamental principles of biology as they relate to current issues. It may be used to fulfill the general education natural and physical science requirement, and is recommended for students who do not need a full year of laboratory biology. No dissection is required. Class: 3 hours per week. Laboratory: 3 hours per week.
Prerequisites: Eligibility for ENG* 101
Offered: Fall, Spring
Fulfills General Education - Knowledge of Physical & Natural Sciences

BIO* 109: Principles of Biotechnology
3 Credits
During the semester students will be introduced to key elements in the exciting and rapidly advancing field of biotechnology. The course will provide students with a brief historical context, the basic scientific knowledge needed to understand biotechnology, a survey of current and future applications of the technology and a candid examination of the pros and cons, promises and dangers of the technology.
Prerequisites: Eligibility for ENG* 101
Offered: Occasionally

BIO* 111: Introduction to Nutrition
3 Credits
(Formerly BIO 114)
An introduction to the study of human nutrition with emphasis on the scientific bases of facts and controversies surrounding issues of foods and diets will be taught. Not open to students who have completed BIO* 112.
Prerequisites: Eligibility for ENG* 101.
Offered: Fall, Spring, Summer

BIO* 115: Human Biology
4 Credits
(Formerly BIO 112)
This course is an introduction to the structure and function of the human body. Various organ systems will be discussed with an emphasis on how they maintain homeostasis. The lab will include some dissection. Students who have passed a higher level human anatomy and physiology course will not receive credit for this course. Class: 3 hours per week. Laboratory: 3 hours per week.
Prerequisites: Eligibility for ENG* 101
Offered: Fall, Spring, Summer
Fulfills General Education - Knowledge of Physical & Natural Sciences

BIO* 120: Immunity and Human Disease
3 Credits
This course will examine diseases caused by the homeostatic imbalance of the Immune System and its effects. What happens when the system in our body designed to protect us, turns on us? What happens when this defense system is over protective or not protective enough? Diseases of the Human Body will explore the normal functions of the Immune System and some of the problems that can result when it’s not operating effectively. Diseases such as Lupus, Type II Diabetes, Rheumatoid Arthritis and HIV/AIDS will be explored.
Prerequisites: "C" or better in ENG* 101 or concurrent
Offered: Fall, Spring

BIO* 121: General Biology I
4 Credits
(Formerly BIO 101)
This course is a study of the fundamental principles of biology concerning the structure and function of cells, heredity, and biotechnology. Recommended for LAS students, especially those who will be pursuing science-related careers. No dissection is required. Students who have not had a high school biology course, or who had one more than 5 years ago, should strongly consider enrolling in BIO* 105. Class: 3 hours per week. Laboratory: 3 hours per week.
Prerequisites: ENG* 101 with a grade of "C" or better or may be taken concurrently and MAT* 095 with a grade of "C" or better.
Offered: Fall, Spring
Fulfills General Education - Knowledge of Physical & Natural Sciences
BIO* 122: General Biology II
4 Credits
(Formerly BIO 102)
This course is a study of unicellular and multicellular organisms and their evolutionary relationships. Both plants and animals are discussed. Some dissection is required. Class: 3 hours per week. Laboratory: 3 hours per week.
Prerequisites: BIO* 121 with a grade "C" or better.
Offered: Fall, Spring
Fulfills General Education - Knowledge of Physical & Natural Sciences

BIO* 153: Survey of Botany
3 Credits
This course will explore basic botanical principles by having students "learning in community." Students will learn basic botany while concurrently enrolled in a designated ART course, Botanical Drawing that teaches them to accurately and artistically portray the cells, tissues, organs and structures of various plants. Students will construct a detailed portfolio of the plants and structures studied and be assessed on botanical accuracy as well as artistic interpretation.
Prerequisites: ENG* 101
Offered: Fall, Spring

BIO* 159: Introduction to Aquaculture
3 Credits
Aquaculture, the controlled cultivation and harvest of aquatic animals and plants, is a rapidly growing industry that has the potential to reduce the significant environmental impact of global food production. This class will examine the economic, social and environmental sustainability of the aquaculture industry and provide students with scientific knowledge and technical skills essential to aquaculturists and informed consumers alike.
Prerequisites: Eligibility for ENG* 101 and completion of MAT* 095 with 'C' or better
Offered: Occasionally

BIO* 159L: Introduction to Aquaculture Lab
1 Credits
This lab course will provide hands on exposure to the physical, chemical, and biological components of aquaculture systems. Students will participate in lab activities and study hydrodynamics, water chemistry, and fish biology. This course includes field trips to research facilities and commercial aquaculture sites. The lecture based Introduction to Aquaculture BIO 159 may be taken concurrently.
Prerequisites: Concurrent enrollment in BIO* 159 or permission of instructor
Offered: Occasionally

BIO* 173: Introduction to Ecology
4 Credits
This course is a one semester introduction to ecological principles focusing on the factors that influence the distribution and abundance of organisms. This includes a survey of the interactions of organisms with each other and with the physical environment. These interactions will be studied in the context of evolutionary history and biodiversity. Population, community, and ecosystem level ecology will be examined, especially in light of man’s influence on nature. This course is designed for both environmental science majors and non-majors. Class: 3 hours per week. Laboratory: 3 hours per week.
Prerequisites: Eligibility for ENG* 101.
Offered: Fall, Spring
Fulfills General Education - Knowledge of Physical & Natural Sciences

BIO* 211: Anatomy and Physiology I
4 Credits
(Formerly BIO 152)
The anatomy and physiology of the integumentary, skeletal, muscular, and nervous systems are discussed and explored including the appropriate laboratory investigations which include some dissection. Class: 3 hours per week. Laboratory: 3 hours per week.
Prerequisites: BIO* 121, or BIO* 115, or CHE* 111, and eligibility for ENG* 101.
Offered: Fall, Spring

BIO* 212: Anatomy and Physiology II
4 Credits
(Formerly BIO 153)
The anatomy and physiology of the endocrine, digestive, respiratory, cardiovascular, lymphatic, urinary and reproductive organ systems are discussed and explored including appropriate laboratory investigations which include some dissection. Class: 3 hours per week. Laboratory: 3 hours per week.
Prerequisites: Completion of BIO* 211 with a grade of C or higher
Offered: Fall, Spring, Summer

BIO* 218: Understanding Cancer
3 Credits
Content is designed to provide the student the fundamentals of cancer biology and cancer treatment. The management of neoplastic disease will be examined and evaluated including epidemiology, etiology, prevention, detection, diagnosis, patient condition, treatment and prognosis.
Prerequisites: Eligibility for ENG* 101; and completion of BIO* 105 or BIO* 115 or BIO* 121 with a grade of "C" or better
Offered: Fall

BIO* 235: Microbiology
4 Credits
(Formerly BIO 141)
This course is designed to provide students with an introduction to microbiology. Students will learn the fundamentals of microbiology, survey the world of microbial organisms, and study the interactions between microbes, their hosts, and their effects on the environment. There will also be laboratory exercises each week that will teach the basics of handling, culturing, and identifying microbes.
Prerequisites: BIO* 105, BIO* 115, BIO* 121 or BIO* 211, and CHE* 111 or higher, and ENG* 101 with a grade of "C" or better in all Prerequisites.
Offered: Fall, Spring, Summer
BIO* 260: Principles of Genetics
3 Credits
(Formerly BIO 260)
This intermediate level course is designed to extend the understanding of college level biology students to encompass an understanding of heredity and of the hereditary material with particular attention to current theories.
Prerequisites: BIO* 121 and MAT* 095 with a grade C or better.
Offered: Fall, Spring

Business, Entrepreneurship

BES* 218: Entrepreneurship
3 Credits
(Formerly BES* 118)
This course introduces the student to the fundamentals of entrepreneurship. The students will gain the knowledge and skills necessary to research and begin a small business. Explores opportunity analysis, startup-expenses, forms of business ownership, site selection, and sources of funding. Students research and compare buying an existing business, starting a new business and franchising. Also review human resources, marketing, management, accounting and legal aspects of business.
Prerequisites: Completion of ENG* 101 with C- or better
Offered: Fall, Spring

BES* 219: Management and Growth - Small Business
3 Credits
This course builds upon the knowledge and skills needed to manage and grow a small business. It emphasizes the fundamentals of management specific to a small business owner. The course will review the financial health of the business. It will explore strategic planning and growth. Case studies will be utilized for insight into both successful and unsuccessful businesses.
Prerequisites: Completion of ENG* 101 with C- or better
Offered: Spring

Business, Finance

BFN* 111: Financial Literacy
3 Credits
This course will teach students essential decision-making skills they must apply and use to become wise and knowledgeable consumers, savers, investors, users of credit, money managers, citizens, and members of a global workforce and society. This course will use a "hands-on" instructional approach involving techniques such as problem solving, reasoning, simulation, and direct application of the included concepts to the world in which students live. The course is designed to incorporate concepts and skills from mathematics, language arts, social science, applied technology, and character education. This class may not be used for credit towards program requirements for all business and accounting majors.
Prerequisites: Eligibility for ENG* 101 or by permission of instructor
Offered: Occasionally
Fulfills General Education - Knowledge of Interdisciplinary Studies

BFN* 120: Investment Basics
1 Credits
(Formerly FNCE 150)
Introduction to the basics of money management: budgeting, saving, and investing. Students will develop an understanding of reconciling bank or brokerage statements, reading stock, bond, and mutual fund listings in The Wall Street Journal, and learning what to look for in a mutual fund prospectus and an annuity contract. Students will also be introduced to various retirement programs IRA, Keogh, 401k, 403b, etc.
Prerequisites: None
Offered: Occasionally

BFN* 201: Principles of Finance
3 Credits
A study of the principles and techniques of financial management, covering money and capital markets, financial analysis, working capital management, long term financing, time value of money, risk, leverage, and cost of capital.
Prerequisites: Eligibility for ENG* 101 and completion of ACC* 118 with a 'C' or better
Offered: Fall, Spring

BFN* 202: Corporate Finance
4 Credits
(Formerly BUS 241/FNCE 241)
A study of the principles and techniques of financial management, covering money and capital markets, financial analysis, working capital management, long term financing, time value of money, risk, leverage, and cost of capital.
Prerequisites: Eligibility for ENG* 101 and "C" or better in ACC* 118
Offered: Fall, Spring

Business, Financial Planning

BFP* 210: Fundamentals of Personal Financial Planning
4 Credits
(Formerly FNCE 210)
A survey of the financial planning process, that includes regulations affecting financial planners, construction of financial statements and analysis of client’s current financial situation, client communications, time value of money and an overview of the elements related to financial planning. In addition, principles of risk management, including the insurance contracts and different types of insurance will also be covered. Students should understand financial statements and have and know how to use a financial calculator e.g. HP 12-C prior to taking this course.
Prerequisites: Eligibility for ENG* 101
Offered: Fall

BFP* 220: Risk Management
3 Credits
(Formerly FNCE 220)
Principles of risk management; the insurance contract and concepts relating to life insurance, property and liability insurance, medical and disability insurance, and social insurance; case analysis evaluating insurance needs; and selecting appropriate risk management techniques are covered. Time value of money calculations using financial calculator.
Prerequisites: Eligibility for ENG* 101
Offered: Occasionally
Offered

**BFP* 230: Investment Management**
3 Credits
(Formerly FNCE 230)
Principles of investment management, including the study of stocks, bonds, government securities, mutual funds, futures, options, annuities and tangible assets for investment to construct and manage an investment portfolio with knowledge of risk and tax considerations are covered. Time value of money calculations using financial calculator.
**Prerequisites:** BFP* 210 or eligibility for ENG* 101
**Offered:** Occasionally

**BFP* 250: Retirement Planning and Employee Benefits**
3 Credits
(Formerly FNCE 250)
A survey of the key terms and concepts of retirement planning and analysis of employee benefit programs using time value of money calculations. Students will study both private corporate pension plans and government programs, including social security and Medicare, as well as qualified and nonqualified corporate programs.
**Prerequisites:** BFP* 210 or eligibility for ENG* 101
**Offered:** Occasionally

**BFP* 260: Estate Planning**
3 Credits
(Formerly FNCE 260)
A survey of principles of estate planning, including discussion of descent and distribution, wills, intestacy, probate and administration, Probate Court, estate and gift tax returns, and fiduciary accounting.
**Prerequisites:** BFP* 210 or eligibility for ENG* 101
**Offered:** Occasionally

**BFP* 265: Case Study and Analysis**
3 Credits
(Formerly FNCE 265)
A course covering case study and analysis and integration of the six major areas of personal financial planning. Upon completion of the course, students will be able to analyze a case and prepare an appropriate financial plan for a variety of clients.
**Prerequisites:** BFP* 210, BFP* 230, BFP* 250, BFP* 260, ACC* 243 or permission of the program administrator
**Offered:** Occasionally

**Business, General**

**BBG* 108: Business & Consumer Finance**
3 Credits
(Formerly QM 110)
A broad introduction to mathematical problems most commonly associated with business-oriented careers. Topics presented include bank reconciliation, payroll, simple and compound interest, credit cards, mortgages, depreciation and inventory. This course provides students with sufficient background to assist them as consumer decision-makers and future employees of business firms.
**Prerequisites:** Completion of or concurrent enrollment in ENG* 101.
**Offered:** Fall, Spring

**BBG* 208: Business and Strategic Planning**
3 Credits
(Formerly BUS 220)
This course will provide students with a detailed level of understanding of both Business and Strategic Plans. Upon researching and evaluating plans for small businesses, students will prepare a Business Plan, which would be used, for exploring a business opportunity or soliciting funds and a Strategic Plan to ensure the health and direction of a business.
**Prerequisites:** Eligibility for ENG* 101 and BES* 218 or permission of the instructor.
**Offered:** Occasionally

**BBG* 215: Global Business**
3 Credits
(Formerly BUS 271)
This course provides students with a foundation for conducting international business and a general understanding of international corporate and government operations. The course will undertake a comprehensive overview of international business designed to provide a global perspective on international trade including topics in: foreign investment, international marketing, the operations of multinational corporations, and government relations.
**Prerequisites:** Eligibility for ENG* 101
**Offered:** Occasionally

**BBG* 216: Business in Developing Nations**
3 Credits
(Formerly BUS 272)
This course provides students interested in developing nations or the Third World with a background for conducting business or working for the U.S. government in these nations. Focus on special regions of the world will include: Africa, Latin America, Asia, Eastern Europe and the Middle East.
**Prerequisites:** Eligibility for ENG* 101
**Offered:** Occasionally

**BBG* 234: Legal Environment of Business**
3 Credits
This course introduces the student to the structure of the American legal system and its impact on the operations of American business. Ethics and social responsibility are examined from many perspectives, including that of decision-makers and stakeholders. Major aspects of government regulation of business are explored, including product liability, securities regulation, employment and labor law, and intellectual property. The course also examines fiduciary duties and tort and criminal liability.
**Prerequisites:** Eligibility for ENG* 101
**Offered:** Fall, Spring
BBG* 236: Commercial Law
3 Credits
This course provides a framework for the legal and ethical considerations impacting many basic commercial transactions, and deals with the formation of contracts and the rights and responsibilities of contracting parties. Specific topics included are contract law and the Uniform Commercial Code, including sales, secured transactions, and negotiable instruments. Also covered are aspects of agency, partnerships, corporations, limited partnerships, limited liability companies, and bankruptcy.
Prerequisites: POL* 120 or eligibility for ENG* 101 or permission of instructor
Offered: Fall, Spring
Cross listed as: LGL* 212

BBG* 240: Business Ethics
3 Credits
(Formerly BUS 215/PHL 115)
This course will examine the full extent of the relationship between business and ethics: The philosophical foundation for capitalism will be examined as will the application of ethical values and principles to employee/employer interactions.
Prerequisites: Students are strongly urged to take PHL* 101 or the equivalent; or any 100 or 200 level English course to prepare for this course.
Offered: Occasionally
Cross listed as: PHL* 115

BBG* 260: History of American Business
3 Credits
(Formerly BUS 244/HIST 244)
The goal of the course is to provide students interested in management with an historical, philosophical and economic framework for dealing with a rapidly changing business environment.
Prerequisites: Eligibility for ENG* 093 or concurrently taking ENG* 096.
Offered: Occasionally

BBG* 295: Co-op Work Experience I
3 Credits
(Formerly BUS 270)
This course provides students the opportunity to apply classroom theory in an actual work setting. Students may be placed in a variety of work settings as related to their program of study including corporations, small businesses, financial institutions and governmental agencies.
Prerequisites: 15 completed credit hours in Business Administration, Accounting, Computer Information Systems or Marketing programs.
Offered: Fall, Spring

Business, Management

BMG* 202: Principles of Management
3 Credits
(Formerly BMG 101)
This course is an analysis of principles, techniques and the major functions planning, organizing, and leading of business enterprise management.
Prerequisites: Completion of ENG* 101 with C- or better
Offered: Fall, Spring

BMG* 204: Managerial Communication
3 Credits
(Formerly BUS 214)
This is a practical course in oral and written managerial communication skills, covering the writing of letters, memos and reports, editing techniques, and the preparation of resumes and cover letters.
Prerequisites: Completion of ENG* 101 with C- or better
Offered: Fall, Spring

BMG* 210: Organizational Behavior
3 Credits
(Formerly BUS 240)
A survey of the psychological factors that influence the individual in the work setting. Includes employee attitudes, motivation, group dynamics, decision making, leadership, assessment and training as an introduction to human resource management.
Prerequisites: Completion of ENG* 101 with C- or better
Offered: Fall, Spring

Business, Marketing

BMK* 140: Retailing
3 Credits
(Formerly BUS 252)
A study of retailing methods and institutions including analysis of their behavior in a competitive environment.
Prerequisites: Eligibility for ENG* 101
Offered: Occasionally

BMK* 201: Principles of Marketing
3 Credits
(Formerly BUS 121)
This course covers marketing methods and institutions, including analysis and interrelationship of the marketing mix. Application of basic management and marketing strategy planning methods, and performance computations related to marketing efficiency are also covered.
Prerequisites: C- or higher in ENG* 101 and in ACC* 115 or permission of instructor
Offered: Fall, Spring

BMK* 217: Electronic Commerce
4 Credits
(Formerly BUS 250)
This course will allow students to explore the major opportunities, limitations, and issues of managing business on the Web today. Students will learn what electronic commerce is, how it is being conducted and managed, and its major opportunities, limitations, issues, and risks, taking a managerial orientation and interdisciplinary approach. Real world cases are offered with each chapter to offer an in-depth analysis of topics.
Prerequisites: BES* 218, and CSA* 115 which may be taken concurrently, or permission of the instructor.
Offered: Occasionally

BMK* 220: Sales
3 Credits
(Formerly BUS 221)
This course is an introduction to the principles, methods and techniques of selling, and the application of these principles through individual sales demonstrations.
Prerequisites: Eligibility for ENG* 101
Offered: Occasionally
BMK* 241: Principles of Advertising
3 Credits
(Formally BUS 231)
This course is a study of advertising strategy, tactics and techniques, including media selection, ad preparation, market research methods, and program evaluation.
Prerequisites: BMK* 201 or permission of the instructor.
Offered: Occasionally

BMK* 245: Integrated Marketing Communications
3 Credits
Marketing promotion has changed from an emphasis on advertising, to an understanding and use of an Integrated Marketing Communications IMC perspective that reflects strategy and full use of promotional tools to reach target audiences. This course will cover all aspects of IMC, including the five promotional tools: advertising, sales promotion, public relations, direct marketing and personal selling. Students will apply concepts to situations and create an original IMC plan for a client.
Prerequisites: ENG* 101, and BMK* 201 or BMK* 220
Offered: Occasionally

BMK* 260: Relationship Marketing
3 Credits
(Formally BUS 260)
The purpose of this course is to give the student a solid foundation in customer service systems. Students will learn concepts and skills necessary to perform effectively in a customer driven service economy. This course will focus on the concepts and applications of communications, strategic planning, teamwork, coaching, and vision building, as well as an introduction to Total Quality Management. This course emphasizes the importance of development and retention of repeat customers and business buyers.
Prerequisites: Eligibility for ENG* 101.
Offered: Spring
Cross listed as: HSP* 238

Business Office Technology

BOT* 100: Computer Literacy for College Success
2 Credits
This is a basic skill-centered course tailored to the needs of the individual student. This course is designed to help prepare the student to type simple letters and reports, prepare basic PowerPoint presentations, use Blackboard Vista, access the Internet, and use email for college success. This course is not designed for BOT majors but can be taken for personal growth. Students are strongly encouraged to also register for BOT* 101 in conjunction with this course.
Prerequisites: None
Offered: Occasionally

BOT* 101: Basic Keyboarding
1 Credit
(Formally BOT 100A)
Keyboarding mastery for computer input. BOT Lab instruction.
Prerequisites: None
Offered: Fall, Spring

BOT* 111: Keyboarding for Info Pro I
3 Credits
(Formally BOT 107)
Students will learn input mastery using keyboarding and word processing software. Using a hands-on instructional approach, students will improve their keying speed and accuracy, learn to prepare standard types of business communications in both printed and electronic forms, and further develop their proofreading skills.
Prerequisites: None
Offered: Fall, Spring

BOT* 112: Keyboarding for Info Pro II
3 Credits
(Formally BOT 108)
This course is an intensive review of the keyboard emphasizing further development of speed and accuracy, proofreading techniques, and comprehensive word processing skills. Students will learn the intermediate and advanced features of Microsoft Word.
Prerequisites: C- or better in BOT* 111
Offered: Fall, Spring

BOT* 122: Writing Procedures
3 Credits
(Formally BOT 103)
Through the review and analysis of writing concepts and grammatical rules, students will gain the necessary skills to produce professional business communications. As a result of their learning, students will be able to write concise, complete, and correct usable office communications and reports.
Prerequisites: None
Offered: Fall, Spring

BOT* 137: Word Processing Applications
3 Credits
(Formally BOT 124)
Students will learn the basic skills of Microsoft Word software which can be applied to either a career setting or for one's own personal productivity.
Prerequisites: BOT* 111 or 35 words-per-minute keyboarding skill
Offered: Occasionally

BOT* 139: Grammar, Usage and Style
3 Credits
(Formally BOT 203)
This course helps students develop a command of standards and conventions of written English. It is also an advanced course designed to hone communication skills, including editing and proofreading documents.
Prerequisites: Eligibility for ENG* 101 or permission of the instructor
Offered: Spring
Cross listed as: ENG* 203

BOT* 164: Office Accounting
3 Credits
(Formally BOT 224)
Provides students with knowledge of the accounting cycle and procedures for professional offices. Students will also be prepared to handle personal financial management.
Prerequisites: None
Offered: Fall
BOT* 171: Legal Documents
3 Credits
(Formerly BOT 233)
Students will be introduced to legal terminology and become familiar with widely used legal forms and documents. BOT Lab instruction.
Prerequisites: BOT* 111 and BOT* 137 can be taken before or concurrently with this course
Offered: Fall, Spring

BOT* 180: Medical Terminology
3 Credits
(Formerly BOT 241)
Introduction and mastery of medical terminology with understanding of word building systems. Prefixes, suffixes, word roots, combining forms, special endings, plural forms, abbreviations, and symbols are included in the content. Emphasis on anatomy and physiology of body structure and functions, along with an understanding of signs and symptoms leading to diagnostic and acceptable treatment procedures. BOT Lab or online instruction.
Prerequisites: None
Offered: Fall, Spring

BOT* 181: Medical Coding I
3 Credits
(Formerly BOT 140)
This course is an in-depth study of Current Procedural Terminology CPT-4 and an introductory study of International Classification of Disease, Clinical Modification ICD-9-CM. Procedures, services, diagnoses, signs, and symptoms will be studied and coded by students using the most to date industry resources. The flow of medical records from physician's office to hospital discharge will be tracked for insurance, risk management and case study purposes. Students will use correct medical coding information in the preparation of medical and insurance records for reimbursement.
Prerequisites: BOT* 180
Offered: Fall, Spring

BOT* 182: Medical Coding II
3 Credits
(Formerly BOT 141)
This course is a continuation of International Classification of Disease, Clinical Modification ICD-9-CM with introduction and overview of ICD-10 changes and Current Procedural Terminology CPT-4 coding. Students will utilize medical records and case histories to code the diagnoses and procedures according to the level of care received in the appropriate medical facilities.
Prerequisites: BOT* 181
Offered: Fall, Spring

BOT* 220: Computerized Communication
3 Credits
This hands-on course will prepare the office support professional to use personal information management applications, such as Microsoft Outlook, and modern office communication tools including presentation/voice recognition software and web conferencing. Some selected topics include how to create and manage email, plan and schedule meetings, appointments and events, and manage contacts and tasks. Students will also explore emerging software to provide techniques for maintaining productivity. Basic keyboarding ability recommended.
Prerequisites: BOT* 111 or permission of instructor
Offered: Fall, Spring

BOT* 230: Microsoft Office Suite Applications
3 Credits
(Formerly BOT 130)
This course provides students with further advancement and enhancement of their office skills using the Microsoft Office Suite. Fundamentals of Microsoft Word, Excel, PowerPoint, and Access will prepare students for tasks performed by administrative personnel in today's office environment.
Prerequisites: BOT* 111 or permission of instructor
Offered: Occasionally

BOT* 251: Administrative Procedures
3 Credits
(Formerly BOT 222)
Application of previously acquired office skills to the tasks and responsibilities encountered by the administrative professional in today's business office. Topics include: professional image, human relations, job attitude, time management, decision making, technology and records management. Office projects relevant to students' programs will also be included.
Prerequisites: BOT* 171
Offered: Fall, Spring

BOT* 270: Legal Terminology and Transcription
3 Credits
(Formerly BOT 234)
This course is a continuation of BOT* 171 including a review of legal terminology and includes machine transcription of legal materials in the preparation of legal documents. BOT Lab instruction.
Prerequisites: BOT* 171
Offered: Fall, Spring

BOT* 280: Medical Transcription and Document Production
3 Credits
(Formerly BOT 210)
This course teaches the fundamentals of machine transcription and the development of medical reports, patient records, histories/physicals, and correspondence using appropriate reference sources. Keyboarding skills, grammar, punctuation, spelling, capitalization, and proofreading are covered. BOT Lab instruction.
Prerequisites: BOT* 111, BOT* 180; Must be eligible for ENG* 101
Offered: Fall, Spring

BOT* 282: Medical Administrative Procedures
3 Credits
(Formerly BOT 222)
This course prepares medical administrative professionals with relevant/real-world medical administrative procedures and medical office simulations to prepare them for hands-on coordination of the administrative function in the medical office. Topics include medical ethics laws and compliance, medical practice financials, introduction and overview of insurance practices with exposure to clinical and diagnoses coding importance, management of health record information, effective office verbal and written communications, and preparation for employment.
Prerequisites: Completion of BOT* 111 and BOT* 180
Offered: Spring
BOT* 286: Medical Machine Transcription  
3 Credits  
(Formerly BOT 211)  
Students will further develop of medical machine transcription skills demonstrating the ability to effectively incorporate English usage, medical terminology, and the ability to proofread and edit medical documentation. Students will meet progressively demanding medical transcription accuracy and productivity standards. BOT Lab instruction.  
Prerequisites: BOT* 280  
Offered: Fall, Spring

BOT* 287: Foundations/Management Medical Insurance  
3 Credits  
(Formerly BOT 142)  
This course is designed to enable students to define, explain, and understand the types of health insurance policies, contracts, and guidelines. Comparisons of private insurance, HMOs, federal and state programs and entitlements, as well as completion of insurance forms, and handling/ tracking medical information is included. Emphasis will be placed on current healthcare law and medical record confidentiality.  
Prerequisites: BOT* 180  
Offered: Spring

BOT* 288: Medical Practice Management Software Applications  
3 Credits  
This hands-on computer applications course prepares medical administrative professionals to efficiently use practice management software in managing the operational, patient and financial data in medical offices and hospital environments. Software skills covered will include appointment scheduling, patient registration, procedure posting, electronic payment posting, patient billing and collections, report generation and file maintenance.  
Prerequisites: Completion of BOT* 111 and BOT* 180  
Offered: Fall

BOT* 289: Practical Pharmacology for the Medical Office  
3 Credits  
This course is designed to provide information about medications, side effects, and interactions of drugs for office administration personnel who maintain medical records, and for other allied health occupations. BOT Lab instruction.  
Prerequisites: BOT* 180.  
Offered: Fall, Spring

BOT* 291: Electronic Health Records  
3 Credits  
This course provides a comprehensive understanding of the history, theory and functional benefits of Electronic Health Records EHR. Through practical, hands-on learning activities, students will learn how to scan, import and convert health information into specialized EHR applications. Students will learn to review electronic health records for timeliness, completeness, accuracy, and appropriateness. Additionally, this course emphasizes the need for strict adherence to patient confidentiality laws, authorized release of information, and data security. Skills acquired in this course are relevant and can be applied in today’s medical office, clinic, or information services/medical records divisions of a hospital.  
Prerequisites: Completion of BOT* 288 with a C or higher  
Offered: Spring

BOT* 296: Cooperative/Work Experience  
3 Credits  
(Formerly BOT 270)  
This course provides students with the opportunity to apply classroom theory in an actual work setting related to their program of study.  
Prerequisites: 12 completed credit hours in Administrative Assistant, Legal; Administrative Assistant, Medical; or Administrative Assistant, Office and the completion of BOT* 251.  
Offered: Fall, Spring, Summer

CSA* 205: Advanced Applications  
3 Credits  
This hands-on course provides students with the skills and training needed to create and manage complex office documents, spreadsheets, presentations and databases. Upon successful completion students will have mastery skills in computer application tasks that align to the 21st century workplace.  
Prerequisites: Completion of CSA* 105 with a C- or higher  
Offered: Spring

Computer-Aided Design

CAD* 110: Introduction to CAD  
3 Credits  
(Formerly CAD 101)  
An introduction to the techniques of generating graphic images with computers, using AutoCAD. Topics include: overview of CAD technology, computer technology, hardware descriptions and requirements, file manipulation and management, two- dimensional geometric construction, symbol library creation, dimensioning, scaling, sectioning, plotting, detail and assembly drawing including tolerance studies.  
Prerequisites: None  
Offered: Fall, Spring, Summer

CAD* 218: CAD 3d Mechanical AutoCAD  
3 Credits  
(Formerly CAD 102)  
A continuation course in industrial drafting concepts using a CAD system, specifically oriented towards three-dimensional design of manufactured parts using AutoCAD.  
Prerequisites: CAD* 110  
Offered: Fall, Spring

CAD* 220: Parametric Design Solidworks  
3 Credits  
Introduction to computer-based design using SolidWorks® parametric 3D CAD software. The course focuses on Parametric Modeling and topics include: Design Intent and Process, Sketching Techniques, Model Development Techniques, Process-Specific Modeling, Design Changes, Editing Models, Patterning and Assembly Techniques. Students will participate in mostly individual and some group design projects as appropriate.  
Prerequisites: CAD* 110  
Offered: Spring, Summer
CAD* 271: CAD Solids Mechanical Pro/ENGINEER
3 Credits
(Formerly CAD 105)
An introduction to parametric design utilizing the
Pro/ENGINEER software technology. 3D objects are made and
orthographic drawings are created.
Prerequisites: CAD* 218 or permission of instructor
Offered: Occasionally

CHE* 111: Concepts of Chemistry
4 Credits
(Formerly CHEM 110)
A brief survey of atomic structure, chemical bonding,
stoichiometry, periodicity, properties of gases, solutions, acid-
base theory and an introduction to kinetics and equilibria will
be taught. This is a one-semester course in general chemistry.
Strongly recommended for students with no prior chemistry
experience. Scientific calculator required. Class meets for 6
hours per week for integrated lecture and laboratory.
Prerequisites: MAT* 075 or math placement test. Students
who have passed a higher level chemistry class will not receive
credit for this course.
Offered: Fall, Spring, Summer
Fulfills General Education - Knowledge of Physical & Natural
Sciences

CHE* 121: General Chemistry I
4 Credits
(Formerly CHEM 111)
The principles of chemistry, including atomic structure,
periodicity, stoichiometry, reactions in solution, thermo-
chemistry, chemical bonding, molecular structure and
geometry, and properties of gases, will be taught. Students with
no prior chemistry experience should strongly consider
enrolling in CHE* 111 first. Scientific calculator required. Class:
3 hours per week. Laboratory: 3 hours per week.
Prerequisites: MAT* 095 or math placement test.
Offered: Fall, Spring, Summer
Fulfills General Education - Knowledge of Physical & Natural
Sciences

CHE* 122: General Chemistry II
4 Credits
(Formerly CHEM 112)
A continuation of the principles of chemistry, including intermolecular forces, properties of liquids and solids, physical properties of solutions, chemical kinetics, general chemical equilibria, acid-base theory and equilibria, solubility equilibria, electrochemistry and coordination compounds. Scientific calculator required. Class: 3 hours per week. Laboratory: 3 hours per week.
Prerequisites: CHE* 121
Offered: Fall, Spring, Summer
Fulfills General Education - Knowledge of Physical & Natural
Sciences

CHE* 210: Introduction to Organic Chemistry
4 Credits
(Formerly CHEM 201)
The principles of organic chemistry, emphasizing functional
groups, molecular structure, nomenclature, and organic
reactions; synthetic logic and basic methods of organic analysis
will be included. Scientific calculator required. Class: 3 hours
per week. Laboratory: 3 hours per week.
Prerequisites: CHE* 121
Offered: Spring

CHE* 211: Organic Chemistry I
4 Credits
(Formerly CHEM 211)
A study of the structure, properties, reactions, and
nomenclature of aliphatic hydrocarbons and their derivatives,
including alkyl halides, alcohols and ethers. Emphasis will be
given to mechanisms, stereochemistry, and synthetic
considerations. Scientific calculator required. Class: 3 hours
per week. Laboratory: 3 hours per week.
Prerequisites: CHE* 122
Offered: Fall

CHE* 212: Organic Chemistry II
4 Credits
(Formerly CHEM 212)
A study of the structure, properties, reactions, and
nomenclature of aromatic compounds, aldehydes and ketones,
carboxylic acids and their derivatives, amines, addition and
condensation polymers, and biochemical molecules. Additional
topics will include the role and use of spectroscopy, reactions
involving carbanions, and alpha-beta unsaturated compounds.
Scientific calculator required. Class: 3 hours per week.
Laboratory: 3 hours per week.
Prerequisites: CHE* 211
Offered: Spring

CHE* 220: Biochemistry
4 Credits
This intermediate level course focuses on the chemistry and
metabolism of carbohydrates, lipids, and amino acids. The
structure and function of proteins and enzymes will also be
discussed. Concepts are discussed in the context of diseases to
further understand how biochemical processes are relevant to
human life.
Prerequisites: Completion of BIO* 121 and CHE* 122 with
grade of C or higher
Offered: Occasionally

Communication

COM* 100: Introduction to Communication
3 Credits
Communication is fundamental to human social life. In this
introductory course to the discipline, students will learn about
a broad range of theories and processes of communication,
examining communication as a cultural practice that shapes
meaning of peoples' beliefs, attitudes, values, and practices
across situations.
Prerequisites: Eligibility for ENG* 101
Offered: Fall, Spring
Fulfills General Education - Knowledge of Humanities
COM* 101: Introduction to Mass Communication
3 Credits
(Formerly COMM 208)
This course is a survey of the American mass media and communication. Lectures and discussions will focus on the various print and electronic mass media industries, and the impact of mass communication on our society. The course is designed as an introductory course for those students who plan to major in communication and for those who want to be informed about the development of the influence of modern mass media.
Prerequisites: Eligibility for ENG* 101
Offered: Fall, Spring
Fulfills General Education - Knowledge of Humanities

COM* 108: Contemporary Issues in Media
3 Credits
The purpose of this course is to enable students to develop their media literacy as news consumers. Through examination of the significant issues in the American media, students will learn how to “read” the news beyond simply digesting the words. For the informed citizen as well as the future journalist, the course will provide an ethical framework for understanding and gathering the news.
Prerequisites: None
Offered: Fall, Spring

COM* 113: Social Media in Contemporary Society
3 Credits
Interpersonal relationships and community have traditionally been conceptualized as created through face-to-face interaction. However, with the advent and proliferation of new communication technologies, interpersonal relationships and communities have taken on a new face and form, transcending space and time, challenging our definitions and perceptions of what "relationships" and "community" are and can be. In this course, we will examine theories and concepts pertaining to interpersonal relationships and community, literature that applies these to new technologies, as well as literature that offers new findings and theories on the interfaces between them. We will also critically examine the role that new technologies are having on our thought processes, education, civic and social life.
Prerequisites: Eligibility for ENG* 101
Offered: Occasionally

COM* 145: Sports on Television
3 Credits
Sports on Television will look at the role, scope and current status of sports on American television. It will cover the processes and people involved in the decisions that affect the programming and production of sports television. The economic and cultural impact of sports on television will also be studied.
Prerequisites: None
Offered: Fall, Spring

COM* 154: Film Study and Appreciation
3 Credits
(Formerly COMM 171)
The viewing, discussion and analysis written and oral of representative films from the early years of the industry to the present will be taught.
Prerequisites: Eligibility for ENG* 101
Offered: Fall, Spring, Summer
Cross listed as: ART* 206
Fulfills General Education - Knowledge of The Arts

COM* 166: Video/Filmmaking
3 Credits
(Formerly COMM 176)
A creative workshop in which students will work in groups and make their own movies. Students work with video camcorders and editors. Students will learn scripting, shooting, editing and audio production techniques.
Prerequisites: None
Offered: Fall, Spring
Cross listed as: ART* 185

COM* 172: Interpersonal Communication
3 Credits
(Formerly COMM 220)
The focus of this course is on the theory and process of communication in both professional and personal interpersonal relationships. The course examines the theoretical and practical application of communication as it relates to family, friends, work and intimate relationships.
Prerequisites: Eligibility for ENG* 101
Offered: Spring
Fulfills General Education - Knowledge of Humanities

COM* 173: Public Speaking
3 Credits
(Formerly COMM 213)
This course is designed to encourage students to develop their speaking and listening skills in order to become more confident communicators. The course introduces students to communication as an interactive process and emphasizes developing effective public presentation skills. Instruction stresses organization, research, writing, delivery and audience adaptation.
Prerequisites: Eligibility for ENG* 101
Offered: Fall, Spring, Summer
Fulfills General Education - Knowledge of Humanities

COM* 173H: Honors Public Speaking
3 Credits
(Formerly COMM 213)
This course is designed to encourage students to develop their speaking and listening skills in order to become more confident communicators. The course introduces students to communication as an interactive process and emphasizes developing effective public presentation skills. Instruction stresses organization, research, writing, delivery and audience adaptation.
Prerequisites: Eligibility for ENG* 101 and who welcome an increased level of challenge should sign up for this Honors section.
Offered: Fall, Spring, Summer
Fulfills General Education - Knowledge of Humanities
**COM* 177: Broadcast Performance**
3 Credits
*(Formerly COMM 206)*
The rudiments of broadcast announcing in a studio setting: clear speech, presence, projection and intimacy will be discussed. This course will cover radio announcing. Proper commercial/PSA preparation and broadcast delivery of the commercial/PSA are stressed through classroom and on-microphone exercises, including development, enunciation, pronunciation, interpretation, integration, and pacing. Students are critiqued on an individual basis, following the evaluation of laboratory projects.
**Prerequisites:** None
**Offered:** Fall, Spring

**COM* 186: Computer Animation**
3 Credits
*(Formerly COMM 251)*
Students will learn how to use the computer to create animated presentations. The course will cover basic animation techniques as they apply to the digital environment as well as traditional skills such as storyboarding and script preparation. The software used will be Adobe Flash. The class is limited to 24 students. Studio: 6 hours per week.
**Prerequisites:** DGA* 111, DGA* 212 or COM* 213 or permission of instructor.
**Offered:** Fall, Spring
Cross listed as: DGA* 261

**COM* 201: Introduction to Public Relations**
3 Credits
*(Formerly COMM 201)*
A comprehensive survey of public relations principles and practices: fact-finding, planning and programming, action and communication, evaluation. This course covers relationships between organizations and their publics, and the effective use of media. Students will plan a complete public relations program.
**Prerequisites:** ENG* 101
**Offered:** Fall

**COM* 202: Intercultural Communication**
3 Credits
An introduction to the field of intercultural communication. This course studies how culture and communication interact. This course is designed to increase awareness of the cultural self and to help develop greater competence in communicating across cultural lines. Cultural privilege and power will be explored, as well as processes for mediating intercultural conflict. Finally, the course will examine models of how people learn cultural identity and develop intercultural sensitivity. Throughout the course, examples will be drawn from cultures of Europe, Asia, Africa, the Middle East and the Americas to help the student gain a global understanding of the issues involved in intercultural communication.
**Prerequisites:** ENG* 101 and any 100-level Social Science Course.

**COM* 206: Family Communication I**
3 Credits
Communication as it functions in family systems. Students will focus on identifying, describing and analyzing patterns of communication, the development of communication norms, the role the family system plays in the organization of society.
**Prerequisites:** Eligibility for ENG* 101
**Offered:** Occasionally

**COM* 209: Gender and Communication**
3 Credits
*(Formerly COMM 222)*
Gender and Communication is a course dealing with issues of language, speech and perception as they relate to gender. Students become familiar with the various theoretical approaches to gender and their implications for the study of communication. They explore how women and men approach same and opposite sex interactions and relationships in personal, social and professional contexts.
**Prerequisites:** ENG* 101
**Offered:** Occasionally

**COM* 210: Environmental Communication**
3 Credits
While many of us think of the "environment" as something physical in the world around us, and somehow related to "nature", our understanding of the environment is to some extent mediated by the way we communicate about it. In this course we will explore questions like, "how does the way we communicate about the environment influence the way we act in that environment? What is the role of communication in creating a better place to live? How is communication involved in our sense of place, our sense of home, and the wilderness 'out there'?" We'll look at pop culture representations of the environment and ask about the consequences of those messages. We'll also explore some big ideas like communicating about climate change, and look at some more local issues like how groups make decisions about the use of local environmental resources.
**Prerequisites:** Eligibility for ENG* 101
**Offered:** Occasionally

**COM* 211: Screenwriting**
3 Credits
An introduction to the basics of scriptwriting for television and film. The course covers the formatting of scripts for both television and film. The course covers the formatting of scripts for both television and film as well as market considerations. Elements of storytelling including characterization and plotting will be emphasized.
**Prerequisites:** C or higher in ENG* 101
**Offered:** Fall, Spring

**COM* 213: Electronic Publishing**
3 Credits
*(Formerly COMM 290)*
In this course the student learns to use the Macintosh computer and In Design Software to create a variety of publications ranging from simple flyers to four page newsletters.
**Prerequisites:** None
**Offered:** Fall, Spring

**COM* 222: Reporting and Writing News Stories.**
3 Credits
*(Formerly COMM 281)*
This course covers news gathering and reporting within the context of news criteria. Interviewing, ethics and law are introduced.
**Prerequisites:** ENG* 101 with a grade of C+ or better.
**Offered:** Fall, Spring
COM* 225: Photojournalism
3 Credits
An introduction to photojournalism and digital photography including hardware and software, camera handling and creative controls, file management and image editing using Adobe Photoshop. History, ethics, composition, lighting and visual communication will be investigated. Through demonstrations and assignments including assignments for the student newspaper, a survey of imagery and a final project, students will be introduced to the basic vocabulary, concepts, tools and techniques of photography and photojournalism. Students must own a digital camera with manual and/or aperture priority and shutter priority exposure modes. Basic computer experience preferred.
Prerequisites: None
Offered: Fall, Spring
Cross listed as: ART* 283

COM* 229: Creative Writing, Non Fiction.
3 Credits
(Formerly COMM 282)
This course covers: Types of features considered most in demand such as profile, travel, health and consumer issues. It also introduces students to the freelance market.
Prerequisites: ENG* 101 with a grade of C+ or better
Offered: Spring

COM* 240: Broadcast/TV Production
4 Credits
(Formerly COMM 210)
The fundamentals of television production are presented in this lab course in the College's TV studio. Scripting, camera setups, how to work with talent, and the control room side of TV production are topics that will be covered.
Prerequisites: None
Offered: Fall

COM* 242: Advanced Broadcast/TV Production
4 Credits
(Formerly COMM 211)
This course is designed to give students further training in broadcast/TV production. The course will focus on using electronic news gathering and electronic field production formats and integrating them into studio productions. Students will learn about field production, including lighting, audio and camera techniques. Students will gain more expertise in the editing process. Students, in the latter part of the semester, will produce weekly programs for local and public access.
Prerequisites: COM* 240
Offered: Spring

COM* 247: Television Writing
3 Credits
(Formerly COMM 218)
Television Writing provides an overview of broadcast writing style. Students will develop skills in major areas such as news and feature writing, public affairs research and interviewing, and commercial script writing. In addition to the research/writing component students will have the opportunity to produce their work during in-studio newscasts and interviews and be involved in the production of a video commercial.
Prerequisites: COM* 166/ART* 185 or COM* 222.
Offered: Fall

COM* 255: Topics in Film
3 Credits
This course will examine a specific topic in film and film making from an historical and artistic perspective. Topics that may be covered include examining the work of an influential director or a specific film genre or artistic movement.
Prerequisites: Completion of ENG* 101
Offered: Fall, Spring

COM* 277: Advanced Broadcast Performance
3 Credits
This advanced course will provide students further opportunities to practice and apply their broadcast performance skills by successful completion of several major projects that will develop and augment their portfolios - all utilizing MCC's excellent digital audio equipment, ICE Radio/1620 AM, an online radio station, and TV studio facilities. Projects will also be guided by the instructor to benefit the MCC campus and learning community as well as engage the wider population in our service area via MCC's mass media venues. Additionally, students will have increased opportunities to interface with resources and activities sponsored by professional and trade organizations, and to interact with local media professionals, experts, guest speakers, and field trips/tours to various broadcast facilities in our area.
Prerequisites: COM* 177 or permission of instructor
Offered: Occasionally

COM* 278: Group Communication
3 Credits
Students will learn about the theory and process of small group communication. The course will examine the creation, development, and functions of small groups. Students will gain experience leading group discussions and analyzing patterns of communication in community-based small group settings.
Prerequisites: Eligibility for or completion of ENG* 093.
Offered: Fall, Spring
Fulfills General Education - Knowledge of Humanities

COM* 286: Computer Animation II
3 Credits
(Formerly COMM 252)
This course is a continuation of COM* 186/DGA* 261 with an emphasis on multimedia design and interactivity. Students will work with Flash's Actionscript to create interactive presentations. Advanced tips and tricks with this software are covered, as well as a discussion of design principles for multimedia development. Topics such as digital video and sound are also discussed. The class is limited to 24 students. Studio: 6 hours per week.
Prerequisites: COM* 186/DGA* 261 or permission of instructor
Offered: Spring
Cross listed as: DGA* 262

COM* 295: Internship I
3 Credits
(Formerly COMM 270)
This course provides students the opportunity to apply classroom theory in an actual work setting. Students may be placed in a variety of work settings as related to their program of study including TV, radio, and newspaper.
Prerequisites: Completed 12 credit hours in any Communication courses.
Offered: Fall, Spring, Summer
COM* 296: Internship II
3 Credits
(Formerly COMM 271)
This course provides students the opportunity to apply classroom theory in an actual work setting. Students may be placed in a variety of work settings as related to their program of study including TV, radio, and newspaper.
Prerequisites: Completed 12 credit hours in Communications program.
Offered: Fall, Spring, Summer

COM* 298: Independent Study in Advanced Video Filmmaking.
3 Credits
This course allows students who have taken Video/Filmmaking to pursue an advanced project with a faculty mentor. The student will develop the concept, write the script, and shoot and edit the final video project. Completed projects are generally in the 15-20 minute range.
Prerequisites: None
Offered: Fall, Spring

Computer Science

CSC* 101: Introduction to Computers
3 Credits
This transferable course is designed for the learner who wants to strengthen their current computer knowledge and become more proficient with technology. An overview of today’s technologies, their importance and how they converge will be discussed. Students will gain an understanding of information literacy along with specific topics including the infrastructure of the Internet, web technologies, networking, digital media, computer programming, productivity software, and issues of personal responsibility as they relate to technology.
Prerequisites: Eligibility for MAT* 095 and ENG* 101.
Offered: Fall, Winter, Spring, Summer
Fulfills General Education - Knowledge of Interdisciplinary Studies

CSC* 124: Programming Logic and Design with Python
3 Credits
This is an introductory course in structured programming concepts using Python and assumes no prior programming experience in any language. Topics include data types, input/output from both the console and data files, arithmetic, comparison and logical operators, selection statements, looping, functions and arrays. This course assumes students are comfortable working with simple algebraic equations. Students should also have basic file and folder management skills on a personal computer.
Prerequisites: Eligibility for MAT* 172.
Offered: Fall, Spring

CSC* 125: Programming Logic and Design with C++
3 Credits
This is an introductory course in structured programming concepts using C++. Topics include data types, input/output from both the console and data files, arithmetic, comparison and logical operators, selection statements, looping, functions and arrays. This course assumes students are comfortable working with simple algebraic equations. Students should also have basic file and folder management skills on a personal computer.
Prerequisites: Eligibility for MAT* 172.
Offered: Fall, Spring

CSC* 205: Visual Basic .NET I
3 Credits
(Formerly CS 201)
This course will give the student practical experience with an object-oriented programming language. The emphasis will be on the use of the .NET classes in the building of the user interface and the corresponding code. Students will be exposed to object-oriented concepts working with the syntax and techniques of the Visual Basic .NET programming language.
Prerequisites: CSC* 124 or EGR* 230 or CSC* 125 or previous programming experience.
Offered: Occasionally

CSC* 206: Visual Basic .NET II
3 Credits
This course is a continuation of the Visual Basic .NET experience started in CSC* 205. It will emphasize object-oriented design and development concepts. Database work will be covered extensively. Web pages with ASP.NET code, class building, structured query language, and user controls will also be covered. Sequential files and Crystal Reports will be covered as time permits.
Prerequisites: CSC* 205.
Offered: Occasionally

CSC* 209: Advanced Access with Visual Basic
3 Credits
This course covers advanced concepts in Microsoft Access and uses Access VBA to extend the capabilities of the software. Access VBA is normally written to take advantage one of a number of optional database object libraries. From oldest to newest, they include RDO, DAO, and ADO with helpers like ODBC thrown in for good measure. The Basics of Writing and Testing VBA Code includes Programming Applications Using Objects, Interacting with Data Using ADO and SQL, Building Interactive Forms, Importing, Linking, and Exporting Using External Data Sources, and Creating Reports and Web-Enabled Output.
Prerequisites: CSA* 145 and either CSC* 124 or CSC* 125 or CSC* 205 or EGR* 230 or permission of the instructor.
Offered: Occasionally

CSC* 215: Object-Oriented Programming with C++
4 Credits
This course completes the introduction to programming in the C++ language. OOP concepts include objects and classes, instantiation, encapsulation, inheritance, polymorphism, overloading, pointers, and class libraries. Additional topics include structures, recursion, namespaces, multi-file programming, and random access files. This course assumes proficiency in C++ structured programming at the level of CSC* 125.
Prerequisites: CSC* 125 or EGR* 230
Offered: Fall, Spring
CSC* 217: Object-Oriented Programming with C#  
3 Credits  
This course offers students the opportunity to extend their experience and programming skills in the area of .NET development. C# pronounced C Sharp is an object-oriented programming language with syntax similar to JAVA. C# is becoming increasingly popular with developers in the areas of Windows applications and web sites using relational databases. Using the Visual Studio Integrated Development Environment IDE the course will cover topics including arrays, methods, classes, objects, inheritance, and exception handling. File streams and database applications will also be an important part of the course.  
**Prerequisites:** Completion of CSC* 124, CSC* 125 or EGR* 230  
**Offered:** Occasionally

CSC* 226: Object-Oriented Programming with Java  
4 Credits  
This course will provide an introduction to Object-Oriented Programming with Java. Object-Oriented topics covered will include encapsulation, inheritance, interfaces and polymorphism. Students will gain experience reading and writing non-trivial, interactive programs that involve systems of cooperating objects. Features of Java including the Swing class, generics and static imports are covered. Students will also learn how to use Java to develop programs utilizing interactive graphics.  
**Prerequisites:** CSC* 124 or CSC* 125 or EGR* 230  
**Offered:** Occasionally

CSC* 230: Database Concepts with Web Application  
3 Credits  
This course provides a foundation in using database management systems. This includes framing user requirements and modeling the data using UML, implementing the model using the MySQL relational database management system, and using SQL statements to validate database efficacy. Alternative database systems considered are the hierarchical, networked, object-oriented, and XML.  
**Prerequisites:** CSC* 125 or CSC* 124 or EGR* 230 or CSC* 205 or permission of the instructor  
**Offered:** Spring

CSC* 241: Data Structures and Algorithms  
4 Credits  
This course will cover data structures and algorithms and present justifications for understanding and using them. Data structures such as linked lists, stacks, and queues will be covered. Algorithms including hash tables, trees and tree traversal, heaps and priority queues will be studied. An in-depth treatment of sorting, search and numerical methods will be covered prior to an analysis of compression and encryption techniques, and graph and geometric algorithms  
**Prerequisites:** CSC* 215 or permission of instructor.  
**Offered:** Spring

CSC* 247: Game Development in C++  
3 Credits  
This course will introduce the student to basic computer game design and game components such as sprites, backgrounds, 2D graphics and tiling. Different types of games including as multi-level and multi-player games will be explored. Students will add sound to the games and learn how to save game settings between sessions. The use of mathematics and artificial intelligence in game design and development will be introduced. This will be a project-based, hands-on class using the Allegro game library with the C++ programming language.  
**Prerequisites:** CSC* 125 or EGR* 230  
**Offered:** Occasionally

CSC* 286: Microprocessor Assembly language  
4 Credits  
(Formerly CS 215)  
This course is an introduction to the programming and interfacing of a microprocessor. Topics include assembly language programming, bus architecture, the datapath, addressing methods, memory systems, interrupts, analog to digital and digital to analog conversion, use of a Multipurpose Microprocessor Support Controller, data acquisition and process control systems. The course includes a microprocessor laboratory component.  
**Prerequisites:** CSC* 124 or CSC* 125 or EGR* 230 or permission of the instructor; Also recommend EET* 252  
**Offered:** Spring  
Cross listed as: EET* 256

CSC* 287: Organization and Architecture  
3 Credits  
This course is an introduction to the internal structure of the digital computer. Topics include: instruction sets, computer arithmetic, the datapath, pipelining, parallel processing, RISC Reduced Instructions Set Computers, memory, addressing schemes, and embedded systems.  
**Prerequisites:** EET* 252: Digital Electronics may be taken concurrently or permission of the instructor  
**Offered:** Fall

CSC* 295: Cooperative Education/Work Experience  
3 Credits  
(Formerly CIS 270)  
This course provides students the opportunity to apply classroom theory in an actual work setting. Students may be placed in a variety of work settings as related to their program of study. For students in the computer programs, this may include positions as system analysts, or staff specialists within a variety of settings.  
**Prerequisites:** 15 completed credit hours in a computer program  
**Offered:** Fall, Spring

**Computer Systems Applications**

CSA* 105: Introduction to Software Applications  
3 Credits  
This hands-on introductory course is designed for students to develop practical software application skills necessary for personal productivity at home, on the job, or in the classroom. Topics will include an overview of the Windows operating system, including file management skills, in addition to word processing, spreadsheet, database and presentation tools. Online students must have access to Office 2013 or Office 365.  
**Prerequisites:** Eligibility for ENG* 101  
**Offered:** Fall, Spring, Summer
CSA* 135: Spreadsheet Applications  
3 Credits  
This course is designed for students who want to learn more about the power of spreadsheets and what they can do, or just update their software skills to the newest version of Excel. Students will be introduced to the features of Excel on every level from worksheets and workbooks, to formulas, functions, charts and databases. Students will also be introduced to the analytical features of spreadsheets which include macros and VBA in a "hands-on" teaching environment. This course begins to prepare students for the Microsoft Office Specialist MOS: Microsoft Office Excel exam.  
Prerequisites: CSA* 105 or BOT* 230 or CST* 201 or ACC* 125 or permission of instructor  
Offered: Fall, Spring

CSA* 246: Introduction to Geographic Information Systems GIS  
3 Credits  
(Formerly CIS 246)  
Students will learn the basic principles of Geographic Information Systems and explore and evaluate the various data models and structures used in the input management, analysis and output of geographic data. We will develop hands-on experience through use of a microcomputer based vector system ArcView GIS, and examine how the nature and character of spatial data can be used in studies of natural and socio-economic environments.  
Prerequisites: GEO* 101 or GEO* 111 and proficiency with the Windows operating system.  
Offered: Spring  
Cross listed as: GEO* 246

Computer Systems Technology  

CST* 114: Web Essentials  
3 Credits  
(Formerly CST 114)  
This course provides students of all disciplines with the skills needed to become proficient and informed users of the web. Students will learn how to navigate through current web technologies encompassing current internet tools, social media, their digital presence, investigative practices and online security risks and safeguards to apply to today's workplace or career disciplines.  
Prerequisites: None  
Offered: Fall, Spring

CST* 123: Computer Operating Systems  
4 Credits  
(Formerly CST 130)  
This introductory course will provide the student with an understanding of modern operating systems and their functions. The course will cover the structure and design of operating systems including resource allocation, process management, CPU management, problems in concurrency and synchronization of processes, deadlocks, primary and secondary storage management, file management, and system performance. The course is a blend of theory and laboratory work. The laboratory component will include an examination of DOS, Windows and Linux. The student will have an opportunity to install a minimum of two operating systems.  
Prerequisites: CSC* 124 or CSC* 125 or CSC* 205 or CSC* 206 or CSC* 215 or CSC* 226 or CSC* 241 or CSC* 286 or CSC* 287 or EGR* 230  
Offered: Fall, Spring

CST* 131: Networking Theory & Application  
4 Credits  
This course will provide an introduction to theoretical networking concepts as well as a hands-on exposure to applications of networking technology. Various basic topics on design, implementation, administration and troubleshooting of Local Area Networks LANs and Wide Area Networks WANs will be explored. The types of network components such as software, hardware, media, topologies, protocols and standards OSI model will be covered from a networking technician's point of view. Students will develop critical thinking and troubleshooting skills through setting-up and administering a basic network. This course will begin to prepare students for the CompTIA Network+ certification exam.  
Prerequisites: Eligibility for MAT* 138  
Offered: Fall, Spring

CST* 132: Networking Infrastructure  
3 Credits  
(Formerly Replaces CST 172/(Formerly CST 272)  
This course will cover advanced infrastructure concepts. Advanced topics in network design, network and routing protocols, security, and troubleshooting as they apply to switch and router configuration will be covered. Students will work with switches and routers in a hands-on setting. This course begins to prepare for the Cisco CCNA exams.  
Prerequisites: CST* 237  
Offered: Fall

CST* 141: Computer Hardware  
4 Credits  
(Formerly Replaces CST 191/(Formerly CST 141)  
This course will cover the principles of maintaining and troubleshooting personal computer hardware. The course will cover computer hardware, associated peripherals, configuration, optimization, and repair from the perspective of a PC technician. Students will develop critical thinking and troubleshooting skills through an emphasis on hands-on experience in installing, maintaining, and processing various problems with computer hardware. This course begins to prepare students for the CompTIA A+ certification.  
Prerequisites: Eligibility for ENG* 101.  
Offered: Fall, Spring

CST* 150: Web Design & Development I  
3 Credits  
This course is designed to deliver the fundamentals for designing and building web pages. The core technologies of the HTML5 markup language along with an introduction to Cascading Style Sheets CSS, and web multimedia are introduced to help students build navigable web pages. Various stages of effective web page planning and analysis can also be expected. Basic computer experience, strong file management skills and some knowledge of HTML are helpful.  
Prerequisites: Any CSC*, CSA*, or CST* course, or permission of instructor.  
Offered: Fall, Spring, Summer
CST* 201: Introduction to MIS
3 Credits
This course provides the background necessary for understanding the role of information systems in organizations and for using computer tools and technology in solving business problems. Topics include organization and technical foundations of information systems, theory of design of information, database, and network systems, e-commerce and business intelligence, and information network security management. Microsoft Excel, Access and collaborative applications and other commonly used business applications are used to demonstrate selected topical concepts.
Prerequisites: Eligibility for ENG* 101.
Offered: Fall, Spring

CST* 205: Project Management
4 Credits
This course will help the student understand the role of project management, and how to manage client expectations, develop a list of key tasks, assign responsibilities, track progress and prepare progress updates. Additionally, the student will be introduced to PMBOK the Project Life Cycle Methodology process groups; initiating, planning, executing, monitoring and controlling, and closing. Project sponsorship, stakeholders, scope, time, cost, quality and risk management are topics examined during the course. A project management software tool is introduced and utilized within the scope of the class project. Each student, as part of a team, will be responsible for taking an assigned project through its entire life cycle. This course will begin to preparing the students for the Project Management Institute CAPM® Exam and for those with project management experience, the PMP® Exam.
Prerequisites: Successful completion with a B or higher in one of the following: BES* 218, BFN* 202, BMG* 202, CSC* 124, CSC* 125, CSC* 205, CSC* 215, CSC* 230, CST* 131, CST* 150, EGR* 230 or permission of the instructor.
Offered: Spring, Summer

CST* 237: SysAdmin I - Client/Server
4 Credits
This course introduces students to system administration concepts for Microsoft Windows Server and Workstation operating systems, emphasizing hands-on configuration and troubleshooting of multiple networked systems in a laboratory environment. Topics include OS deployment, OS virtualization, IP configuration, MMC, registry, RAID and disk management, user accounts, IIS, terminal services, print servers, system security and optimization, and third-party tools. This course begins to prepare the students for Microsoft OS certification exams.
Prerequisites: CST* 131
Offered: Spring

CST* 238: SysAdmin II - Client/Server
4 Credits
This course continues the study of Microsoft Windows Server and Workstation operating systems, emphasizing hands-on configuration and troubleshooting of multiple networked systems in a laboratory environment. Topics include DHCP, NetBIOS, WINS, DNS, Active Directory and Group Policy. This course begins to prepare students for Microsoft OS certification exams.
Prerequisites: CST* 237
Offered: Fall

CST* 250: Web Design and Development II
3 Credits
This course is for students who have a solid background in XHTML/HTML5 and CSS, and who want to learn more about the intricacies of creating dynamic websites using advanced stylesheet design concepts CSS and client-side programming with Javascript. Building and maintaining an interactive, commercial website on various browser platforms will be covered.
Prerequisites: CST* 150 and CSC* 124 or CSC* 125 or CSC* 205 or EGR* 230 or permission of instructor.
Offered: Fall

CST* 254: Web Page Design
3 Credits
(formerly CST 245)
Course will introduce students to the fundamentals of planning, designing, producing and posting web pages and sites for the Internet. The basics of HTML code, Photoshop image creation for the web and use of Dreamweaver are major topics. Emphasis will be on site design and management. Student projects will be reviewed in class. Class: 6 hours per week.
Prerequisites: DGA* 111, COM* 213 or permission of the instructor.
Offered: Fall, Spring
Cross listed as: DGA* 240

CST* 258: Internet Programming
4 Credits
This course provides a foundation in using server-side web programming to provide dynamic content on the web. This includes how to install, configure, integrate, and utilize an Apache web server, a MySQL relational database management system, the PHP scripting language, and standards-based HTML web code to generate dynamic web pages. Emerging Web 2.0 techniques will be surveyed.
Prerequisites: CST* 150 and CSC* 230.
Offered: Spring

CST* 277: Network Security Implementation
4 Credits
This course provides a practical foundation for students entering the computer security field. This course will focus on the skills a security professional requires, and will cover such topics as network address translation, packet filtering, firewalls, intrusion detection systems, security policies, and virtual private networks (VPNs). Students will gain knowledge of how attackers break into systems and networks, and how an intrusion detection system can play a key role in detecting and responding to these events. Students will develop critical thinking and troubleshooting skills though mastering these security concepts in a hands-on setting. This course begins to prepare students for security certification exams.
Prerequisites: CST* 238 and CST* 132
Offered: Spring
Criminal Justice

CJS* 100: Perspectives of Criminal Justice
3 Credits
This course is designed to provide academic skill development while focusing on topics specific to the criminal justice system. Students will explore learning styles, enhance their reading skills, and continue to develop college writing abilities through the study of various components of the criminal justice system.
Prerequisites: Currently eligible for or enrolled in ENG* 096, or by permission of the instructor.
Offered: Fall, Spring

CJS* 101: Introduction to Criminal Justice
3 Credits
This course is a survey of the history and philosophy of American justice concepts with the emphasis on present day practical application through the efforts of the law enforcement, court, and correction segments of the criminal justice system.
Prerequisites: Eligibility for ENG* 093.
Offered: Fall, Spring

CJS* 102: Introduction to Corrections
3 Credits
(Formerly CJ 114)
An introduction to the correctional system in the United States and other allied countries. Emphasis will be placed on the role of corrections in our society and criminal justice system as a whole.
Prerequisites: Eligibility for ENG* 093.
Offered: Fall, Spring

CJS* 103: Introduction to Security
3 Credits
This course is a review and study of the organizations that require security such as retail operations, medical institutions, educational institutions, financial operations, and others, and of the legal and economic aspects that must be considered in security operations.
Prerequisites: Eligibility for ENG* 093.
Offered: Occasionally

CJS* 104: Introduction to Security Methods
3 Credits
This course is a concise study of the procedures and operations that affect security and guarantee the rights of those involved in any security system.
Prerequisites: CJS* 103
Offered: Occasionally

CJS* 105: Introduction to Law Enforcement
3 Credits
This course examines the history of law enforcement, the work of police officers, and how police organizations operate. The topics of discretion, police sub culture, corruption and the use of force will also be examined. The course will look at law enforcement as a career with various local, state and federal law enforcement agencies.
Prerequisites: Eligibility for ENG* 093
Offered: Occasionally

CJS* 106: Introduction to Homeland Security
3 Credits
Students will come to understand the history of homeland security as it evolved from the fields of civil defense, emergency preparedness, and traditional intelligence studies. How to provide security against various hazards such as chemical, biological, and cyber-attacks will also be covered. The principles and practices of emergency planning and management are emphasized in this course, and the instruction focuses on recent and ongoing efforts at government reorganization and restructuring.
Prerequisites: CJS* 101 and ENG* 093.
Offered: Occasionally

CJS* 120: Police and the Community
3 Credits
This course covers the study, analysis, and recommendations for reducing the severity of the major tension points between the police and the community. The student will learn the practical application of scientific knowledge and methodology to police-community relations in the State of Connecticut.
Prerequisites: Eligibility for ENG* 093.
Offered: Fall, Spring

CJS* 123: Police Patrol Procedures
3 Credits
(Formerly CJ 112)
The history and growth of traffic problems and the development of specialized traffic control methods.
Prerequisites: CJS* 105.
Offered: Spring

CJS* 125: Motor Vehicle Stops
1 Credits
(Formerly CJ 140)
The academic aspect of this course will provide an in-depth look and discussion of Connecticut motor vehicle laws. The practical aspect of the course will concentrate on suggested police procedures for the stopping and extrication of individuals from their vehicles. Several practicals will focus on the safe extrication of felony suspects as well as investigation of the suspected DWI offender.
Prerequisites: None
Offered: Occasionally

CJS* 126: Gangs and "Families"
1 Credits
(Formerly CJ 141)
The course will provide the student with an overview of the psychology and sociology behind various gangs around the country. In depth coverage will be given to local gangs' symbolisms including their graffiti, styles, tattoo, patches and other markings. Additionally, this course will cover assorted proactive strategies for the police and the community in their attempt to control gang violence/crime.
Prerequisites: None
Offered: Occasionally
CJS* 127: Identifying and Coping with Domestic Violence and Child Abuse
1 Credits
This course presents a multidisciplinary approach to the study of intimate partner violence and child abuse. At the conclusion of this course, students will have a basic knowledge of the dynamics and consequences of child abuse and intimate partner violence and the community, social service, criminal justice, and current policy responses.
Prerequisites: None
Offered: Occasionally

CJS* 128: Survey of Drugs of Abuse
1 Credits
(Formerly CJ 143)
The course will consist of an overview of drugs of abuse with regard to identification, effects on the body, mind and behavior. Class will include didactic presentation, video presentation discussion and interactive class presentations.
Prerequisites: None
Offered: Occasionally

CJS* 129: Management Preservation of the Crime Scene
1 Credits
In this course students will gain a basic understanding and knowledge of crime scene investigation including the theory and history of crime scene investigation, responsibilities of a crime scene investigator, methods and techniques in the collection and preservation of evidence.
Prerequisites: None
Offered: Occasionally

CJS* 130: Profiles of the Serial Offender
1 Credits
(Formerly CJ 151)
This course introduces the student to the fundamental principles of violence in American society, namely the nature, existence and causation of violent crime, and the problems and procedures involved in the investigation and apprehension of violent criminals.
Prerequisites: None
Offered: Occasionally

CJS* 131: Traumatic Incident Stress Management
1 Credits
(Formerly CJ 152)
The focus of this seminar is the identification, origin and management of personal stress as it relates to public service fields. These sessions will draw upon the day-to-day life experiences and coping mechanisms of individuals working in law enforcement and other public service fields.
Prerequisites: None
Offered: Occasionally

CJS* 132: Serial Sex Offenders
1 Credits
(Formerly CJ 153)
This course will provide an in-depth look at the psychology, sociology and characteristics of the habitual sex offender. In-depth coverage will be given to the modus operandi of these offenders as well as a discussion concerning the profile of individuals who become their victims.
Prerequisites: None
Offered: Occasionally

CJS* 133: Police Response to Tactical/Hostile Situations
1 Credits
This course will provide an overview of law enforcements role in response to a tactical/hostile situation. Areas covered will include initial response by patrol officers, function of tactical teams, hostage negotiators, and responsibilities of command personnel.
Prerequisites: None
Offered: Occasionally

CJS* 134: Advanced Studies in Gangs & Cults
1 Credits
(Formerly CJ 156)
The course will provide the student with an overview of the psychology and sociology behind various gangs around the country. In this advanced course the student will be exposed to West Coast gangs' symbolism including their graffiti, styles, tattoos, patches and other markings. Additionally this course will cover assorted cult groups identified throughout the country and some of the proactive strategies police and family members use to extricate individuals caught up in cults.
Prerequisites: None
Offered: Occasionally

CJS* 135: The Death Penalty
1 Credits
(Formerly CJ 160)
This course will introduce students to the death penalty laws of the State of Connecticut, other states, and other countries. This will be accomplished through lecture, group discussion, reading material, video presentation and an expert guest lecturer. There will also be an in-depth discussion concerning present day death penalty cases.
Prerequisites: None
Offered: Occasionally

CJS* 136: Crime, Criminals and the Media
1 Credits
(Formerly CJ 161)
In this one credit course, the student will look at various aspects of the effect of the media in the criminal realm. This course will also explore the historical events that have led to the contemporary relationship that now exists between the police and the media.
Prerequisites: None
Offered: Occasionally

CJS* 137: Test Preparation for Police Candidates
1 Credits
(Formerly CJ 162)
The goals and objectives of this two-day program are to prepare the student to successfully pass the written and oral board phases of police testing. In addition the student will learn about orientation and the human resource component of law enforcement provisions.
Prerequisites: None
Offered: Occasionally
CJS* 138: Shooting Reconstruction  
1 Credits  
Reconstruction of shooting incidents is a critical investigative area for all law enforcement agencies. This course will cover topics such as gunshot residue and distance determination, scene investigation and the search of physical evidence, determination of bullet trajectory, bloodspatter patterns, DRUGFIRE, and glass examination. Hands-on techniques will be emphasized.  
Prerequisites: None  
Offered: Occasionally

CJS* 144: Policing Techniques  
1 Credits  
(Formerly CJ 144)  
This course will help to identify the social science, theoretical and historical roots of community policing and will clarify the concept in both organizational and philosophical terms. Research relative to the successes and failures of community policing will be studied as well as various programs that fall under the community policing rubric.  
Prerequisites: None  
Offered: Occasionally

CJS* 145: Interviewing and Interrogation  
1 Credits  
(Formerly CJ 157)  
This course will present the determination of when interviewing or interrogation should be used. The use of interviewing methods including the how, what and why of each will be discussed.  
Prerequisites: None  
Offered: Occasionally

CJS* 148: Trace Evidence  
1 Credits  
This course will discuss through lecture and multimedia the subject of forensic trace evidence. Trace evidence encompasses numerous topics such as; gunshot residue, fibers, hairs, glass, soil, paint and how these materials may play a vital role in criminal investigation. The recognition, collection, identification, and instrumental analysis of trace evidence are critical to law enforcement personnel, forensic scientists and the legal community. These areas will be discussed and explored through this class.  
Prerequisites: None  
Offered: Occasionally

CJS* 157: Homeland Security and Domestic Preparedness  
1 Credits  
This course is designed to provide the students with the understanding and background in the field of terrorism and homeland security. Students will identify different terror organizations both domestic and international and focus on prevention of future terrorist incidents.  
Prerequisites: None  
Offered: Occasionally

CJS* 160: Introduction to Emergency Management  
3 Credits  
This course is designed to provide the students with a comprehensive foundation on the background, components, and systems involved in the management of disasters and other emergencies that are handled by Emergency Managers, Police, Fire, and EMS.  
Prerequisites: CJS* 101 or CJS* 105  
Offered: Occasionally

CJS* 171: Safety and Fire protection Management  
3 Credits  
(Formerly CJ 131)  
The management of safety and fire prevention services and accident prevention programs will be covered.  
Prerequisites: None  
Offered: Occasionally

CJS* 211: Criminal Law I  
3 Credits  
A study of the acts and mental states which make up the elements of a crime. The analysis of these criminal elements will allow exploration into a wide spectrum of criminal law including felonies and misdemeanors. This course will enable students to recognize and correctly classify criminal actions as they happen every day in our society.  
Prerequisites: Completion of ENG* 101 with a C- or higher and completion of either CJS* 101 or CJS* 105  
Offered: Fall

CJS* 212: Criminal Law II  
3 Credits  
A study of the acts and mental states which make up the elements of a crime. The analysis of these criminal elements will allow exploration into a wide spectrum of criminal law including felonies and misdemeanors. This is not a course specifically addressing Connecticut laws, although they will be discussed in comparison with other state and federal court decisions.  
Prerequisites: Successful completion of ENG* 101 with a C- or better and successful completion of CJS* 211 with a C- or better.  
Offered: Spring

CJS* 213: Evidence & Courtroom Procedure  
3 Credits  
The study of the major rules of evidence and the steps necessary to compile a comprehensive and complete courtroom record. Emphasis will be placed on the hearsay rule, confessions, and evidence obtained though search and seizure.  
Prerequisites: Successful completion of ENG* 101 with a grade of C- or better and successful completion of CJS* 101 or CJS* 105.  
Offered: Spring

CJS* 215: Trial Research and Presentation  
3 Credits  
Provides in-depth involvement, academically as well as practically, in various aspects of courtroom experience. The rules of evidence are examined through the study of various legal problems. Ability to analyze facts and legal issues and to develop logical legal arguments is emphasized. Concentration is given to proper courtroom demeanor and advocacy skills.  
Prerequisites: CJS* 211  
Offered: Fall  
Cross listed as: LGL*225
CJS* 216: Advanced Trial Techniques
3 Credits
Students in this advanced trial techniques and litigation class will further develop and perfect their skills in the presentation of a legal case in front of a courtroom judge or jury. The student will learn to go beyond the basic aspects of the courtroom rules and procedures and will develop a theme of how a case should be presented differently at different times and in front of different audiences. This class is set forth to fine tune the litigation skills of the prospective law student in a legal debate atmosphere. Furthermore, this course will perfect the technique and ability of the student to research, analyze, and use legal case law and evidence to their fullest capacity in order to present the most effective and persuasive case possible in a court of law.
Prerequisites: CJS* 215
Offered: Spring

CJS* 220: Criminal Investigation
3 Credits
This course will address the basic aspects of criminal investigation; present an overview of crimes and their elements; identify the major goals of a criminal investigation; and, discuss various investigative techniques and the criminal investigator's relationship with individuals and other agencies. Instruction topics include: conduct at crime scenes; collection and preservation of evidence; interviews and interrogations; crime scene photography; crime scene sketching; and report writing. Students will also participate in the investigation and analysis of a mock crime scene.
Prerequisites: Completion of or concurrent enrollment in ENG* 101, and completion of CJS* 101 or CJS* 105
Offered: Fall

CJS* 221: Arson Investigation
3 Credits
This course covers a wide range of topics in various disciplines and professions related to fire investigation. The nature and behavior of fire, ignition sources, fire related deaths and arson investigation will be explored. Other investigative topics such as fire modeling, courtroom testimony and report writing will be included.
Prerequisites: CJS* 220
Offered: Occasionally

CJS* 222: Computer Investigation Techniques
3 Credits
This course will provide an overview of computer crime and law enforcement response. This course will discuss electronic evidence, the detection of computer crime, securing, seizing, and examining computer systems. Highly recommended that students have a working knowledge of computers.
Prerequisites: None
Offered: Occasionally

CJS* 225: Forensic Science I
3 Credits
This course involves the detailed discussion of types of physical evidence and the analytical processes that are utilized in a forensic science laboratory. In addition this course will enable students to study how forensic scientists along with law enforcement are able to obtain investigative leads in criminal cases. Some travel will be required.
Prerequisites: CJS* 101 or CJS* 105
Offered: Fall

CJS* 226: Forensic Science II
3 Credits
This course will be devoted to advanced topics within the area of forensic science. Students will discuss advanced methods of crime scene reconstruction and conduct hands on applications of scientific techniques available to law enforcement personnel and forensic scientists. Some travel will be required.
Prerequisites: CJS* 101 or CJS* 105 and successful completion of CJS* 225 with a C- or better.
Offered: Spring

CJS* 227: Forensic Photography
3 Credits
Focuses on the practical application of photography to problems of investigation, court identification, proof identification, and court exhibits. Explores scientific areas of photography as related to crime scene and evidence applications and examines new uses of computer image enhancement. Techniques of locating and identifying evidence also included.
Prerequisites: CJS* 101 or permission of instructor.
Offered: Occasionally

CJS* 230: Security Management
3 Credits
(Formerly CJ 133)
The principles of organization, management, budgeting, personnel, records and public relations of a security agency will be covered.
Prerequisites: CJS* 104
Offered: Occasionally

CJS* 240: Correctional Administration
3 Credits
This course is an overview of the corrections field; courts, detention, sentencing, adult institutions, probation, parole, and therapeutic techniques. Emphasis will be on the reintegration of the offender. Students will learn how to successfully respond to an offender by taking their crimes and experiences into account, but also by looking at how the offenders view themselves.
Prerequisites: CJS* 101 and successful completion of CJS* 102 with a C- or better.
Offered: Occasionally

CJS* 243: Institutional Treatment of the Offender
3 Credits
This course will explore issues and policies in correctional counseling, counselor roles, work settings and challenges, offender classification and assessment, counseling processes, and therapeutic techniques. Emphasis will be on the placement, treatment, community release and successful reintegration of the offender. Students will learn how to successfully respond to an offender by taking their crimes and experiences into account, but also by looking at how the offenders view themselves.
Prerequisites: CJS* 101
Offered: Occasionally
**CJS* 244: Community-Based Corrections**
3 Credits
*(Formerly CJ 202)*
This course introduces students to historical, theoretical and judicial processes in the development of community correctional programs, with emphasis on juvenile delinquency programs at the police and judicial level probation, parole, drug, alcohol and self-help programs.

**Prerequisites:** CJS* 102

**Offered:** Occasionally

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**CJS* 250: Police Organization and Administration**
3 Credits
This course introduces the student to the various aspects of police administration that include, but are not limited to, administrative functions, human resources, public relations, manager-subordinate relations, community interactions, and the theories that reflect management strategies.

**Prerequisites:** CJS* 101 or CJS* 105

**Offered:** Spring

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**CJS* 255: Ethical Issues in Criminal Justice**
3 Credits
This course is designed to provide students with an understanding of the necessity of high standards of ethical and moral behavior in our justice process. Comprehensive coverage is achieved through focus on law enforcement, legal practice, sentencing, corrections, research, crime control policy and philosophical issues.

**Prerequisites:** Completion of or concurrent enrollment in ENG* 101

**Offered:** Occasionally

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**CJS* 272: Social Psychology of Criminal Behavior**
3 Credits
This course will focus on an understanding of the variation of the occurrence of criminal acts and, in particular, an understanding of individual difference in criminal activity and victimology. Topics for exploration include; the demographics of crimes *nationally*, theories behind the perpetrators and various theories that may assist in profiling of offenders and their victims. These theories include the biological, psychological, and sociological perspective of what constitutes crime and the criminals.

**Prerequisites:** PSY* 111 or SOC* 101 and CJS* 101

**Offered:** Occasionally

Cross listed as: PSY* 217

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**CJS* 289: Careers in Criminal Justice**
3 Credits
This course is designed to provide students with an understanding of the physical, intellectual and psychological demands associated with obtaining and performing a law enforcement position. Students will learn how to achieve the levels of physical fitness necessary to acquire and perform a law enforcement position. Students will also be instructed in the written and oral skills necessary to obtain and function as a law enforcement officer. Students will participate in mock physical, written and oral exams. Students will also be introduced to the concepts of polygraph testing in use by law enforcement agencies. Students will also be instructed in the methods used by law enforcement personnel for self-defense and officer safety.

**Prerequisites:** CJS* 101 or CJS* 105 or concurrently taking CJS* 101 or CJS* 105

**Offered:** Fall, Spring

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**CJS* 293: CJ Cooperative Education/Work Experience**
3 Credits
This course is an academic program that assists students with placement into work experiences that are related to criminal justice. Under the supervision of the college and the employer students work 150 hours in unpaid placements or 300 hours in paid placements to combine virtual classroom learning with work experience. In addition to the work placement, students are required to participate and complete all requirements of the virtual online classroom.

**Prerequisites:** CJS* 101 and the consent of the program coordinator.

**Offered:** Occasionally

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**CJS* 294: Contemporary Issues in Criminal Justice**
3 Credits
Contemporary Issues in Criminal Justice is a dynamic course meant to help students think about alternative policing methods. There will be an emphasis on non-traditional practices, organizational methods and policies. Students will examine how to make police systems more effective and how to improve service to communities in a rapidly changing society.

**Prerequisites:** None

**Offered:** Occasionally

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**Deaf Studies**

**DFS* 111: Introduction to the Deaf Community**
3 Credits
*(Formerly DS 111)*
This introductory course examines various aspects of the deaf community. It addresses culture, controversies, activities and events in the deaf community. In addition, the course explores the hearing mechanism, hearing disorders and the role of audiological assessment in the deaf community.

**Prerequisites:** None

**Offered:** Fall, Spring

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**Dental Assistant**

**DAS* 123: Chairside Dental Assisting**
4 Credits
This course provides instruction on development of the student as a dental health care professional as well as basic theory related to general and specialty dental procedures. Students will learn the principles of four-handed dentistry and, during lab, develop chairside assisting skills.

**Prerequisites:** Acceptance into the Dental Assistant Program

**Offered:** Fall

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**DAS* 131: Oral Anatomy and Pathophysiology**
3 Credits
This course combines basic oral anatomy with oral pathology. Students will learn the basic anatomy of the oral cavity and the bones of head and face. Additionally, students will be introduced to oral pathology including developmental anomalies and pathological lesions.

**Prerequisites:** Acceptance into the Dental Assistant Program

**Offered:** Fall
DAS* 132: Dental Materials
4 Credits
This course will provide students with the knowledge and skills necessary to safely manipulate dental materials in the clinical and laboratory settings. Skills necessary for the manipulation of dental materials will be developed during lab sessions.
Prerequisites: DAS* 123, DAS* 131, and DAS* 136 all with a "C" or better
Offered: Spring

DAS* 133: Dental Radiography I
4 Credits
This course will prepare students for the Dental Assisting National Board Radiation Health and Safety Exam through exposure to the topics of radiation production, hazards and safety, radiation control factors, exposure and processing techniques, exposure and processing errors, and extraoral radiographs. All exposure skills will be developed to the level of clinical competency during lab sessions.
Prerequisites: Completion of DAS* 123, DAS* 131, and DAS* 136 with a "C" or better
Offered: Spring

DAS* 134: Oral Health Promotion
1 Credit
This course will provide students with the theory of preventive dentistry including preventive procedures, oral hygiene instruction, and nutrition as it relates to oral health.
Prerequisites: DAS* 123, DAS* 131, and DAS* 136 with a "C" or better
Offered: Spring

DAS* 135: Dental Practice Management
2 Credits
This course will introduce students to dental office front desk duties such as scheduling appointments, answering the telephone, accounts receivable/payable, processing dental insurance claims, records management and inventory control.
Prerequisites: DAS* 132, DAS* 133, and DAS* 134 all with a "C" or better
Offered: Summer

DAS* 136: Infection Control in Dentistry
1 Credit
This course will familiarize students with their role as a preventer of disease transmission in the clinical setting. Theory will involve diseases of concern in dentistry, modes of disease transmission, and prevention of disease transmission through personal protection, disinfection and sterilization. Focus will be on standards/guidelines as established by OSHA, CDC, and the ADA. Application of infection control skills will take place during labs for Chairside Dental Assisting, Dental Materials, and Dental Radiography.
Prerequisites: Acceptance into the Dental Assistant Program
Offered: Summer

DAS* 143: Dental Radiography II
4 Credits
This course will prepare students for the Dental Assisting National Board Radiation Health and Safety Exam. Students will develop competencies in radiation exposure techniques using digital dental radiography in compliance with federal and state regulations.
Prerequisites: Completion of DAS* 131, DAS* 133 and DAS* 136 with grade of C or higher
Offered: Fall

DAS* 200: Dental Assistant Clinical Practicum I
1 Credit
This clinical practicum allows the students to apply and improve upon the dental assisting skills learned in Chairside Dental Assisting, Dental Materials, and Dental Radiography.
Prerequisites: DAS* 132, DAS* 133, and DAS* 134 all with a "C" or better
Offered: Summer

DAS* 201: Dental Assistant Practicum II
2 Credits
This clinical practicum allows the students to apply and improve upon the dental assisting skills learned in Chairside Dental Assisting, Dental Materials, and Dental Radiography.
Prerequisites: Completion of DAS* 132, DAS* 133, and DAS* 134 with grade C or higher
Offered: Occasionally

Digital Arts

DGA* 109: Introduction to Games
3 Credits
An introduction to designing and producing games that examines the history of games, game theory in general, the use of various technologies to create games and an analysis of the use of games and simulations in recreation, learning and commerce. The course will allow students to put the theory into practice through research and design projects and class presentations.
Prerequisites: None
Offered: Fall, Spring
Fulfills General Education - Knowledge of The Arts

DGA* 111: Introduction to Computer Graphics
3 Credits
(Formerly FA 210)
An introduction to creating images using the computer. Students will learn basic imaging skills through the use of several software programs. Previous drawing or design experience is helpful and no prior computer skills are required.
Prerequisites: None
Offered: Fall, Spring
Fulfills General Education - Knowledge of The Arts

DGA* 113: Drawing for Animation & Games
3 Credits
An introduction to designing and producing games that examines the history of games, game theory in general, the use of various technologies to create games and an analysis of the use of games and simulations in recreation, learning and commerce. The course will allow students to put the theory into practice through research and design projects and class presentations. Studio: 6 hours per week.
Prerequisites: None
Offered: Fall, Spring
DGA* 212: Advanced Computer Graphics
3 Credits
(Formerly FA 211)
This course is a continuation of computer imaging skills developed in DGA* 111 but with an emphasis on creating and executing design projects on the computer. The course includes instruction in advanced software such as Adobe Illustrator and Adobe Photoshop as well as such topics as image scanning, memory management and color outputting. Studio: 6 hours per week. Advanced Computer Graphics may be taken up to three times for credit. Prerequisites: DGA* 111 or COM* 213 or permission of instructor. Offered: Fall, Spring

DGA* 214: Advanced Computer Graphics II
3 Credits
(Formerly FA 212)
This course is a continuation of computer imaging skills developed in DGA* 111 but with an emphasis on creating and executing design projects on the computer. The course includes instruction in advanced software such as Adobe Illustrator and Adobe Photoshop as well as such topics as image scanning, memory management and color outputting. Studio: 6 hours per week. Advanced Computer Graphics may be taken up to three times for credit. Prerequisites: DGA* 212 Offered: Fall, Spring

DGA* 216: Advanced Computer Graphics III
3 Credits
(Formerly FA 213)
This course is a continuation of computer imaging skills developed in DGA* 111 but with an emphasis on creating and executing design projects on the computer. The course includes instruction in advanced software such as Adobe Illustrator and Adobe Photoshop as well as such topics as image scanning, memory management and color outputting. Studio: 6 hours per week. Advanced Computer Graphics may be taken up to three times for credit. Prerequisites: DGA* 214 Offered: Fall, Spring

DGA* 224: Digital Painting
3 Credits
This course will focus on the use of digital imaging software to create rich, complex compositions and original imagery. Topics will include color theory, shading and light, essentials of two-dimensional design, familiarity with “painterly” styles and techniques, creation of custom brush shapes, and output formats. The course will use specific software to develop artistic, representational skills for creating imagery for use in illustration, environments and objects for computer games, and other forms of artistic expression. Studio course: 6 hours per week. Prerequisites: DGA* 111: Introduction to Computer Graphics or permission of instructor. Offered: Fall

DGA* 240: Web Page Design
3 Credits
(Formerly MM 245)
Course will introduce students to the fundamentals of planning, designing, producing and posting web pages and sites for the Internet. The basics of HTML code, Photoshop image creation for the web and use of Dreamweaver are major topics. Emphasis will be on site design and management. Student projects will be reviewed in class. Class: 6 hours per week. Prerequisites: DGA* 111, COM* 213 or permission of the instructor. Offered: Fall, Spring Cross listed as: CST* 254

DGA* 244: Advanced Web Design
3 Credits
A continuation of DGA* 240 that explores the creative and technical design processes behind dynamics web page construction. Topics covered will include advanced CSS Cascading Style Sheets practices, additional web programming options such as JavaScript, audio and video components, development of Flash web content. Students will develop web pages and websites that move beyond HTML site construction. Class: 6 hours per week. Prerequisites: DGA* 240 or permission of instructor. Offered: Spring

DGA* 261: Computer Animation
3 Credits
(Formerly FA 251)
Students will learn how to use the computer to create animated presentations. The course will cover basic animation techniques as they apply to the digital environment as well as traditional skills such as storyboarding and script preparation. The software used will be Adobe Flash. The class is limited to 24 students. Studio: 6 hours per week. Prerequisites: DGA* 111, DGA* 212 or COM* 213 or permission of instructor. Offered: Fall, Spring Cross listed as: COM* 186

DGA* 262: Computer Animation II
3 Credits
(Formerly FA 252)
This course is a continuation of COM* 186/DGA* 261 with an emphasis on multimedia design and interactivity. Students will work with Flash’s Actionscript to create interactive presentations. Advanced tips and tricks with this software are covered, as well as a discussion of design principles for multimedia development. Topics such as digital video and sound are also discussed. The class is limited to 24 students. Studio: 6 hours per week. Prerequisites: COM* 186/DGA* 261 or permission of instructor Offered: Fall, Spring Cross listed as: COM* 286
DGA* 265: Character Animation
3 Credits
This course will continue the animation instruction that began in DGA 261 with a focus on creating and animating characters. Using Adobe Flash as the primary animation tool students will concentrate on the study and analysis of animated characters, the graphic design of character development, drawing techniques for character representation, character motion based on human and animal locomotion, lip-syncing for character dialogue, and storytelling and narrative development. This course will focus on two-dimensional character animation. Studio course: 6 hours per week.
Prerequisites: DGA* 261: Computer Animation or permission of instructor.
Offered: Fall

DGA* 271: 3-D Computer Modeling I
3 Credits
(Formerly MM 201)
Students will learn to design and create in digital 3D space, changing flat art and images into shapes with solid volume. The course will cover basic 3D topics such as wireframe assembly, extruding and lathing, various approaches and techniques of lighting and shading, image and texture mapping and development of animation in the 3D space. Use and integration of 3D forms and animations with other multimedia software will also be covered. Class: 6 hours per week.
Prerequisites: DGA* 111 or DGA* 212 or COM* 213 or permission of the instructor.
Offered: Fall

DGA* 275: Game Level Design
3 Credits
This course is a comprehensive introduction to the design of multi-level games. Topics will include general game theory, analysis of existing games, development of game narratives and storytelling, modes of game distribution, and level design. The focus of the course is the development of increasingly complex games through the creation of levels of varying gameplay. The course will employ a “game engine” for project work that will allow students to concentrate on design issues with a minimal amount of programming experience. Studio Course: 6 hours per week.
Prerequisites: DGA* 109: Introduction to Games or permission of instructor.
Offered: Fall

DGA* 276: 3D Animation and Rigging
3 Credits
This course is a continuation of DGA 271 3D Computer Modeling I with a focus on animation within a three-dimensional virtual environment. Essential 3D animation techniques will be included as well as fundamental techniques of model rigging for animated deformation. Topics will include animating surface textures and lights, 3D character development and animation, rigging with bone structures, particle system animation, special effects creation, and post-production compositing with video software. Studio course: 6 hours per week.
Prerequisites: DGA* 271: 3-D Computer Modeling I or permission of instructor.
Offered: Spring

DGA* 277: 3D Game Level Design
3 Credits
This course will introduce students to designing and producing computer games in a three-dimensional environment. The course will involve working with a 3D game engine and will include essential instruction in working in 3D virtual space, working with the game engine programming language, and producing games that are set in 3D space. Studio: 6 hours per week
Prerequisites: Completion of DGA* 271
Offered: Spring

DGA* 289: Special Effects for Video
3 Credits
Students will learn special effects for video using specialized effects software. The class will focus on compositing and special effects for motion, layers, keys and mattes, text generation, 3D, filter effects and audio. Importing and outputting for a variety of formats: television, video graphics, internet and mobile devices, will be covered. Studio: 6 hours per week
Prerequisites: Completion of COM* 166 or ART* 185
Offered: Spring

Drug/Alcohol Recovery Counselor

DAR* 101: Public Health Issues Abuse and Addiction
3 Credits
This course is designed to introduce students to various topics and issues important to understanding addictions. These topics include: history of legislation and regulation, the brain and its relationship to addictions, self-help and evidence-based approaches to recovery, the client-counselor relationship, levels of treatment approaches, current medication assisted therapies, assessment and treatment approaches, current medication assisted therapies, assessment and treatment planning, the continuum of care, family systems as they relate to addictions, cultural considerations, ethics and confidentiality, public health issues such as prevention, HIV/AIDS and other related diseases, and co-occurring substance use & mental health disorders. The student will also be introduced to the eight performance domains of an addiction counselor. Class: 3 hours per week.
Prerequisites: Eligibility for ENG* 096. DARC majors must pass this course with a C- or better.
Offered: Fall, Spring and Summer

DAR* 102: Taking Sides: Drugs and Society
3 Credits
Many times in our media, in our communities and in our lives we are confronted with issues regarding alcohol and drug use and abuse. For instance, should marijuana be decriminalized or legalized? The purpose of this course is to introduce you to a number of contemporary topics such as the one mentioned, in order to illustrate how we view these issues and some of the controversies they produce. Because of complex human affairs, there are no easy answers to many of the dilemmas we may examine. When confronted by differing opinions and points of view, it is necessary to develop the ability to comprehend, evaluate and make decisions in the face of uncertainty. The use of basic critical thinking skills and educational research will be incorporated in this course to better understand these differences.
Offered: Occasionally
**DAR* 105: Hollywood, Addiction and Mental Illness**  
3 Credits  
This course will review movies, both past and present that involve substance abuse, addiction, mental health, and treatment. We will discuss and analyze how Hollywood has depicted these themes over the last 50 years and examine how it has impacted society's view of addiction and mental health. The course is also designed to introduce you to the artistic, cultural and historical dimensions of these types of films. You will be required to view films, read material that explores the nature and impact of the film medium and write analytically about the style and content. Some films may carry 'R' ratings, primarily for strong language, violence and nudity.

**Offered:** Fall

**DAR* 111: Addiction Counseling**  
(Formerly DARC 111)  
Provides an overview of the major historical counseling theories such as Psychoanalytic, Adlerian, Person Centered and Gestalt as well as more current and evidenced-based theories such as CBT, MET, Solution Focused and Brief therapies as they pertain to addiction counseling. This course will also examine various recovery theories/methods such as 12 step and medication assisted therapies. Students will be introduced to various counselor/counseling skill and techniques through classroom experience and explore culturally sensitive issues in the client/counselor relationship. Issues pertaining to substance use and mental health disorders co-occurring disorders will also be examined. Addiction counselor codes of ethics will also be reviewed.

**Prerequisites:** Eligibility for ENG* 101. DARC majors must pass this course with a "C" or better.

**Offered:** Fall, Spring

**DAR* 112: Group Counseling Theory and Techniques**  
3 Credits  
This course will introduce the student to the concepts and theories of group counseling and will present an overview of the different modalities of group counseling, from psychoeducational groups to process groups. This course will also explore the use of group counseling as an effective modality for treating addictions and the implications for use in a multicultural environment. Students will have an opportunity to examine their own performance as a group leader and a group member through experiential groups. Ethics and confidentiality, as it pertains to groups, will be addressed. This course combines didactic and experiential learning situations.

**Prerequisites:** Eligibility for ENG* 101. DARC majors must pass this course with a "C" or better.

**Offered:** Fall, Spring

**DAR* 158: Biology of Addiction**  
3 Credits  
Students will study the pharmacodynamics and pharmacokinetics of drugs and alcohol on various systems in the body including the brain. Students will get an understanding of the classification of drugs and will examine the short and long term consequences of alcohol and/or drug use, abuse and dependence on the brain and body. Students will also be introduced to the central nervous system and the process of neurotransmission and its role in addiction.

**Prerequisites:** Eligibility for ENG* 101. DARC majors must pass this course with a "C" or better.

**Offered:** Fall, Spring

**DAR* 213: Addiction Counseling II**  
3 Credits  
This course builds on the fundamental theories of counseling learned in DAR* 111 and shows the relationship between theory and skills. This course will also examine the DSM and will discuss and explore co-occurring disorders. Students will develop their roles as entry level counselors and define the qualities, knowledge, and skills essential to become a competent, ethical, and culturally aware counselor and will research and develop a comprehensive clinical evaluation and treatment plan.

**Prerequisites:** DAR* 111 and eligibility for ENG* 101. DARC majors must pass this course with a "C" or better.

**Offered:** Fall, Spring

**DAR* 251: Counseling Internship I**  
6 Credits  
This course provides students with the experience of spending 15 hours per week in a substance abuse treatment facility under the joint supervision of the DARC Program and an appropriately credentialed supervisor at the facility. Students will observe the treatment process from intake to discharge. Students will observe, practice, and develop increased competence, they will progress from active observers to co-counselors, and then to counselors. To enhance the field experience, students will also attend a weekly seminar/group supervision on campus. Students will be expected to reflect on their fieldwork, participate in clinical supervision as well as group interaction.

**Prerequisites:** DAR* 101, DAR* 111, DAR* 112, DAR* 158 and DAR* 213 with a grade of C or better and eligibility for ENG* 101. It is also recommended that students complete their other General Education course requirements prior to entering the internship. This internship has a selective admission component and if accepted/approved for the internship the student will begin in the fall semester. Also note that this internship continues in DAR* 252 in the spring semester.

**Offered:** Fall

**DAR* 252: Counseling Internship II**  
6 Credits  
This course is a continuation of DAR* 251 and again the student will spend a minimum of 15 hours per week at their site and attend a classroom seminar once a week. It is expected that students will have counselor responsibilities at their sites and will be running groups and be assigned one or more clients. In the classroom the students will prepare and write a case for presentation. Class: 2 hours per week plus 15 hours per week at their field placement site.

**Prerequisites:** DAR* 251 with a grade of "C" or better and eligibility for ENG* 101.

**Offered:** Spring

**Early Childhood Education**

**ECE* 101: Introduction to Early Childhood Education**  
3 Credits  
(Formerly ED 111)  
This course is designed to acquaint students with the profession of early childhood education. Foundations of early childhood education, the content of the curriculum and significant aspects of child growth and development will be discussed.

**Prerequisites:** Eligibility for ENG* 101.

**Offered:** Fall, Spring
ECE* 103: Creative Experiences/Children
3 Credits
(Formerly ED 212)
This course examines the role of music, movement, art, language and literacy, dramatic play, blocks, table toys, sand and water in the curriculum. The relationship of creative experiences to the total educational program of the young child is explored. Students create and present developmentally appropriate activities.
Prerequisites: None
Offered: Fall, Spring

ECE* 109: Science & Math for Children
3 Credits
(Formerly ED 237)
This course will focus on the teacher’s role in supporting and expanding young children’s interests in math, science, nature and the environment. Students will share and explore ideas, materials and activities both indoors and outdoors. Topics will include the importance of sand and water play, fostering observation skills and encouraging trial and error experiences. Identifying quality math and science literature for young children will also be addressed.
Prerequisites: ECE* 101.
Offered: Fall, Spring

ECE* 131: Children’s Literature
3 Credits
(Formerly ED 118/ENG 118)
This course offers an overview of children’s literature including its history, genres, and leading authors and illustrators. The selection and critical study of books for children, including folklore, poetry, fiction and nonfiction will be addressed. Issues related to children’s literature and literature extension activities will also be explored.
Prerequisites: ENG* 101.
Offered: Fall, Spring

Cross listed as: ENG* 114

ECE* 176: Nutrition, Health and Safety for Young Children
3 Credits
The relationship between health, safety and nutrition and child development will be examined. Emphasis will be on the strategies needed to implement a safe, healthy and nutritionally sound program. Community agencies and resources that benefit children and families will be explored.
Prerequisites: None
Offered: Fall, Spring

ECE* 214: Observation Assessment and Participant Seminar
4 Credits
(Formerly ED 117)
This course will focus on the role of the learning environment and teacher/child interaction in the early childhood program. Students will visit programs and use observation forms to assess the quality of the early childhood experience for the young child. Six 4-hour observation visits are required. Class: 3 hours per week and the required program visits.
Prerequisites: ECE* 101.
Offered: Fall, Spring

ECE* 222: Methods and Techniques in Early Childhood Education
3 Credits
(Formerly ED 211)
This course studies the role of the teacher as she/he plans, implements, and evaluates a curriculum that focuses on the design of the learning environment; the interaction between teacher, child, and family; and the development of activities that foster children’s social, emotional, physical, and intellectual development.
Prerequisites: None
Offered: Fall, Spring

ECE* 224: Advanced Early Childhood Curriculum
3 Credits
(Formerly ED 217)
This course focuses on the teaching strategies necessary to design and implement a high quality early childhood program and will address topics of previous curriculum courses in greater depth. Study topics will include observation and planning for individual and groups of children, working with families, and ethics.
Prerequisites: ECE* 101.
Offered: Spring

ECE* 231: Early Language and Literacy Development
3 Credits
(Formerly ED 123)
This course is an introduction to the language and literacy development of children from birth through age eight. It explores ways that adults can promote growth in the areas of reading, writing, listening and speaking.
Prerequisites: Eligibility for ENG* 101.
Offered: Fall, Spring

ECE* 241: Methods and Techniques for Infants and Toddlers
3 Credits
(Formerly ED 211)
This course focuses on the teaching strategies necessary to design and implement a high quality early childhood program and will address topics of previous curriculum courses in greater depth. Study topics will include observation and planning for individual and groups of children, working with families, and ethics.
Prerequisites: ECE* 101.
Offered: Spring

ECE* 290: Student Teaching I
3 Credits
(Formerly ED 200)
The student participates in 300 hours of training in an early childhood education program where he/she assumes responsibilities appropriate to his/her skills, knowledge and experience.
Prerequisites: Interview with CDA Coordinator and/or permission of instructor.
Offered: Spring
ECE* 291: Student Teaching II
3 Credits
(Formerly ED 200)
The student participates in 300 hours of training in an early childhood education program where he/she assumes responsibilities appropriate to his/her skills, knowledge and experience.
Prerequisites: Interview with CDA Coordinator and/or permission of instructor.
Offered: Fall

ECE* 295: Student Teaching Practicum
6 Credits
(Formerly ED 295)
The student participates in 225 hours of training in a NAEYC accredited early childhood education program. The student will assume responsibilities appropriate to his/her skills, knowledge and experience. Attendance is required at seminars as well as completion of the 225 hour practicum requirement.
Prerequisites: 40 hours of approved course work and permission of instructor.
Offered: Fall, Spring

ENG* 114: Children’s Literature
3 Credits
(Formerly ENG 118)
This course offers an overview of children’s literature including its history, genres, and leading authors and illustrators. The selection and critical study of books for children, including folklore, poetry, fiction and nonfiction will be addressed. Issues related to children’s literature and literature extension activities will also be explored.
Prerequisites: ENG* 101.
Offered: Fall, Spring, Summer
Cross listed as: ECE* 131

Earth Science

EAS* 102: Earth Science
3 Credits
(Formerly ERSC 110)
This course is an introductory survey of selected topics in geology, oceanography, astronomy, and meteorology. Earthquakes, space probes, sea explorations, plate tectonics, volcanoes, climate change and severe weather are among the topics treated in depth.
Prerequisites: Eligibility for ENG* 101.
Offered: Fall, Spring, Summer
Fulfills General Education - Knowledge of Physical & Natural Sciences

EAS* 106: Natural Disasters
3 Credits
This course provides an introduction to the causes, occurrence and consequences of natural disasters. Students will analyze the physical causes as well as the distribution and frequency of disasters such as earthquakes, volcanoes, hurricanes, floods and extraterrestrial impacts. Case studies will include local and regional examples of historical and recent disasters. The course will focus on naturally-occurring disasters, but will also consider the role of human activities in both contributing to and mitigating natural disasters.
Prerequisites: Eligibility for ENG* 101.
Offered: Fall, Spring
Fulfills General Education - Knowledge of Physical & Natural Sciences

Economics

ECN* 101: Principles of Macroeconomics
3 Credits
(Formerly ECON 101)
This course covers determinants of the level of national economic activity, employment and prices, fiscal and monetary policies, international economics, and payment mechanisms.
Prerequisites: Eligibility for ENG* 101.
Offered: Fall, Spring
Fulfills General Education - Knowledge of Social Sciences

ECN* 102: Principles of Microeconomics
3 Credits
(Formerly ECON 102)
Demand and supply, principles of the market mechanisms, pricing and output determination under competitive and noncompetitive market behavior, factor productivity, prices and international economics will be taught.
Prerequisites: Eligibility for ENG* 101.
Offered: Fall, Spring, Summer
Fulfills General Education - Knowledge of Social Sciences

Education

EDU* 102: Educational Paraprofessional
3 Credits
(Formerly EDU 101)
This course addresses the knowledge and skill base needed by the effective educational paraprofessional. Topics studied include roles and responsibilities, relevant laws, confidentiality and ethics, effective collaboration and problem solving, and supporting students in the classroom. This course is appropriate for preservice and veteran educational paraprofessionals alike.
Prerequisites: None
Offered: Occasionally

EDU* 104: Pathways to Education
1 Credits
(Formerly ED 200)
This course is an introduction to the road to becoming a teacher, including professional responsibilities and certification requirements for various levels of educators. Federal and state requirements, including those contained in the No Child Left Behind Act, will be discussed. It will also include a discussion of ethical responsibilities. Preparation for the Praxis 1 is included in this course.
Prerequisites: None
Offered: Fall, Spring

EDU* 110: Teaching in the Twenty-First Century
3 Credits
This course is designed for students considering education as a major and teaching as a profession. Students will have an opportunity to experience primary, middle and secondary education through field placements. Students will obtain a systematic body of knowledge from which they can develop a repertoire of teaching practices to meet the learning needs of students with diverse learning styles, developmental needs, cultural and socioeconomic backgrounds.
Prerequisites: ENG* 101 eligibility, MAT* 138 eligibility.
Offered: Occasionally

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Electrical Engineering Technology

**EET* 108: AC/DC Circuit Analysis**
4 Credits
(Formerly ELT 120)
This course introduces students to the analysis of AC/DC circuits. Upon completion of the course, students will be able to interpret circuit schematics, design, construct, verify, and analyze DC/AC circuits and use electrical test equipment. Class: 3 hours per week. Laboratory: 2 hours per week.

**Prerequisites:** Co-requisite MAT* 185 or MAT* 186.
**Offered:** Fall, Spring

**EET* 118: Electrical Power Systems**
3 Credits
(Formerly ELT 113)
This course covers the basics of electrical systems and major components used in energy conversion systems. Topics include: DC motor/generators, AC motor generators, AC squirrel cage induction motors and transformers and their control systems.

**Prerequisites:** PHY* 122, EET* 108.
**Offered:** Occasionally

**EET* 132: Electronics**
4 Credits
(Formerly ELT 122)
The course includes semiconductor-based devices such as diodes, bipolar transistors, FETs, thyristors, and related electronic components. Emphasis is placed on analysis, selection, biasing, and applications in power supplies, small signal amplifiers, and switching and control circuits. Upon completion of the course, students will be able to construct, analyze, verify, and troubleshoot discrete component circuits using appropriate techniques and test equipment. Class: 3 hours per week. Laboratory: 2 hours per week.

**Prerequisites:** EET* 108.
**Offered:** Occasionally

**EET* 252: Digital Electronics**
4 Credits
(Formerly ELT 220)
This course covers combinational and sequential logic circuits. Topics include: number systems, Boolean algebra, logic families, MSI and LSI circuits, and other related topics. Upon completion of the course, students will be able to construct, verify, and troubleshoot digital circuits using appropriate techniques and test equipment. Class: 3 hours per week. Laboratory: 2 hours per week.

**Prerequisites:** CSC* 125, MAT* 185 or MAT* 186.
**Offered:** Fall

**EET* 268: Control Systems**
4 Credits
(Formerly ELT 213)
This course introduces students to electronic control systems. Topics include: complex algebra, phasors, impedance, transfer functions, open and closed loop systems and sequential control including pneumatic and relay logic. Students will study pneumatic control elements, ladder diagrams, interfacing techniques, stepper motor controls and servo motor controls, the use of microcomputer controls in industrial applications such as robotics, application of data conversion electronics and the applications of program controllers. Class: 3 hours per week. Laboratory: 2 hours per week.

**Prerequisites:** EET* 108, MAT* 254 (formerly MAT* 250).
**Offered:** Occasionally

**PHO* 101: Introduction to Photonics**
4 Credits
This course explores optics as a science underlying many new “photonics” technologies such as laser manufacturing, arthroscopic surgery, CD and DVD technology, and fiber optic telecommunications. The course will focus on the nature, production, and behavior of light and cover common optical devices such as lenses and prisms. Throughout the course, we will emphasize optics application in medicine, communications, manufacturing and nature. The lab that accompanies this course will illustrate and reinforce concepts by duplicating the classic experiments in optics and photonics.

Class: 3 hours per week. Laboratory: 2 hours per week.

**Prerequisites:** Permission of instructor.
**Offered:** Occasionally

**Engineering Science General**

**EGR* 101: Engineering Experience**
3 Credits
(Formerly ENGR 110)
This course is designed for students that think they may have an interest in science, engineering and technology. It will cover design and safety principles, illustrate why you can drive your car across a bridge, explain how a hair dryer really works, why airplanes fly and a curve ball curves. Students will be exposed to a wide range of engineering problems and solutions and the best part is mathematics will not be needed.

**Prerequisites:** None
**Offered:** Fall, Spring

**EGR* 111: Introduction to Engineering**
3 Credits
(Formerly ENGR 111)
Students will be introduced to the fields of engineering through design and graphics and comprehensive engineering projects. Topics include: sketching, charts, graphs, forces, energy, electrical circuits, mechanisms, robotics, manufacturing technologies, and fundamentals of engineering economics.

**Prerequisites:** Completion of MAT* 172 with a C or better, or satisfactory score in the mathematics assessment test
**Offered:** Fall, Spring, Summer
EGR* 112: Engineering Drawing Interpretations
3 Credits
(Formerly ENGR 101)
An introduction to the interpretation of engineering drawings beginning with the basics of orthographic projection. Topics include: working drawings, lines, linear and angular dimensioning, sectional views, tolerances and allowances, thread representation, arrowless and tabular dimensioning, steel specifications, auxiliary views, point-to-point and datum dimensioning conforming to ANSI Y14.5M and ISO standards.
Prerequisites: None
Offered: Fall, Spring

EGR* 221: Introduction to Electric Circuit Analysis
4 Credits
(Formerly ENGR 221)
Linear electric circuit analysis using Ohm’s and Kirchhoff’s laws: includes loop and nodal analysis; transients in electric circuits; behavior of operational amplifiers and nonlinear devices; design, operation and use of electric instruments; basic meter movements; and simple filter circuits. TI-85 graphing calculator required. Class: 3 hours per week. Laboratory: 2 hours per week.
Prerequisites: PHY* 222 and MAT* 256. Co-requisite: MAT* 285.
Offered: Fall, Spring

EGR* 240: Current Topics in Sustainable Engineering
1 Credits
This course will include review and discussion of a wide range of current topics related to sustainable energy and engineering including new technologies, regulations, legal issues, employment opportunities, professional organizations and certifications, global issues and ethics. Case studies will be used to evaluate integration of sustainable energy technologies into residential and commercial facilities. The financial impact of implementation of a sustainable engineering project will also be discussed.
Prerequisites: None
Offered: Occasionally

EGR* 241: Sustainable Electrical Systems
4 Credits
This course integrates theory and laboratory work to investigate the fundamentals of electrical circuitry, and the design and function of the residential electrical energy distribution system. The principles of performance and efficiency of lighting systems and common appliances are presented, along with strategies for improving household electrical energy efficiency. Students will investigate how electricity is produced and transmitted, with a focus on alternative energy sources.
Prerequisites: EVS* 130, EVS* 131, and MAT* 138 or MAT* 139, may be taken concurrently or permission of instructor.
Offered: Occasionally

EGR* 242: Sustainable Building Systems
4 Credits
This course integrates theory and laboratory work to investigate the fundamentals of sustainable energy in commercial and residential settings. The performance and efficiency of the Building Shell, Air Flow, Insulation, Heating, Air Conditioning, Doors and Windows and Hot Water Systems will be studied along with strategies for improving energy efficiency. Health and Safety issues will be also be addressed.
Prerequisites: EVS* 130, EVS* 131, and MAT* 138 or MAT* 139, may be taken concurrently or permission of instructor.
Offered: Occasionally

EGR* 214: Engineering Thermodynamics
3 Credits
This course covers energy concepts and balances; basic definitions including the first and second laws of thermodynamics; ideal and real gases; thermodynamic properties; and introductory cycle analysis.
Prerequisites: PHY* 221 and MAT* 254 (Formerly MAT* 250 or MAT* 186 grade C or better, or permission of instructor.
Offered: Fall, Spring

EGR* 211: Engineering Statics
3 Credits
(Formerly ENGR 211)
Students will be introduced to concepts of chemical engineering including units, dimensions, and process variables; material and energy balances; single and multiphase systems; reactive and non-reactive processes.
Prerequisites: Completion of EGR* 111 and MAT* 256 may be taken concurrently
Offered: Occasionally

EGR* 220: C++ for Engineers
3 Credits
This course approaches the C++ programming language using structured and object-oriented programming methods to examine and solve a variety of engineering problems. The course will include the use of abstract data types in solving classical engineering problems.
Prerequisites: Completion of MAT* 172 with a C or better, or a satisfactory score on the placement test
Offered: Fall, Spring, Summer
**English**

**ENG* 003: Foundations of Reading**
0 Credits
This course is designed for students who need a semester of reading and study skills experiences necessary for college level work and before continuing on to English 066. This course will engage students in reading, writing, listening, and speaking activities with an emphasis on vocabulary, comprehensions, and whole class and small group discussion. Placement into this course is via the assessment test. A grade of C or better is required for students to take ENG* 066.
Prerequisites: Placement into this course is via the assessment test.
Offered: Fall, Spring

**ENG* 064: Foundations for College English**
0 Credits
This course is designed for students who have demonstrated the ability to read and write with a basic level of competence, but who are not ready to read and write on a college level. The course focuses on reading and writing as processes, and is designed to lead students to producing college-level work. Students will interact with various types of texts through reading, writing, listening, and speaking. They will have the opportunity to create meaningful pieces of writing for real purposes and real audiences. As a result of this course, students will form a set of personal strategies for reading and writing. Note: A grade of "C" or better in ENG* 064 is required to take ENG* 093.
Prerequisites: ENG* 003 with a grade of "C" or better, or placement via assessment test.
Offered: Fall, Spring

**ENG* 066: Foundation for College**
Study/Reading/Writing
0 Credits
(Formerly ENG 097)
This course focuses on reading and writing as processes. Students will interact with various types of texts through reading, writing, listening, and speaking. They will have the opportunity to create meaningful pieces for real purposes and real audiences. This course will prepare students to understand, interpret, and respond to course content at the college level. As a result of this course, students will form a set of personal strategies for reading and writing. Note: A grade of "C" or better in ENG* 066 is required to take ENG* 093. Class: 6 hours per week.
Prerequisites: ENG* 003 or ENG* 043 with a grade of "C" or better, or placement via assessment test.
Offered: Fall, Spring

**ENG* 093: Introduction to College Reading and Writing**
0 Credits
(Formerly ENG 098)
This course is designed for students who need to develop further their capabilities in language use—reading, writing, thinking, and speaking—to prepare them for the kinds of assignments they will be asked to complete in ENG* 101 and beyond. Students will read, discuss, think, and write about a number of topics. Note: A grade of "C" or better in ENG* 093 is required to take ENG* 101
Prerequisites: ENG 096 pre-fall 2003 or ENG* 066 fall 2003 and after with a grade of "C" or better, or placement via assessment test.
Offered: Fall, Spring, Summer

**ENG* 096: Introduction to College English**
3 Credits
This course prepares students for the reading and writing demands in Composition and other college-level courses by integrating reading, writing, and critical thinking. Student writing will focus on understanding, reporting on, reacting to, and analyzing the ideas of others. Texts will serve as models and sources for students to refine their skills in exposition, interpretation, and argumentation. Students learn and practice specific college-level skills through critical reading and writing, class discussions, lectures, group presentations, or workshops. This course does not satisfy an English requirement or an elective in any degree program, nor do its credits count toward graduation.
Prerequisites: Students will place into ENG096 via the placement process, or by recommendation of the instructor.
Offered: Fall, Spring, Summer

**ENG* 101: Composition**
3 Credits
(Formerly ENG 111)
Composition focuses on the study and practice of effective written communication across a variety of rhetorical situations. The course develops skills in applying language conventions, engaging with and using authoritative sources, and crafting logical arguments. Note: A grade of "C" or better in ENG* 101 is required to take ENG* 110 or ENG* 200.
Prerequisites: Completion of ENG* 096 with a C or better, or by placement process.
Offered: Fall, Spring, Summer

**ENG* 101H: Honors Composition**
3 Credits
(Formerly ENG 111H)
The honors section of ENG* 101, while meeting the requirements of the standard course, provides an opportunity for highly motivated students who welcome an increased level of challenge. The instructor's expectations for student motivation and preparedness for class discussion and completion of assignments are significant. Students will read a number of demanding texts typically focused on a single, semester-long question.
Prerequisites: There is no formal prerequisite for the Honors section of ENG* 101. Students who are eligible for ENG* 101 and who welcome an increased level of challenge should sign up for the Honors section.
Offered: Fall

**ENG* 101M: Composition with Embedded Support**
4.5 Credits
Composition focuses on the study and practice of effective written communication across a variety of rhetorical situations. The course develops skills in applying language conventions, engaging with and using authoritative sources, and crafting logical arguments. Composition with Embedded Support meets the same outcomes as ENG*101, but offers students additional support through supplemental instruction, increased time on task, focused workshops, and/or tutoring.
Prerequisites: Students will place into ENG*101M by the placement process.
Offered: Fall, Spring
ENG* 104: Reading Dynamics and Study Skills
3 Credits
(Formerly ENG 103)
This course enhances reading and study skills on an individualized and group basis. The course includes the following areas: reading comprehension, note taking, memory training, time management, outlining procedures, library skills, study skills, and strategies for taking essay and objective examinations.
Prerequisites: Eligibility for ENG* 093.
Offered: Occasionally

ENG* 110: Introduction to Literature
3 Credits
(Formerly ENG 120)
This course is an introduction to the thematic and formal elements of literatures of diverse cultures, with an emphasis on fiction, poetry, drama, and the essay, with the aim of developing interpretive reading and writing skills.
Prerequisites: ENG* 101 with a grade of "C" or better.
Offered: Fall, Spring, Summer
Fulfills General Education - Knowledge of Humanities

ENG* 110H: Honors Introduction to Literature
3 Credits
The honors section of ENG* 110, while meeting the requirements of the standard course, provides an opportunity for highly motivated students who welcome an increased level of challenge. The instructor's expectations for student motivation and preparedness for class discussion and completion of assignments are significant. Students will read a number of texts focused on a single, semester-long question.
Prerequisites: Successful completion of ENG* 101 with a grade of "C" or better, plus 12 semester hours with a cumulative GPA of 3.4 OR a grade of B+ or higher in ENG* 101.
Offered: Occasionally

ENG* 190: Basic Study Skills
1 Credits
(Formerly ENG 100)
This course is designed for and required of all students enrolled in the Adults in Transition program. Taken just before their first semester, this course introduces students to fundamental study skills. It presents these skills as processes and shows how they relate to and reinforce one another. Class: 15 hours. Open only to students in the Adults in Transition Program.
Prerequisites: Open only to students in the Adults in Transition Program.
Offered: Fall, Spring

ENG* 200: Advanced Composition
3 Credits
(Formerly ENG 112)
This course is designed to develop and refine the advanced skills learned in ENG* 101 that are essential for both academic and professional writing. Emphasis will be on research and writing from data outside sources. The main areas covered will be exposition, argumentation, and the research paper.
Prerequisites: ENG* 101 with a grade of "C" or better.
Offered: Fall, Spring, Summer
Fulfills General Education - Knowledge of Humanities

ENG* 202: Technical Writing
3 Credits
(Formerly ENG 114)
This course focuses on the researching, writing, and editing of documents commonly found in the fields of science, technology, and business. Major topics covered include memo reports, instructions, proposals, progress reports, abstracts, document design, and documentation styles for technical reports.
Prerequisites: ENG* 101 with a grade of "C" or better.
Offered: Fall, Spring

ENG* 203: Grammar, Usage and Style
3 Credits
(Formerly ENG 203)
This course reviews the standards and conventions of written English. It is an advanced course designed to hone communication skills, including editing and proofreading documents.
Prerequisites: Eligibility for ENG* 101 or permission of the instructor
Offered: Spring
Cross listed as: BOT* 139

ENG* 214: Drama
3 Credits
Literary survey of drama from Ancient Greece to the present including discussion of theatrical terms, stagecraft and classic critical statements. Students will study different dramatic genres like comedy and tragedy, and will approach plays in their historical context.
Prerequisites: None
Offered: Fall, Spring

ENG* 221: American Literature I
3 Credits
(Formerly ENG 245)
This course examines writings from the era spanning the arrival of Columbus to the Civil War. Topics covered include Native American tales and oratories, slave folklore, and both the popular and "classic" works of writers from the Puritan period, the eighteenth century, and the American Renaissance.
Prerequisites: ENG* 110 or permission of the instructor.
Offered: Fall

ENG* 222: American Literature II
3 Credits
(Formerly ENG 246)
This course examines major American writers from the late 19th century to the present day, with a focus on their contributions to the rapid and unique changes in style, form, and content that mark the literary tradition of 20th century America.
Prerequisites: ENG* 110 or permission of the instructor.
Offered: Spring

ENG* 232: British Literature II
3 Credits
(Formerly ENG 202)
This course examines representative figures and concerns in British literature from 1799 to the Modern Period.
Prerequisites: ENG* 110 or permission of the instructor.
Offered: Occasionally
ENG* 245: Early Western Literature
3 Credits  
(Formerly ENG 251)
This course introduces students to Western World literature from the Classical age to the Renaissance. Students will read works by authors such as Homer, Sophocles, the Biblical writers, Virgil, St. Augustine, Chaucer, Dante, and Shakespeare. Students will examine narrative and poetic strategies and discuss such lasting issues as the nature of good and evil, love and war, heroism and cowardice, salvation and damnation.  
**Prerequisites:** ENG* 110 or permission of the instructor.  
**Offered:** Fall

ENG* 246: Modern Western Literature
3 Credits  
(Formerly ENG 252)
This course introduces students to Western literature from the Age of Reason through the Modern Period and for purposes of comparison to a variety of so-called “non-canonical” texts from writers who until very recently were not studied in college classrooms. Students will examine the poetic and narrative strategies of writers from a variety of classes and cultures.  
**Prerequisites:** ENG* 110 or permission of the instructor.  
**Offered:** Fall, Spring

ENG* 250: Studies in Ethnic Literature
3 Credits
This course surveys writing by authors of various ethnicities and races in American culture, including but not limited to Native Americans, European immigrants, African Americans, Hispanic Americans, and Asian Americans. This course examines how ethnic writing enables and resists assimilation, and how the literature of individual ethnicities underlies mainstream American literature and, at times, becomes part of the mainstream. The course also explores the history and sociology of immigration and multiculturalism.  
**Prerequisites:** ENG* 110 or permission of instructor.  
**Offered:** Spring

ENG* 251: African American Literature
3 Credits
This course considers a wide range of literature, examining slave narratives, novels, short stories, plays, poetry, essays, and lyrics. Students will explore aspects of the African American experience from its origin in folklore through contemporary cultural expressions such as rap and hip hop.  
**Prerequisites:** ENG* 110 or permission of instructor  
**Offered:** Spring

ENG* 262: Women in Literature
3 Credits  
(Formerly ENG 271)
This course explores the nature, roles, relationships, and feelings of women as expressed by women writers in various literary genres essays, short stories, personal reflections, poems, plays and novels. Students will read the works of women writers of the 17th, 18th, 19th, and 20th centuries who share their ideas and understanding of what it is to be human and, particularly, to be female.  
**Prerequisites:** ENG* 110 or permission of the instructor.  
**Offered:** Fall

ENG* 263: Women in Poetry
3 Credits  
(Formerly ENG 220)
This course is a seminar on the lives and work of women poets from 1950 to the present. Students will read, discuss, and analyze poems and explore how they reflect the life and times of the author. Students will demonstrate their understanding of poetry through weekly writing assignments and a longer research paper.  
**Prerequisites:** ENG* 101 or permission of the instructor.  
**Offered:** Spring

ENG* 271: Film and Literature
3 Credits  
(Formerly ENG 140)
This course explores what happens when classic and not-so-classic works of fiction and drama are brought to the screen. In studying specific literature-to-film adaptations, students examine the elements of both media metaphor, narration, symbol, shot, sound, editing and debate what differences, if any, exist between so-called serious art and entertainment.  
**Prerequisites:** ENG* 101 with a grade of “C” or better.  
**Offered:** Fall, Spring

ENG* 272: Creative Writing: Poetry
3 Credits  
(Formerly ENG 222)
This course is a workshop in which students write and polish poems and study the poems of published writers and fellow students.  
**Prerequisites:** ENG* 101 or permission of the instructor.  
**Offered:** Spring

ENG* 283: Creative Writing: Fiction
3 Credits  
(Formerly ENG 221)
This course is a workshop experience in which students write a polished story or stories and study the short stories of published writers and fellow students.  
**Prerequisites:** ENG* 101 or permission of the instructor.  
**Offered:** Fall

ENG* 294: English Practicum
3 Credits  
(Formerly ENG 294)
This course is designed to offer motivated students a practicum experience in the college English classroom based on the assumption that “the best way to learn a subject is to teach it.” There are four Practicum options for students: Writing Practicum; Literature Practicum; Tutoring Practicum; Research Practicum. Class: 3 semester hours, to be arranged.  
**Prerequisites:** Students will need the permission of the instructor of record to register. To be eligible, students should have completed 24 credits at MCC, should have completed ENG* 101 and either ENG* 110 or ENG* 200, and should have a GPA of at least 3.0. Interested students should submit one letter of recommendation from an MCC faculty member, a 250-word application essay detailing why they are interested in pursuing this Practicum, and a writing sample which must be a paper they have submitted for a class at MCC to the instructor of record who is chairing the selection committee. The deadline for submission of application portfolios is two weeks before the start of each semester. Contact professor of note for more information.  
**Offered:** Fall, Spring
English as a Second Language

ESL* 163: ESL Structure I
4 Credits
(Formerly ENG106)
ESL* 163 is a content-based grammar course for the high beginning ESL student. Listening, speaking, reading, and writing skills will be the focus of this course. Intensive grammar practice will include various reading selections, listening, speaking, and writing activities.
Prerequisites: Placement via assessment test.
Offered: Fall, Spring

ESL* 164: ESL Structure II
4 Credits
(Formerly ENG 107)
ESL* 164 is a content-based grammar for the intermediate ESL student. Students will practice grammatical patterns as well as pronunciation, stress, and intonation. Sentence writing skills will supplement readings and journal writing.
Prerequisites: "C" or better in ESL* 163 or appropriate assessment test score or permission of instructor. ESL* 164 may be taken concurrently with ESL* 165; however, permission of the instructor is required.
Offered: Fall, Spring

ESL* 165: ESL Writing & Reading I
4 Credits
(Formerly ENG 116)
ESL* 165 is an intermediate to advanced writing and reading course for the high intermediate ESL student. Intensive writing of paragraphs will correspond to the in-depth exploration of various paragraph styles.
Prerequisites: "C" or better in ESL* 164 or appropriate assessment test score. ESL*165 may be taken concurrently with ESL* 165; however, permission of the instructor is required.
Offered: Fall, Spring

ESL* 166: ESL Writing & Reading II
4 Credits
(Formerly ENG 117)
ESL*166 is an advanced writing and reading course that emphasizes essay development and writing, critical response to readings, and reading comprehension skills.
Prerequisites: "C" or better in ESL* 165 or appropriate assessment test score or permission of the instructor.
Offered: Fall, Spring

ESL* 167: ESL Composition
4 Credits
(Formerly ENG 118)
ESL*167 is a content-based grammar for the advanced ESL student. Intensive grammar practice will include various reading selections, listening, speaking, and writing activities.
Prerequisites: "C" or better in ESL* 166 or appropriate assessment test score. ESL*167 may be taken concurrently with ESL* 167; however, permission of the instructor is required.
Offered: Fall, Spring

ESL* 168: ESL Composition II
4 Credits
(Formerly ENG 119)
ESL*168 is a content-based grammar for the advanced ESL student. Intensive grammar practice will include various reading selections, listening, speaking, and writing activities.
Prerequisites: "C" or better in ESL* 167 or appropriate assessment test score. ESL*168 may be taken concurrently with ESL* 168; however, permission of the instructor is required.
Offered: Fall, Spring

Environmental Science

EVS* 100: Introduction to Environmental Science
3 Credits
(Formerly EVSC 100)
An introduction to the problems of physical resources management and aspects of ecological concern in our natural environment, with emphasis on our demand for energy, the consumption of our natural resources, resource pollution, climate changes, land use planning, and waste management. Alternate sources of energy are explored.
Prerequisites: Eligibility for ENG* 101.
Offered: Fall, Spring, Summer
Fulfills General Education - Knowledge of Physical & Natural Sciences

EVS* 130: Sustainable Energy and the Environment
3 Credits
An introduction to the study of energy for electrical power generation and transportation, including sustainable and non-sustainable energy sources. This course investigates the relationship between population and consequences of increased energy demand, reliance on fossil fuels, global warming and other impacts. Work in this class includes an examination of energy types including fossil fuels and nuclear power, as well as sustainable and renewable energy sources such as wind, solar, hydropower, geothermal, biofuels, fuel cells, and others. Electrical conservation and efficiency will be investigated. The social, economic and environmental impacts and effectiveness of these alternatives will be evaluated.
Prerequisites: MAT* 095 or placement by mathematics assessment test.
Offered: Fall, Spring, Summer

EVS* 131: Sustainable Energy for Your Community
3 Credits
An investigation of sustainable energy for residences and businesses through the use of energy conservation and renewable energy options. LEED Building standards and certification will be investigated. Energy options including hydroelectric, wind power, biofuels, passive solar, solar thermal, photovoltaics, hydrogen fuel cells and others will be studied. Energy conservation and efficiency in the use of window, insulation, electrical equipment, lighting, heating, and cooling will be investigated. Research and evaluation of renewable energy’s economic and social feasibilities, environmental benefits and impacts, as well as state and national energy policies, will be addressed. Cost-benefit analyses will be completed for the implementation of various systems.
Prerequisites: MAT* 095 or placement by mathematics assessment test.
Offered: Fall, Spring, Summer

French

FRE* 111: Elementary French I
4 Credits
(Formerly FREN 101)
An introduction to spoken and written French and Francophone culture. Emphasis is on communication through development of skills in conversation, reading and writing based upon the principles of French grammar and pronunciation. No previous knowledge of French is required.
Prerequisites: None
Offered: Fall

FRE* 112: Elementary French II
4 Credits
(Formerly FREN 102)
French 112 is the second half of Elementary French. The course includes practice in conversation, reading and writing, and the study of French grammar and Francophone culture as an aid to communication.
Prerequisites: FRE* 111 or one year of high school French, and eligibility for ENG* 101, or permission of instructor.
Offered: Spring
Fulfills General Education - Knowledge of Humanities
FRE* 211: Intermediate French I
4 Credits
(Formerly FREN 201)
An intermediate level study of the principles of French grammar and basic vocabulary as a means of developing skills of conversation, reading and writing. The course includes the study of Francophone culture. Students may choose the honors option for this course.
Prerequisites: FRE* 111 and FRE* 112, FRE* 108, or two years of high school French; and eligibility for ENG* 101, or permission of instructor.
Offered: Fall
Fulfills General Education - Knowledge of Humanities

FRE* 212: Intermediate French II
4 Credits
(Formerly FREN 202)
This course is the second half of Intermediate French. The course will work to continue to develop skills in listening, speaking, reading and writing, including reading from selections on Francophone culture. Students may choose the honors option for this course.
Prerequisites: FRE* 211: Intermediate French I or three years of high school French, and eligibility for ENG* 101, or permission of instructor.
Offered: Spring
Fulfills General Education - Knowledge of Humanities

Geography

GEO* 101: Introduction to Geography
3 Credits
(Formerly GEOG 101)
This course introduces some of the many topics geographers examine to explain the relationship between people and place. Topics include the physical earth, i.e. how mountains and lakes form, cultural patterns such as how languages in neighboring countries are related, population analysis, like human migration trends, and economic analysis including growth and decline of regions. Geographic factors that underlie current political, social and economic problems will also be explored.
Prerequisites: Eligibility for ENG* 101.
Offered: Fall, Spring, Summer
Fulfills General Education - Knowledge of Social Sciences

GEO* 111: World Regional Geography
3 Credits
(Formerly GEOG 111)
This course provides the student with a survey of the lands, peoples, and places in the world's major cultural regions. Students explore the interaction between the physical environment and cultural, political and economic conditions in regions such as Asia, Africa, Middle and South America and Europe. This course provides a background for understanding world events.
Prerequisites: Eligibility for ENG* 101.
Offered: Fall, Spring, Summer
Fulfills General Education - Knowledge of Social Sciences

GEO* 201: Urban Geography
3 Credits
(Formerly GEOG 201)
Introduction to the history, nature and function of urban settlements will be considered. Particular stress on those problems pertinent to the dynamics of the central city and surrounding suburbs will be examined using census data, aerial photos, satellite imagery and GIS Geographic Information Systems. Study of the development patterns and associated problems within the state will be included.
Prerequisites: Eligibility for ENG* 101.
Offered: Spring

GEO* 203: This Fragile Planet: Toward an Environmentally Responsible World
3 Credits
This course introduces the student to the global environmental dilemma facing the world today. Its aim is to enhance awareness and understanding of the state of our natural environment, the rise of environmental consciousness in this country and abroad, and some of the major initiatives underway to secure a path toward a sustainable accommodation and development of the world's growing population. This course draws upon the disciplines of geography, history, political science, and economics, stressing their interrelatedness when dealing with ecological issues. Alternative pathways to remedial action will be discussed, and important policy documents analyzed. Case studies of environmental action will be introduced.
Prerequisites: Eligibility for ENG* 101.
Offered: Fall

GEO* 204: Geography and Tourism Development
3 Credits
The course introduces the tourism field, enumerates the goals of the profession and provides a guideline for building individual and collective successes within it. Need/want satisfiers and motivators associated with travel, intrinsic and extrinsic influences of the buying process, geography, travel modes, accommodations, support industries, resorts, tourism planning, regulation, development, and marketing will be covered. The comprehensive view outline in this course brings to the forefront the immense proportions of world tourism
Prerequisites: Eligibility for ENG* 101.
Offered: Spring

GEO* 246: Introduction to Geographic Information Systems GIS
3 Credits
(Formerly GEOG 246)
Students will learn the basic principles of Geographic Information Systems and explore and evaluate the various data models and structures used in the input management, analysis and output of geographic data. We will develop hands-on experience through use of a microcomputer based vector system ArcView GIS, and examine how the nature and character of spatial data can be used in studies of natural and socio-economic environments.
Prerequisites: Eligibility for ENG* 101.
Offered: Spring
Cross listed as: CSA* 246
Geology

GLG* 121: Introduction to Physical Geology
4 Credits
(Formerly GEOL 110)
An introduction to the composition and structure of the Earth’s crust, and the study of land forms and dynamic geological processes. Topics include minerals, rocks, fossils, glaciers and climate change, earthquakes, volcanoes, plate tectonics and mountain building. Students will investigate the geologic history of Connecticut. Field trips will be included as a component of the laboratory. Class: 3 hours per week. Laboratory: 3 hours per week.
Prerequisites: Eligibility for ENG* 101.
Offered: Fall, Spring
Fulfills General Education - Knowledge of Physical & Natural Sciences

Gerontology

GERN 161: Aging America: Issues and Dilemmas
3 Credits
This course will introduce a multidisciplinary approach to the study of aging. Students will learn how to separate the facts from the stereotypes about aging and to examine basic sociological, psychological and physiological factors that affect the aging process.
Prerequisites: None
Offered: Spring

Graphic Design

GRA* 151: Graphic Design I
3 Credits
(Formerly FA 205)
An introduction to communication design and basic studio skills with an emphasis on developing the ability to convert creative concepts into a visual medium. The course covers design layout, typography, the development of graphic identity, portfolio development and mechanical preparation. Studio: 6 hours per week.
Prerequisites: None
Offered: Fall, Spring
Fulfills General Education - Knowledge of The Arts

GRA* 156: Graphic Design History, Theory and Practice
3 Credits
Students will study Graphic Design as a component of visual language within historical context. Visual literacy, perception, type design and design practice will be examined within a survey of historical and cultural movements, noting the special relationship of design and art. From Pre-historic cave imagery to the current digital age, the achievements that laid the groundwork for the contemporary practices of graphic design will be looked at. Through online modules, video, discussion, field trips and research, students will be introduced to a historical perspective of visual communication and design.
Prerequisites: Eligibility for ENG* 101
Offered: Occasionally
Fulfills General Education - Knowledge of The Arts

GRA* 221: Illustration I
3 Credits
(Formerly FA 201)
A studio course designed to develop fundamental graphic rendering skills. The course explores a variety of materials and media through the creation of images. The emphasis is on the translation of concepts into visuals. Studio: 6 hours per week.
Prerequisites: Completion of ART* 111
Offered: Fall, Spring

GRA* 222: Illustration II
3 Credits
(Formerly FA 202)
These studio courses expand the skills and techniques of translating concepts into visual form that were learned in GRA* 221, with a greater emphasis on project development and professional presentation. Studio: 6 hours per week.
Prerequisites: GRA* 221.
Offered: Fall, Spring

GRA* 223: Illustration III
3 Credits
(Formerly FA 203)
These studio courses expand the skills and techniques of translating concepts into visual form that were learned in GRA* 221, with a greater emphasis on project development and professional presentation. Studio: 6 hours per week.
Prerequisites: GRA* 222.
Offered: Fall, Spring

GRA* 224: Illustration IV
3 Credits
(Formerly FA 204)
These studio courses expand the skills and techniques of translating concepts into visual form that were learned in GRA* 221, with a greater emphasis on project development and professional presentation. Studio: 6 hours per week.
Prerequisites: GRA* 223.
Offered: Fall, Spring

GRA* 252: Graphic Design II
3 Credits
(Formerly FA 206)
Subsequent semesters of graphic design build on fundamentals covered in GRA* 151 but place a greater emphasis on professional design presentation through the development of more complex projects. Studio: 6 hours per week.
Prerequisites: GRA* 151.
Offered: Fall, Spring

GRA* 253: Graphic Design III
3 Credits
(Formerly FA 207)
Subsequent semesters of graphic design build on fundamentals covered in GRA* 151 but place a greater emphasis on professional design presentation through the development of more complex projects. Studio: 6 hours per week.
Prerequisites: GRA* 252.
Offered: Fall, Spring
GRA* 254: Graphic Design IV
3 Credits
(Formerly FA 208)
Subsequent semesters of graphic design build on fundamentals covered in GRA* 151 but place a greater emphasis on professional design presentation through the development of more complex projects. Studio: 6 hours per week.
Prerequisites: GRA* 253
Offered: Fall, Spring

Health

HLT* 090: Allied Health Study Skills
0 Credits
(Formerly AH 090)
A pass/fail study skills course for students planning to enroll, or who are currently enrolled, in an allied health program. Learn how to effectively study using various learning strategies. Required prior to beginning Allied Health Program courses. Exception granted for those who have a grade point average of 3.2 or better, or have taken ENG* 104 or equivalent study skills course. Class: 15 hours.
Prerequisites: None
Offered: Fall

HLT* 103: Investigations in Health Careers
3 Credits
This course is designed to assist students in meeting the expectations of a health care curriculum and career. The students will become familiar with the rigors of higher education and the specific skills needed to maximize their opportunity for academic and clinical success. The course will include a comprehensive overview of the duties and responsibilities associated with clinical competency. Interdisciplinary learning strategies, correlating clinical and didactic education, life management skills, work ethics, and critical thinking skills necessary for all health providers will be emphasized.
Prerequisites: Eligibility for ENG* 101, or placement by assessment test.
Offered: Spring

HLT* 151: Health and Wellness Promotion
3 Credits
(Formerly SSC 110)
A survey of contemporary health concepts and concerns that affect life style. Students will learn to apply these concepts by assessing their own level of fitness. Topics include: disease in the United States, health models, fitness, nutrition, stress, drugs, alcohol, tobacco, alternative medicine and the concept of self-care.
Prerequisites: Completion of ENG* 096
Offered: Fall, Spring

HLT* 295: Allied Health Coop Work Experience
3 Credits
(Formerly AH 270)
This course provides students the opportunity to apply classroom theory in an actual work setting. Students may be placed in a variety of work settings as related to their program of study including hospitals, nursing homes, and laboratories.
Prerequisites: 15 completed credit hours in Allied Health programs.
Offered: Fall, Spring

HLT* 298: Medical Care in the United Kingdom
3 Credits
The goal of the study abroad course is to have students explore the healthcare system of Great Britain and compare it to the United States. Students will learn first-hand the differences in access, treatment options, and modalities of health care between two distinct health care systems. Students will identify issues arising from comparing and contrasting these health care systems. Students will be immersed into the cultural aspects of the British health care system and identify barriers to health care experienced by the British population. Students will be exposed to public health, acute health, and community health delivery, and will interact with British health care professionals in their health care settings.
Prerequisites: Eligibility for ENG* 101. Also, students must sign up for the Health Care & Nursing in London Study abroad trip to be eligible for this course.
Offered: Occasionally

Health, Physical Education

HPE* 102: Human Performance and Fitness
3 Credits
(Formerly HPE* 102)
This course is designed to provide the background information concerning exercise prescription, development and follow through. Students will be trained in exercise testing, theory and ethics, and practical exercise programs for the beginning exerciser. They will receive a practical understanding of all aspects of fitness center operations from both a fitness specialist and management point of view.
Prerequisites: ENG* 066
Offered: Fall, Spring

HPE* 104: Adventure Based Dynamics
1 Credits
(Formerly HPE* 158)
This course is designed to provide students with the knowledge, skills, and ability to: increase mutual support within diverse groups; develop leadership skills; increase skills in cooperative learning; develop team building skills; improve agility and interactive skills through hands-on experiences. Students will participate in problem solving situations and exercises to assist in the development of these skills.
Prerequisites: None
Offered: Fall, Spring

HPE* 107: Functional Fitness
1 Credits
This course focuses on increasing students’ present fitness levels. Participation in this course will lead to increased energy, mental clarity, and health as a part of one’s lifestyle. It will also teach students to recognize proper form and technique. This course may also provide opportunities for students to increase their cardiovascular conditioning, flexibility and/or develop strength and muscular endurance. Students will develop a basic understanding of the components of group exercise and will acquire the skills to recognize a safe and effective exercise class. Students will have an opportunity to observe and critique a certified instructor to gain a greater understanding of the role of that individual in successful group exercise.
Prerequisites: None
Offered: Fall, Spring
HPE* 110: Aerobics
1 Credits
(Formerly HPE 114)
Prerequisites: None
Offered: Fall, Spring

HPE* 116: Weight Training
1 Credits
(Formerly HPE 115)
Prerequisites: None
Offered: Fall, Spring

HPE* 119: Fitness Walking
1 Credits
(Formerly HPE 116)
Prerequisites: None
Offered: Fall, Spring

HPE* 126: Pilates
1 Credits
This course focuses on increasing students’ present fitness levels through Pilates. Participation in this course may lead to increased energy, mental clarity, and health as a part of one’s lifestyle. It will also teach students to recognize proper form and technique. This course may also provide opportunities for students to increase their flexibility and/or develop strength and muscular endurance. Students will develop a basic understanding of the components of group exercise and will acquire the skills to recognize a safe and effective exercise class. Students will have an opportunity to observe and critique a certified exercise instructor to gain a greater understanding of the role of that individual in successful group exercise.
Prerequisites: None
Offered: Fall, Spring

HPE* 147: Self Defense
1 Credits
Prerequisites: None
Offered: Fall, Spring

HPE* 160: Sport Drills
1 Credits
This course focuses on increasing students’ present fitness levels through Sport Drills. Participation in this course may lead to increased energy, mental clarity, and health as a part of one’s lifestyle. It will also teach students to recognize proper form and technique. This course may also provide opportunities for students to increase their cardiovascular endurance, flexibility and/or develop strength and muscular endurance. Students will develop a basic understanding of the components of group exercise and will acquire the skills to recognize a safe and effective exercise class. Students will have an opportunity to observe and critique a certified exercise instructor to gain a greater understanding of the role of that individual in successful group exercise.
Prerequisites: None
Offered: Fall, Spring

HPE* 164: Bowling
1 Credits
(Formerly HPE 132)
Prerequisites: None
Offered: Fall, Spring

HPE* 175: Kickboxing
1 Credits
This course focuses on increasing students’ present fitness levels through kickboxing. It will teach students to recognize proper form and technique of various kicks, punches and combination drills. This course may also provide opportunities for students to increase their flexibility and/or develop strength and muscular endurance. Students will develop a basic understanding of the components of group exercise. Students will have an opportunity to observe and critique a certified group exercise instructor to gain a greater understanding of the role of that individual in successful group exercise.
Prerequisites: None
Offered: Occasionally

HPE* 191: Basketball
1 Credits
Prerequisites: None
Offered: Fall, Spring

HPE* 192: Softball
1 Credits
(Formerly HPE 130)
Prerequisites: None
Offered: Fall, Spring

HPE* 193: Soccer
1 Credits
(Formerly HPE 131)
Prerequisites: None
Offered: Fall, Spring

HPE* 210: Sports Nutrition
3 Credits
This course explores concepts related to nutrition and conditioning for physically active individuals. The nutrition component of the course will include such topics as: micro and macro nutrients, dietary planning pre/post competition meals/appropriate caloric intake, body composition and endurance/strength training, as well as designing individualized fitness programs.
Prerequisites: BIO* 111
Offered: Fall, Spring

HPE* 211: Fitness Specialist Certification
1 Credits
This class will prepare students, using a variety of teaching techniques, for the Personal Trainer Certificate through the American College of Sports Medicine ACSM. Each student will develop writing proficiency for appropriate exercise recommendations, and demonstrate safe and effective methods of exercise, and motivating individuals to begin and to continue with their healthy behaviors.
Prerequisites: Completion of HPE* 210, HPE* 240 and HPE* 242
Offered: Fall, Spring
HPE* 217: Principles & practices of Coaching
3 Credits
(Formerly HPE 141)
An introduction to the basic principles and practices required in dealing with the arrangement, administration and organization of athletic programs. Emphasis is on coaching athletic teams: legal responsibilities, historical perspectives of sport, ethics of coaching, philosophy of coaching, sport psychology, sport pedagogy, sports medicine and safety. This course meets the State of Connecticut coaching certification requirement.
Prerequisites: None
Offered: Fall, Spring

HPE* 240: Principles of Fitness
3 Credits
(Formerly HPE 120)
A survey of sport/exercise/fitness physiology and its application to sport performance and fitness. Emphasis will be placed on the study of physiological changes associated with the human body as you begin training for various sports. This will include the cardiovascular system, respiratory system, endocrine system, neuromuscular physiology, bone health, and essential nutrient intake.
Prerequisites: BIO* 115 and HPE* 102
Offered: Fall, Spring

HPE* 242: Introduction to Athletic Training
3 Credits
(Formerly HPE 140)
An introduction to the basic concepts and techniques in the prevention, diagnosis, treatment and rehabilitation of athletic injuries. Practical applications are examined as the basic concepts of training, conditioning, diet and nutritional needs are presented. Extensive experience in taping and on field care is an important aspect of the course.
Prerequisites: BIO* 115 and HPE* 102
Offered: Fall, Spring

HPE* 252: Introduction to Physical Education
3 Credits
(Formerly HPE 201)
An introduction to the professional aspects of physical education. Includes the history, philosophy and foundation of the role of physical education in society today. Topics in the course will involve the philosophical and scientific foundations of physical education and an examination of literature, scientific inquiry, exercise prescription, and career options available.
Prerequisites: BIO* 115 and HPE* 102
Offered: Fall, Spring

HPE* 257: Adapted Physical Education
3 Credits
(Formerly HPE 202)
An introduction to the instructional adaptations necessary to meet the physical activity needs of students with disabilities. Individual assessments, educational planning, service delivery and advocacy for special needs, are content areas stressed in this course. It draws on the fields of adapted physical education, special education, psychology, medicine, occupational therapy, physical therapy, and therapeutic recreational service to provide a complete, comprehensive resource.
Prerequisites: HPE* 252 or permission of the instructor
Offered: Fall, Spring

HPE* 261: Yoga
1 Credits
This course focuses on increasing students’ present fitness levels. Participation in this course will lead to increased energy, mental clarity, and health as a part of one's lifestyle. It will also teach students to recognize proper form and technique. This course may also provide opportunities for students to increase their cardiovascular conditioning, flexibility and/or develop strength and muscular endurance. Students will develop a basic understanding of the components of group exercise and will acquire the skills to recognize a safe and effective exercise class. Students will have an opportunity to observe and critique a certified instructor to gain a greater understanding of the role of that individual in successful group exercise.
Prerequisites: None
Offered: Fall, Spring

HPE* 269: Dance Concepts
1 Credits
This course focuses on increasing students’ present fitness levels through various forms of dance. It will teach students to recognize proper form and technique of various dance moves, as well as various musical rhythms and styles. This course may also provide opportunities for students to increase their flexibility and/or develop strength and muscular endurance. Students will develop a basic understanding of the components of group exercise. Students will have an opportunity to observe and critique a certified group exercise instructor to gain a greater understanding of the role of that individual in successful group exercise.
Prerequisites: None
Offered: Occasionally

HPE* 274: Zumba
1 Credits
This course focuses on increasing students’ present fitness levels. Participation in this course will lead to increased energy, mental clarity, and health as a part of one’s lifestyle. It will also teach students to recognize proper form and technique. This course may also provide opportunities for students to increase their cardiovascular conditioning, flexibility and/or develop strength and muscular endurance. Students will develop a basic understanding of the components of group exercise and will acquire the skills to recognize a safe and effective exercise class. Students will have an opportunity to observe and critique a certified instructor to gain a greater understanding of the role of that individual in successful group exercise.
Prerequisites: None
Offered: Fall, Spring

History

HIS* 101: Western Civilization I
3 Credits
(Formerly HIST 101)
An examination of major themes in the development of Western Civilization from the earliest historical beginnings. Topics include: Ancient Middle East, Greece and Rome, Medieval and Renaissance Europe.
Prerequisites: Eligibility for ENG* 101
Offered: Fall, Spring, Summer
Fulfills General Education - Knowledge of Social Sciences
HIS* 102: Western Civilization II
3 Credits
(Formerly HIST 102)
This course examines the history of Western Civilization from the Protestant Reformation to the Cold War. HIS* 101 and HIS* 102 need not be taken in sequence.
**Prerequisites:** Eligibility for ENG* 101.
**Offered:** Fall, Spring
Fulfills General Education - Knowledge of Social Sciences

HIS* 122: World Civilization II
3 Credits
(Formerly HIST 122)
This course studies the major trends and conflicts throughout the world after 1500 to the present, focusing on the impact of and reaction to the Western world through slavery, imperialism, the two world wars, and the Cold War.
**Prerequisites:** Eligibility for ENG* 101
**Offered:** Fall, Spring
Fulfills General Education - Knowledge of Social Sciences

HIS* 202: United States History II
3 Credits
(Formerly HIST 202)
The course represents a social, political, and economic survey of the United States from 1877 to the present through an analysis of the growth of transportation, industrialization, urbanization, technology, and imperialism and an analysis of their effects in shaping American thinking and society. The discussion will also feature women's suffrage, civil rights, and ethnic and minority issues.
**Prerequisites:** Eligibility for ENG* 101
**Offered:** Occasionally
Fulfills General Education - Knowledge of Social Sciences

HIS* 203: History of Religions in America
3 Credits
This course covers the role of religion in American history from the sixteenth century up until the present day and enables students to appreciate the complexity of a religiously plural nation. The influence of Native American religions and spiritual traditions, African religions and spiritual traditions, Christianity, Judaism, Islam, Hinduism, and Buddhism as well as other belief systems will be covered along with topics such as struggles for religious freedom, religion and in American political life, religion and the immigrant experience, religion and civil rights movements, and contemporary trends in American religion.
**Prerequisites:** Eligibility for ENG* 101
**Offered:** Occasionally
HIS* 214: Racial and Ethnic History of the United States
3 Credits
(Formerly HIST 220)
This course will examine immigration to this country from Europe, Africa, Asia and Latin America. It will explore whence we came and why, and how we adapted to life in the United States while retaining emotional attachments to our homelands. Field trips and slide lectures complement class discussions and readings.
Prerequisites: Eligibility for ENG* 101.
Offered: Occasionally

HIS* 215: The History of Women in the US
3 Credits
This course focuses on American women from pre-contact period to the late 20th century. Special emphasis will be given to the effects of race, class and ethnic origins on the history of particular groups of American women including slave society, women's rights movement, labor organizations, and social justice movements.
Prerequisites: Eligibility for ENG* 101.
Offered: Occasionally

HIS* 216: African American History I
3 Credits
(Formerly HIST 230)
In the Americas with an emphasis on British North America and the United States before 1877. Students will explore a variety of issues such as the causes of the African slave trade, the impact of slavery on both whites and blacks, the African influence on American culture, the slaves' contribution to the growth of the American economy and industrialization, the rhetoric and reality of freedom and slavery, and the cause and legacy of the Civil War.
Prerequisites: Eligibility for ENG* 101.
Offered: Occasionally

HIS* 217: African American History II
3 Credits
This course focuses on the experience of African Americans since 1877 within the broad context of American history. Students will explore the rise of the Jim Crow laws and sharecropping system in the South and the impact of racial segregation at the national level in late nineteenth century, examine the growth and achievement of the civil rights movement, and assess the evolution in racial relationship in American society in the twentieth century and beyond.
Prerequisites: Eligibility for ENG* 101.
Offered: Occasionally

HIS* 219: An American Revolution
3 Credits
Unlike the introductory U.S. history courses that provide a general survey of the settlement, development and growth of the American colonies and subsequent republic, this course focuses specifically on the American Revolution. It explores the events, issues, and players from a fresh perspective during the Independence period. This course's primary focus is on the ideas and actions of the ordinary people and the diverse groups such as the farmers, slaves, women, and Continental soldiers. It will examine how these people reacted to the dominant ideas, what actions they participated in pursuing freedom and liberty and how the rhetoric and reality converged or collided, and ultimately what unifying forces prevailed to create the new republic.
Prerequisites: Successful completion of HIS* 201
Offered: Occasionally

HIS* 224: The American Indian
3 Credits
(Formerly HIST 224)
A Survey of the History of American Indians. The course offers students a balanced perspective of Native American people from an ethnohistory point of view. By studying primary sources, including the voices of native people, formal historical texts and the popular press, the course will offer a new look at the complex story of the original residents of the North American territory that we now call the United States.
Prerequisites: Eligibility for ENG* 101.
Offered: Occasionally

HIS* 227: The Vietnam War
3 Credits
(Formerly HIST 227)
This course will analyze the history of America's role in Vietnam from 1945 to 1975. To understand the Vietnam War, however, broad themes must be assessed such as the history and culture of Vietnam, the rise of the Third World, and the impact of the Cold War on U.S. Vietnam policy. Other important issues that will be discussed include the importance of domestic affairs on the Vietnam War, the U.S. Military's role in the war, and the world-view of U.S. Presidents as diverse as Dwight Eisenhower and Lyndon Johnson. Because the war has produced a long-lasting legacy on American culture, the post-Vietnam War years will also be examined in detail. How the last three decades of politics, music, film, and literature have been influenced by the Vietnam War will be subject of in-depth analysis.
Prerequisites: Eligibility for ENG* 101.
Offered: Occasionally

HIS* 228: Colonial New England
3 Credits
A Survey of colonial New England from the 1500s to the 1770s. Topics will include, but not limited to, an examination of the land and people prior to British settlements, the motivations of English migration to the region, the ecological impacts under the English, the social and economic developments, the role of religion, the church-and-state relations, local governments, the rise of local opposition against British rule, the role of New England in the Revolutionary movement.
Prerequisites: Successful completion of HIS* 201
Offered: Occasionally

HIS* 232: A Survey of Russian History
3 Credits
A Survey of Russian History examines key elements in Russia’s history beginning with its origins and concluding with the death of Joseph Stalin. Among the topics included: Mongol influence, the issue of serfdom, the legacy of Peter the Great, industrialization, Russia at war, the Revolution of 1917 and Civil War, creation of the Soviet Union, Stalin and Stalinism.
Prerequisites: Eligibility for ENG* 101.
Offered: Occasionally

HIS* 242: Modern Ireland
3 Credits
(Formerly HIST 222)
Study focuses on the political, social, cultural and economic development of Ireland after 1600. Major themes discussed include: Ireland’s relationship with Britain, the role of the Catholic Church, emigration, and the creation of the divided modern Irish state.
Prerequisites: Eligibility for ENG* 101.
Offered: Occasionally
HIS* 244: Europe in the 20th Century
3 Credits
(Formerly HIST 242)
An introductory survey of the diplomatic, political, social and intellectual history of Europe from 1914 to present.
Prerequisites: Eligibility for ENG* 101.
Offered: Spring

HIS* 245: The World at War
3 Credits
This course will examine the aftermath of World War I and the coming of World War II. Special emphasis is given to the role of the Versailles Treaty and its connection to the failure of democracy and the rise of totalitarianism in pre-war Europe. This course also examines the global dimensions of World War II and the emergence of the Soviet Union and United States as superpowers. Students will be asked to study traditional historical texts as well as selections from the literature and art of the period.
Prerequisites: Eligibility for ENG* 101.
Offered: Occasionally

HIS* 262: Modern Latin America
3 Credits
This course is a survey of Latin American history from the early-nineteenth century to the present day. It is designed to introduce students to significant issues and trends in the region, broadly defined as lands in the western hemisphere south of the Rio Grande, including the Caribbean islands. The course is organized chronologically and will emphasize three major themes. It will begin with the end of the colonial period by examining the process of state formation as the region emerged from three centuries of European colonialism. It also will examine the impact of U.S. influence on Latin America, particularly from the late-nineteenth century to the present. The third major theme the course will address is the phenomenon and consequences of revolution during the twentieth century.
Prerequisites: Eligibility for ENG* 101
Offered: Occasionally

HIS* 272: Modern China
3 Credits
(Formerly HIST 281)
The impact of Western encroachment on China in the 19th century, the attempts of China to deal with the West and with problems arising from contact with the West, the Revolution of 1911 and the period of Nationalist control, the conflict with Japan, the growth and victory of the Communist Party, and the internal changes wrought by the People’s Republic of China since 1949 will be studied.
Prerequisites: Eligibility for ENG* 101
Offered: Occasionally

HIS* 280: Modern Africa
3 Credits
(Formerly HIST 280)
Modern Africa focuses on the history of the continent after 1500 through the study of African states and societies on the eve of European contact, the impact of the Trans-Atlantic slave trade, the Scramble for Africa, de-colonization and the creation of contemporary African states.
Prerequisites: Eligibility for ENG* 101.
Offered: Occasionally

HIS* 284: South Africa
3 Credits
(Formerly HIST 284)
This course will analyze the history of South Africa from pre-Colonial times through the end of Apartheid and the establishment of majority rule in 1994. South Africa’s history offers a unique look at European colonialism in Africa and the implementation of legislative racism from the 1940s on. Analyzing South Africa’s mineral revolution of the mid-nineteenth century allows the studying of labor migration and its impact on traditional African societies, their traditions, norms, and mores.
Prerequisites: Eligibility for ENG* 101.
Offered: Occasionally

Honors

HON* 202: Honors Capstone
1 Credits
In addition to completing four Honors Options or Honors Courses, students in MCC’s Honors College must complete an independent study, 1-credit capstone project conducted with a professor in their major area. This project may be completed as part of an Honors Option in a preexisting class, or it can be designed and completed as an independent study outside of existing curriculum. Important note: Students must earn a grade of B or better in their capstone project in order to graduate with Honors.
Prerequisites: Enrollment within the Honors College and completion of at least two Honors Options or Honors Courses with a grade of B or better
Offered: Occasionally

Hospitality Management

HSP* 100: Introduction to the Hospitality Industry
3 Credits
A survey course encompassing three major areas of the Hospitality Industry: the foodservice industry including restaurants, institutions, clubs, and schools; the hotel-motel industry, including travel and tourism; and hospitality management theories, styles, and laws. Career opportunities are emphasized in each area.
Prerequisites: Eligibility for ENG* 101 or ENG* 093 taken concurrently.
Offered: Fall, Spring

HSP* 101: Principles of Food Preparation
3 Credits
(Formerly HOSP 101)
Introduces techniques and procedures required to prepare basic foods in a hands-on kitchen laboratory environment. Emphasis is placed on use of equipment, identification of a standard quality product, and the importance of methods by which to develop sanitary working habits. Class: 1 hour per week. Laboratory: 3 1/2 hours per week.
Prerequisites: Eligibility for MAT* 109 or MAT* 095 taken concurrently, and HSP* 109 taken concurrently
Offered: Fall, Spring
HSP* 103: Principles of Baking I  
3 Credits  
The course presents an introduction to baking and pastry with intensive hands-on laboratory training in a quantity food environment. The course competencies concentrate on the production and quality control of baked goods that are used in hotels, restaurants, resorts and institutions. Laboratory classes emphasize basic ingredients and production techniques for breads, rolls, folded doughs, batters, basic cakes, pies and creams.  
**Prerequisites:** Eligibility for MAT* 109 or MAT* 095 taken concurrently, and HSP* 109 taken concurrently  
**Offered:** Fall, Spring

HSP* 107: Icing Artistry I  
3 Credits  
This class introduces students to the fundamental and necessary skills for commercial cake decorating. Students learn the basic techniques in butter cream frosting, royal icing, borders and decorations. Students will design a multi-tiered cake. Class: 1 hour per week. Laboratory: 3.5 hours per week.  
**Prerequisites:** Eligibility for MAT* 109 or concurrently enrolled in MAT* 095.  
**Offered:** Fall, Spring

HSP* 108: Sanitation and Safety  
3 Credits  
(Formerly HOSP 112)  
A study of sanitation and safety problems encountered in the foodservice industry, and controls and solutions to those problems. Moral, legal and economic aspects of food protection problems and solutions are discussed. The National Restaurant Association’s Applied Foodservice Sanitation Certification Exam will be offered during this course.  
**Prerequisites:** Eligibility for ENG* 101, or ENG* 093 taken concurrently  
**Offered:** Fall, Spring

HSP* 109: Sanitation Certification  
1 Credits  
This course introduces public health problems that relate to the hospitality industry. Topics include disease transmission through improper food handling, flow of food through the operation and safety regulations. The final exam for this course includes the National Food Safety Certification by the NRA.  
**Prerequisites:** Eligibility for ENG* 101, or ENG* 093 taken concurrently  
**Offered:** Fall, Spring

HSP* 112: Advanced Food Preparation  
4 Credits  
(Formerly HOSP 102)  
Full-course American style menus are prepared in quantity. Students experience various responsibilities in the dining room and kitchen areas. Emphasis is on preparation of recipes, purchase orders, requisitions and income and expense summaries for each menu and dining room service. Class: 1 hour per week. Laboratory: 5 hours and 30 minutes per week.  
**Prerequisites:** Completion HSP* 101, HSP* 109 and HSP* 135 with a C- or higher.  
**Offered:** Fall, Spring

HSP* 115: Food Store Systems  
3 Credits  
(Formerly HOSP 125)  
An introduction to the food store business with a focus on structure, department identification and function, department interdependence, personnel, the role of management, marketing and merchandising, and future direction.  
**Prerequisites:** Eligibility for ENG* 101 or concurrently enrolled in ENG* 093.  
**Offered:** Occasionally

HSP* 117: Beverage Management  
3 Credits  
A study of the history, manufacture and sale of wines, brewed beverage and distilled spirits. Special emphasis is given to responsible use of these products through Training for Intervention Procedures by Servers of Alcohol TIPS, a nationally recognized certification program. Legal and social issues involving beverage alcohol are also explored.  
**Prerequisites:** Eligibility for ENG* 101 or ENG* 093 taken concurrently and C- or better in HSP* 100.  
**Offered:** Fall

HSP* 135: Service Management  
3 Credits  
This course is designed to introduce the students to the basic principles of food and beverage management with focus on front-of-the-house training and development. Topics include dining room/style organization, customer relations, staff challenges, serving beverages, and modern management techniques. Students will gain experiences in basic set-up service skills, dining etiquette training, and include tableside preparation. Sanitary practice and compliance with laws and ordinances of the Department of Health are enforced.  
**Prerequisites:** Eligibility for ENG* 101 or taking ENG* 093.  
**Offered:** Fall

HSP* 201: International Foods  
4 Credits  
(Formerly HOSP 217)  
Full-course, ethnic menus are planned, prepared and served by student teams. Emphasis is on organization, showmanship and supervision. Students will provide both oral and written reports on the menu presentations including food and labor costs, product and production analysis, and menu presentation and delivery. Class: 1 hour per week. Laboratory: 5 1/2 hours per week.  
**Prerequisites:** C- or better in HSP* 112  
**Offered:** Fall, Spring

HSP* 207: Icing Artistry II  
3 Credits  
An advanced course in methods of cake decorating. Students will learn to work in advanced sugar and decorating mediums, demonstrating molding, embossing and draping. Students will design and create a wedding cake.  
**Prerequisites:** HSP*105 no longer **Offered** or C- or better in HSP* 107  
**Offered:** Occasionally
HSP* 210: Buffet Catering
4 Credits
Students experience artistic production such as ice carvings, platter presentation and garnishing. Emphasis is placed on buffet set-up and a variety of dining room service styles including tableside, French, and Russian service. The management of a successful catering business is studied. Students participate in community service catered functions.
Class: 1 hour per week. Laboratory: 5.5 hours per week.
Prerequisites: C- or better in HSP* 112.
Offered: Fall, Spring

HSP* 211: Food and Beverage Cost Control
3 Credits
(Formerly HOSP 203)
A theoretical and practical approach to the various aspects of food and beverage cost control and purchasing. Includes a computer application model for foodservice management programs based on the Costguard Purchasing software system. Note: Successful completion of HSP* 101 or HSP* 103.
Offered: Fall

HSP* 215: Principles of Baking II
3 Credits
This course focuses on the preparation of advanced pastries and classical desserts. Included are the preparation of petit fours, dessert sauces, French dough’s, ice cream, sugar work, chocolate work, European tarts, tortes, and plate decoration ice cream. Laboratory classes are complemented with baking and pastry arts related studies that introduce management operations and procedures in the baking profession.
Prerequisites: Completion of HSP* 103 and HSP* 109 with a C- or higher
Offered: Fall, Spring

HSP* 216: Artisan Bread
3 Credits
This course focuses on the preparation and production of artisan breads. Students in this class will work as a bakery team and commercially produce breads that are found in many specialty bakeries. Students will learn how to make breads using pre-ferments, various types of yeast, enriched dough, and naturally leavened starters, while maintaining a professional work environment. There will be an emphasis on the science of bread production as well as the hand skills necessary for producing classic artisan breads. This class meets for half of the semester. Students should be prepared to work in the kitchen starting on the first day. Class meets 2 hours per week and the laboratory is 7 hours per week.
Prerequisites: Completion of HSP* 103 with a ‘C’ or better
Offered: Fall, Spring

HSP* 225: Principles of Baking III
3 Credits
(Formerly HSP* 235: Advanced Pastry Arts)
This is a lecture and laboratory course on the principles, techniques, and materials used in upper level bake shop and competition piece production. Units covered include sculpture of chocolate, sugar, pastillage, marzipan, salt dough, and dessert presentation.
Prerequisites: C- or better in HSP* 215
Offered: Occasionally

HSP* 230: Sustainable Food Service Management
3 Credits
Food impacts all areas of our lives including the environment, local economies, global economy, social well-being, and human health. This course is designed to help students understand the complex issues surrounding food that ultimately impact sustainability. Topics include understanding sustainable food, local and seasonal production, socially just and unjust means of producing foods, processed foods and food choices.
Prerequisites: Successful completion of HSP* 100.
Offered: Fall

HSP* 233: Hospitality Human Resource Management
3 Credits
(Formerly HOSP 214)
A course in managing people, including recruiting, training, motivating and supervising. Forecasting, staff planning and payroll controls are included. Emphasis is on the supervisor from the standpoint of his or her effectiveness in motivation, communication and productivity.
Prerequisites: C- or better in HSP* 100
Offered: Fall

HSP* 237: Hospitality Marketing
3 Credits
(Formerly HOSP 231)
A course to familiarize students with hospitality sales practices used in restaurants, hotels and clubs, from market analysis to actual sales activity. The course includes guest lectures, term projects, and voluntary membership in the Hotel Sales Management Association.
Prerequisites: C- or better in HSP* 100.
Offered: Fall

HSP* 238: Relationship Marketing
3 Credits
(Formerly HOSP 260)
The purpose of this course is to give the student a solid foundation in customer service systems. Students will learn concepts and skills necessary to perform effectively in a customer driven service economy. This course will focus on the concepts and applications of communications, strategic planning, teamwork, coaching, and vision building, as well as an introduction to Total Quality Management. This course emphasizes the importance of development and retention of repeat customers and business buyers.
Prerequisites: Eligibility for ENG* 101.
Offered: Spring
Cross listed as: BMK* 260

HSP* 242: Hotel Management
3 Credits
(Formerly HOSP 241)
This course presents a systematic approach to front office procedures by detailing the flow of business through a hotel, beginning with the reservation process and ending with the check-out and settlement. The course also examines the various elements of effective front office management, paying particular attention to planning and evaluating front office operations and to personnel management. Front office procedures and management are placed within the context of the overall operations of hotels.
Prerequisites: HSP* 100
Offered: Spring
HSP* 244: Meeting, Convention and Special Event
Management
3 Credits
(Formerly HOSP 232)
This course offers a practical insight into the different kinds of special events, the types of organizations that stage such events, and the people who make them possible. The course will also include how to sell, lead and analyze an event.
Prerequisites: HSP* 100
Offered: Occasionally

HSP* 290: Classical Cuisine
3 Credits
This course provides further techniques in flavor development, fabrication, presentation of hot and cold specialty foods in garde manger and classical French design. Students will prepare classical menus, work with forcemeats, mousses, hot and cold hors d’oeuvres, and learn techniques in cold platter presentations. Emphasis will be placed on necessary skills development for a competitive role for a future culinary competition, if applied.
Prerequisites: Completion of HSP* 201 or HSP* 210, and HSP* 215
Offered: Fall, Spring

HSP* 291: Culinary Competition
3 Credits
This course is designed to familiarize students to competition in the culinary arts. Students will further develop techniques in producing hot meals, cold classical presentation, as well in deserts presentation. Students will use advanced techniques in order to compete at local, state, regional or national level. Upon completion of this course students will be able to begin work towards a certification through the American Culinary Federation.
Prerequisites: C- or better in HSP* 290.
Offered: Occasionally

HSP* 296: Cooperative Education/Work Experience
3 Credits
(Formerly HOSP 270)
This course provides students the opportunity to apply classroom theory in an actual work setting. Students may be placed in a variety of work settings as related to their program of study including corporations, institutions, restaurants, hotel, and conference settings.
Prerequisites: 12 completed credit hours in a Hospitality Careers program.
Offered: Spring, Summer

Human Services

HSE* 101: Introduction to Human Services
3 Credits
(Formerly HS 101)
Course includes history of the human service movement, introduction to current theory and knowledge related to human services, and survey of contemporary helping professions.
Prerequisites: None
Offered: Fall

HSE* 118: Case Management in Human Services
3 Credits
This course will provide an overview of the skills and knowledge necessary to provide case management services for children at risk.
Prerequisites: None
Offered: Occasionally

HSE* 134: Introduction to the Mental Health System
3 Credits
(Formerly HS 105)
This course will review the nature, history and stigma of psychiatric illness and the various treatment modalities over time. The course will also cover classification of psychiatric diagnoses, ethics, co-occurring disorders, psychiatric rehabilitation and criminal justice involvement. Topics can include treatment approaches, case management, psychosocial rehabilitation, public awareness, and a special emphasis on social role valorization and empowerment.
Prerequisites: None
Offered: Fall

HSE* 180: Explorations in Human Abuse
3 Credits
(Formerly HS 105)
This course will provide an overview of the impact of abuse on children including the warning signs that may signal abuse and the profiling of potential abusers.
Prerequisites: None
Offered: Fall

HSE* 210: Group & Interpersonal Relations
3 Credits
(Formerly HS 201)
Current group theory, knowledge, methods and skills are covered that lead to beginning competence in helping people problem solve through group experience.
Prerequisites: HSE* 101 or employment in a human service position.
Offered: Fall

HSE* 211: Ethics in the Helping Profession
3 Credits
Human service workers shoulder the responsibility of assessing and managing client risk, safety and autonomy. Work settings may be institutional or community-based. Every day, workers encounter difficult situations in which the right thing for the worker to do is not always clear. Further, workers often lack specific training and regular support in this area. Ethical conflicts are posed by conflicting roles and duties. It is important students working with all client/consumer groups to understand and respond to ethical and legal issues that arise.
Prerequisites: HSE* 101
Offered: Occasionally

HSE* 220: Juveniles in the Human Service System
3 Credits
The course will explore the unique nature of needs of juvenile clients. Explorations will include the family, community, educational systems and peer groups. Current theories, models and programming will be examined.
Prerequisites: HSE* 101
Offered: Occasionally
HSE* 241: Human Services Agencies and Organizations
3 Credits
(Formerly HS 252)
An introduction to the study of human service organizations. The skills, methods, and functions of human service providers are explored, developed, analyzed, presented and integrated into the overall learning experience of the students. Through the utilization of group process, students will develop and present a grant proposal.
Prerequisites: HSE* 101, HSE* 251, and HSE* 210, and completion of HSE* 281 concurrent enrollment in HSE* 282
Offered: Spring

HSE* 251: Work with Individuals and Families
3 Credits
(Formerly HS 152)
An introduction to current knowledge and theory related to understanding basic human needs. Classroom practice of the interactional skills needed in the helping professions: assessment, planning, contracting, interventions, interviewing and evaluation is studied. Self-awareness regarding personal values and professional ethics is developed.
Prerequisites: HSE* 101 or 6 credits in psychology.
Offered: Spring

HSE* 281: Human Services Field Work I
3 Credits
(Formerly HS 291)
120 hours of supervised field work in a cooperating human service agency. Attendance is required at weekly pro-seminar meetings.
Prerequisites: HSE* 101, HSE* 210, and HSE* 251 and permission of coordinator.
Offered: Fall

HSE* 282: Human Services Field Work II
3 Credits
(Formerly HS 292)
120 hours of supervised field work in a cooperating human service agency. Attendance is required at weekly pro-seminar meetings.
Prerequisites: HSE* 101, HSE* 251, HSE* 210, HSE* 281 and permission of coordinator.
Offered: Spring

HSE* 294: Disability Specialist Seminar
1 Credits
This course, while assisting the student in identifying employment opportunities, will focus on ethics, confidentiality, collaboration, problem-solving, and utilizing Life Building exercises to define a vision for a positive future for themselves and people with disabilities.
Prerequisites: None
Offered: Fall, Spring

Humanities

HUM* 101: Introduction to the Humanities
3 Credits
Through exposure to a variety of the humanities such as the arts, literature, music and dance, students should be able to understand the historical development of the humanities including: literature, music, painting, theatre and philosophy. Students should also be able to identify major movements and thinkers within the liberal arts and analyze works within the humanities, both with reference to other, similar works and as individual objects of study.
Prerequisites: Eligibility for ENG* 093
Offered: Fall, Spring
Fulfills General Education - Knowledge of Humanities

HUM* 125: Introduction to Peace and Conflict Studies
3 Credits
This course is an interdisciplinary study of the concepts of peace and conflict as they relate to economic, sociological, psychological, historical, political, technological, cultural, ideological, geographical, and environmental factors since the end of the Cold War. Students will familiarize themselves with the concepts of positive and negative peace, peacemaking, the principles of a culture of peace, and the roots of conflict. Students will also learn to engage in careful and sustained reflection on some of the major problems confronting humankind today, as well as on the issues of conflict management at the international level, and, finally, on their personal roles and responsibilities as world citizens.
Prerequisites: Eligibility for ENG* 101
Offered: Fall, Spring

HUM* 172: Harlem Renaissance
3 Credits
(Formerly HUMN 201)
Students will explore and experience the incredible surge of creative activity in literature, music, the visual and performing arts by African Americans in the 1920s.
Prerequisites: ENG* 101 or permission of the instructor
Offered: Occasionally

HUM* 178: Native People: The Art, Film and Literature
3 Credits
The 12,000 year old art, music, and oral story telling traditions of native/indigenous peoples commonly called Indians throughout the western hemisphere from Chile to the Arctic Circle will be explored, experienced, and shared in this class. In addition, the written word about and, now, by Native Peoples will be read and discussed in depth. Finally, the newest media of film, DVDs, and TV will be reviewed with a critical eye to accuracy of content and artistic value.
Prerequisites: Eligibility for ENG* 101.
Offered: Spring
HUM* 181: Performance Skills
3 Credits
(Formerly HUMN 110)
Personal growth course in effective communication skills in the performing arts and job-related presentations. Students will learn to focus energy to overcome performance anxiety and project more ease in professional, business and social situations. Fees for performance skills lessons are in addition to regular tuition and are arranged between student and teacher.
Prerequisites: Permission of instructor
Offered: Occasionally

Interdisciplinary Studies

IDS* 101: The First Year Experience
3 Credits
(Formerly SD 111)
This course provides students with the skills, knowledge and confidence necessary to succeed in college and emphasizes the role that effective choice plays. Students are encouraged to think, read, problem-solve, and write critically. Topics include both academic and organizational skills and aim to empower students through heightened self-awareness. The course fosters an understanding and appreciation for the diversity of the college community while encouraging students to become responsible and enthusiastic participants in their education.
Prerequisites: None
Offered: Fall, Spring

IDS* 201: Explore [Theme]
3 Credits
What is the purpose of liberal education in my life and in society? Why do I have to take general education courses unrelated to my major or program to graduate? How can I integrate the knowledge and skills developed from all of my courses to enrich my understanding of the theme of this course and prepare me for the challenges and opportunities I will face after graduation? In the beginning of this interactive class, students will explore answers to these questions. Throughout the semester students will develop the essential intellectual skills needed to succeed in the 21st century: integrative learning, interdisciplinary inquiry, creative and critical thinking, and collaborative problem solving. Students will learn how to apply these skills through learning projects that will broaden and deepen their understanding of the theme of this course and hone their ability to effectively communicate their ideas.
Prerequisites: ENG* 101 with a grade of "C" or better, plus at least 9 additional college credits with a grade of "C" or better
Offered: Fall, Spring

Legal

LGL* 102: Legal Research and Writing
3 Credits
(Formerly LEGL 112)
Provides an understanding of the basic tools of legal research. Students will become familiar with the use of the law library, examining primary and secondary authorities and law-finding tools. Research procedural methods are advanced through case examples and problem-solving techniques. Research findings are reported in legal memoranda. An off-campus law library must be used.
Prerequisites: POL* 120
Offered: Fall, Spring

LGL* 103: Legal Ethics and Professional Responsibility
1 Credits
(Formerly LEGL 110)
Introduces students to the paralegal profession and the basic ethical principles which regulate those working in law, placing special emphasis on how the rules affect paralegals. Regulation of attorneys and unauthorized practice of law is discussed with reference to permitted paralegal tasks. Critical issues such as conflicts of interest, confidentiality, competence, and financial matters are emphasized. Students will become familiar with the law affecting lawyers and paralegals, including the American Bar Association Rules of Professional Conduct, and guidelines and codes adopted by bar and paralegal professional organizations.
Prerequisites: POL* 120 or eligibility for ENG* 101 or permission of instructor
Offered: Fall, Spring

LGL* 104: Real Estate Practice
3 Credits
(Formerly LEGL 207)
Examines basic principles of real property law, with an emphasis on the role of paralegals in residential real estate transactions. Areas studied include acquisition of real property and fixtures, surveys and legal descriptions, co-ownership, easements and other encumbrances, marketable record title and title insurance, brokers, sales contracts, mortgage financing, and closing procedures. Students gain practical experience through document preparation, and familiarity with land records through assignments. Ethical issues related to this practice area are discussed.
Prerequisites: POL* 120 or eligibility for ENG* 101 or permission of instructor
Offered: Spring

LGL* 206: Bankruptcy Law
3 Credits
(Formerly LEGL 212)
Provides an introduction to and understanding of basic bankruptcy practice and procedure for the paralegal. Students are taught the basic legal concepts, legal ethics, and skills which are needed in a bankruptcy practice. Familiarity with the federal bankruptcy courts, the role of the trustee, and the fundamental goals, procedures, documents and forms of Chapters 7, 11, and 13 of the United States Bankruptcy Code will be stressed. Students will be introduced to both federal and state legislation impacting bankruptcy. Practical applications and drafting of necessary documents and forms will be included.
Prerequisites: LGL* 211 or BBG* 234
Offered: Occasionally
LGL* 208: Litigation
3 Credits
(Formerly LEGL 221)
Provides an introduction to and understanding of the basic principles of law that apply to the formation of business organizations including sole proprietorship, general partnership, limited partnership, LLC, LLP, and corporation. Students will be taught legal concepts and skills necessary to work as a litigation paralegal. Emphasis is given to court and office procedures before, during, and after trial, including causes of action and remedies, lawyer and client relationships and ethics, discovery, pleadings, evidence, and preparation of documents used in instituting or defending civil lawsuits. Students will be taught legal concepts and skills necessary to work as a litigation paralegal. Emphasis is given to court and office procedures before, during, and after trial, including causes of action and remedies, lawyer and client relationships and ethics, discovery, pleadings, evidence, and preparation of documents used in instituting or defending civil lawsuits. Students will be taught legal concepts, drafting of necessary documents and forms will be included.

Prerequisites: POL* 120 or eligibility for ENG* 101 or permission of instructor

Offered: Fall, Spring

LGL* 210: Family Law
3 Credits
(Formerly LEGL 222)
Provides an introduction to and an understanding of the basic principles of law and legal terminology relating to the control and disposition of property before and after death, the probate court system and the probate process. Students will be taught basic concepts concerning wills, trusts, probate administration, estate and gift taxation, and fiduciary accounting. Responsibilities, ethical considerations, and duties of the paralegal in the handling of an estate will be stressed. Students will gain practical experience through exposure to document preparation, file management, and preparation of forms for estate administration. Probate matters such as emancipation, adoption, guardianship and conservatorships will be reviewed.

Prerequisites: POL* 120 or eligibility for ENG* 101 or permission of instructor

Offered: Fall

LGL* 211: Business Organization
3 Credits
(Formerly LEGL 211)
Provides an introduction to and understanding of the basic principles of law that apply to the formation of business organizations including sole proprietorship, general partnership, limited partnership, LLC, LLP, and corporation. Students will be taught legal concepts and skills necessary to work as a litigation paralegal. Emphasis is given to court and office procedures before, during, and after trial, including causes of action and remedies, lawyer and client relationships and ethics, discovery, pleadings, evidence, and preparation of documents used in instituting or defending civil lawsuits. Students will be taught legal concepts, drafting of necessary documents and forms will be included.

Prerequisites: POL* 120 or eligibility for ENG* 101 or permission of instructor

Offered: Spring

LGL* 212: Commercial Law
3 Credits
(Formerly LEGL 231)
Provides an introduction to and understanding of the basic principles of law and legal terminology relating to the control and disposition of property before and after death, the probate court system and the probate process. Students will be taught basic concepts concerning wills, trusts, probate administration, estate and gift taxation, and fiduciary accounting. Responsibilities, ethical considerations, and duties of the paralegal in the handling of an estate will be stressed. Students will gain practical experience through exposure to document preparation, file management, and preparation of forms for estate administration. Probate matters such as emancipation, adoption, guardianship and conservatorships will be reviewed.

Prerequisites: POL* 120 or eligibility for ENG* 101 or permission of instructor

Offered: Fall, Spring

LGL* 215: Environmental Law
3 Credits
(Formerly LEGL 215)
Provides an introduction to and a basic understanding of environmental law for the paralegal. Students will be taught basic concepts regarding both national and state environmental laws. Familiarity with legislation, legal terminology and legal requirements in the area of environmental law will be stressed. Practical application will be presented.

Prerequisites: POL* 120, eligibility for ENG* 101, or permission of instructor

Offered: Occasionally

LGL* 216: Administrative Law
3 Credits
(Formerly LEGL 205)
Provides an introduction to and understanding of legal concepts affecting public administrative agencies, including the way in which administrative agencies fit into the United States system of government, delegation of authority and separation of powers, the types and organization of administrative agencies, sources of administrative law, rulemaking, legislative oversight, agency actions, controls on agencies, appeals, adjudications, judicial review, and legal ethics. Specific areas of agency action are explored, such as environmental law, Social Security, civil rights, immigration law, and Workers’ Compensation.

Prerequisites: POL* 120 or eligibility for ENG* 101 or permission of instructor

Offered: Occasionally
LGL* 220: Computer Applications in Law
4 Credits
(formerly LEGL 220)
Provides the paralegal student with a background in computer applications in the law office. The student will employ and examine Microsoft Office suite applications, as well as specialized legal software, to perform billing and calendar functions, file and case management, and litigation support. The student will learn to access public records and governmental information using the Internet. Procedures for electronic filing and access to court forms, dockets and calendars will be reviewed. The student will perform legal research using Westlaw and Lexis-Nexis.
Prerequisites: POL* 120 or eligibility for ENG* 101 or permission of instructor. Students without a strong foundation in computer applications should take CSA* 105
Offered: Fall

LGL* 240: Legal Studies Capstone Course
3 Credits
Offers provides students with an opportunity to engage in advanced analysis, research and writing projects, integrating prior course work and further developing paralegal skills. Students will prepare a portfolio of documents, essays and projects that demonstrate core competencies. Job search strategies and continuing education opportunities will be discussed. Students will prepare for and complete a comprehensive, substantive assessment after review of various content areas.
Prerequisites: LGL* 102, LGL* 103, LGL* 208, LGL* 220 and one of the following: BBG* 234 or LGL* 211 or LGL* 212.
Offered: Spring

LGL* 270: Cooperative Education/Work Experience
3 Credits
(formerly LEGL 270)
Provides students with the opportunity to apply classroom theory in an actual work setting. Students may be placed in a variety of work settings related to the program of study, including private law firms, corporate legal departments, government or other settings in which practical experience may be gained. In addition to site placement, 150 hours for unpaid internships; 300 hours for paid placement, students attend seminars focusing on job-related interpersonal skills, such as values and preferences, time and stress management, communication skills, conflict management, corporate culture, new employee orientation, performance evaluations, business ethics, leadership, and career advancement. Job search strategies are discussed and practiced.
Prerequisites: 12 completed credit hours in the Paralegal program and permission of instructor.
Offered: Fall, Spring, Summer

Manufacturing Engineering Technology

MFG* 106: Computer-Aided Manufacturing I
3 Credits
(formerly CAM 101)
An introductory course in the utilization of computer technology for the planning, implementation and control of manufacturing processes. The process of manual and automated preparation of computer-aided manufacturing systems programs and equipment are studied in preparation for implementing these techniques in a computer-integrated manufacturing environment. This will be accomplished through numerical control programming, CNC and CAD/CAM interface.
Prerequisites: MFG* 111, CAD* 110.
Offered: Fall

MFG* 111: Manufacturing Materials and Process I
3 Credits
(formerly MFG 111)
An introduction to the basic principles on which manufacturing processes are based, and to the basic materials produced by or used in these processes. Topics include: the basic processes in manufacturing metals, testing or engineering materials; ferrous and non-ferrous metals and alloys; fundamental metalcasting, molding and heat treating processes; non-metallic materials; metal cutting, forming, welding and joining; metal machining processes; and quality control measurement and inspection.
Prerequisites: MAT* 138 may be taken concurrently or permission of instructor
Offered: Occasionally

MFG* 112: Manufacturing Materials and Process II
3 Credits
(formerly MFG 112)
A continuation of MFG* 111: Manufacturing Materials and Processes I with emphasis on metal machining and fabrication technologies, numerical control machining, tooling and fixture design and manufacture, and advanced metals machining technologies and concepts.
Prerequisites: MFG* 111.
Offered: Occasionally

MFG* 114: Quality Control in Manufacturing
3 Credits
Students will learn how to utilize a broad array of Quality Control QC tools such as: process plans, inspection plans, control charts, sampling plans and run charts to analyze, control and improve manufacturing processes.
Prerequisites: Completion of MFG* 123
Offered: Occasionally

MFG* 115: Safety in the Workplace
1 Credit
This course provides an introduction to the safety and health issues encountered in a manufacturing environment. This course introduces students to the concepts of personal and work environment safety requirements of manufacturers as well as the governmental oversight agencies such as OSHA.
Prerequisites: None
Offered: Occasionally
MFG* 123: Measurement for Manufacturing
2 Credits
This course provides students with the basics in measurement for manufacturing, incorporating an introduction to the construction and usage of inspection tools, as well as a comprehensive set of hands-on exercises. These tools will be utilized to discover the dimensional characteristics of a variety of sample parts.
Prerequisites: Completion of EGR* 112
Offered: Occasionally

MFG* 171: Introduction to Lean Manufacturing
3 Credits
The purpose of this course is to provide the student with the fundamental knowledge of current continuous process improvement methodologies in use today within competitive manufacturing environments. This introductory course will expose the student to the basic concepts of Lean Manufacturing theory and the various tools and techniques involved with a lean implementation. This course will be presented following the lean-six sigma process methodology of DMAIC Define, Measure, Analyze, Improve, Control to ensure that at the completion of the course, the student will be competent to participate effectively as a team member in lean implementation projects.
Prerequisites: None
Offered: Fall

MFG* 172: Introduction to Lean Supply Chain Management
3 Credits
The course is an introduction to the basic principles and methodologies of Supply Chain Management. The course reviews the lean manufacturing principles needed to understand and maintain the supply chain. Key concepts are covered such as Value Stream Mapping, customer/supplier roles, supplier types, metrics, quality systems, quality audits, communication, and information flow. Class activities, group assignments, and case studies are emphasized for real-world learning experiences.
Prerequisites: None
Offered: Fall

MFG* 205: Principles of CNC with Mastercam
3 Credits
This course is an introduction to computer numerical control CNC programming of 2- and 3-axis machine tools by generating 2D and 3D geometries using Mastercam® software. Topics include an introduction to CNC programming coding, set-up, tooling, operation, and troubleshooting based on industry print standards. Students learn the basic principles and applications of numerically controlled software and hardware and experience the set up and operation of CNC milling machines and lathes.
Prerequisites: MAT* 138 and CAD* 110, or permission of instructor
Offered: Spring

MFG* 230: Statistical Process Control
3 Credits
(Formerly QA 100)
An introduction to the concepts of manufacturing statistical process control. Topics include: measures of central tendency, measures of variation, normal distribution theory, process run charts, process control charts for variable and attribute data, normal probability plots, Pareto diagrams and cause and effect diagrams.
Prerequisites: MAT* 165.
Offered: Fall

MFG* 239: Geometric Dimension and Tolerancing
3 Credits
(Formerly ENGR 102)
An intermediate course in the interpretation of engineering drawing beginning with the basics of dimensional tolerances and tolerance systems. Topics include: the mathematics of interpreting and specifying tolerances on dimensions, the system of geometric tolerancing, the basic nomenclature and standard symbols conforming to ANSI Y14.5M.
Prerequisites: EGR* 112
Offered: Spring

MFG* 244: CNC Machining I
3 Credits
Students will receive instruction in CNC control commands M&G code through the extensive use of in-class CNC control simulators enhanced with hands-on lab experience. Basic G&M code will be utilized to identify and correct programming errors. The benefits of working from a CAD file will also be explained.
Prerequisites: Completion of MFG* 112, MFG* 115 and MFG* 123
Offered: Occasionally

MFG* 245: CNC Machining II
4 Credits
Students will be introduced to Computer Numerical Control CNC topics including setup and tooling, programming simple parts, and modification of programs to compensate for process variation, utilization of canned drilling cycles, circular interpolation, special milling cycles, looping and special features. Upon completion students will be able to setup CNC 3-axis mills; locate, load and proof the CNC program; execute the program; inspect parts; and modify program instructions via G&M code.
Prerequisites: Completion of MFG* 244
Offered: Occasionally

MFG* 271: Advanced Lean Manufacturing
3 Credits
The purpose of this course is to provide the student with the knowledge to implement lean improvements within the production environment using a systematic approach. This course will follow an improvement project from student’s current employer or case study through the five stages of the DMAIC problem solving methodology. At the completion of the course, the student will be competent to effectively lead a lean implementation project within a company.
Prerequisites: MFG* 171 or permission of instructor.
Offered: Spring
MFG* 272: Implementation of Lean Supply Chain
Management
3 Credits
The course covers the benefits and elements needed for implementing supply chain management. Team building and communication skills are shown as crucial factors in supply chain management. Topics emphasized in the course are measuring the velocity of the supply chain, developing partnerships, logistics, software tools, hardware, and continuous improvement. Class activities, group assignments and case studies are emphasized for real-world learning experiences.
Prerequisites: MFG* 172 or Permission of instructor
Offered: Spring

Mathematics

MAT* 075: Prealgebra: Number Sense & Geometry
0 Credits
(Formerly MATH 098)
This course is designed to enhance the student's mathematical literacy so that he/she will be prepared to deal effectively with a variety of practical problems. Topics include: interpretation and analysis of charts and graphs; geometry and measurements; estimation and reasonableness of answers, applications using ratios, proportions, percents and decimals; properties of the whole, integer, and rational numbers and operations on the real numbers; and solutions of equations. A review of the operations and fundamental concepts of arithmetic and geometry will be imbedded in and connected to real world problem situations. An e-book and an access code for specialized software is required on the first day of class.
Prerequisites: Placement by mathematics assessment test and eligibility for ENG* 096.
Offered: Occasionally

MAT* 095: Elementary Algebra Foundations
0 Credits
(Formerly MATH 101)
The course includes all of the basic properties and theorems of the real number system that are required to solve linear, quadratic and selected rational equations. Linear systems, basic graphing, integer exponents and selected literal equations are included. An e-book and an access code for specialized software is required on the first day of class.
Prerequisites: "C" or better in MAT* 075 or placement by mathematics assessment test, and eligibility for ENG* 096.
Offered: Fall, Spring, Summer

MAT* 096: Algebraic Concepts, Number Sense & Geometry
0 Credits
(Formerly MATH 100)
This course satisfies the requirements for both MAT* 075 and MAT* 095 in a single semester. The course will provide the student with enhanced mathematical literacy in arithmetic, geometric, and algebraic concepts while strengthening and building problem solving and reasoning skills. Topics include: interpretation and analysis of charts and graphs; geometry and measurements; estimation strategies; ratio and proportion; percents and decimal numbers; properties of the whole numbers, integers, rationals and reals; operations of the real numbers; use of variables, equations and graphs to interpret problems in symbolic form; properties and theorems of the real number systems to solve linear, quadratic, rational, and literal equations; linear systems; and integer exponents. Practical problem applications and graphing calculators will be fully integrated into the course. A TI-83+ or TI-84+ graphing calculator is required for the course. Class: 6 hours per week.
Prerequisites: Placement by mathematics assessment test, and eligibility for ENG* 096. It is recommended that students consult with either the Mathematics Department or their advisor.
Offered: Occasionally

MAT* 109: Quantitative Literacy
3 Credits
(Formerly MATH 110)
Selected topics in mathematics chosen to satisfy the General Studies program requirement in mathematics. A course designed to demonstrate the fundamental nature of mathematics and its applications in modern life through an introduction to the concepts of statistics. Topics include random sampling, design of surveys and experiments, information from samples, confidence intervals, elementary probability, examining numbers and data critically, graphing and data analysis, written discussion of numerical analysis, and simulation. A TI-30 XIIs or TI-83+ or TI-84+ graphing calculator is required. Applications considered throughout.
Prerequisites: "C" or better in MAT* 095 or MAT* 096 or placement by mathematics assessment test and eligibility for ENG* 101. May not be taken for credit if credit already received for MAT* 165.
Offered: Fall, Spring
Fulfills General Education - Knowledge of Mathematics

3 Credits
(Formerly MATH 102)
A second course in mathematical modeling course whose main themes are function represented by tables, graphs and rules and problem solving. Polynomial functions with special attention to linear and quadratic functions; power functions; square root, absolute value, piecewise and exponential functions are studied. A TI-83+ or TI-84+ graphing calculator is required and used throughout the course.
Prerequisites: "C" or better in MAT* 096 or MAT* 095, or placement by mathematics assessment test and eligibility for ENG* 101. No credit if already completed MAT* 158 or any higher numbered math course.
Offered: Fall, Spring, Summer
Fulfills General Education - Knowledge of Mathematics
MAT* 139: Elementary and Intermediate Algebra
Combined
3 Credits
A course in mathematical modeling where the main themes are represented using tables, graphs, algebraic rules, and verbal rules. Topics will include problem solving and practical applications. Basic properties and theorems of the real number system will be used to solve linear, exponential, polynomial, piecewise, and absolute value functions. Properties of exponents will be covered using both integer and rational numbers. Use of the graphing calculator will be integrated throughout the course. This course combines the content of MAT* 095 with MAT* 138 in one semester.
Prerequisites: Placement by mathematics assessment test and eligibility for ENG* 093.
Offered: Fall, Spring
Fulfills General Education - Knowledge of Mathematics

MAT* 146: Math for Liberal Arts
3 Credits
(Formerly MATH 106)
An introduction to contemporary mathematics for students of science, social science and the liberal arts. Topics may include: sets and deductive reasoning, inductive reasoning, logic, counting techniques, social choice and decision making, management science and the nature of geometry-growth and symmetry. Applications are considered throughout. A TI-83+ or TI-84+ graphing calculator is required.
Prerequisites: "C" or better in MAT* 138 or MAT* 139 or placement by mathematics assessment test, and eligibility for ENG* 101.
Offered: Fall, Spring
Fulfills General Education - Knowledge of Mathematics

MAT* 148: Geometry
3 Credits
(Formerly MATH 109)
A foundation course in Euclidean geometry using an axiomatic approach recommended especially for physical science and engineering majors who have not had a formal geometry course. Topics include: inductive and deductive reasoning; logic; polygons; parallelism; congruence; similarity; coordinate geometry; direct, indirect and coordinate proof; three-dimensional space; and a brief introduction to non-Euclidean geometries. As appropriate, computer software is used to encourage exploration and formulation of hypotheses.
Prerequisites: "C" or better in MAT* 138 or MAT* 139 or "B+" or better in MAT* 096 or MAT* 095 or placement by mathematics assessment test and eligibility for ENG* 101.
Offered: Occasionally

MAT* 158: Functions, Graphs & Matrices
3 Credits
(Formerly MATH 120)
A course in selected topics from contemporary mathematics with applications for students in business, economics, and social science. Topics include: the concepts of function and rate of change, a review of algebraic and graphical aspects of polynomial functions, a study of exponential and logarithmic functions, mathematical modeling, and systems of linear equations in 2 or more variables with an emphasis on forming, solving and interpretation of matrices. A TI-83+ or TI-84+ graphing calculator is required and used throughout.
Prerequisites: "C" or better in MAT* 138 or MAT* 139 or placement by mathematics assessment test, and eligibility for ENG* 101.
Offered: Fall, Spring, Summer

MAT* 165: Elementary Statistics with Computer Applications
4 Credits
(Formerly MATH 111)
An introduction to statistical theory and its applications. The use of statistics as a decision-making tool will be discussed. Topics include: data collection, organization and summarization, measures of central tendency and variation, counting techniques, introductory probability theory, discrete and continuous probability models, normal distribution theory, sampling distributions, confidence interval estimation and one sample hypothesis testing. A statistical calculator is required and will be used throughout. Applications of statistical techniques in a variety of disciplines will use the Minitab Statistical Software Package.
Prerequisites: "C" or better in MAT* 138 or MAT* 139 or "C" or better in both MAT* 095 and MAT* 109, or "C" or better in MAT* 096 and MAT* 109, eligibility for ENG* 101.
Offered: Fall, Spring, Summer
Fulfills General Education - Knowledge of Mathematics

MAT* 172: College Algebra
3 Credits
This course is a thorough and rigorous treatment of the algebraic skills needed to be successful in the Calculus sequence. The course will cover sets, functions, simplifying expressions, solving equations, linear functions, linear systems, polynomials, exponential functions, logarithmic functions, complex fractions, radical expressions, complex numbers and quadratic functions. Focus will be on gaining proficiency with algebraic skills. A TI-83 or TI-84 graphing calculator is required and used throughout the course.
Prerequisites: "C" or better in MAT* 138 or MAT* 139, or placement by mathematics assessment test, and eligibility for ENG* 101.
Offered: Fall, Spring, Summer
Fulfills General Education - Knowledge of Mathematics

MAT* 185: Trigonometric Functions
3 Credits
(Formerly MATH 105)
A brief review of sets, relations, functions, and inverses. Topics include trigonometry of the right triangle, solutions of triangles, the trigonometric functions, the circular functions, identities, solving trigonometric equations, graphs, inverse trigonometric functions, polar coordinates and vectors. Emphasis is on an analytic approach.
Prerequisites: MAT* 138 or MAT* 139 or placement by mathematics assessment test and eligibility for ENG* 101.
Recommended: MAT* 148 or high school geometry.
Offered: Fall, Spring
Fulfills General Education - Knowledge of Mathematics

MAT* 186: Precalculus
4 Credits
(Formerly MATH 150)
A detailed study of relations and functions, operations on functions, and their graphs. Characteristics of various families of functions, modeling and solving application problems are the main focus of the course. In particular, exponential, logarithmic and circular functions along with polynomial, rational and selected algebraic families will be developed. This course assumes that the student has had some exposure to geometry. A TI-83+ or TI-84+ or 86 graphing calculator is required and will be used throughout.
Prerequisites: A grade of "C" or better in MAT* 172; "C" or better in MAT* 155, or placement by mathematics assessment test, and eligibility for ENG* 101.
Offered: Fall, Spring, Summer
MAT* 222: Statistics II with Technology Applications  
3 Credits  
(Formerly MATH 208)  
Introduction to statistical research methods with applications to business, economic and social sciences. Emphasis on: statistical inference, hypothesis testing, correlation simple linear regression and multiple regression, analysis of variance, nonparametric methods and Chi-square tests. The statistical software package, Minitab, will be used throughout the course.  
Prerequisites: MATH 108 or MAT* 165, eligibility for ENG* 101.  
Offered: Occasionally

MAT* 230: Applied Calculus with a Modeling Approach  
3 Credits  
(Formerly MATH 121)  
A course in selected topics from calculus with applications in business, economics, and social science. Students will learn the fundamental concepts of calculus and how to apply them to real-life problems. A major goal is to develop conceptual understanding rather than algebraic manipulation through the use of graphing calculators and through the consideration of graphical, numerical and algebraic perspectives. The major conceptual focus is on rates of change and their interpretations within a problem context. The definition of the integral, the Fundamental Theorem of Calculus, some selected applications of integration and some integration techniques are included. A TI-83+ graphing calculator is required and used throughout.  
Class: 3 hours per week.  
Prerequisites: “C” or better in MAT* 158 and eligibility for ENG* 101.  
Offered: Fall, Spring

MAT* 242: Projects in Calculus I  
1 Credits  
(Formerly MATH 188)  
A supplemental problem-solving session dominated by problems that will direct attention more to ideas than to techniques. There will be some self-contained examples of applications of calculus that are tractable, relevant and interesting to students. Other problems will require imagination, outside reading and consultation, cooperation and coherent writing. Students will be required to defend both their methodology and their conclusion. Lastly, the readings along with the associated problems from the readings will provide some history of the discipline as well as how mathematics in general and calculus in particular has contributed to intellectual history. May be taken up to two times as MAT* 242 and MAT* 243.  
Prerequisites: Concurrent registration in MAT* 254 (Formerly MAT* 250 or MAT* 256 and eligibility for ENG* 101.  
Offered: Occasionally

MAT* 243: Projects in Calculus II  
(Formerly MATH 189)  
A supplemental problem-solving session dominated by problems that will direct attention more to ideas than to techniques. There will be some self-contained examples of applications of calculus that are tractable, relevant and interesting to students. Other problems will require imagination, outside reading and consultation, cooperation and coherent writing. Students will be required to defend both their methodology and their conclusion. Lastly, the readings along with the associated problems from the readings will provide some history of the discipline as well as how mathematics in general and calculus in particular has contributed to intellectual history. May be taken up to two times as MAT* 242 and MAT* 243.  
Prerequisites: Concurrent registration in MAT* 254 (Formerly MAT* 250 or MAT* 256 and eligibility for ENG* 101.  
Offered: Occasionally

MAT* 254: Calculus I  
4 Credits  
(Formerly MAT* 250)  
A first course in calculus with analytic geometry for students in mathematics, science, engineering and technology. Topics include families of functions including exponential and logarithmic represented by table, graph and equation, modeling of actual data, the concepts of limit and continuity, the derivative and antiderivatives, the definite integral and the Fundamental Theorem of Calculus. Applications from mathematics, engineering, and economics will receive special attention. Solutions to such problems will require the use of a graphing calculator and/or a symbolic algebra system Maple. A TI-83+ or TI-84+ or TI-86 graphing calculator is required.  
Prerequisites: “C” or better in MAT* 186, or placement by mathematics assessment test, and eligibility for ENG* 101. Students cannot receive credit for MAT* 254 if they have already received credit for MAT* 250.  
Offered: Fall, Spring

MAT* 256: Calculus II  
4 Credits  
(Formerly MAT* 192)  
A second course in calculus and analytic geometry for students in mathematics, science, engineering and technology. Topics include antiderivatives, the definite integral, the Fundamental Theorem of Calculus, techniques of integration, numerical approximation, methods of integration, separable differential equations, improper integrals, sequences and series, polar coordinates and parametric equations. Applications of these topics are used throughout the course and will include problems in area, volume, arc length and exponential growth and decay: Estimation and approximation techniques are considered throughout the course and include methods for approximating solutions to equations, methods of numerical integrations, and the use of power series to approximate functions. Solutions of these problems will require the use of graphing calculator and/or Maple software. A TI-83+ or TI-84+ or TI-86 graphing calculator is required.  
Prerequisites: Eligibility for ENG* 101 and "C" or better in MAT* 254 (Formerly MAT* 250.  
Offered: Fall, Spring

MAT* 268: Calculus III: Multivariable  
4 Credits  
(Formerly MAT* 293)  
A course in multivariable calculus with analytic geometry for students of mathematics, science and engineering. Topics include: parametric equations, two- and three-dimensional vector algebra, vector differential calculus, differentiation of functions of several variables, multiple integrals, and line and surface integrals. Applications are considered throughout. Computer software and/or graphic calculators will be integrated as appropriate throughout the course.  
Prerequisites: “C” or better in MAT* 256 and eligibility for ENG* 101.  
Offered: Fall, Spring
MAT* 274: Linear Algebra
4 Credits
(Formerly MATH 220 and MAT*272)
A first course in linear algebra for students in mathematics, science and engineering. Topics include: systems of linear equations, matrices, determinants, vectors and vector spaces, linear transformations, eigenvalues and eigenvectors. Applications from various disciplines will be considered throughout the course. Computers and/or graphing calculators will be integrated as appropriate.
Prerequisites: "C" or better in MAT* 256 and eligibility for ENG* 101.
Offered: Spring

MAT* 285: Differential Equations
4 Credits
(Formerly MATH 201)
An introductory course in differential equations. Solution methods for differential equations including selected first order equations, nth-order equations, and systems of linear equations using matrix techniques, Laplace transforms, and numerical methods. Series techniques for selected linear differential equations including Bessel's equation will be considered. Computer software and/or graphing calculators will be integrated as appropriate throughout the course. Recommended for science and engineering students.
Prerequisites: "C" or better in MAT* 256 and eligibility for ENG* 101.
Offered: Fall, Spring

MAT* 287: Foundations of Mathematics
4 Credits
(Formerly MATH 250)
A formal introduction to the basic concept of modern abstract mathematics. Topics include: symbolic logic, sets and relations, recursive and inductive procedures, methods of proof, functions, cardinality, algebraic structures, and number theory.
Prerequisites: "C" or better in MAT* 256 and eligibility for ENG* 101.
Offered: Occasionally

Meteorology

MET* 101: Meteorology
3 Credits
(Formerly METO 110)
An introduction to the principles of atmospheric behavior, with emphasis on atmospheric motion, general circulation, air masses and frontal systems, clouds and precipitation, and their relation to climate and weather formations.
Prerequisites: Eligibility for ENG* 101
Offered: Fall

Music

MUS* 101: Music History and Appreciation I
3 Credits
This course is a survey of western European music from the Medieval Period through Baroque with an emphasis given to stylistic forms i.e. plainchant, motet, opera fuga, composers i.e. Palestrina, Corelli, Morley, Vivaldi, Bach, Handel, and the cultural/societal impact on the music. The course will also review the elemental components of music i.e. pitch, melody, rhythm and harmony.
Prerequisites: Eligibility for ENG* 093
Offered: Fall, Spring, Summer
Fulfills General Education - Knowledge of The Arts

MUS* 102: Music History and Appreciation II
3 Credits
(Formerly MUS 112)
A survey of western music from the classical period to modern times with emphasis given to the major music forms i.e. symphony, concert, art song, opera of composition as well as pieces that have literary or other non-musical associations. A review of music concepts such as sound, melody, harmony, rhythm and form.
Prerequisites: Eligibility for ENG* 093
Offered: Fall, Spring
Fulfills General Education - Knowledge of The Arts

MUS* 107: Today's Music
3 Credits
(Formerly MUS 113)
A music appreciation course that examines the development of American music from its roots in Anglo, African, Native and Latin American traditions to the evolved styles of country, blues, folk, rock "n" roll. Emphasis will be given to the impact of these earlier styles on contemporary practices.
Prerequisites: Eligibility for ENG* 093
Offered: Fall
Fulfills General Education - Knowledge of The Arts

MUS* 108: Today's Music Gospel, Ragtime, Blues, Jazz
3 Credits
An examination of the development of American music from its roots in the secular and sacred traditions of the late 1800's and their impact on the pre-jazz forms of ragtime, brass bands, and blues to the jazz forms of swing, bebop, cool and fusion. Emphasis will be given to the stylistic characteristics of each form and their impact on current music styles.
Prerequisites: Eligibility for ENG* 093
Offered: Spring
Fulfills General Education - Knowledge of The Arts

MUS* 115: Music Theory I
3 Credits
(Formerly MUS*111)
An exploration of the rudiments of music theory. Students will learn and develop the skills needed to read and write music notation. Topics include: pitch, rhythm, meter, scale construction, keys, intervals, and chords. Open to any student at the college.
Prerequisites: None
Offered: Fall

MUS* 116: Music Theory II
3 Credits
(Formerly MUS*215)
An introduction to the basic principles of tonal music through listening, analysis, and writing. Topics include melody, diatonic harmonic progression, chord inversion, voice leading, figured bass, and non-chord tones. It is highly recommended to take this course concurrently with MUS*168: Ear-Training II.
Prerequisites: "C" or better in MUS* 115 or permission of instructor.
Offered: Spring
MUS* 124: Music of the Classical Period
3 Credits
(Formally MUS 251)
A study of Western European music development from the early 18th century to the early 19th century. Topics will include: an overview of the transitional pre-classical period and its impact on the music and composers of the classical period, an analysis of the significant musical styles of the period, a biographical study of the key composers and the impact of the culture on the music development of the period.
Prerequisites: Eligibility for ENG* 101, "C" or better in MUS* 101. Highly recommended: MUS* 101.
Offered: Fall

MUS* 145: Class Guitar I
1 Credits
(Formally MUS*141)
Guitar techniques for the beginning player. Emphasis on correct tuning standard, chord construction, scales, rhythm and group performance. Reading general music notation, music notation related to the guitar tablature notation is not used, and an understanding and application of basic chords. Students will receive a foundation in music theory and appreciation. Students are required to use an acoustic steel or nylon stringed guitar. Electric guitars will not be allowed.
Prerequisites: None
Offered: Fall, Spring

MUS* 149: Beginning Jazz Concepts
1 Credits
This course is a preparatory course for students interested in performing jazz. Students will acquire an understanding and skill development in the areas of basic jazz forms, rhythmic concepts and harmonic structures as it applies to the performance of jazz on their respective instruments/voices. Students will gain knowledge of significant jazz artists of diverse styles and acquire skills in performing a jazz solo over harmonic progressions as a soloist or within an ensemble setting.
Prerequisites: MUS* 115: Music Theory I with a C or above or with permission of the instructor.

MUS* 158: Chamber Music/Jazz Ensemble I
1 Credits
(Formally MUS 123)
Students participating in the Jazz Ensemble course will gain exposure and experience in performing standard jazz repertoire as part of a jazz combo ensemble. During preparation of the musical selections, students will be required to listen to recordings of works by the composers and professional performers to gain an understanding of the historical significance and stylistic approach of selected performance repertoire. Students will develop jazz improvisation skills and ensemble techniques and will be required to practice assigned musical selections outside of class in order to be prepared to perform these pieces with the ensemble.
Prerequisites: None
Offered: Fall, Spring

MUS* 159: Chamber Music/Jazz Ensemble II
1 Credits
(Formally MUS 124)
Students participating in the Jazz Ensemble course will gain exposure and experience in performing standard jazz repertoire as part of a jazz combo ensemble. During preparation of the musical selections, students will be required to listen to recordings of works by the composers and professional performers to gain an understanding of the historical significance and stylistic approach of selected performance repertoire. Students will develop jazz improvisation skills and ensemble techniques and will be required to practice assigned musical selections outside of class in order to be prepared to perform these pieces with the ensemble.
Prerequisites: None
Offered: Fall, Spring

MUS* 161: Chorale I
1 Credits
(Formally MUS 121)
The primary purposes of this academic course are the development of student musicianship and his vocal technique, as well as the study and performance of a variety of musical styles through the medium of choral ensemble. The course includes regular rhythmic, dictation, sight-reading and vocalizing exercises, as well as learning of their own soprano, alto, tenor, baritone or bass part. This course is open to all students in the college. No previous experience is necessary but being able to match pitch is a requirement for this course. Brief individual auditions will be conducted at the beginning of the first class. All vocalists are required to take the four-semester sequence of Chorale. Students in the keyboard track are also required to take this course.
Prerequisites: None
Offered: Fall, Spring

MUS* 162: Chorale II
1 Credits
(Formally MUS 122)
The primary purposes of this academic course are the development of student musicianship and his vocal technique, as well as the study and performance of a variety of musical styles through the medium of choral ensemble. The course includes regular rhythmic, dictation, sight-reading and vocalizing exercises, as well as learning of their own soprano, alto, tenor, baritone or bass part. This course is open to all students in the college. All vocalists are required to take the four-semester sequence of Chorale. Students in the keyboard track are also required to take this course.
Prerequisites: Completion of MUS* 161 with a 'C' or above
Offered: Fall, Spring

MUS* 166: Music Ear Training I
1 Credits
(Formally MUS*217)
Ear Training I covers the aural component of Music Theory I. It is highly recommended to take MUS*163 concurrently with Music Theory I MUS*115. This course uses Kodály materials. Students are introduced to Solfeggio movable "do", Curwen hand signs, stick notation and score reading. Students will also develop their aural skills with rhythm exercises, music dictation, interval singing, scale singing, chordal and ensemble singing.
Prerequisites: None
Offered: None

Offered: Spring
MUS* 167: Language for Singers
1 Credits
This course is designed to provide knowledge of International Phonetic Alphabet IPA as it applies to singers, teaching them not only IPA but also how to form vowels and consonants the anatomy of the voice. In addition, students will learn how to transcribe English texts into IPA. Students will also be introduced to basic IPA knowledge for Italian, German, French and Spanish texts.
Prerequisites: None
Offered: Occasionally

MUS* 168: Music Ear Training II
1 Credits
Ear Training II is a continuation of Ear Training I. As the aural component of Music Theory II, it is highly recommended to take MUS*168 concurrently with Music Theory II MUS*116. This course uses Kodály materials. All Intervals except the tritone, scales major, natural and harmonic minor, and triads Mmd in all inversions are sung and identified, with an introduction of augmented triads. Practice singing in two and three parts in treble and bass clefs is included as well as “Sing and Play.” This course also includes singing and dictation of one-part and two-parts melodies in major and minor natural and harmonic. Sight-singing in duple compound meter, keyboard harmony and simple chord progressions are introduced aural identification of diatonic harmonic functions.
Prerequisites: Completion of MUS* 166 with a 'C' or better, or permission of instructor
Offered: Fall, Spring

MUS* 173: Voice Class I
1 Credits
Formerly MUS*160
A performance-based course designed to introduce vocal technique, Italian/English classical and Broadway song repertoire and performance practices to individuals seeking vocal instruction.
Prerequisites: None
Offered: Fall, Spring

MUS* 174: Madrigal/Chamber Singer I
1 Credits
Formerly MUS 127
The primary purposes of this academic course are the development of student musicianship and his vocal technique, as well as the study and performance of a variety of musical styles through the medium of chamber choral ensemble. The course includes regular rhythmic, diction, sight-reading and vocalizing exercises, as well as learning of their own soprano, alto, tenor, baritone or bass part. This advanced course is open to all students in the college. Previous choral experience, knowledge of music notation and good sight-reading skills are required. Brief individual auditions will be conducted at the beginning of the first class. Students registered for this course must be also registered for MUS*B162.
Prerequisites: Pass an audition and take MUS* 161 simultaneously
Offered: Occasionally

MUS* 175: Madrigal/Chamber Singer II
1 Credits
(Formerly MUS 128)
The primary purposes of this academic course are the development of student musicianship and his vocal technique, as well as the study and performance of a variety of musical styles through the medium of chamber choral ensemble. The course includes regular rhythmic, diction, sight-reading and vocalizing exercises, as well as learning of their own soprano, alto, tenor, baritone or bass part. This advanced course is open to all students in the college. Previous choral experience, knowledge of music notation and good sight-reading skills are required. Brief individual auditions may be conducted at the beginning of the first class. Students registered for this course must be also registered for MUS*B162.
Prerequisites: Completion of MUS* 174 with a 'C' or above and take MUS* 162 simultaneously
Offered: Occasionally

MUS* 185: Applied Lessons I
1 Credits
This course is the first in a sequence of required private vocal or instrumental lessons to learn elements of music performance. Students will begin their instruction through one hour per week master class and one hour per week of required private music lesson. Private teachers will be selected and approved by the music department.
Prerequisites: None
Offered: Fall, Spring

MUS* 186: Applied Lessons II
1 Credits
This course is the second in a sequence of required private vocal or instrumental lessons to reinforce and learn elements of music performance. Students will continue their instruction through one hour per week master class and one hour per week of required private music lesson. Private teachers will be selected and approved by the music department.
Prerequisites: Completion of MUS* 185 with a 'C' or above, or permission of instructor
Offered: Fall, Spring

MUS* 188: Introduction to Conducting
3 Credits
This course is designed to introduce basic conducting techniques, develop independence of hands, and present a comprehensive approach to score preparation of full and reduced scores, with the main goal of communicating music artistically and expressively through conducting.
Prerequisites: Completion of MUS* 190, and MUS* 116, and either MUS* 161 or MUS* 158 , all with a grade of 'C' or higher
Offered: Fall, Spring

MUS* 190: Group Piano I
1 Credits
(Formerly MUS*148)
Provides basic beginning piano instruction to any student at the college. Teaches how to read music in treble and bass clef, play intervals up to an octave, chords of all qualities major, minor, augmented, diminished, exercises using major and minor scales and five-finger patterns, and simple chord progressions I-IV-V7-I. Students are required to attend a live concert featuring solo keyboard and write a concert review paper.
Prerequisites: None
Offered: Fall, Spring
MUS* 191: Group Piano II
1 Credits
This class is the continuation of MUS*190 Group Piano Class I and it concentrates on performance of advanced beginning, well-known selections and piano techniques, as well as sight-reading, transposing and harmonizing simple melodies. Students are required to attend a live concert featuring solo keyboard and write a concert review paper.
Prerequisites: "C" or better in MUS* 190 or permission of instructor.
Offered: Spring

MUS* 213: Music Theory III
3 Credits
A continued study of tonal music, including chromatic harmony: secondary dominants, altered chords, mode mixture, and modulation techniques. Analytical and writing skills are further developed, along with a deeper understanding of musical form and structure. It is highly recommended to take this course concurrently with MUS*260 Ear-Training III.
Prerequisites: Completion of MUS* 116 with a 'C' or better, or permission of instructor

MUS* 214: Music Theory IV
3 Credits
An advanced study of musical form and composition. Late Romantic and 20th century techniques are explored, including non-functional harmony, dodecaphony, set theory, and bitonality. Students also further their understanding of large-scale forms through listening and analysis. It is highly recommended to take this course concurrently with MUS*261 Ear-Training IV.
Prerequisites: Completion of MUS* 213 with a 'C' or better, or permission of instructor
Offered: Fall, Spring

MUS* 216: Contemporary Music Theory and Application
3 Credits
A continuation of fundamentals. Continued analysis and application of major and minor key harmony. Introduction to modal interchange, sub-dominant minor harmony and chord scale theory. A review of melodic construction and melody and harmony relationship. The course is geared towards the study of contemporary styles such as jazz, pop, rock, R n' B, and Blues.
Prerequisites: "C" or better in MUS* 115 or permission of instructor.
Offered: Fall

MUS* 218: Electronic Music Composition I
3 Credits
(Formerly MUS 241)
The study of contemporary electronic music composition, technique, performance, and recording using synthesis, computer, sequencing and recording technology.
Prerequisites: None
Offered: Fall, Spring

MUS* 219: Electronic Music Composition II
3 Credits
A continuation of MUS* 218, Electronic Music Composition I. This course is an exploration of techniques used in electronic music composition. Topics covered include: further exploration in the editing of digital recording using industry standard sequencing software; the mix, mastering and exporting of digital recordings; and the composition of a music score for a video. Students will also be introduced to the various aspects of operating a recording studio which will include the type and function of equipment used and business requirements.
Prerequisites: MUS* 218 or permission of instructor.
Offered: Spring

MUS* 252: Group Piano III
1 Credits
This class is the continuation of MUS*191 Group Piano II and it concentrates on performance of beginning intermediate level, well-known selections and piano techniques, harmonizing and transposing simple melodies, and three-part score reading. Students are required to attend a live concert featuring solo keyboard and write a concert review paper.
Prerequisites: Completion of MUS* 191 with a 'C' or better, or permission of instructor
Offered: Fall, Spring

MUS* 255: Group Piano IV
1 Credits
This class is the continuation of MUS*252 Piano Class III and it concentrates on performance of advanced intermediate level selections, piano techniques, score reading, and harmonizing melodies. Students are required to attend a live concert featuring solo keyboard and write a concert review paper.
Prerequisites: Completion of MUS* 252 with a 'C' or better, or permission of instructor
Offered: Fall, Spring

MUS* 258: Chamber Music/Jazz Ensemble III
1 Credits
(Formerly MUS 223)
Students participating in the Jazz Ensemble course will gain exposure and experience in performing standard jazz repertoire as part of a jazz combo ensemble. During preparation of the musical selections, students will be required to listen to recordings of works by the composers and professional performers to gain an understanding of the historical significance and stylistic approach of selected performance repertoire. Students will develop jazz improvisation skills and ensemble techniques and will be required to practice assigned musical selections outside of class in order to be prepared to perform these pieces with the ensemble.
Prerequisites: None
Offered: Fall, Spring
MUS* 259: Chamber Music/Jazz Ensemble IV
1 Credits
(Formerly MUS 224)
Students participating in the Jazz Ensemble course will gain exposure and experience in performing standard jazz repertoire as part of a jazz combo ensemble. During preparation of the musical selections, students will be required to listen to recordings of works by the composers and professional performers to gain an understanding of the historical significance and stylistic approach of selected performance repertoire. Students will develop jazz improvisation skills and ensemble techniques and will be required to practice assigned musical selections outside of class in order to be prepared to perform these pieces with the ensemble.
Prerequisites: None
Offered: Fall, Spring

MUS* 260: Music Ear Training III
1 Credits
Ear Training III is a continuation of Ear Training II. As the aural component of Music Theory III, it is highly recommended to take MUS*260 concurrently with Music Theory III MUS*213. This course uses Kodály materials. Intervals, scales, and triads in all inversions are sung and identified, with an introduction of seventh chords. Practice singing in three and four parts is included in treble and bass clefs, with introduction of C clefs and transposition. Melodies for singing and dictation in one-part and two-parts gradually incorporate chromatic alterations. Keyboard harmony and chord progressions are reinforced aural identification of diatonic harmonic functions.
Prerequisites: Completion of MUS* 168 with a 'C' or better, or permission of instructor
Offered: Fall, Spring

MUS* 261: Ear Training IV
1 Credits
Ear Training IV is a continuation of MUS*260 Ear Training III. As the aural component of Music Theory IV, it is highly recommended to take MUS*264 concurrently with Music Theory IV MUS*214. This course uses Kodály methodology. Intervals, scales, and chords in all inversions are sung and identified. Students will practice taking modal and tonal dictation as well as singing in three and four parts in all clefs and reading chorales in open-score. "Sing and play" is part of this class. Keyboard harmony and chord progressions are reinforced through aural identification of harmonic functions incorporating secondary dominants, modulations, Neapolitan and augmented sixth chords. Sight-sing simple atonal melodies will be introduced.
Prerequisites: Completion of MUS* 260 with a 'C' or better, or permission of instructor
Offered: Fall, Spring

MUS* 270: Chorale III
1 Credits
(Formerly MUS 221)
The primary purposes of this academic course are the development of student musicianship and his vocal technique, as well as the study and performance of a variety of musical styles through the medium of choral ensemble. The course includes regular rhythmic, diction, sight-reading and vocalizing exercises, as well as learning of their own soprano, alto, tenor, baritone or bass part. This course is open to all students in the college. All vocalists are required to take the four-semester sequence of Chorale.
Prerequisites: Completion of MUS* 162 with a 'C' or above
Offered: Fall, Spring

MUS* 271: Chorale IV
1 Credits
(Formerly MUS 222)
The primary purposes of this academic course are the development of student musicianship and his vocal technique, as well as the study and performance of a variety of musical styles through the medium of choral ensemble. The course includes regular rhythmic, diction, sight-reading and vocalizing exercises, as well as learning of their own soprano, alto, tenor, baritone or bass part. This course is open to all students in the college. All vocalists are required to take the four-semester sequence of Chorale.
Prerequisites: Completion of MUS* 270 with a 'C' or better
Offered: Fall, Spring

MUS* 275: Madrigal/Chamber Singer III
1 Credits
(Formerly MUS 227)
The primary purposes of this academic course are the development of student musicianship and his vocal technique, as well as the study and performance of a variety of musical styles through the medium of chamber choral ensemble. The course includes regular rhythmic, diction, sight-reading and vocalizing exercises, as well as learning of their own soprano, alto, tenor, baritone or bass part. This advanced course is open to all students in the college. Previous choral experience, knowledge of music notation and good sight-reading capability are required. Brief individual auditions may be conducted at the beginning of the first class. Students registered for this course must be also registered for MUS*B270.
Prerequisites: Completion of MUS* 175 with a 'C' or above and take MUS* 270 simultaneously
Offered: Occasionally

MUS* 276: Madrigal/Chamber Singer IV
1 Credits
(Formerly MUS 228)
The primary purposes of this academic course are the development of student musicianship and his vocal technique, as well as the study and performance of a variety of musical styles through the medium of chamber choral ensemble. The course includes regular rhythmic, diction, sight-reading and vocalizing exercises, as well as learning of their own soprano, alto, tenor, baritone or bass part. This advanced course is open to all students in the college. Previous choral experience, knowledge of music notation and good sight-reading skills are required. Brief individual auditions may be conducted at the beginning of the first class. Students registered for this course must be also registered for MUS*271.
Prerequisites: Completion of MUS* 275 with a 'C' or above, and taking MUS* 271 simultaneously
Offered: Occasionally
MUS* 277: Vocal: Opera to Broadway
1 Credits
A performing ensemble course. Students will research and perform several scenes from musical theater, operetta and operatic repertoire in a live production
Prerequisites: MUS* 173 or MUS* 161 or MUS* 174 or permission by instructor.
Offered: Fall, Spring

MUS* 285: Applied Lessons III
1 Credits
This course is the second in a sequence of required private vocal or instrumental lessons to reinforce and learn elements of music performance. Students will continue their instruction through one hour per week master class and one hour per week of required private music lesson. Private teachers will be selected and approved by the music department.
Prerequisites: Completion of MUS* 186 with a 'C' or above, or permission of instructor
Offered: Fall, Spring

MUS* 286: Applied Lessons IV
1 Credits
This course is the fourth and last in a sequence of required private vocal or instrumental lessons to reinforce and learn elements of performance. Students will continue their instruction through one hour per week master class and one hour per week of required private music lesson. Private teachers will be selected and approved by the music department. Capstone: Students will be required to present a lecture/recital of contrasting periods and styles for music faculty and students. Vocalists will need to perform pieces in at least two different languages.
Prerequisites: Completion of MUS* 285 with a 'C' or above, or permission of instructor
Offered: Fall, Spring

Occupational Therapy Assistant

OTA* 102: Foundation of Occupational Therapy
3 Credits
(Formerly OTA 101)
An overview of occupational therapy that describes the philosophy and theoretical foundation of the profession as well as the role of the occupational therapy assistant. Level I, observational experiences will be required.
Prerequisites: None
Offered: Fall

OTA* 120: Neurologic Intervention in Occupational Therapy
4 Credits
(Formerly OTA 120)
A study of the human nervous system with a focus on sensory and motor behavior. The lab is a focus on anatomy and physiology including assessment of function. Prerequisite: concurrently or after OTA* 102 and the biology requirement.
Class: 3 hours per week. Laboratory: 2 hours per week.
Prerequisites: Concurrently or after OTA* 102 and the biology requirement.
Offered: Fall

OTA* 206: Level I Advanced Fieldwork
0 Credits
(Formerly OTA 106)
A pass/fail course providing 20 hours of supervised fieldwork experience where the student applies treatment learned in OTA courses and learns about the roles of other professionals involved in patient treatment.
Prerequisites: OTA* 102, OTA* 120, BIO* 115, PSY* 201. To be taken concurrent with OTA* 210, OTA* 212, OTA* 214 and OTA* 232.
Offered: Spring

OTA* 208: Healthcare Management in Occupational Therapy
3 Credits
Explores the roles of the OTA in healthcare delivery, with an emphasis on ethics, standards of practice, professional behavior, certification/licensure, emerging areas of practice, evidence based practice and the healthcare team role delineation.
Prerequisites: None
Offered: Spring

OTA* 210: Occupational Therapy Practice in Pediatrics
3 Credits
(Formerly OTA 102)
An overview of disabilities and diseases that affect children, and the study of occupational therapy theory and practice as it pertains to the treatment of these disabilities.
Prerequisites: OTA* 102 and OTA* 120, BIO* 115, and PSY* 201.
Offered: Spring

OTA* 210L: Occupational Therapy Practice in Pediatrics Lab
1 Credits
(Formerly OTA 102L)
A laboratory course in occupational therapy to complement OTA* 210; must be taken concurrently with OTA* 210. Laboratory: 2 hours per week.
Prerequisites: None
Offered: Spring

OTA* 216: Occupational Therapy Practice in Physical Dysfunction
3 Credits
The study of Occupational Therapy theory and practice as it pertains to the treatment of disabilities and diseases commonly treated by occupational therapy practitioners in the physical rehabilitation setting.
Prerequisites: None
Offered: Spring

OTA* 216L: Occupational Therapy Practice in Physical Dysfunction Lab
1 Credits
Exploration of Occupational Therapy assessments, techniques, interventions and approaches utilized within the practice area of physical disability. Laboratory: 2 hours per week.
Prerequisites: None
Offered: Spring
OTA* 218: Occupational Therapy Practice in Mental Health
3 Credits
The study of Occupational Therapy theory and practice as it pertains to psychiatric diagnoses, and the impact of such upon one's occupational functioning.
Prerequisites: None
Offered: Spring

OTA* 218L: Occupational Therapy Practice in Mental Health Lab
3 Credits
Exploration of Occupational Therapy assessments, techniques, interventions and approaches utilized within the practice area of Mental Health. Laboratory: 2 hours per week.
Prerequisites: None
Offered: Spring

OTA* 234: Documentation in Occupational Therapy
3 Credits
This course develops an understanding of, and provides opportunities for, the student to become proficient in the various styles and formats of clinical documentation. Students will develop the ability to construct and revise treatment goals and formulate treatment plans employing various styles utilized within the medical profession.
Prerequisites: None
Offered: Fall

OTA* 242: Level II Fieldwork
11 Credits
(Formerly OTA 242)
Sixteen weeks of clinical training under the direction of an occupational therapy practitioner. Half the training deals with psychosocial dysfunction and half with physical disabilities.
Prerequisites: Completion of all OTA and general education course work, and Level I Advanced Fieldwork.
Offered: Fall, Spring

OTA* 244: Clinical Seminar in Occupational Therapy
1 Credits
(Formerly OTA 244)
The study of occupational therapy treatment principles and applications using the single case model; to be taken concurrently with OTA* 242.
Prerequisites: Completion of all OTA and general education course work, and Level I Advanced Fieldwork.
Offered: Fall, Spring

Oceanography

OCE* 101: Introduction to Oceanography
3 Credits
(Formerly OCEN 110)
An introduction to the science of the ocean with emphasis on the geological, physical, chemical and biological aspects of oceans. Topics include physical and chemical properties of seawater, circulation, bathymetry, waves, tides, El Niño, and marine plant and animal habitats. A field trip may be included.
Prerequisites: Eligibility for ENG* 101.
Offered: Fall, Spring

Philosophy

PHL* 101: Introduction to Philosophy
3 Credits
(Formerly PHIL 201)
Development of personal views on the fundamental issues of human existence: the nature of reality, the nature of the human person, knowing and thinking, freedom, basis of morality, aesthetics, the philosophical basis of political systems, and God's existence.
Prerequisites: Eligibility for ENG* 101.
Offered: Fall, Spring, Summer

PHL* 103: Who Are We?: Theories of Human Nature
3 Credits
An introductory level philosophy course, designed for students who have no experiences in philosophic studies. The course deals with a wide range of philosophic issues organized thematically with particular emphasis placed on the study of major theories of Human Nature: ancient religious traditions, classic philosophical systems, contemporary theories that use scientific method to understand human nature.
Prerequisites: None
Offered: Fall, Spring

PHL* 106: Great Human Ideas: Truth, Goodness, Beauty, Liberty, Equality, and Justice
3 Credits
An introductory level philosophy course, exploring some of great philosophic ideas which have had enduring impact on human and human societies. The course is organized in three parts: 1. What is philosophy? ; 2. The Ideas We Judge by; 3. The Ideas We Act on. The first part is a general introduction to philosophy for students who have no experiences in philosophical studies, the second part discusses in depth ideas of Truth, Goodness, and Beauty, and in the third part, Liberty, Equality, and Justice.
Prerequisites: Eligibility for ENG* 101.
Offered: Fall, Spring

PHL* 111: Ethics
3 Credits
(Formerly PHIL 203)
The fundamentals and principles of ethics: moral conscience, good and evil, values, norms, ethical judgment, major ethical systems, punishment, religion and ethics. Contemporary problems with case studies; in particular, issues of environmental and bio-medical ethics.
Prerequisites: Eligibility for ENG* 101.
Offered: Fall, Spring, Summer

PHL* 112: Medical Ethics
3 Credits
(Formerly PHIL 213)
This course relates specific health experiences and issues to ethical theories of traditional and contemporary philosophy. It includes a critical examination of current opinions on moral issues in health care and gives a fair consideration of those views.
Prerequisites: None
Offered: Spring
PHL* 151: World Religions
3 Credits
(Formerly PHIL 207)
Survey of the major religions of the world: Christianity, Judaism, Islam, Buddhism and Hinduism, with emphasis on essential doctrines and practices. A review of contemporary cults and sects.
Prerequisites: None
Offered: Fall, Spring

PHL* 153: Buddhist Philosophy
3 Credits
(Formerly PHIL 227)
An examination of the predominant philosophical themes in divergent traditions of Buddhism. Some topics to be covered are metaphysics, ethics, aesthetic concepts, and the Buddhist values for confronting contemporary problems. Recommended for all students.
Prerequisites: None
Offered: Occasionally

PHL* 163: Chinese Philosophy
3 Credits
(Formerly PHIL 211)
An inquiry into the concept of order and harmony in Chinese philosophy. Readings in English translation will include both primary texts and contemporary analyses of materials from Confucianism, Taoism, and other Chinese philosophic schools. Recommended for all students.
Prerequisites: None
Offered: Occasionally

PHL* 197: Philosophy of Sports
3 Credits
This is an advanced philosophy course designed to illustrate the point that philosophical reflection is present in our daily experiences, which we may consider nonintellectual. This course will take up the related themes of sports, athletics, and play, in order to show that an adequate understanding of them requires philosophical understanding. Topics will include the social significance of sports, ethical issues in sports, sports and race, mind and body in sports, sports and aesthetics, gender in sports. Advanced reading and writing skills will help to succeed in this course. Taking a lower level philosophy course or ENG*101 would be helpful before taking this course.
Prerequisites: Eligibility for ENG*101
Offered: Occasionally

PHL* 201: Reading Plato's Republic
3 Credits
This course is an upper level course and designed to help students read original philosophic literature. In this course, students will explore Plato's Republic, which is the first, and arguably the most influential, work in the history of Western political philosophy.
Prerequisites: Any 100-level philosophy course or ENG*101.
Offered: Spring

PHL* 211: Reading Aristotle: The Ethics of Happiness
3 Credits
This is an advanced philosophy course prepared for students proficient in reading and writing. The course focuses on the study of views of Aristotle about mortality by means of a careful reading of his Nichomachean Ethics. The goal of the course is to present his ideas clearly and to suggest ways in which the thought of a philosopher from so long ago still bears tremendous relevance for our own age.
Prerequisites: None
Offered: Spring

Physical Therapist Assistant

PTA* 120: Introduction to Physical Therapy
3 Credits
(Formerly PT 101)
Learning opportunities in this course assist the student to recognize the roles of physical therapy within various practice settings. Students differentiate functions of physical therapists and physical therapist assistants as members of the health care team through study of documentation principles, ethics, laws and organizations important to the provision of services. Learning also includes development of knowledge and abilities within the domains of conduct, communication and sensitivity to individual and cultural differences.
Prerequisites: Admission to the PTA* Program.
Offered: Spring

PTA* 125: Physical Therapy for Function
4 Credits
(Formerly PT 102)
This course provides the student with introductory concepts and techniques for effective patient teaching and physical therapy intervention for function and mobility. Emphasis is placed on competence in problem-solving and the physical therapist assistant’s role in modification of physical therapy interventions.
Prerequisites: Admission to the PTA* Program.
Offered: Spring
PTA* 220: Introduction to the Physical Therapy Clinic
1 Credit
(Formerly PT 106)
This course provides an orientation to the physical therapy clinic and to the provision of physical therapy interventions. Students develop communication, intervention, and problem-solving techniques within the physical therapy clinic.
Prerequisites: PTA* 120 and PTA* 125 with a grade of “C” or higher.
Offered: Summer

PTA* 230: Physical Agents in Physical Therapy
4 Credits
(Formerly PT 110)
This course develops the student’s competence with problem-solving and application of physical therapy interventions using physical agents, including therapeutic applications of heat, cold, water, electricity, light and mechanical forces or devices.
Prerequisites: PTA* 120 and PTA* 125 with a grade of “C” or higher, PTA* 220 with a grade of “P”.
Offered: Fall

PTA* 235: Kinesiology for Rehabilitation
4 Credits
(Formerly PT 111)
This course fosters learning of the anatomical and biomechanical principles of human movement through the study of the musculoskeletal and nervous systems. Competencies attained include accurate data collection by goniometry, manual muscle testing, posture and gait analysis including the effects of biomechanical forces on the human body.
Prerequisites: PTA* 120 and PTA* 125 with a grade of “C” or higher, PTA* 220 with a grade of “P”.
Offered: Fall

PTA* 250: Therapeutic Exercise
5 Credits
(Formerly PT 201)
Learning includes the theory and techniques to safely and effectively implement therapeutic exercise interventions based on a plan of care established by a physical therapist. Students also develop competence to measure a patient’s response to interventions and respond accordingly and to provide effective instruction to patients and caregivers.
Prerequisites: PTA* 230 and PTA* 235 with a grade of “C” or higher.
Offered: Spring

PTA* 253: Pathophysiology for Rehabilitation
3 Credits
(Formerly PT 202)
This course develops comprehension about abnormalities and the physical, physiological and psychological changes that occur throughout the human lifespan. The student learns the effects of pathology on the rehabilitation of patients with orthopedic, neurological, and general medical conditions.
Prerequisites: PTA* 230 and PTA* 235 with a grade of “C” or higher.
Offered: Spring

PTA* 258: PTA in the Healthcare Arena
2 Credits
(Formerly PT 210)
This course develops the student’s ability to apply physical therapy interventions and data collection techniques within the clinic environment and advances the student’s abilities with communication, conduct and problem-solving within the structure of the health care system.
Prerequisites: PTA* 230 and PTA* 235 with a grade of “C” or higher.
Offered: Spring

PTA* 260: Physical Therapy Seminar
2 Credits
(Formerly PT 211)
In this pass/fail course students demonstrate the ability to apply principles of problem solving to selected professional issues, industry trends, and special populations that may be encountered as a physical therapist assistant. Learning opportunities assist in the transition from student to clinician and identification of interest areas for lifelong learning.
Prerequisites: PTA* 250, PTA* 253 and PTA* 258 with a grade of “C” or higher.
Offered: Fall

PTA* 262: PTA Internship II
5 Credits
(Formerly PT 212)
Within this clinic-based, pass/fail course students learn to integrate and apply physical therapy concepts and to effectively perform physical therapy interventions as a physical therapist assistant. Students develop their abilities for daily organization and management of a patient caseload and effectively contribute to the health care team.
Prerequisites: PTA* 250, PTA* 253 and PTA* 258 with a grade of “C” or higher.
Offered: Fall

PTA* 265: PTA Internship III
5 Credits
(Formerly PT 213)
Within this clinic-based, pass/fail course students learn to problem-solve and competently function in the clinic environment as a physical therapist assistant. Students develop their abilities for daily organization and identification of interest areas for lifelong learning.
Prerequisites: PTA* 250, PTA* 253 and PTA* 258 with a grade of “C” or higher.
Offered: Fall

PTA* 260: Physical Therapy Seminar
2 Credits
(Formerly PT 211)
In this pass/fail course students demonstrate the ability to apply principles of problem solving to selected professional issues, industry trends, and special populations that may be encountered as a physical therapist assistant. Learning opportunities assist in the transition from student to clinician and identification of interest areas for lifelong learning.
Prerequisites: PTA* 250, PTA* 253 and PTA* 258 with a grade of “C” or higher.
Offered: Fall

PTA* 262: PTA Internship II
5 Credits
(Formerly PT 212)
Within this clinic-based, pass/fail course students learn to integrate and apply physical therapy concepts and to effectively perform physical therapy interventions as a physical therapist assistant. Students develop their abilities for daily organization and management of a patient caseload and effectively contribute to the health care team.
Prerequisites: PTA* 250, PTA* 253 and PTA* 258 with a grade of “C” or higher.
Offered: Fall

PTA* 265: PTA Internship III
5 Credits
(Formerly PT 213)
Within this clinic-based, pass/fail course students learn to problem-solve and competently function in the clinic environment as a physical therapist assistant. Students develop their abilities for daily organization and identification of interest areas for lifelong learning.
Prerequisites: PTA* 250, PTA* 253 and PTA* 258 with a grade of “C” or higher.
Offered: Fall

Physics

PHY* 105: Radiologic Physics
3 Credits
Content is designed to establish a basic knowledge of physics pertinent to developing an understanding of radiations used in the clinical setting. Fundamental physical units, measurements, principles, atomic structure and types of radiation are emphasized. Also presented are the fundamentals of x-ray generating equipment, x-ray production and its interaction with matter.
Prerequisites: Acceptance in the Radiologic Science program.
Offered: Fall
**PHY* 110: Introductory Physics**
4 Credits
(Formerly PHYS 110)
An introductory course in the physics of motion, heat, sound, electricity, magnetism, light, optics and the theory of the atom. Intended for non-science majors. A process oriented laboratory approach emphasizing exploration and problem solving. This course is intended for students who need only one semester of physics. Students with credit for high school physics should elect PHY* 121 or PHY* 221. Scientific calculator required.
Class: 3 hours per week. Laboratory: 2 hours per week.
**Prerequisites:** Completion of MAT* 095 with a C or higher, or math placement test. Students who have taken a higher level physics course will not receive credit for this course.
**Offered:** Fall, Spring, Summer
Fulfills General Education - Knowledge of Physical & Natural Sciences

**PHY* 121: General Physics I**
4 Credits
(Formerly PHYS 121)
Basic concepts of mechanics and heat, including forces, work and energy, conservation laws, physics of fluids, temperature, heat transfer and the laws of thermodynamics. Students who need only one semester of physics should elect PHY* 110. A TI-83+ or TI-84+ or TI-86+ graphing calculator required. Class: 3 hours per week. Laboratory: 3 hours per week.
**Prerequisites:** Completion of MAT* 185 or MAT* 186 with a C or higher. Students who have taken a higher level physics course will not receive credit for this course.
**Offered:** Fall
Fulfills General Education - Knowledge of Physical & Natural Sciences

**PHY* 122: General Physics II**
4 Credits
(Formerly PHYS 122)
Basic concepts of electricity, magnetism and wave motion, including electric and magnetic fields, electromagnetic radiation, wave properties of light and optics. A TI-83+ or TI-84+ or TI-86+ graphing calculator required. Class: 3 hours per week. Laboratory: 3 hours per week.
**Prerequisites:** Completion of PHY* 121 with a C or higher. Students who have taken a higher level physics course will not receive credit for this course.
**Offered:** Spring
Fulfills General Education - Knowledge of Physical & Natural Sciences

**PHY* 221: Calculus-Based Physics I**
4 Credits
(Formerly PHYS 131)
A study of Newtonian mechanics and thermodynamics intended for physics, chemistry, engineering and math transfer students. Topics include particle and rigid body dynamics, work, momentum and energy conservation, gravitation, fluids, heat, and the laws of thermodynamics. A TI-83+ or TI-84+ or TI-86+ graphing calculator or its equivalent is required. Class: 3 hours per week. Laboratory: 3 hours per week.
**Prerequisites:** Successful completion of MAT* 254 or MAT* 250 and PHY* 110 or successful completion of one year of high school physics.
**Offered:** Fall, Spring

**PHY* 222: Calculus-Based Physics II**
4 Credits
(Formerly PHYS 132)
A study of electricity, magnetism, waves, and optics intended for physics, chemistry, engineering and math transfer students. Topics include Coulomb’s Law, electric and magnetic fields, Gauss’ Law, electric potential, capacitance, Ohm’s Law, dc and ac circuits, induced emf; inductance, simple harmonic motion, wave properties for sound and light, and geometrical optics. A TI-83+ or TI-84+ or TI-86+ graphing calculator or its equivalent is required. Class: 3 hours per week. Laboratory: 3 hours per week.
**Prerequisites:** Successful completion of PHY* 221 and MAT* 256.
**Offered:** Fall, Spring

**PHY* 223: Calculus-Based Physics III**
4 Credits
(Formerly PHYS 133)
Intended for physics, engineering and math transfer majors. Principles of quantum radiation and modern physics, including electromagnetic waves, relativistic mechanics, and quantized radiation are studied. A TI-83+ or TI-84+ or TI-86+ graphing calculator required. Class: 3 hours per week. Laboratory: 3 hours per week.
**Prerequisites:** PHY* 222, MAT* 268 may be taken concurrently
**Offered:** Occasionally

**Political Science**

**POL* 101: Introduction to Political Science**
3 Credits
(Formerly PLSC 101)
The study of politics through the identification of great political issues that are analyzed from historical and philosophical viewpoints.
**Prerequisites:** Eligibility for ENG* 101.
**Offered:** Fall
Fulfills General Education - Knowledge of Social Sciences

**POL* 102: Introduction to Comparative Politics**
3 Credits
This course focuses on the governments and peoples of the major regions of the world: Europe, Africa, the Middle East, Asia, and the Americas. It examines global variations in governing structures due to historic, cultural, religious, economic, and other causes. Issues of Third World democratization, economic globalization, Islam and democracy’s “clash of civilizations,” authoritarian states, and other timely issues will be subjects of class discussions and course papers.
**Prerequisites:** Eligibility for ENG* 101.
**Offered:** Occasionally

**POL* 103: Introduction to International Relations**
3 Credits
(Formerly PLSC 102)
An examination of the international community, emphasizing theory and practice in international politics.
**Prerequisites:** Eligibility for ENG* 101.
**Offered:** Spring
POL* 111: American Government
3 Credits
(Formerly PLSC 111)
A study of the American political system at the national level, with emphasis on political dynamics and public policy.
Prerequisites: Eligibility for ENG* 101.
Offered: Fall, Spring, Summer
Fulfills General Education - Knowledge of Social Sciences

POL* 112: State and Local Government
3 Credits
(Formerly PLSC 112)
The forms, functions, processes and problems of state and local government in the United States, with special emphasis on Connecticut state government.
Prerequisites: Eligibility for ENG* 101.
Offered: Fall, Spring, Summer
Fulfills General Education - Knowledge of Social Science

POL* 120: Introduction to Law
3 Credits
(Formerly PLSC 120)
This course serves as an introduction to the study of law with an overview of fundamental concepts and principles of our legal system. A variety of legal topics, terminology, and areas of law are discussed in order to assist students in acquiring an appreciation of the dynamic role of law in our changing society. Students are introduced to the roles of legal professionals, including paralegals. Legal reasoning, legal ethics, and legal research methods are also presented.
Prerequisites: Eligibility for ENG* 101 or permission of instructor.
Offered: Fall, Spring
Cross listed as: LGL* 101

POL* 212: Constitutional Law and Civil Rights
3 Credits
(Formerly PLSC 212)
An examination of the United States Constitution as it applies to police power and landmark decisions of the United States Supreme Court interpreting and defining police power.
Prerequisites: POL* 111 or POL* 112.
Offered: Fall, Spring

PSG* 101: Polysomnography I
2 Credits
This course is designed to provide didactic instruction for entry-level personnel in the basics of polysomnographic technology. Students will become familiar with terminology, instrumentation, setup and calibration, patient safety and infection control, recording and monitoring techniques, and documentation.
Prerequisites: Acceptance into the Polysomnography Certificate program
Offered: Fall

PSG* 102: Polysomnography Lab I
1 Credits
This course is designed to provide laboratory training for entry-level personnel in the basics of polysomnographic technology. Students will become familiar with terminology, instrumentation, setup and calibration, patient safety and infection control, recording and monitoring techniques, documentation, and patient-technologist interactions related to polysomnography technology.
Prerequisites: Acceptance into the Polysomnography Certificate program
Offered: Fall

PSG* 150: Polysomnography Clinical I
2 Credits
A health-related work-based learning experience that enables the student to apply specialized occupational theory, skills, and concepts. Direct supervision will be provided by clinical professionals.
Prerequisites: Acceptance into the Polysomnography Certificate program
Offered: Fall

PSG* 201: Polysomnography II
2 Credits
This course is designed to provide didactic instruction for entry-level personnel in the basics of polysomnographic technology. Students will become familiar with EMG and EEG recording and monitoring techniques, scoring of LRS and PLMS, performing and scoring MSLT and MWT, mask fitting, PAP equipment and its therapeutic application, pediatric sleep studies, and documentation.
Prerequisites: PSG* 101, PSG* 102 and PSG* 150 all with a "C" or better
Offered: Spring

PSG* 202: Polysomnography Lab II
1 Credits
This course is designed to provide laboratory training for entry-level personnel in the basics of polysomnographic technology. Students will become familiar with mask fitting, the application of oxygen therapy and PAP therapy, and the manipulation of PAP, performing EMG hook ups, performing MSLT and MWT tests, practice setting up pediatric sleep studies and scoring all different types of sleep studies.
Prerequisites: PSG* 101, PSG* 102 and PSG* 150 all with a "C" or better.
Offered: Spring
PSG* 250: Polysomnography Clinical II
2 Credits
A health-related work-based learning experience that enables
the student to apply specialized occupational theory, skills, and
concepts. Direct supervision will be provided by clinical
professionals.
Prerequisites: PSG* 101, PSG* 102 and PSG* 150 all with a
"C" or better
Offered: Spring

Psychology

PSY* 107: Pathways to Personal Growth
3 Credits
The purpose of this course is twofold: it is to help students
develop a deeper understanding of themselves, of others, and
of human life in general and to promote change and personal
growth. Students will be introduced to a number of
psychological tools and principles and will learn how to apply
them to their own lives in such a way as to promote
understanding, insight, and change. In addition to this,
students will have the opportunity to develop a deeper
understanding of others and of their perspectives and ways of
being.
Prerequisites: Eligibility for ENG* 101.
Offered: Fall, Spring, Summer

PSY* 111: General Psychology I
3 Credits
The purpose of this course is to introduce students to the
discipline of psychology and to the evolving body of knowledge
that has been produced by this discipline. It surveys basic topic
areas within psychology including psychology's history and
scientific origins, current research and measurement
techniques, the physiological correlates of experience and
behavior, human development, learning, memory, intelligence,
and personality.
Prerequisites: Eligibility for ENG* 101.
Offered: Fall, Spring, Summer
Fulfills General Education - Knowledge of Social Sciences

PSY* 112: General Psychology II
3 Credits
(Formerly PSYC 112)
The purpose of this course is to introduce students to the
discipline of psychology and to the evolving body of knowledge
produced by this discipline. This course continues the
exploration of the basic areas of study within the field of
psychology begun in General Psychology I. Topics include
sensation, perception, consciousness, motivation, emotion,
language, cognition, social psychology, stress and health,
psychological disorders, and treatment of psychological
disorders.
Prerequisites: PSY* 111 with a grade of "C-" or better.
Offered: Fall, Spring
Fulfills General Education - Knowledge of Social Sciences

PSY* 125: Psychology of Aging and Mental Health
3 Credits
(Formerly PSYC 125)
The course will offer a realistic portrait of the personal
experiences of late life and highlight the mental health issues
that confront human beings as they age.
Prerequisites: Eligibility for ENG* 101
Offered: Occasionally

PSY* 163: Children with Disabilities
3 Credits
This course is a general introduction to exceptional learners,
their families, and their education. The course includes
discussion of the psychological, medical, and sociological
aspects of exceptional learners and their relationship to family,
community, and especially the educational system. The course
emphasis is on the inclusion of exceptional learners within
family, community, and school. This course focuses on all
exceptional learners, including gifted and/or talented students.
Prerequisites: Eligibility for ENG* 101.
Offered: Fall, Spring

PSY* 164: Assistive Technology for Students with
Disabilities K-12
1 Credit
The goal of this course is to promote an understanding of the
use of Assistive Technology for learners with disabilities.
Assistive Technology can be utilized to promote participation
in the least restrictive educational environment and provide
students with access to and maximum participation in the
mainstream educational curriculum.
Prerequisites: None
Offered: Fall

PSY* 173: Adults with Disabilities
3 Credits
(Formerly PSYC 173)
This course is a general introduction to adults with disabilities
and the issues faced by them in current American society. The
emphasis is on issues relating to full inclusion in
neighborhoods, community associations, workplaces and
leisure-recreation experiences. The Americans with Disabilities
Act ADA and its powerful implications for full community
inclusion by men and women with disabilities will be
examined.
Prerequisites: Eligibility for ENG* 093 or concurrently
enrolled in ENG* 096.
Offered: Spring

PSY* 174: Assistive Technology for Adults in the
Workplace, Home and Community.
1 Credit
The goal of this course is to promote an understanding of the
use of Assistive Technology by adults in the workplace, at home
and in the community. Activities in which assistive technology
can be used to facilitate independence will be addressed.
Finding the resources necessary to acquire needed assistive
technology will also be a focus of this course.
Prerequisites: None
Offered: Fall

PSY* 183: Learning Process and Disabilities
3 Credits
(Formerly PSYC 183)
This course explores various learning theories, especially
behavior modification, as they relate to children and adults
with disabilities. Included will be an introduction to the
biological aspects of the brain and learning. Ethical questions
regarding the application of certain learning theories will be
examined.
Prerequisites: Eligibility for ENG* 101.
Offered: Fall
PSY* 193: Issues/Trends in Disabilities
3 Credits
(Formerly PSYC 193)
This course will examine current legal, ethical, community, family and personal support issues affecting children and adults with disabilities and their families. Through the study of literature, newsletters and media accounts and by listening to the leaders and advocates of today, students will more fully understand the challenges and opportunities of people with disabilities.
Prerequisites: Eligibility for ENG* 093 or concurrently enrolled in ENG* 096.
Offered: Spring

PSY* 201: Life Span Development
3 Credits
(Formerly PSYC 124)
A survey of physical, cognitive, social and emotional changes as they are influenced by heredity and environment from conception to death. Class: 3 hours per week.
Prerequisites: PSY* 111 with a grade of "C-" or better.
Offered: Fall, Spring, Summer

PSY* 203: Child Development
3 Credits
(Formerly PSYC 234)
An evaluation of current issues, theories, and research in the area of child development. This study of physical, cognitive and socioemotional development includes: genetics, development of self, language, play, learning, intelligence, personality, and social interactions from conception through age twelve.
Prerequisites: PSY* 111 with a grade of "C-" or better.
Offered: Fall, Summer

PSY* 206: Adolescent & Adult Development
3 Credits
(Formerly PSYC 244)
An exploration of current problems, theories and research in adolescent and adult development. A basic exploration of physical, cognitive, and socioemotional development and the psychological dynamics which accompany them including adjustments, changing roles, and social relationships.
Prerequisites: PSY* 111 with a grade of "C-" or better.
Offered: Fall, Spring

PSY* 210: Death and Dying
3 Credits
(Formerly PSYC 117)
Examines the processes of death, dying and grieving. Death and loss as they relate to major developmental life tasks are also studied, including the effect of death and loss upon survivors. Both Eastern and Western perspectives are considered.
Prerequisites: Eligibility for ENG* 101.
Offered: Fall, Spring

PSY* 211: Psychology of Women
3 Credits
This course studies a variety of psychological issues and theories as they apply to women. Traditional psychological overviews give insufficient attention to or emphasis on topics critical to a psychological depiction of women. This course attempts to correct this imbalance. Topics include how women develop psychologically; how they form values and direct their behavior, including sexual behaviors; women's anatomy; women and work and their reaction to stress; and women and substance abuse.
Prerequisites: Eligibility for ENG* 101.
Offered: Occasionally

PSY* 212: Health Psychology
3 Credits
(Formerly PSYC 200)
The psychological factors that promote health and enhance resistance to disease or place people at risk for disease are explored. Emphasis is placed upon those psychological factors which can prevent or reverse illness and sustain or recapture health.
Prerequisites: Eligibility for ENG* 093 or concurrently taking ENG* 096.
Offered: Occasionally

PSY* 217: Psychology of Criminal Behavior
3 Credits
(Formerly PSYC 232)
An overview on the psychological understanding of crime and the criminal. It will provide an analysis of individual differences in various criminal activities with a focus on a conceptual and practical understanding of the predictors of individual behavior.
Prerequisites: None
Offered: Occasionally
Cross listed as: CJS* 272

PSY* 220: Educational Psychology
3 Credits
Educational psychology encompasses the nature of learning, development, motivation, diversity and assessment. The major areas of emphasis for this course include the development of educational research as a science; developmental psychology's impact on education; effective teaching techniques and strategies; behavior management and discipline; tests and measurements. Intelligence, achievement, exceptionality, and diversity will be discussed.
Prerequisites: PSY* 111 with a grade of "C-" or better.
Offered: Occasionally
PSY* 221: Data Analysis in Psychology
4 Credits
Psychological research enables psychologists to describe, predict, and explain human behavior and thought. Such research often relies on the analysis of quantitative data. In this course, you will learn how to describe, analyze, interpret, and report psychological data. Course content includes coverage of both descriptive and inferential analytic procedures. Specific topics include graphical representations of data, measures of central tendency and variability, sampling, hypothesis testing, effect size estimates, confidence intervals, correlation and regression, t-tests, analysis of variance, and non-parametric tests. Students will gain practical experience in writing reports of research according to the standard conventions of the American Psychological Association and in the use of data analysis software commonly employed by research psychologists.

Prerequisites: PSY* 111, and C- or better in MAT* 109 or MAT* 138 or MAT* 139 or eligibility for class higher than MAT*138

Offered: Occasionally

PSY* 222: Quantitative Research Methods in Psychology
3 Credits
This course provides an introduction to psychological research, with a focus on developing the skills required to conduct responsible and valid research. Topics include conducting library research, developing hypotheses, measuring variables, research ethics, research design, data collection and analysis, interpretation of results, evaluating research, and writing research reports. Students will gain practical experience in the design and implementation of research by planning and conducting independent research projects, analyzing data using software commonly employed by research psychologists, and writing reports of research according to the standard conventions of the American Psychological Association.

Prerequisites: C- or better in PSY* 221

Offered: Occasionally

PSY* 240: Social Psychology
3 Credits
A survey of theory and research in social psychology, including the topics of conformity, obedience, attitudes and persuasion, group dynamics, the self, forming impressions and explaining behavior, altruism, aggression, romantic attraction, prejudice, and social conflict.

Prerequisites: PSY* 111 with a grade of "C-" or better.

Offered: Occasionally

PSY* 241: Social Psychology II
3 Credits
This course is an extension of PSY* 240, covering advanced topics in social psychology, such as attitude change, persuasion, social influence, and social cognition. Students will develop skills in research design, data analysis, and critical evaluation of social psychological research.

Prerequisites: PSY* 240 with a grade of "C-" or better.

Offered: Occasionally

PSY* 245: Abnormal Psychology
3 Credits
The purpose of this course is to introduce students to the phenomenon of psychopathology and to the field of abnormal psychology which attempts to understand and treat it in its many forms. The course will provide students with a basic understanding of this field and survey a number of the more common psychological disorders that have been explored within it such as clinical depression, bipolar disorder, schizophrenia, eating disorders, anxiety disorders, and personality disorders. Assessment, diagnosis, and treatment will also be addressed.

Prerequisites: PSY* 111 with a grade of "C-" or better.

Offered: Fall, Spring, Summer

PSY* 247: Industrial and Organizational Psychology
3 Credits
(Formerly PSYC 240)
A survey of the psychological factors that influence the individual in the work setting. Includes employee attitudes, motivation, group dynamics, decision making, leadership, assessment and training as an introduction to human resource management.

Prerequisites: Completion of ENG* 101 with C- or better

Offered: Fall, Spring

Cross listed as: BMG* 210

PSY* 255: The Psychology of Prejudice
3 Credits
This course explores stereotypes, prejudice, and discrimination from a psychological perspective. We will examine the various ways in which psychologists study stereotypes, prejudice, and discrimination as well as the psychological causes, correlates, and consequences of these phenomena.

Prerequisites: Eligibility for ENG* 101.

Offered: Occasionally

PSY* 273: Introduction to Neuropsychology
3 Credits
Introduction to Neuropsychology is an introduction to the neural foundations for behavior. Topics include how a Neuroscientist studies the brain and nervous system, the organization of the brain and nervous system, the major brain circuits and brain functions, and some major brain diseases and disorders. This course will also discuss how these disorders are related to behaviors and mental health disorders.

Prerequisites: Completion of PSY* 111 with a grade of "C-" or better.

Offered: Occasionally

PSY* 280: The Psychology of Social Influence
3 Credits
Social influence refers to the processes by which a person or group changes or attempts to change the opinions, beliefs, and/or behaviors of another person or group. This course will explore selected topics related to social influence from a social psychological perspective. Topics to be addressed include attitude measurement, conformity, compliance, obedience, propaganda, cults, subliminal persuasion, and the use and abuse of persuasion. Designed as a seminar, the emphasis of the course is on reading, discussion, critical thinking, and the application of course material to real world phenomena.

Prerequisites: Eligibility for ENG* 101.

Offered: Occasionally
PSY* 285: Positive Psychology
3 Credits
Positive psychology is the scientific study of the strengths and virtues that enable individuals and communities to thrive. This course will explore psychological strengths and optimal functioning, including 1 positive subjective states such as happiness; 2 positive individual traits such as wisdom and resilience; and 3 positive institutions such as healthy families, work environments, and communities. 
Prerequisites: PSY* 111 with C- or better.
Offered: Occasionally

PSY* 288: Psychology of Creativity
3 Credits
Drawing in part on the book The Artist’s Way, this course will introduce students to a number of principles and practices that will serve to deepen their understanding of and appreciation for the creative process. In addition, it will assist them in identifying and developing creative goals and ambitions as well as healthy and productive creative practices, practices that will allow them to move past obstacles to creative expression and toward more creative lives.
Prerequisites: PSY* 107 or PSY* 111 with a grade of "C-" or better.
Offered: Occasionally

Quality Assurance

QUA* 110: Measurement and Measurement Systems
3 Credits
(Formally QA 110)
An introductory course in the techniques of making successful measurements for dimensions, pressures, temperatures and other manufacturing process variables. The design and use of automated measuring and test equipment will be discussed. Methods for establishing controls for preparation and use of inspection gaging will be discussed.
Prerequisites: EGR* 112.
Offered: Occasionally

QUA* 233: Statistical Process Improvement
3 Credits
(Formally QA 150)
A course in various statistical methods and their applications in industry. Course concentration will deal with the use of statistical logic and methods to aid in the solution of quality, production and engineering type problems.
Prerequisites: MFG* 230
Offered: Occasionally

Radiation Therapy

RDT* 114: Principles and Practices of Radiation Therapy I
4 Credits
Content is designed to provide an overview of radiation therapy. The roles and responsibilities of the radiation therapist will be discussed. Instruction in treatment prescription, techniques and delivery will be provided.
Prerequisites: Acceptance into Radiology Program
Offered: Fall

RDT* 115: Principles and Practices of Radiation Therapy II
4 Credits
Content is designed to provide the student with the techniques to deliver Radiation Therapy treatments. Course will include psychological and physical needs and factors affecting treatment outcome, theories and principles of tolerance dose, time-dose relationships, fractionation schemes. Also included is a knowledge base in factors that govern and influence the production and recording of radiographic images for patient simulation, treatment planning and treatment verification in radiation oncology.
Prerequisites: RDT* 114
Offered: Spring

RDT* 116: Treatment Planning I
3 Credits
Content is designed to establish factors that influence and govern clinical planning of patient treatment. This encompasses isodose descriptions, patient contouring, radiobiologic considerations, dosimetric calculations, compensation and clinical application of treatment beams. Optimal treatment planning is emphasized along with particle beams. Stereotactic and emerging technologies are presented.
Prerequisites: RDT* 114
Offered: Spring

RDT* 117: Treatment Planning II
3 Credits
Content is designed to establish factors that influence and govern clinical planning of patient treatment as a continuation of those topics in Treatment Planning I. This encompasses a review of treatment beams, evaluation of dose distributions, optimal treatment planning considerations, evaluation and assessment, including adaptive treatment planning.
Prerequisites: RDT* 116
Offered: Summer

RDT* 140: CT Imaging and Sectional Anatomy
3 Credits
Content will introduce students to computed tomography imaging methods. Students will identify normal anatomical structures via a variety of imaging formats.
Prerequisites: Completion of RDT* 117 and RDT* 197
Offered: Spring

RDT* 145: Radiation Therapy Equipment
2 Credits
Content is designed to present treatment units used in external radiation therapy. The history of equipment development will be presented and well as an in-depth training on console operation.
Prerequisites: Completion of RDT* 115 and RDT* 116
Offered: Summer

RDT* 201: Radiation Oncology I
3 Credits
Content is designed to examine and evaluate the management of neoplastic disease. The epidemiology, etiology, detection, diagnosis, patient condition, treatment and prognosis of neoplastic disease will be presented, discussed and evaluated in relationship to histology, anatomical site and patterns of spread. The breast, central nervous system, genitourinary tract, gastrointestinal tract, pediatric neoplasms, musculoskeletal, reproductive and respiratory tumors will be discussed.
Prerequisites: RDT* 117
Offered: Fall
RDT* 203: Radiation Oncology II
3 Credits
This is a continuation of Clinical Radiation Oncology I. Content is designed to examine and evaluate the management of neoplastic disease. The epidemiology, etiology, detection, diagnosis, patient condition, treatment and diagnosis of neoplastic disease will be presented, discussed and evaluated in relationship to histology, anatomical site and patterns of spread. The lymphoreticular system, skin, hematopoietic system, bone and soft tissue, endocrine system, ocular, head and neck cancer, eye and orbit, and benign tumors will be discussed.
Prerequisites: RDT* 201
Offered: Spring

RDT* 213: Radiation Therapy Physics I
2 Credits
This course provides a broad introduction to the physics involved with the medical application of ionizing radiation in the field of Radiation Therapy.
Prerequisites: RDT* 145
Offered: Fall

RDT* 216: Principles and Practice of Radiation Therapy III
4 Credits
This course revisits anatomy specifically from an imaging perspective related to each specific disease site. Specific radiation therapy techniques and treatment borders will be discussed. Students will learn to identify structures on X-rays, CT and MRI scans and locate landmarks on simulation films. The radiation therapist's responsibility in the management of neoplastic disease will be presented and discussed. This course covers cancers of the breast, central nervous system, thorax, as well as pediatric and gynecologic cancers. In addition, lymphomas and leukemia are discussed.
Prerequisites: RDT* 115
Offered: Fall

RDT* 217: Principles and Practice of Radiation Therapy IV
3 Credits
This course is a continuation of The Principles and Practices of Radiation Therapy III and revisits anatomy specifically from an imaging perspective related to each specific disease site. Specific radiation therapy techniques and treatment borders will be discussed. Students will learn to identify structures on X-rays, CT and MRI scans and locate landmarks on simulation films. The radiation therapist's responsibility in the management of neoplastic disease will be presented and discussed. Cancers of the skin, bone and soft tissue, the gastrointestinal tract, the endocrine system, as well as cancers of the head, neck and orbit will be discussed.
Prerequisites: RDT* 216
Offered: Spring

RDT* 223: Radiation Therapy Physics II
2 Credits
This course provides a continuation of the study of the physics involved with the medical application of ionizing radiation in the field of Radiation Therapy.
Prerequisites: RDT* 213
Offered: Spring

RDT* 240: Operational & Quality Management in Radiation Therapy
2 Credits
Content is designed to focus on the components of quality improvement QI programs in radiation oncology. Topics will include quality control and assurance checks for the clinical aspects of patient care, medical records, treatment delivery and localization equipment and treatment planning equipment. The role of the various radiation therapy team members in continuous quality improvement will be discussed as well as the legal and regulatory implications for maintaining appropriate quality care.
Prerequisites: RDT* 213
Offered: Spring

RDT* 295: Radiologic Science Seminar
2 Credits
This course will contribute to the body of knowledge and allow the student to effectively analyze resources to promote growth in the profession. The attitude of professional development enables the radiologic science professional to stay in step with the current health care environment and be prepared to help foster the future and increase awareness of the profession in the global community. This content is geared to increase and disseminate intellectual inquiry, information literacy and the use of scholarly research methods. This course also includes a comprehensive review of the curriculum with testing in preparation for the ARRT examination.
Prerequisites: Completion of RAD* 136 or RDT* 240
Offered: Occasionally

Radiography

RAD* 117: Introduction to Radiologic Sciences
3 Credits
(Formerly RAD*112)
This course will serve as an introduction to the radiography program and hospital clinical environment. Through classroom presentation and laboratory simulation, students will learn to manipulate radiographic equipment, transport, position and communicate with patients for basic radiographic procedures, and gain an understanding of the role of the Radiographer in the diagnosis and treatment of disease. Students will also receive an orientation to the clinical facilities and program and hospital policies as part of this course.
Prerequisites: Acceptance in the Radiologic Science program
Offered: Fall

RAD* 120: Radiographic Procedures I
3 Credits
Instruction on how to accurately position patients for diagnostic Radiologic procedures and to prepare the necessary equipment and supplies for each procedure will be covered. The anatomy, physiology and pathology related to each positioning section, as well as image critique and improvement is included. The chest, abdomen, upper and lower extremities, and the upper gastrointestinal tract procedures are covered. Classroom and laboratory practice enhance learning during this course.
Prerequisites: Acceptance in the Radiologic Science program
Offered: Fall
RAD* 121: Radiologic Science Patient Care
3 Credits
(Formerly RAD*109)
Introduction to the field of Radiologic Technology to include specialties in the field, professional organizations, other professionals comprising the health care team, communication skills, critical thinking and problem solving, body mechanics, vital signs and infection control procedures. As part of this course, students will participate in a minimum of one community service project.
Prerequisites: Acceptance in the Radiologic Science program
Offered: Fall

RAD* 125: Radiographic Imaging I
3 Credits
An introduction to the fundamentals of exposure factor selection and imaging parameters, this course will introduce the student to the equipment and techniques utilized for radiographic imaging. Material covered includes image receptors, the x-ray tube and circuitry, x-ray production, prime factors, exposure factor selection and technique charts. Supervised laboratory sessions utilizing energized radiographic equipment will reinforce concepts and allow for hands-on learning.
Prerequisites: RAD* 117
Offered: Spring

RAD* 126: Radiographic Imaging II
2 Credits
A continuation of RAD 125, this course builds on the foundation of basic equipment and imaging methods to include specifics of image production and image quality evaluation. Topics covered include image quality factors, beam restriction and filtration, image intensification and fluoroscopy, tomographic principles, and control of scatter radiation.
Prerequisites: RAD* 125
Offered: Summer

RAD* 130: Radiologic Procedures II
3 Credits
A continuation of RAD 126, this course covers patient anatomy, pathology, positioning and procedures for contrast imaging of the lower gastrointestinal system, reproductive system and the anatomy, positioning and radiographic imaging of the shoulder, cervical spine, pelvis and non-routine orthopedic imaging. Classroom, laboratory and clinical practice are held in conjunction with this course.
Prerequisites: RAD* 126
Offered: Spring

RAD* 136: Radiographic Imaging III
3 Credits
The principles and use of automatic exposure control devices, image processing, digital image acquisition, display, and archiving will be discussed. Increased emphasis will be placed on the clinical situation, with image evaluation and problem solving in the clinical environment included in each unit.
Prerequisites: RAD* 130
Offered: Fall

RAD* 150: Summer Clinical Practicum
2 Credits
Supervised clinical experience involving general duties of the radiology professional. Students will apply principles learned in the classroom to exercise skills in patient care, communication, patient positioning, treatment, image production, and radiation protection and gain competence in imaging procedures and/or treatment of patients.
Prerequisites: RAD* 198
Offered: Summer

RAD* 197: Clinical Practices I
1-2 Credits
Supervised clinical experience involving introduction of the student to general radiography or radiation therapy practices. Students will apply principles learned in the classroom to develop skills in patient care, communication, clinical procedures, and radiation protection.
Prerequisites: Acceptance in the Radiologic Science program
Offered: Fall

RAD* 198: Clinical Practices II
1-2 Credits
Supervised clinical experience involving the continued development of student skills for general radiography or radiation therapy practices. Students will apply principles learned in the classroom to develop skills in patient care, communication, clinical procedures, and radiation protection. Students will begin to demonstrate proficiency on ARRT competencies.
Prerequisites: RAD* 197
Offered: Spring

RAD* 199: Clinical Practice III
1-2 Credits
Supervised clinical experience involving the continued development of student skills for general radiography or radiation therapy practices. Students will apply principles learned in the classroom to develop skills in patient care, communication, clinical procedures, and radiation protection. Students will continue to demonstrate proficiency on ARRT competencies.
Prerequisites: RAD* 150
Offered: Fall

RAD* 217: Radiology Seminar
2 Credits
Students will pursue independent research on a current topic in radiology, develop a written paper and provide an oral presentation on the topic. The course also includes a comprehensive review of the radiography curriculum with testing in preparation for the ARRT examination.
Prerequisites: Concurrent with RAD* 297
Offered: Spring

RAD* 220: Advanced Imaging Procedures I
2 Credits
Students will gain knowledge of the anatomy, physiology, specialized equipment and procedures involved in interventional radiology of the vascular and hepatobiliary systems. This course will also provide students with knowledge of sectional anatomy as it relates to computer generated imaging modalities and the equipment and procedures utilized for bone densitometry.
Prerequisites: RAD* 126
Offered: Spring
RAD* 221: Advanced Imaging Procedures II
2 Credits
Advanced procedures involving joint imaging arthrography, central nervous system and lymphatic system imaging as well as the principles of venipuncture for contrast media injection will be discussed. In addition, mammography, breast pathology and alternative methods of breast imaging for the purpose of breast cancer detection will be covered.
Prerequisites: RAD* 220
Offered: Spring

RAD* 222: Radiobiology & Protection
3 Credits
Basic principles of radiation protection and safety for the radiologic technologist and basic concepts and principles of radiation biology will be presented. Radiation health and safety requirements of federal and state regulatory agencies, accreditation agencies and health care organizations are incorporated. The interactions of radiation with cells, tissues and the body as a whole, and resultant biophysical events will be presented. Discussion of the theories and principles of tolerance dose, time-dose relationships, fractionation schemes and the relationship to the practical application of radiography will be included.
Prerequisites: PHY* 105
Offered: Spring

RAD* 225: Radiologic Procedures III
3 Credits
A continuation of RAD* 221, this course covers anatomy and imaging of the urinary system, paranasal sinuses, mandible, orbits, facial bones, and thoracic and lumbar spine. Classroom, laboratory and clinical practice enhance learning in conjunction with the completed units of this course.
Prerequisites: RAD* 130
Offered: Fall

RAD* 230: Radiologic Procedures IV
4 Credits
Course covers anatomy and imaging procedures of the ribs and sternum, sternoclavicular joints, sacrum and coccyx, skull and sella turcica, nasal bones and temporomandibular joints. Classroom, laboratory and clinical practice enhance learning in conjunction with the completed units of this course. A comprehensive review of Radiographic Procedures I, II and III is included in preparation for the ARRT examination.
Prerequisites: RAD* 225
Offered: Fall

RAD* 233: Advanced Imaging Procedures
4 Credits
Students will gain knowledge of the anatomy, physiology, specialized equipment and procedures involved in interventional radiology of the vascular and hepatobiliary systems. Students will also gain knowledge of sectional anatomy as it relates to computer generated imaging modalities, CT and MRI, and the equipment and procedures utilized for bone densitometry, diagnostic medical sonography and mammography.
Prerequisites: Completion of RAD* 225
Offered: Occasionally

RAD* 255: Medical Radiation Physics
4 Credits
This course provides content for medical physics as related to diagnostic imaging equipment operation. Digital imaging system characteristics of operation are discussed. Topics covered are: image quality indicators, beam geometry, and quality management processes. Students are familiarized with equipment used for QC testing and how to evaluate the results.
Prerequisites: RAD* 222
Offered: Fall

RAD* 257: Medical Radiation Physics II
2 Credits
This course is a continuation of Medical Radiation Physics I and includes an introduction to computers, computer hardware and software, computer communication and security and PACS. Detailed descriptions of the imaging equipment utilized for digital imaging, Computed Tomography, Magnetic Resonance Imaging and ultrasound will be presented. Included in this course is an overview of quality management and a description of routine quality control testing on radiographic and associated support equipment. Students are familiarized with equipment used for QC testing and how to evaluate the results.
Prerequisites: RAD* 255
Offered: Fall

RAD* 260: Radiographic Pathology
3 Credits
This course introduces theories of disease processes involving systems of the body commonly evaluated with diagnostic imaging. An overview of diseases and medical terms involving the respiratory system, gastrointestinal, genitourinary, central nervous, skeletal and reproductive systems will be provided along with etiology, symptoms, diagnosis and radiographic appearance.
Prerequisites: Completion of RAD* 126 and RAD* 150
Offered: Fall

RAD* 297: Clinical Practice IV
2-3 Credits
Supervised clinical experience involving the continued development of student skills for general radiography or radiation therapy practices. Students will learn to perform the skills necessary for the clinical practice of radiography or radiation therapy. This course fulfills ARRT competencies. Students will continue to demonstrate proficiency on ARRT competencies. Students will begin advanced clinical rotations.
Prerequisites: RAD* 199
Offered: Spring

RAD* 298: Clinical Practice V
2-3 Credits
Supervised clinical experience involving the continued development of student skills for general radiography or radiation therapy practices. Students will learn to perform the skills necessary for the clinical practice of radiography or radiation therapy. This course fulfills ARRT competencies. Students will continue to demonstrate proficiency on ARRT competencies. Students will begin advanced clinical rotations.
Prerequisites: Completion of RAD* 297
Offered: Occasionally
Recreation and Leisure

**RLS* 101: Introduction to Recreation and Leisure Services**  
3 Credits  
(Formerly REC 101)  
This course serves as an introduction to the field of recreation and leisure service. The student will understand the development of the recreation movement from early ages to the present with emphasis on future perspectives. Cultural, economic, and social factors in reference to leisure participation will be explored. Career opportunities in a variety of settings will be highlighted. Philosophies of recreation will be discussed. Students will develop a personal philosophy of recreation and leisure.  
**Prerequisites:** None  
**Offered:** Fall, Spring

**RLS* 121: Introduction to Therapeutic Recreation Services**  
3 Credits  
(Formerly THRC 115)  
This course provides a background of study for the field of therapeutic recreation. It encompasses the history and development of the profession with an emphasis on understanding the persons who are served, their disabilities, and the environments in which they live. An experiential approach offers understanding and empathy.  
**Prerequisites:** None  
**Offered:** Fall

**RLS* 122: Processes and Techniques in Therapeutic Recreation**  
3 Credits  
(Formerly THRC 116)  
This course is designed to provide an overview of the process and techniques used in treatment oriented programs. The course explores leadership skills of the helping professional through an in-depth look at facilitation techniques used in therapeutic recreation, including, but not limited to: creative arts, physical/Body movement, mental stimulation, and social interaction in relation to the needs of special population groups. Emphasis is placed on meeting clients’ needs through proper activity selection, including activity analysis and program adaptation/modification.  
**Prerequisites:** None  
**Offered:** Spring

**RLS* 220: Inclusive Recreation**  
3 Credits  
This course is designed to provide the student with an awareness of and sensitivity to the needs of persons with disabilities with regard to assessing, planning, implementing, and evaluating recreation/leisure services in the community. Students will gain insights and knowledge of the meanings and implications of the design and delivery of recreation/leisure services to people with various disabilities. Students will also look at culture variability and its impact on leisure behavior and planning.  
**Prerequisites:** Eligibility for ENG* 101  
**Offered:** Occasionally

**RLS* 221: Therapeutic Recreation Programming**  
3 Credits  
(Formerly THRC 215)  
(Programs: Planning and Implementation) This course involves the student in the study of the therapeutic recreation process with emphasis on program planning. The needs of the client will be met through a well-planned process that includes assessing functional abilities and needs, planning program goals and objectives, implementing the program, and evaluating both the program and the client.  
**Prerequisites:** RLS* 121 and eligibility for ENG* 101  
**Offered:** Spring

**RLS* 223: Leisure and Aging**  
3 Credits  
(Formerly THRC 230)  
This course serves as an overview to the delivery of therapeutic recreation services to older adults. The course will assist the student in developing an understanding of the elderly and how activity intervention may be used to reach treatment and rehabilitation goals. The course will focus on issues such as the physiological, psychological, and socio-economic factors of the aging process, leisure resources, community and institutional services, and recreation in assisted living facilities and in long term care settings.  
**Prerequisites:** None  
**Offered:** Fall

**RLS* 295: Professional Practicum in Therapeutic Recreation**  
4 Credits  
(Formerly THRC 280)  
This course provides the student with practical experience in a therapeutic recreation setting. The student is required to work a minimum of 200 hours in a community based or medical setting that provides therapeutic recreation services. During this period, the student will apply the knowledge, methods, and leadership techniques which have been learned in academic courses. Students will also participate in 15 hours of classroom discussion during the semester.  
**Prerequisites:** Completion of all Therapeutic Recreation course work. Students planning to take this course must notify the Program Coordinator three months prior to the start of the semester for which they plan to register.  
**Offered:** Spring

Respiratory Care

**RSP* 121: Cardiopulmonary Anatomy & Physiology**  
3 Credits  
(Formerly RC 221)  
The student is given an in-depth study of the anatomy and physiology of the cardiopulmonary system. Topics will include but are not limited to: structure, function, and assessment of the cardiopulmonary system.  
**Prerequisites:** To be taken concurrently with RSP* 141.  
**Offered:** Fall
RSP* 131: Applied Pharmacology
3 Credits  
(Formerly RC 211)
This course includes the study of the composition, indication and effects of medication administered to patients treated in the field of respiratory care. Emphasis is placed on drugs prescribed for the cardiopulmonary system and those delivered by aerosol.  
Prerequisites: To be taken concurrently with RSP* 160 and RSP* 180.  
Offered: Spring

RSP* 140: Principles of Respiratory Care
3 Credits  
This course will introduce the student to the theory, function, and maintenance of respiratory care equipment. Medical gases, gas laws, and the delivery of respiratory care using various pieces of equipment will be included. The emphasis of the course will be on the mechanics and function of respiratory care devices.  
Prerequisites: Must be taken concurrently with RSP* 121  
Offered: Fall

RSP* 140L: Principles of Respiratory Care Lab  
1 Credits  
This course will introduce the student to the theory, function, and maintenance of respiratory care equipment in a laboratory setting. Medical gases, gas laws, and the delivery of respiratory care using various pieces of equipment will be included. The emphasis of the course will be on the mechanics and function of respiratory care devices.  
Prerequisites: Must be taken concurrently with RSP* 121  
Offered: Fall

RSP* 160: Diagnostic & Therapy Principles  
3 Credits  
(Formerly RC 222)
The theory and administration of respiratory care procedures, airway management, monitoring devices, and clinical assessment of the respiratory patient will be taught.  
Prerequisites: RSP* 121. To be taken concurrently with RSP* 131 and RSP* 180.  
Offered: Spring

RSP* 180: Clinical Practicum  
1 Credits  
(Formerly RC 202)
Supervised clinical application of principles learned in the classroom. Students will be scheduled for various clinical rotations at health care facilities.  
Prerequisites: RSP* 121 and RSP* 141. To be taken concurrently with RSP* 131 and RSP* 160.  
Offered: Spring

RSP* 181: Clinical Practicum II  
1 Credits  
(Formerly RC 203)
Supervised clinical application of principles learned in the classroom. Students will be scheduled for various clinical rotations at health care facilities.  
Prerequisites: RSP* 131, RSP* 160, RSP* 180 and BIO* 212.  
Offered: Summer

RSP* 251: Respiratory Pathophysiology  
3 Credits  
(Formerly RC 282)
The study of cardiopulmonary abnormalities and diseases of the adult patient. Major emphasis will be placed on the diagnosis and treatment of patients using case study analysis.  
Prerequisites: To be taken concurrently with RSP* 251, RSP* 274 and RSP* 282.  
Offered: Fall

RSP* 252: Respiratory Pathophysiology II  
2 Credits  
(Formerly RC 283)
The study of cardiopulmonary abnormalities and diseases of the adult, pediatric and newborn patient. Major emphasis will be placed on the diagnosis, treatment, and management of patients using case study analysis.  
Prerequisites: To be taken concurrently with RSP* 261 and RSP* 282.  
Offered: Spring

RSP* 260: Advanced Principles of Ventilator Therapy  
3 Credits  
(Formerly RC 242)
A study of mechanical ventilators used in respiratory care with an in-depth explanation of function and application. Indications, hazards and complications of mechanical ventilation will be emphasized.  
Prerequisites: RSP* 160  
Offered: Summer

RSP* 261: Advanced Respiratory Care II  
3 Credits  
(Formerly RC 261)
A study of the respiratory care modalities used in the care of neonates and pulmonary rehabilitation patients. Each population will be discussed in separate units.  
Prerequisites: To be taken concurrently with RSP* 252 and RSP* 282.  
Offered: Spring

RSP* 274: Diagnostic Respiratory Care  
3 Credits  
(Formerly RC 251)
A study of the pulmonary and cardiac assessment, critical care monitoring, and fluid and electrolyte balance as it relates to cardiopulmonary medicine.  
Prerequisites: BIO* 212. To be taken concurrently with RSP* 251 and RSP* 281.  
Offered: Fall

RSP* 281: Advanced Clinical Practicum  
2 Credits  
(Formerly RC 204)
Supervised clinical application of principles learned in the classroom. Students will be scheduled for various clinical rotations at health care facilities.  
Prerequisites: RSP* 260 and RSP* 181. To be taken concurrently with RSP* 261 and RSP* 252.  
Offered: Spring
RSP* 282: Advanced Clinical Practicum II
2 Credits
(Formerly RC 205)
Supervised clinical application of principles learned in the classroom. Students will be scheduled for various clinical rotations at health care facilities.
Prerequisites: RSP* 251, RSP* 274, RSP* 281. To be taken concurrently with RSP* 261 and RSP* 252.
Offered: Spring

SGN* 105: Deaf Culture and History
3 Credits
This course introduces students to Deaf people as a cultural linguistic minority group. Students may or may not have had prior experience with Deaf people. It examines the values, norms, and traditions of Deaf people in North America. It emphasizes myths surrounding deafness, the historical treatment of deafness and Deaf people, the anatomy of the ear and the etiology of hearing loss, the education of deaf children, the deaf identity, legislation that affects the Deaf and hard of hearing population, interpreters and their work between cultures, deaf-blindness, and current controversies in technology and education. Although this course focuses on Deaf people in the western world, global comparisons are drawn.
Prerequisites: None
Offered: Fall

SGN* 103: Sign Language III
3 Credits
This course is a continuation of Sign Language I and II. Emphasis is placed on improving speed and fluency when communicating in ASL. In addition, students will learn basic storytelling features.
Offered: Occasional
Cross listed as: SGN* 101 and SGN* 102.

SGN* 102: Sign Language II
3 Credits
(Formerly ASL 102)
This course is a continuation of American Sign Language I. Students will learn grammatical features, vocabulary and conversational skills including expressive and receptive skills of ASL. In addition, students will learn the culture of the deaf community, the history of ASL and the relationship of ASL to other forms of signing.
Prerequisites: SGN* 101
Offered: Fall, Spring

SGN* 104: Sign Language IV
3 Credits
This course continues to build upon students’ receptive and expressive skills at the advanced level while expanding their knowledge of Deaf culture and the influences of other sign language systems. Emphasis is placed on advanced fingerspelling, ASL structure and vocabulary. Instruction utilizes a natural approach to teaching a second language by engaging students in authentic conversations within the classroom environment and through out-of-class interactions with members of the Deaf community.
Prerequisites: SGN* 101, SGN* 102 and SGN 103
Offered: Fall

SGN* 101: Sign Language I
3 Credits
(Formerly ASL 101)
American Sign Language ASL is the sign language most deaf people use when communicating among themselves. Students will learn grammatical features, vocabulary and conversational skills including expressive and receptive skills of ASL. In addition, students will learn the culture of the deaf community, the history of ASL and the relationship of ASL to other forms of signing.
Prerequisites: None
Offered: Fall, Spring

Social Science

SSC* 150: Transition Development
2 Credits
(Formerly SOSC 150)
This course is designed for adult students who are resuming their education. Topics include goal setting, academic and career choices, math anxiety, family and work stresses, problem solving, and skill building. Open only to students in the Adults in Transition program.
Prerequisites: None
Offered: Fall, Spring

SSC* 155: Women's Issues and the Law
3 Credits
(Formerly SOSC 155)
An examination of legal responses to gender-based treatment in society. Legal materials will be studied to provide both a historical and current perspective on issues affecting women and men. Readings will be used as the basis for public policy discussions and greater understanding of the law of sex discrimination.
Prerequisites: None
Offered: Fall

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SSC* 201: Introduction to African American Studies
3 Credits
(Formerly SOSC 201)
An interdisciplinary survey of the historical, social, economic, political, philosophical and cultural experience of the African American. This course serves as the introductory course to give students an Africentric perspective to evaluating information in society; other philosophical perspectives may be introduced. Recommended for potential U.S. History and American Studies majors.
Prerequisites: None
Offered: Occasionally

SSC* 220: Computers’ Impact on Society
3 Credits
(Formerly SOSC 220)
After studying the fundamentals of how computers work in order to understand their capabilities and limitations, the course explores the kinds of purposes to which computers are being put in our world: how computers are affecting us individually and as a society; the methods used and intrinsic difficulties in using computers to tackle business, economic, social, scientific, etc. problems; the positive and negative effects of computers; the ethics surrounding the use of computers; how to make rational, ethical, and humane technological decisions; and how, in private and professional life, to make informed, reasoned judgments regarding computing technology issues. Current computer issues and news items are used as case studies.
Prerequisites: None
Offered: Occasionally

SSC* 242: American Families
3 Credits
(Formerly SOSC 242)
A look at nuclear American family life from early Colonial period to the present, to see how various commentators have regarded and evaluated American families. Course will rely on the writings of historians, sociologist, novelists and social critics.
Prerequisites: None
Offered: Occasionally

SSC* 262: Puerto Rican History and Culture
3 Credits
(Formerly SOSC 262)
An introduction to the history and culture of Puerto Rico designed to give both Hispanic and other students an understanding of the historical factors and the cultural concepts that help develop today’s Puerto Rico and its people, both on the island and on the mainland.
Prerequisites: None
Offered: Occasionally

SSC* 294: Cooperative Education/Work Experience
3 Credits
(Formerly SOSC 270)
This course provides students the opportunity to apply classroom theory in an actual work setting. Students may be placed in a variety of work settings as related to their program of study including social service agencies, day care facilities, and corporations.
Prerequisites: 12 completed credit hours in the Social Service, Disabilities Specialist, Criminal Justice, Sport and Exercise, Therapeutic Recreation, and Early Childhood/Educational Associate programs.
Offered: Fall, Spring

Sociology

SOC* 100: Community Engagement
3 Credits
This course provides students with an enhanced understanding of the local community and the diversity of groups within the community. Students are required to perform structured community service throughout the semester and to reflect and engage with other students on the meaning of diversity and community. Through readings, critical reflection, group discussions and interactions, and volunteer service, students will learn community leadership and civic engagement and discuss how communities might bridge differences among people. This course will require 1-3 hours of community service per week or the equivalent. NOTE: This is a Pass/Fail course. All Students completing the course will receive either a grade of Pass P or Fail F on their transcript. See the instructor for more specific information.
Prerequisites: None
Offered: Fall, Spring

SOC* 101: Principles of Sociology
3 Credits
(Formerly SOC 101)
This course is designed to provide students with a basic overview and understanding of the discipline of sociology. The course focuses on the concepts, methods, theories, and levels of analysis used in the study of social interaction. The readings and lectures will examine a broad range of social issues and questions; the different theories of social behavior used to explain these questions; and the ways in which sociologists scientifically examine these theories. The goal of the course is to provide students with the ability and knowledge to critically examine and understand the social issues that impact their daily lives. Depending upon the instructor, this course often includes a service learning project in which students learning sociology while also serving their community by volunteering at non-profit community organizations e.g., Habitat for Humanity, Foodshare, mentoring youth, environmental projects, food pantries, homeless shelters, etc..
Prerequisites: Eligibility for ENG* 101.
Offered: Fall, Spring
Fulfills General Education - Knowledge of Social Sciences

SOC* 116: Impact of Aging on the Family
3 Credits
(Formerly SOC 205)
This course will consider key social issues and current service delivery systems that affect the aged population.
Prerequisites: SOC* 101
Offered: Spring

SOC* 200: Queer Sociology
3 Credits
This course provides a critical exploration of identity based understandings of sex, gender, orientation, race and the family. Using assigned readings, experiential activities, and classroom discussion, students will incorporate queer theories as well as personal values to challenge their assumptions and undermine previously unquestioned ‘givens’ about each of these topics. Finally, students will explore the question: what is possible as individuals, as a society if we assume no causal relationship among sex, gender, sexuality and desire?
Prerequisites: Eligibility for ENG* 101.
Offered: Occasionally

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SOC* 201: Contemporary Social Issues  
3 Credits  
(formerly SOC 202)  
A detailed analysis of major social problems in American society. Problems including population, ecology, poverty, race and ethnic relations, urbanization, the role of the media, criminal activity, aging, health, and housing will be evaluated. Emphasis is on American society, but some international issues and situations will be examined. Community awareness and involvement will be stressed as students evaluate local issues as well.  
Prerequisites: SOC* 101  
Offered: Fall, Spring

SOC* 205: Sociology in Film  
3 Credits  
This course is designed to teach key sociological topics through film. In this course, we will examine how a range of social issues are depicted in both documentary and popular film. Students study such issues as race relations, family dynamics, urbanization, gender and reproduction, and crime by viewing films, analyzing the films’ content, and reading sociology literature.  
Prerequisites: SOC* 101  
Offered: Occasionally

SOC* 210: Sociology of the Family  
3 Credits  
(formerly SOC 231)  
This course will explore the complexity and diversity of the contemporary family and other intimate relationships. Topics for this course include mate selection, gender roles, sexuality, communication, power and conflict, family violence, parenthood, work/family interaction, and diverse family arrangements.  
Prerequisites: Eligibility for ENG* 101.  
Offered: Fall, Spring

SOC* 211: Sociology of Gender  
3 Credits  
This course addresses the distinction between biological sex and the social construction of gender and investigates issues about the dynamics of sex and gender relationships in different socio-cultural contexts. Major topics for discussion include gender role differentiation, sex role stereotyping, and changes over time in male/female relationships in North American society with the differences and inequalities shaped by social class, race, ethnicity, sexuality, age and national origin. A global perspective, which examines and compares the place of gender in nations of the North with those of the South, is also emphasized.  
Prerequisites: SOC* 101  
Offered: Occasionally

SOC* 212: Sociology of Women  
3 Credits  
(formerly SOC 261)  
An interdisciplinary study of women in contemporary America, making use of the data and methodology of history, psychology and sociology.  
Prerequisites: Eligibility for ENG* 101.  
Offered: Occasionally

SOC* 215: Women and Prisons  
3 Credits  
This course examines demographic characteristics, current offenses, criminal histories, the women’s family background, children, drug and alcohol use, prior physical and sexual abuse, and health issues. This course also includes a basic introduction to doing sociological research on a topic as each student will pick a state’s prison population to examine individually.  
Prerequisites: Eligibility for ENG* 101.  
Offered: Occasionally

SOC* 220: Racial & Ethnic Diversity  
3 Credits  
(formerly SOC 271)  
This course focuses on the interrelationship of institutionalized prejudice and discrimination and related aspects of diversity in society. The experience of various ethnic and racial minorities in the United States is investigated through the study of the origins and functions of subordination in society.  
Prerequisites: Eligibility for ENG* 101.  
Offered: Occasionally

SOC* 227: The Native American Experience  
3 Credits  
Students will become familiar with the major issues and topics of tribes in Connecticut such as tribal recognition, and casino development. The course will also examine economic, political, and social concerns of tribes in North America. With much class participation and contact with guest speakers, students will bring into sharper focus the real day to day issues of native people who “more than 500 years after the European Invasion of North America are still seeking to work out relations, as descendants of the first Americans, with the people of modern American society.”  
Prerequisites: eligibility for ENG* 101.  
Offered: Occasionally

SOC* 228: African American Sociology and Literature  
3 Credits  
This course introduces students to ways in which scholars examine the African American experience as a major topic in Sociology and Literature. The course is taught from an interdisciplinary perspective that emphasizes methodologies and approaches from both the humanities and the social sciences framing inquiries about African American literary creations, social life, history, and socio-cultural organization. The goal of the course is for each student to look at black culture and society in a broader and more complex way.  
Prerequisites: SOC* 101 and ENG* 120.  
Offered: Occasionally

SOC* 240: Criminology  
3 Credits  
Introduces the fundamental principles of criminology; namely, the nature, existence and causation of crime, the problems and procedures involved in the administration of justice, and rehabilitative and corrective treatment.  
Prerequisites: SOC* 101.  
Offered: Spring
SOC* 241: Juvenile Delinquency  
3 Credits  
(Formerly SOC 211)  
Examines the social aspects of juvenile delinquency and the pressures that cause this behavior to emerge. The organization, functions and jurisdiction of the juvenile court system, as well as processing, detention, case disposition and juvenile delinquency statutes, are examined.  
Prerequisites: SOC* 101  
Offered: Occasionally

SOC* 242: Sociology of Deviance  
3 Credits  
(Formerly SOC 203)  
This course will provide an overview and analysis of deviant behavior and social control. The course will critically review and discuss the causes of deviance and societal attempts at controlling deviant behavior. Topics to be studied include alcohol and drug abuse, criminal activity, disabilities, mental illness, sexual deviance, violent behavior and abuse, elite deviance, and collective deviance.  
Prerequisites: Eligibility for ENG* 101.  
Offered: Fall, Spring

Spanish

SPA* 108: Elementary Spanish I & II  
8 Credits  
(Formerly SPAN 108)  
An intensive, beginning Spanish course in which two semesters of Spanish SPA* 111 and SPA* 112 are completed in one semester. Students will develop all four language skills. The emphasis in class will be speaking and listening, the assignments will emphasize reading and writing. Hispanic culture will be studied. No previous Spanish language experience required. Transfer college may not award credit for this course if the student has already completed two or more years of Spanish at the high school level.  
Prerequisites: None  
Offered: Fall, Spring  
Fulfills General Education - Knowledge of Humanities

SPA* 111: Elementary Spanish I  
4 Credits  
(Formerly SPAN 101)  
An introduction to spoken and written Spanish. Emphasis is on basic grammar and developing all four language skills reading, writing, listening and speaking with an emphasis on Hispanic culture. No previous Spanish language experience required. Transfer college may not award credit for this course if the student has already completed two or more years of Spanish at the high school level.  
Prerequisites: None  
Offered: Fall, Summer

SPA* 112: Elementary Spanish II  
4 Credits  
(Formerly SPAN 102)  
A second semester course in which students develop all four language skills reading, writing, listening, and speaking while studying grammatical structures preterite, imperfect, object pronouns, reflexive verbs that are more advanced than those studied in the first semester Spanish course. Hispanic culture will be studied.  
Prerequisites: SPA* 111, one year of high school Spanish, or permission of instructor. Transfer college may not award credit for this course if the student has already completed two or more years of Spanish at the high school level.  
Offered: Spring, Summer  
Fulfills General Education - Knowledge of Humanities

SPA* 130: Spanish Culture  
3 Credits  
(Formerly SPAN 125)  
A survey of Spanish culture taught in English. Topics of study include art, music, literature, history, geography, political systems, bullfighting, and culture with a small “c” use of two surnames, extended families, cuisine, etc.  
Prerequisites: None  
Offered: Occasionally

SPA* 131: Hispanic Culture  
1, 2 or 3 Credits  
(Formerly SPAN 130)  
This is an independent study course which is offered in conjunction with an academic trip and is available only to participants of that trip. Pre-trip assignments will prepare the students for the research that will be done in the country of the trip and post-trip assignments will organize and analyze the information observed and collected in the Hispanic country. This course can be done in English or in Spanish. Class: hours per week will depend on number of credit hours. Co-requisite: student must participate in an academic trip sponsored by MCC.  
Prerequisites: None  
Offered: Occasionally

SPA* 135: Hispanic Culture and Conversation  
3 Credits  
(Formerly SPAN 145)  
A one-semester, first-level course for two-year career program students which stresses aspects of Hispanic culture, as well as pronunciation and vocabulary skills in Spanish, that would be helpful as an additional tool in future employment, job advancement, and effective fulfillment of daily job routines.  
Prerequisites: None  
Offered: Occasionally

SPA* 145: Mexican Culture  
3 Credits  
(Formerly SPAN 145)  
A survey of Mexican culture taught in English. Topics of study includes art, music, literature, ancient civilizations, history, geography, political systems, bullfighting, and culture with a small “c” use of two surnames, bargaining in the market, extended families, cuisine, etc.  
Prerequisites: None  
Offered: Occasionally
SPA* 208: Intermediate Spanish I and II
8 Credits
(Formerly SPAN 208)
An intensive, intermediate Spanish course in which two semesters of Spanish SPA* 211 and SPA* 212 are completed in one semester. Students will be taught all four language skills with an emphasis on speaking and listening in class and an emphasis on reading and writing through the assignments. Cultural readings will be in Spanish.
Prerequisites: SPA* 111 or SPA* 108 or two years of high school Spanish or permission of instructor.
Offered: Occasionally

SPA* 211: Intermediate Spanish I
4 Credits
(Formerly SPAN 201)
A third semester course in which grammar, conversation and reading materials are at an intermediate level. Cultural readings will be in Spanish.
Prerequisites: SPA* 111, and SPA* 112 or SPA* 108 or two years of high school Spanish or permission of instructor.
Offered: Fall
Fulfills General Education - Knowledge of Humanities

SPA* 212: Intermediate Spanish II
4 Credits
(Formerly SPAN 202)
A fourth semester course in which the grammar, conversation and reading materials are at an intermediate level. Cultural readings will be in Spanish.
Prerequisites: SPA* 211 and SPA* 212 or three years of high school Spanish or permission of instructor.
Offered: Spring

SPA* 251: Advanced Spanish I
4 Credits
A fifth semester course in which language skills will be reinforced while increased emphasis is placed on composition and conversation. Literature and culture will also be studied in Spanish.
Prerequisites: SPA* 212, SPA* 208 or permission of the instructor.
Offered: Occasionally

SPA* 252: Advanced Spanish II
4 Credits
A sixth semester course in which language skills will be reinforced while increased emphasis is placed on composition and conversation. Literature and culture will also be studied in Spanish.
Prerequisites: SPA* 212, SPA* 208 or permission of instructor.
Offered: Occasionally

Speech-Language Pathology Assistant

SLP* 111: Communication Development
3 Credits
An overview of the milestones of form, content, and use in the process of typical communication development for children from infancy through adolescence.
Prerequisites: Eligibility for ENG* 093 or concurrently taking ENG* 096.
Offered: Fall

SLP* 112: Speech and Language Services in the Educational Setting
3 Credits
This course will address professional issues related to the role of the Speech/Language Pathology Assistant in the practice of speech/language pathology in schools. Topics will include, but are not limited to, the legal and policy framework for school services, ethical practice, supervision, collaboration, scheduling, data collection, advocating, professional development, resources, and professional trends. This course includes an observation component.
Prerequisites: SLP* 111 or concurrently taking SLP* 111.
Offered: Spring

SLP* 120: Communication Disorders and Intervention I
3 Credits
A general overview of language, and hearing disorders in preschool and school-aged children, their impact on literacy acquisition, and evidence-based interventions. This course will prepare Speech/Language Pathology Assistants for their role in providing oral language and literacy interventions to children with language and hearing disorders in educational settings.
Prerequisites: SLP* 111.
Offered: Fall

SLP* 121: Communication Disorders and Intervention II
3 Credits
A general overview of phonology, voice, and fluency disorders in preschool and school aged children, with a focus on phonology i.e., speech problems and evidenced-based interventions. This course will prepare Speech/Language Pathology Assistants for their role in providing assistance to children with phonology disorders in educational settings and will also prepare them to work with students with significant/severe communication needs e.g., non-verbal/low verbal children requiring assistive technology [AT] or augmentative/alternative communication [AAC] systems.
Prerequisites: SLP* 111.
Offered: Spring

Student Development

SD 100: Creating Your Own College Success
1 Credits
This course is designed to help students maximize the value of their college experience. Topics include self-assessment, goal setting, decision making, and time management. Emphasis will be placed on the development of a plan leading to a successful college experience.
Prerequisites: None
Offered: Fall, Spring

SD 101: Career Life Planning
3 Credits
A course designed to develop the knowledge and skills necessary for lifelong career planning. Students will increase their self-awareness through analysis of self-assessment data obtained from biographical data, interest inventories, value surveys, personality surveys, and ability surveys. Students will also develop personal career directions and strategies for working toward them. Students will be expected to share personal and life experiences in group settings.
Prerequisites: None
Offered: Fall, Spring
SD 103: Introduction to Information
3 Credits
After completion of the course students will recognize the need for information and be able to access, evaluate, classify, store and manipulate new information. In addition they will understand the pertinent issues surrounding the use of information and recognize the importance of information literacy in lifelong learning.
Prerequisites: None
Offered: Occasionally

Surgical Technology

SUR* 101: Operating Room Procedures I
4 Credits
(Formerly ST 101)
An introduction to theoretical experience of the basic skills used in an operating room: aseptic technique, technologists' arts, instrumentation, draping techniques, and related operating room skills. An explanation of essential patient care concepts necessary for effective functioning in an operating room.
Prerequisites: Permission of the Surgical Technology Program Coordinator.
Offered: Fall

SUR* 102: Operating Room Procedures II
4 Credits
(Formerly ST 102)
An introduction to practical experience of the basic skills used in an operating room: aseptic technique, technologists' arts, instrumentation, draping techniques, and related operating room skills such as mock operations in lab. Includes an extensive survey of various surgical specialties including specific operations in each discipline.
Prerequisites: Successful completion of SUR* 101.
Offered: Spring

SUR* 201: Seminar in Surgery
2 Credits
(Formerly ST 106)
This course serves as a bridge between the preclinical and clinical phases of the program and emphasizes the total picture of the surgical patient. Students learn about health care departments outside the operating room that are integral to diagnosis and treatment of surgical conditions. Presentations by physicians and practitioners emphasize surgical procedures and perioperative care of the patient.
Prerequisites: Successful completion of SUR* 102
Offered: Summer

SUR* 220: Clinical Experience I
2 Credits
(Formerly ST 220)
An introduction to clinical practice in general and specialty surgical procedures in the operating room and outpatient facilities. Emphasis is on applying skills learned in the preclinical courses to clinical practice including experiences in basic operating room procedures and minor surgery.
Prerequisites: Successful completion of SUR* 102.
Offered: Summer

SUR* 221: Pathology/Pharmacology for the Surgical Technologist
3 Credits
This course focuses on the topics relating to Surgical Technology as identified in the 5th Edition of the Core Curriculum for Surgical Technology. The pathology and pharmacology of each organ system will be discussed concurrently.
Prerequisites: BIO* 212
Offered: Spring

SUR* 222: Clinical Experience II
4 Credits
(Formerly ST 222)
Clinical practice in the operating room concentrating on experience in basic procedures of general and specialty surgery.
Prerequisites: Successful completion of SUR* 220.
Offered: Fall

SUR* 224: Clinical Experience III
4 Credits
(Formerly ST 224)
Clinical practice in the operating room concentrating on experience in advanced levels of general and specialty surgery. Includes classroom preparation for the national certification examination and development of job search skills.
Prerequisites: Successful completion of SUR* 222.
Offered: Spring

SUR* 225: Advanced Seminar in Surgery
3 Credits
This course will review the basic principles and practices taught in the Surgical Technology program. This course will focus on the objectives of the National Certification Examination for Surgical Technologists CST using an online learning system, lecture and practice tests. The purpose of this course is to prepare students to pass the CST examination which is required for employment as a surgical technologist.
Prerequisites: SUR* 221 and SUR* 222
Offered: Spring

Theatre

THR* 101: Introduction to Theater
3 Credits
This course explores the range of theatrical conventions present in theater throughout the world. Students will participate in hands-on activities in acting, directing, and design. Students will complete a research paper on a topic in theater history in addition to writing responsively throughout the course both in class and online
Prerequisites: Eligibility for ENG* 101.
Offered: Fall, Spring
Fulfills General Education - Knowledge of The Arts

THR* 110: Acting I
3 Credits
(Formerly THEA 181)
A first course in acting. Students will focus on relaxation and physical awareness, and on developing their imagination, concentration and characterization skills. They will be introduced to basic vocal and physical techniques. Class: 3 hours per week.
Prerequisites: None
Offered: Fall, Spring
THR* 190: Theater Practicum
3 Credits
Students will receive instruction and participate in all aspects of staging a theatrical production. Students will work in areas such as research, scriptwriting, designing and developing sets, acquiring and creating props, costuming, make-up, lighting, sound, acting, theater administration and management. The capstone project for this course will be a play staged in cooperation with a local theater group.

Prerequisites: None
Offered: Fall, Spring

THR* 210: Acting II
3 Credits
(Formally THEA 182)
A continuation of THR* 110. Students will focus on script analysis and interpretation, and will expand their emotional, expressive and technical ranges.

Prerequisites: THR* 110 or equivalent training or experience.
Offered: Spring