

MIDDLESEX COMMUNITY COLLEGE

COLLEGE CATALOG 2017-2018

ACADEMIC PROGRAMS

General Education, Degrees & Certificates, Non-Credit Certificates, Course Descriptions
For academic and student services policies, please visit mxcc.edu/catalog



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ACADEMIC CALENDAR 2017-18

MIDDLESEX COMMUNITY COLLEGE Academic Calendar for Credit Classes, Summer 2017

SESSION I – 5 WEEKS (May 30 – June 30)

| | | |
|----------|---------|-----------------------------------|
| Tuesday | May 30 | CLASSES BEGIN |
| Thursday | June 22 | Last Day to Withdraw from Classes |
| Friday | June 30 | Last Day of Classes |

SESSION II – 10 WEEKS (May 30 – August 9)

| | | |
|-----------|----------|---|
| Tuesday | May 30 | CLASSES BEGIN |
| Monday | July 3 | NO CLASSES |
| Tuesday | July 4 | Independence Day – COLLEGE CLOSED, NO CLASSES |
| Monday | July 24 | Last Day to Withdraw from Classes |
| Wednesday | August 9 | Last Day of Classes |

SESSION III – 5 WEEKS (July 5 – August 8)

| | | |
|-----------|----------|-----------------------------------|
| Wednesday | July 5 | CLASSES BEGIN |
| Monday | July 31 | Last Day to Withdraw from Classes |
| Tuesday | August 8 | Last Day of Classes |

SESSION IV – 7 WEEKS (July 5 – August 18)

| | | |
|-----------|-----------|-----------------------------------|
| Wednesday | July 5 | CLASSES BEGIN |
| Tuesday | August 8 | Last Day to Withdraw from Classes |
| Friday | August 18 | Last Day of Classes |

SESSION V – ONLINE EXPRESS – 3 WEEKS (July 31 – August 18)

ALL CLASSES ARE ONLINE

| | | |
|--------|-----------|-----------------------------------|
| Monday | July 31 | CLASSES BEGIN |
| Friday | August 11 | Last Day to Withdraw from Classes |
| Friday | August 18 | Last Day of Classes |

CONNECTICUT STATE COLLEGES & UNIVERSITIES
MIDDLESEX COMMUNITY COLLEGE
Common Academic Calendar for Credit Classes, 2017-18

| FALL SEMESTER 2017 | | |
|---------------------------|-----------------------|---|
| Friday | August 25 | Faculty Semester Begins |
| Monday | August 28 | Orientation for New Adjunct Faculty |
| Tuesday | August 29 | CLASSES BEGIN |
| Saturday | September 2 | Saturday Classes Begin – CLASSES HELD |
| Monday | September 4 | Labor Day – COLLEGE CLOSED |
| Monday | September 11 | <ul style="list-style-type: none"> • Last Day to Add/Drop Courses • Last Day for 50% Tuition Refund |
| Monday | September 18 | Constitution Day Observed – CLASSES HELD |
| Monday | September 18 | MxCC “LATE START” CLASSES BEGIN |
| Monday | September 25 | Last Day to Change from Credit to Audit Status |
| Saturday | September 30 | 3 rd Annual Faculty Professional Development Symposium |
| Monday | October 9 | Columbus Day – CLASSES HELD |
| Tuesday | October 17 | Reading Day – COLLEGE OPEN, NO REGULARLY SCHEDULED CLASSES <i>Reading Days</i> are intended to be used by students as study days and/or as optional make-up class time at the discretion of faculty members. No faculty member will be assigned additional duty during the scheduled reading days and no student shall be penalized for not attending any activities/classes on a reading day. |
| Mon-Fri | Oct 30-Nov 21 | Priority Advising & Registration for Continuing Students |
| Friday | November 3 | Last Day to Make Up “Incompletes” from Spring/Summer 2017 |
| Friday | November 10 | Veterans’ Day Observed – CLASSES HELD |
| Friday | November 10 | Last Day to Withdraw from Classes |
| Friday | November 10 | Graduation Applications Due for December Completers |
| Wed-Sun | Nov. 22-26 | Thanksgiving Recess – NO CLASSES Wed., 11/22 – Veterans’ Day Observed (Faculty Holiday) Thur., 11/23 – Thanksgiving Day (College Closed) Fri., 11/24 – Day After Thanksgiving (Faculty Holiday) Sat., 11/25 and 11/26 – No Classes (College Closed) |
| Monday | December 11 | Last Day of Classes |
| Tue-Mon | December 12-18 | Final Exams/Final Classes (Required) |
| Tuesday | December 19 | Final Exam Make-Up Day (necessary only if college is closed due to inclement weather or emergency on a day when Final Exams are scheduled) |
| Wednesday | December 21 | Grades due by 11:00pm Faculty Semester Ends |

MIDDLESEX COMMUNITY COLLEGE
Academic Calendar for Credit Classes, 2017-18

WINTER SESSION 2017-18

| | | |
|---------|-------------|--|
| Tuesday | December 26 | WINTER CLASSES BEGIN |
| Monday | January 1 | New Year's Day – COLLEGE CLOSED |
| Sunday | January 14 | Classes End at 12:00 noon Eastern Time |
| Tuesday | January 16 | Grades Due by 9:00AM |

ALL WINTER SESSION CLASSES ARE ONLINE

CONNECTICUT STATE COLLEGES & UNIVERSITIES
MIDDLESEX COMMUNITY COLLEGE
Common Academic Calendar for Credit Classes, 2017-18

SPRING SEMESTER 2018

| | | |
|------------------|-------------------|---|
| Monday | January 15 | Martin Luther King Day – COLLEGE CLOSED |
| Tuesday | January 16 | Faculty Semester Begins |
| Tuesday | January 16 | Adjunct Faculty “Back to School Night” |
| Wednesday | January 17 | CLASSES BEGIN |
| Wednesday | January 31 | <ul style="list-style-type: none"> • Last Day to Add/Drop Courses • Last Day for 50% Tuition Refund |
| Friday | February 16 | Lincoln’s Birthday Observed – NO CLASSES, COLLEGE OPEN |
| Monday | February 19 | Washington’s Birthday Observed – COLLEGE CLOSED |
| Tuesday | February 20 | MxCC “LATE START” CLASSES BEGIN |
| Wednesday | February 21 | Last Day to Change from Credit to Audit Status |
| Mon-Sun | March 12-18 | Spring Break – NO CLASSES, COLLEGE OPEN |
| Fri-Sun | Mar. 30-Apr. 1 | Days of Reflection – COLLEGE CLOSED |
| Mon-Fri | April 2-27 | Priority Advising & Registration for Continuing Students |
| Wednesday | April 4 | Last Day to Make Up “Incompletes” from Fall 2017 |
| Monday | April 16 | Last Day to Withdraw from Classes |
| Monday | April 16 | GRADUATION APPLICATIONS DUE |
| Friday | April 27 | 3 rd Annual Academic Convivium |
| Friday | May 4 | Academic Awards Night |
| Saturday | May 5 | Last Day of Classes |
| Mon-Sat | May 7-13 | Final Exams/Final Classes |
| Monday | May 14 | Final Exam Make-Up Day (necessary only if college is closed due to inclement weather or emergency on a day when Final Exams are scheduled) |
| Tuesday | May 15 | Grades Due by 11:00pm |
| Thursday | May 24 | MxCC COMMENCEMENT, 6:00pm |
| Monday | May 28 | Memorial Day – COLLEGE CLOSED |
| Friday | June 1 | Faculty Semester Ends |

GENERAL EDUCATION

Purpose

The General Education core at Middlesex Community College offers students a comprehensive and vibrant curriculum which builds the foundation for lifelong learning. To that end, our course offerings provide students rich learning experiences meant to develop their abilities to think critically, communicate clearly — orally and in writing — use quantitative and scientific reasoning practically, understand and navigate information and use it effectively, and value others through an appreciation of human differences. General Education at Middlesex prepares students for their shared responsibilities as global citizens and to thrive in and contribute to an increasingly information dependent society.

Transfer-Oriented Programs and CSCU Transfer Tickets

This information is for students who enroll in a transfer-oriented Associate Degree program or CSCU Transfer Ticket Program. As of the Fall 2016 semester, the General Education Requirements were aligned with the General Education Common Core Competencies adopted by the Connecticut State Colleges & Universities System. The new General Education Core is part of the Transfer Articulation Program designed to ensure seamless transfer from a Connecticut Community College to a Connecticut State University or Charter Oak State College.

While at Middlesex, students must complete 30-31 credits of general education courses that are designated as fulfilling a set of common core competencies — in addition to 30-31 credits of degree requirements in their major. Students in a CSCU Transfer Ticket Program will complete the first 60-63 credits at a community college and the final 60-63 credits *in the same field* at a CSU. The Transfer Articulation Program ensures that all of the Associate Degree credits will transfer, students will enter the university with junior (3rd year) status, and they will need to complete no more than 60-63 additional credits to earn a Bachelor's degree.

| | |
|----------------------------|---|
| 3 credits | ENG*101 Composition |
| 3 credits | Written Communication |
| 3 credits | Oral Communication |
| 3 credits | Aesthetic Dimensions |
| 3-4 credits | Quantitative Reasoning <i>MUST be a course with a prerequisite of MAT*137/MAT*137E, or placement above MAT*137</i> |
| 3 credits | Historical Knowledge |
| 6 credits (2 courses) | Social Phenomena |
| 6-8 credits (2 courses) | Scientific Reasoning Scientific Knowledge & Understanding <i>One course MUST be a laboratory science course</i> |
| 30-33 credits | Total |

Note: Students matriculating in the Fall 2016 semester and later are no longer required to take “D” and “L” courses as previously mandated at Middlesex Community College.

Career-Oriented Programs

Guidelines for fulfilling General Education Core Competencies for Career-Oriented Degree Programs.

Students must complete 21-23 credits of general education courses that are designated as fulfilling a set of common core competencies — in addition to 39-45 credits of degree requirements in their major.

| | |
|----------------------|--|
| 3 credits | ENG*101 Composition |
| 6 credits | Two courses chosen from among those designated as fulfilling the following General Education Core Competencies: Aesthetic Dimensions Historical Knowledge Oral Communication Social Phenomena Written Communication |
| 3 credits | Aesthetic Dimensions |
| 3-4 credits | Quantitative Reasoning (For Career-Oriented Programs ONLY, may include MAT*100 - MAT*137) |
| 3 credits | Social Phenomena |
| 3-4 credits | Scientific Reasoning OR Scientific Knowledge & Understanding |
| 21-23 credits | Total |

Students matriculating in the Fall 2016 semester and later are no longer required to take “D” and “L” courses as previously mandated at Middlesex Community College.

Common Core Competencies

Each institution under the Board of Regents for Higher Education that offers an undergraduate degree program shall develop its core curriculum consistent with the purpose adopted by the Board. The purpose of a core curriculum is to enable students to gain knowledge of human cultures and the physical and natural world across all academic areas. The goal of this education is that all graduating students are prepared to be world citizens. The idea of general education in America is to give students an integrated educational experience.

General Education is the hallmark of American higher education and the key to a broadly-educated citizenry. In addition to improving the *transferability* of general education, we should also focus on the *quality* of general education. Therefore, our goal is not simply transferability but an excellent preparation for all students in their first 60 hours, including their essential general education. The CSCU Transfer Articulation Policy defines eleven General Education Competencies that are defined on the following pages:

Aesthetic Dimensions of Humankind
Continuing Learning/Information Literacy
Critical Analysis & Logical Thinking
Ethical Dimensions of Humankind
Historical Knowledge
Oral Communication in English

Quantitative Reasoning
Scientific Knowledge & Understanding
Scientific Reasoning
Social Phenomena
Written Communication in English

Aesthetic Dimensions courses are designed so that students will understand the diverse nature, meanings, and functions of creative endeavors through the study and practice of literature, music, the theatrical and visual arts, and related forms of expression. Students will demonstrate mastery of the **Aesthetic Dimensions** general education core competency by being able to:

1. Apply key concepts, terminology, and methodologies in the analysis of literary, performing, visual, and other arts forms.
2. Identify works of visual, performing, or literary art within historical, social, political, cultural, and aesthetic contexts.
3. Articulate ways in which literature, performance, the visual arts and related forms respond to and influence society and culture.
4. Actively engage with the literary, performing or visual arts and other cultural forms through experience or creative expression.
5. Articulate the ethical dimensions surrounding the creation, circulation, and interpretation of works of visual, performing, or literary art.

The following Middlesex Community College courses are designated as fulfilling the **Aesthetic Dimensions** general education core competency. (Full course descriptions may be found elsewhere in this Catalog.)

| | | | |
|---------|------------------------------|---------|--------------------------------------|
| ART*100 | Art Appreciation | DGA*120 | Digital Imaging I |
| ART*101 | Art History I | DGA*182 | Digital Video Technology |
| ART*102 | Art History II | DGA*223 | Digital Illustration |
| ART*109 | Color Theory | DGA*231 | Digital Page Design I |
| ART*111 | Drawing I | DGA*241 | Internet Web Design I |
| ART*112 | Drawing II | DGA*242 | Internet Web Design II |
| ART*116 | Perspective Drawing | DGA*250 | Interactive Multimedia Production |
| ART*121 | Two-Dimensional Design | DGA*257 | Motion Graphics and Effects |
| ART*122 | Three-Dimensional Design | DGA*260 | Animation |
| ART*131 | Sculpture I | ENG*281 | Creative Writing |
| ART*147 | Digital Cinematography | ENG*282 | Creative Writing – Poetry |
| ART*155 | Watercolor I | ENG*283 | Creative Writing – Fiction |
| ART*163 | Ceramic Handbuilding | ENG*285 | Memoir Writing |
| ART*165 | Metal and Jewelry Design I | GRA*150 | Introduction to Graphic Design |
| ART*166 | Metal and Jewelry Design II | GRA*251 | Advanced Graphic Design |
| ART*215 | Illustration | GRA*296 | Graphic Design Internship |
| ART*250 | Digital Photography | MUS*101 | Music History and Appreciation I |
| ART*253 | Oil Painting I | MUS*104 | World Music |
| ART*254 | Oil Painting II | MUS*111 | Fundamentals of Music I |
| ART*280 | Advanced Digital Photography | MUS*117 | Electronic Music |
| COM*129 | Digital Video Production | MUS*137 | History and Appreciation of Jazz |
| COM*142 | Television Production | MUS*138 | Rock and Roll History & Appreciation |
| COM*147 | Digital Cinematography | MUS*152 | Drumming and Percussion Ensemble |
| COM*154 | Film Study & Appreciation | THR*101 | Introduction to Theatre |
| COM*203 | Media Literacy | THR*110 | Acting I |
| COM*220 | Television Studio Production | THR*113 | Performance for Film and Television |
| COM*264 | Advanced Editing Workshop | THR*121 | Plays in Production I |
| DGA*101 | Introduction to Digital Arts | THR*210 | Acting II |
| DGA*110 | Computer Graphics | | |

Continuing Learning / Information Literacy Gen Ed Competency

Continuing Learning/Information Literacy courses are designed so that students will be able to use traditional and digital technology to access, evaluate, and apply information to the needs or questions confronting them throughout their academic, professional, and personal lives. Students will demonstrate mastery of the **Continuing Learning/Info Literacy** general education core competency by being able to:

1. Demonstrate competency in using current, relevant technologies to solve problems, complete projects, and make informed decisions.
2. Access, navigate, identify and evaluate information that is appropriate for students' need(s) and audience(s).
3. Synthesize information to broaden knowledge and experiences and to produce both independent and collaborative work.
4. Evaluate the economic, legal, ethical, and social issues surrounding the access and use of information and relevant technologies.

The following Middlesex Community College courses are designated as fulfilling the **Continuing Learning/Information Literacy** general education core competency. (Full course descriptions may be found elsewhere in this Catalog.)

| | | | |
|---------|--|---------|--|
| ACC*115 | Financial Accounting (no longer offered at MxCC) | CSC*101 | Introduction to Computers |
| ACC*118 | Managerial Accounting (no longer offered at MxCC) | CSC*115 | Intro. to Programming with Alice |
| ACC*271 | Intermediate Accounting I | CSC*205 | Visual Basic I |
| ACC*272 | Intermediate Accounting II | CSC*231 | Database Design I |
| ART*250 | Digital Photography | CSC*262 | Programming Mobile Devices I |
| BBG*115 | Business Software Applications | CSC*295 | Coop Ed/Work Experience |
| BFN*201 | Principles of Finance | CST*120 | Introduction to Operating Systems |
| BMG*202 | Principles of Management | CST*163 | Windows Server Administration |
| BMK*201 | Principles of Marketing | CST*201 | Intro. to Management Information Systems |
| BMK*216 | Internet Marketing | CST*228 | Voice and Data Interworking |
| CAD*110 | Introduction to CAD | CST*231 | Data Communication and Networking |
| CJS*211 | Criminal Law I | CST*270 | Network Security Fundamentals |
| CJS*212 | Criminal Law II | ECE*101 | Intro. to Early Childhood Education |
| CJS*213 | Evidence and Criminal Procedure | ECE*131 | Children's Literature |
| CSA*135 | Spreadsheet Applications | FS 100 | Freshman Seminar |
| CSA*140 | Database Applications | HIM*156 | Electronic Health Records |
| CSA*205 | Advanced Applications | HIM*157 | Healthcare Informatics |

Critical Analysis & Logical Thinking courses are designed so that students will be able to organize, interpret, and evaluate evidence and ideas within and across disciplines; draw reasoned inferences and defensible conclusions; and solve problems and make decisions based on analytical processes.

Students will demonstrate mastery of the **Critical Analysis & Logical Thinking** core competency by being able to:

1. **Identify Arguments:** Identify issues, evidence and reasoning processes; distinguish facts from opinion; recognize various types of arguments.
2. **Formulate arguments:** Formulating good arguments, including a significant focus on inductive reasoning.
3. **Conduct Analysis:** Break subject matter into components, and identify their interrelations to ascertain the defining features of the work and their contributions to the whole.
4. **Evaluate Evidence:** Identify assumptions, assessing the quality and reliability of sources of evidence, and demonstrating knowledge of the criteria for evaluating the success of each kind of inference.
5. **Synthesize Conclusions:** Draw together disparate claims into a coherent whole in order to arrive at well-reasoned and well supported inferences that can be justified as a conclusion.

The following Middlesex Community College courses are designated as fulfilling the **Critical Analysis & Logical Thinking** general education core competency. (Full course descriptions may be found elsewhere in this Catalog.)

| | | |
|--|--|--|
| ACC*100 Basic Accounting | CJS*213 Evidence & Criminal Procedure | ENG*221 American Literature I |
| ACC*115 Financial Accounting (no longer offered at MxCC) | CJS*294 Contemporary Issues in Criminal Justice | ENG*222 American Literature II |
| ACC*118 Managerial Accounting (no longer offered at MxCC) | CSA*135 Spreadsheet Applications | ENG*231 British Literature I |
| ACC*271 Intermediate Accounting I | CSA*140 Database Applications | ENG*232 British Literature II |
| ACC*272 Intermediate Accounting II | CSA*205 Advanced Applications | ENG*233 Shakespeare |
| BBG*101 Introduction to Business | CSC*115 Intro to Programming with Alice | ENG*234 Shakespeare II |
| BBG*125 The Future and Business Organizations | CSC*205 Visual Basic I | ENG*262 Women in Literature |
| BBG*135 Exploring Business & Technology Careers | CSC*231 Database Design I | ENG*291 Mythology |
| BBG*215 Global Business | CSC*262 Programming Mobile Devices I | ENG*298 Special Topics in English |
| BBG*231 Business Law I | CSC*295 Coop Ed/Work Experience | EVS*100 Intro. to Environmental Science |
| BBG*232 Business Law II | CST*120 Intro. to Operating Systems | EVS*111 Environmental Science Lab |
| BBG*234 Legal Environment of Business | CST*163 Windows Server Administration | HIM*205 Medical Coding 1 |
| BBG*294 Business Internship | CST*201 Introduction to Management Information Systems | HIM*206 Medical Coding 2 |
| BBG*295 Cooperative Work Experience | CST*228 Voice and Data Interworking | HIM*295 Health Information Management Internship |
| BES*118 Small Business Management | CST*231 Data Communication and Networking | HON 101 Honors Seminar |
| BFN*110 Personal Finance | CST*270 Network Security Fundamentals | HON 102 Honors Seminar II |
| BFN*201 Prin. of Finance | EAS*106 Natural Disasters | HON 202 Honors Capstone Project |
| BMG*202 Principles of Management | ECN*101 Principles of Macroeconomics | MAT*104 Quantitative Reasoning |
| BMG*204 Managerial Communications | ECN*102 Principles of Microeconomics | MAT*141 Number Systems |
| BMG*210 Principles of Organizational Behavior | ECN*220 International Economics | MAT*146 Math for the Liberal Arts |
| BMG*220 Human Resource Management | ENG*102 Literature and Composition | PHL*101 Introduction to Philosophy |
| BMK*103 Prin. of Retailing | ENG*110 Introduction to Literature | PHL*111 Ethics |
| BMK*106 Principles of Selling | ENG*200 Advanced Composition | PHL*131 Logic |
| BMK*201 Principles of Marketing | ENG*202 Technical Writing | PHL*145 Sustainable Living |
| BMK*216 Internet Marketing | ENG*210 Fiction | PHL*151 World Religions |
| BMK*230 Advertising and Promotion | ENG*211 Short Story | PHL*199 Special Topics in Philosophy |
| CJS*211 Criminal Law I | ENG*213 Poetry | |
| CJS*212 Criminal Law II | ENG*214 Drama | |
| | ENG*218 Autobiography | |
| | ENG*220 Studies in American Literature | |

Ethical Dimensions of Humankind

Gen Ed Competency

The Ethical Dimensions general education competency is a set of learning outcomes and principles designed so that students will identify ethical principles that guide individual and collective actions, and apply those principles to the analysis of contemporary social and political problems. Students will demonstrate mastery of the **Ethical Dimensions** general education core competency by being able to:

1. Recognize and reflect critically on ethical issues.
2. Apply appropriate concepts and terminology in identifying ethical problems and proposing and defending solutions to them.
3. Apply standards and practices of scholarship, research, and documentation in defending positions and beliefs, including reevaluating beliefs in light of unforeseen implications or new evidence.
4. Recognize the value of creative, collaborative, and innovative approaches to problem solving, including the ability to acknowledge differing points of view.

These learning outcomes are embedded throughout the curriculum. Students are engaged in the Ethical Dimensions competency in both their general education and program requirements. Thus, there is not a specific list of courses designated to fulfill all of these learning outcomes.

Historical Knowledge

Gen Ed Competency

Historical Knowledge courses are designed so that students will study the interrelatedness of various realms of human experience from multiple historical perspectives. Students will demonstrate mastery of the **Historical Knowledge** general education core competency by being able to:

1. Identify and differentiate types of historical sources including popular, academic, primary, and secondary.
2. Recognize ever-changing interpretations of history.
3. Place the development of societies in national and/or international contexts.
4. Explain the influence and agency of social circumstances, which may include race, class, gender, and others, on historical events
5. Describe the impact of the past on subsequent events, including the present.
6. Examine the complex, dynamic, and interrelated nature of change.

The following Middlesex Community College courses are designated as fulfilling the **Historical Knowledge** general education core competency. (Full course descriptions may be found elsewhere in this Catalog.)

| | | | |
|---------|-----------------------------|---------|--|
| BIO*109 | Principles of Biotechnology | HSE*224 | Social Problems of Youth |
| HIS*101 | Western Civilization I | MUS*101 | Music History and Appreciation I |
| HIS*102 | Western Civilization II | MUS*104 | World Music |
| HIS*107 | History of Puerto Rico | MUS*137 | History and Appreciation of Jazz |
| HIS*121 | World Civilization I | MUS*138 | Rock and Roll History and Appreciation |
| HIS*122 | World Civilization II | THR*101 | Introduction to Theatre |
| HIS*201 | United States History I | | |
| HIS*202 | United States History II | | |
| HIS*244 | Europe in the 20th Century | | |

Oral Communication in English courses are designed so that students will be prepared to develop oral messages of varying lengths and styles that communicate effectively and appropriately across a variety of settings. Students will demonstrate mastery of the **Oral Communication in English** core competency by being able to:

1. **Respond to Rhetorical Situations:**

- Identify and evaluate the specific audience and purpose in different communication situations, and adapt the communication appropriately to those situations.
- Develop effective messages that influence attitudes, beliefs, and actions through appropriate logical, ethical, and emotional appeals.
- Recognize when others do not understand the message and then manage those misunderstandings.
- Listen effectively by understanding, remembering, interpreting, evaluating, and responding appropriately to the speech of others.

2. **Use Sources**

- Locate, evaluate, use, and acknowledge sources appropriate to the communication purpose.
- Synthesize and integrate others' ideas purposefully and ethically into students' own communication.
- Summarize, paraphrase, and quote accurately the ideas of others, clearly differentiating them from the students' own ideas.

3. **Craft Logical Arguments**

- Select an appropriate and effective medium for communicating.
- Provide clear and logical evidence, support, or illustration for their assertions.
- Choose appropriate and effective organizing methods for the message, employing effective transitions and signposts.

4. **Apply Language Conventions**

- Use diction, tone, and level of formality appropriate to audience, purpose, and situation.
- Use pronunciation, grammar, articulation, and nonverbal behaviors appropriate for the message and designated audience.

5. **Formulate Effective Communication Strategies**

- Reflect on and explain the effectiveness of their communication choices regarding the audience, purpose, and situation.
- Speak ethically by accepting responsibility for their communication practices and by communicating openly and directly.
- Revise and rehearse speeches before delivery.
- Work collaboratively with others, including managing discussion, tasks, and information.

The following Middlesex Community College courses are designated as fulfilling the **Oral Communication in English** general education core competency. (Full course descriptions may be found elsewhere in this Catalog.)

BBG*115 Business Software Applications
BMG*204 Managerial Communications
COM*172 Interpersonal Communication
COM*173 Public Speaking
HSE*202 Introduction to Counseling/ Interviewing
HSE*224 Social Problems of Youth

ODD*110 Ophthalmic Materials I
SOC*120 Group Dynamics
VET*102 Veterinary Office Management & Communication
VET*280 Veterinary Technician Externship I
VET*286 Veterinary Technician Externship II

Quantitative Reasoning courses are designed so that students will learn to recognize, understand, and use the quantitative elements they encounter in various aspects of their lives. Students will develop a habit of mind that uses quantitative skills to solve problems and make informed decisions. Students will demonstrate mastery of the **Quantitative Reasoning** general education core competency by being able to:

1. Represent mathematical, and quantitative information symbolically, graphically, numerically, and verbally.
2. Apply quantitative methods to investigate routine and novel problems. This includes calculations/procedures, mathematical and/or statistical modeling, prediction, and evaluation.
3. Interpret mathematical and quantitative information and draw logical inferences from representations such as formulas, equations, graphs, tables, and schematics.
4. Evaluate the results obtained from quantitative methods for accuracy and/or reasonableness.

The following Middlesex Community College courses are designated as fulfilling the **Quantitative Reasoning** general education core competency **for Transfer-Oriented Programs and CSU Transfer Tickets**. (Full course descriptions may be found elsewhere in this Catalog.)

| | |
|---------|--|
| HIM*230 | Healthcare Statistics and Data Analysis |
| MAT*141 | Number Systems |
| MAT*146 | Math for the Liberal Arts |
| MAT*158 | Graphs, Functions, and Matrices |
| MAT*167 | Principles of Statistics |
| MAT*168 | Elementary Statistics and Probability I (<i>no longer offered at MxCC</i>) |
| MAT*173 | College Algebra with Technology |
| MAT*186 | Precalculus |
| MAT*254 | Calculus I |
| MAT*256 | Calculus II |
| MAT*268 | Calculus III: Multivariable |
| MAT*272 | Linear Algebra |
| MAT*285 | Differential Equations |

In addition to the courses listed above, the following Middlesex Community College courses may fulfill Quantitative Reasoning requirements **for MxCC Career-Oriented programs only**:

| | |
|----------|--|
| ACC*115 | Financial Accounting (<i>no longer offered at MxCC</i>) |
| ACC*118 | Managerial Accounting (<i>no longer offered at MxCC</i>) |
| ACC*271 | Intermediate Accounting I |
| ACC*272 | Intermediate Accounting II |
| CSA*135 | Spreadsheet Applications |
| CSC*262 | Programming Mobile Devices I |
| MAT 104 | Quantitative Reasoning |
| MAT 137 | Intermediate Algebra |
| MAT 137E | Intermediate Algebra with Embedded Review |

Scientific Knowledge & Understanding courses are designed so that students will gain a broad base of scientific knowledge and methodologies in the natural sciences. This will enable them to develop scientific literacy, the knowledge and understanding of scientific concepts and processes essential for personal decision making and understanding scientific issues. Students will demonstrate mastery of the **Scientific Knowledge & Understanding** core competency by being able to:

1. Communicate using appropriate scientific terminology.
2. Use representations and models to communicate scientific knowledge and solve scientific problems.
3. Plan and implement data collection strategies appropriate to a particular scientific question.
4. Articulate the reasons that scientific explanations and theories are refined or replaced.
5. Evaluate the quality of scientific information on the basis of its source and the methods used to generate it.

The following Middlesex Community College courses are designated as fulfilling the **Scientific Knowledge & Understanding** general education core competency. (Full course descriptions may be found elsewhere in this Catalog.)

| | | | |
|---------|---|---------|---|
| AST*101 | Principles of Astronomy | EVS*111 | Environmental Science Laboratory |
| BIO*105 | Introduction to Biology | GLG*120 | Dynamic Earth |
| BIO*110 | Principles of the Human Body | RAD*200 | Radiologic Physics & Diagnostic Imaging Modalities |
| BIO*111 | Introduction to Nutrition | RAD*206 | Quality Assurance |
| BIO*115 | Human Biology | RAD*219 | Radiographic Equipment and Image Production |
| BIO*121 | General Biology I | SCI*103 | Recent Discoveries in Science |
| BIO*122 | General Biology II | SCI*285 | Forensic Science with Lab |
| BIO*173 | Introduction to Ecology | VET*100 | Introduction to Animal Care |
| BIO*211 | Human Anatomy and Physiology I | VET*101 | Introduction to Veterinary Technology |
| BIO*212 | Human Anatomy and Physiology II | VET*102 | Veterinary Office Management and Communication |
| BIO*235 | Microbiology | VET*151 | Small Animal Veterinary Technology w/Lab |
| BIO*238 | Parasitology | VET*152 | Large Animal Veterinary Technology w/Lab |
| BIO*263 | Molecular Genetics | VET*201 | Veterinary Anatomy & Physiology I w/Lab |
| CHE*101 | Introductory Chemistry | VET*202 | Veterinary Anatomy & Physiology II w/Lab |
| CHE*111 | Concepts of Chemistry | VET*205 | Veterinary Laboratory Procedures |
| CHE*112 | Principles of Organic and Biochemistry | VET*212 | Principles of Imaging with Lab |
| CHE*121 | General Chemistry I | VET*220 | Animal Pathology |
| CHE*122 | General Chemistry II | VET*230 | Veterinary Anesthesia and Surgical Nursing with Lab |
| CHE*220 | Biochemistry | VET*238 | Parasitology |
| CHE*250 | Instrumental Analysis | VET*240 | Periodontology and Oral Radiology |
| CJS*225 | Forensic Science | VET*250 | Principles of Pharmacology for Vet Tech |
| CJS*285 | Forensic Science with Lab | VET*280 | Veterinary Technician Externship I |
| EAS*102 | Earth Science | VET*286 | Veterinary Technician Externship II |
| EAS*106 | Natural Disasters | | |
| EAS*107 | Earth Resources | | |
| EGR*111 | Introduction to Engineering | | |
| EGR*211 | Applied Mechanics I (Statics) | | |
| EGR*212 | Applied Mechanics II (Dynamics) | | |
| EGR*214 | Engineering Thermodynamics | | |
| EGR*221 | Introduction to Electric Circuit Analysis | | |
| EVS*100 | Intro to Environmental Science | | |

Scientific Reasoning courses are designed so that students will become familiar with science as a method of inquiry. Students will develop a habit of mind that uses quantitative skills to solve problems and make informed decisions. Students will demonstrate mastery of the **Scientific Reasoning** general education core competency by being able to:

- Explain the methods of scientific inquiry that lead to the acquisition of knowledge. Such methods include observations, testable hypotheses, logical inferences, experimental design, data acquisition, interpretation, and reproducible outcomes.
- Apply scientific methods to investigate real-world phenomena, and routine and novel problems. This includes data acquisition and evaluation, and prediction.
- Represent scientific data symbolically, graphically, numerically, and verbally.
- Interpret scientific information and draw logical inferences from representations such as formulas, equations, graphs, tables, and schematics.
- Evaluate the results obtained from scientific methods for accuracy and/or reasonableness.

The following Middlesex Community College courses are designated as fulfilling the **Scientific Reasoning** general education core competency. (Full course descriptions may be found elsewhere in this Catalog.)

| | | | |
|---------|---|---------|--|
| BIO*105 | Introduction to Biology | EGR*212 | Applied Mechanics II (Dynamics) |
| BIO*109 | Principles of Biotechnology | EGR*214 | Engineering Thermodynamics |
| BIO*115 | Human Biology | EGR*221 | Introduction to Electric Circuit Analysis |
| BIO*121 | General Biology I | GLG*120 | Dynamic Earth |
| BIO*122 | General Biology II | HIM*156 | Electronic Health Records |
| BIO*173 | Introduction to Ecology | HLT*160 | Introduction to Public Health |
| BIO*211 | Human Anatomy and Physiology I | MAM*202 | Mammography Clinical Experience |
| BIO*212 | Human Anatomy and Physiology II | MAT*167 | Principles of Statistics |
| BIO*235 | Microbiology | MAT*168 | Elementary Statistics and Probability I (no longer offered at MxCC) |
| BIO*263 | Molecular Genetics | PHY*110 | Introductory Physics |
| CAT*201 | Cross Sectional Anatomy I | PHY*121 | General Physics I |
| CHE*111 | Concepts of Chemistry | PHY*122 | General Physics II |
| CHE*112 | Principles of Organic and Biochemistry | PHY*221 | Calculus-Based Physics I |
| CHE*121 | General Chemistry I | PHY*222 | Calculus-Based Physics II |
| CHE*122 | General Chemistry II | PSY*111 | General Psychology I |
| CHE*220 | Biochemistry | PSY*240 | Social Psychology |
| CHE*250 | Instrumental Analysis | RAD*200 | Radiologic Physics & Diagnostic Imaging Modalities |
| CJS*225 | Forensic Science | RAD*206 | Quality Assurance |
| CJS*285 | Forensic Science with Lab | RAD*219 | Radiographic Equipment and Image Production |
| CSC*105 | Programming Logic | SCI*285 | Forensic Science with Lab |
| CSC*220 | Object Oriented Programming Using JAVA | SOC*160 | Introduction to Public Health |
| CST*141 | Computer Hardware | SOC*240 | Criminology |
| EGR*111 | Introduction to Engineering | | |
| EGR*211 | Applied Mechanics I (Statics) | | |

Social Phenomena courses are designed so that students will develop an increased understanding of the influences that shape a person's, or group's attitudes, beliefs, emotions, symbols, and actions, and how these systems of influence are created, maintained, and altered by individual, familial, group, situational or cultural means. Students will demonstrate mastery of the **Social Phenomena** general education core competency by being able to:

- Explain social, organizational, political, economic, historical, or cultural elements that influence and are influenced by individuals and groups.
- Explain theories and research methods used to investigate social phenomena.
- Explain ethical issues pertaining to social contexts and phenomena.
- Explain issues of diversity within and across cultures.
- Apply concepts or theories of social phenomena to real world situations (e.g., service learning, group work, clubs, organizations, civic engagement, conflict resolution and internships).

The following Middlesex Community College courses are designated as fulfilling the **Social Phenomena** general education core competency. (Full course descriptions may be found elsewhere in this Catalog.)

| | | | |
|---------|---|---------|---|
| ANT*101 | Introduction to Anthropology | POL*102 | Introduction to Comparative Politics |
| ANT*205 | Cultural Anthropology | POL*103 | Introduction to International Relations |
| CJS*101 | Introduction to Criminal Justice | POI*111 | American Government |
| CJS*102 | Introduction to Corrections | POL*112 | State and Local Government |
| CJS*105 | Introduction to Law Enforcement | POL*293 | Connecticut Legislative Internship |
| CJS*106 | Introduction to Homeland Security | PSY*111 | General Psychology |
| CJS*220 | Criminal Investigation | PSY*201 | Life Span Development |
| CJS*250 | Police Organization and Management | PSY*204 | Child and Adolescent Development |
| CJS*255 | Ethical Issues in Criminal Justice Leadership | PSY*240 | Social Psychology |
| CJS*288 | Careers in Criminal Justice | PSY*245 | Abnormal Psychology |
| CJS*290 | Practicum in Criminal Justice | RAD*109 | Methods of Patient Care I |
| CJS*294 | Contemporary Issues in Criminal Justice | RAD*209 | Methods of Patient Care II |
| COM*101 | Introduction to Mass Communication | RAD*271 | Advanced Clinical Internship |
| COM*120 | Social Media | SOC*101 | Principles of Sociology |
| COM*125 | New Media Production | SOC*103 | Social Problems |
| DAR*101 | Public Health Issues: Abuse & Addiction | SOC*117 | Minorities in the U.S. |
| DAR*114 | Introduction to Family Systems | SOC*120 | Group Dynamics |
| DGA*125 | New Media Production | SOC*160 | Introduction to Public Health |
| ECN*101 | Principles of Macroeconomics | SOC*190 | Self and Others: Dynamics of Diversity |
| ECN*102 | Principles of Microeconomics | SOC*210 | Sociology of the Family |
| ECN*220 | International Economics | SOC*213 | Human Sexuality |
| GEO*101 | Introduction to Geography | SOC*221 | Social Inequality |
| HLT*160 | Introduction to Public Health | SOC*240 | Criminology |
| HSE*101 | Introduction to Human Services | SOC*241 | Juvenile Delinquency |
| | | SOC*277 | Social Survey Research |

Written Communication in English courses are designed so that students will be prepared to develop written texts of varying lengths and styles that communicate effectively and appropriately across a variety of settings. Students will demonstrate mastery of the **Written Communication in English** core competency by being able to:

1. **Respond to Rhetorical Situations**
 - Identify and evaluate the specific audience and purpose in different writing situations, and adapt their writing appropriately to those situations.
 - Develop effective prose that influences attitudes, beliefs, and actions through appropriate logical, ethical, and emotional appeals.
2. **Use Sources**
 - Locate and evaluate sources appropriate to the rhetorical situation
 - Read, comprehend, and summarize an argument from a complex piece of writing.
 - Analyze, evaluate, and respond to an argument from a complex piece of writing.
 - Summarize, paraphrase, and quote accurately the ideas of others, clearly differentiating them from the students' own ideas.
 - Synthesize and integrate others' ideas purposefully and ethically, with correct and appropriate documentation.
3. **Craft Logical Arguments**
 - Generate a controlling idea or thesis.
 - Provide clear and logical evidence, support, or illustration for their assertions.
 - Choose appropriate and effective organizing methods, employing effective transitions and signposts.
 - Write a focused and sustained argument of at least 1500 words that demonstrates all of the written communication outcomes.
4. **Apply Language Conventions**
 - Use diction, tone, and level of formality appropriate to audience, purpose, and situation.
 - Apply the conventions of Standard English grammar, spelling, and mechanics.
5. **Formulate Effective Writing Strategies**
 - Develop flexible strategies for generating, revising, editing, and proofreading their writing.
 - Reflect on and explain the effectiveness of their writing choices regarding the audience, purpose, and situation.

The following Middlesex Community College courses are designated as fulfilling the **Written Communication in English** general education core competency. (Full course descriptions may be found elsewhere in this Catalog.)

| | | | |
|----------|-------------------------------|---------|--------------------------------|
| CJS*290 | Practicum in Criminal Justice | ENG*220 | Studies in American Literature |
| ENG*101 | Composition | ENG*221 | American Literature I |
| ENG*101E | Composition (Embedded) | ENG*222 | American Literature II |
| ENG*102 | Literature and Composition | ENG*231 | British Literature I |
| ENG*200 | Advanced Composition | ENG*232 | British Literature II |
| ENG*202 | Technical Writing | ENG*233 | Shakespeare |
| ENG*210 | Fiction | ENG*234 | Shakespeare II |
| ENG*211 | Short Story | ENG*262 | Women in Literature |
| ENG*213 | Poetry | ENG*291 | Mythology |
| ENG*214 | Drama | ENG*298 | Special Topics in English |
| ENG*218 | Autobiography | | |

College-Wide Program

GENERAL STUDIES

Associate Degree

College-Wide Program

Division Directors:**Dr. Lin Lin (thru Aug. 2017)****Mr. Jaime Flores**

Allied Health, Business, STEM

Arts & Media, Humanities, Social Sciences

Office Location:**Wheaton Hall 209****Snow Hall 508****Telephone:****(860) 343-5763****(860) 343-5757****Email:****llin@mxcc.edu****jflores@mxcc.edu****Description**

General Studies is intended for students who wish to design a personalized degree program for exploration or to meet educational and career goals. It's also for students who may have credits from several colleges who wish to "collect" their credits into an Associate Degree credential. **This program is not designed primarily for transfer purposes.** It does not provide adequate guidance for meeting the admissions and transfer requirements of baccalaureate institutions without careful assistance from advisors at both Middlesex and the college or university where a student plans to attend.

MxCC is committed to a sound liberal arts education and the development of a solid foundation of professional skills, which are incorporated through specific requirements in the program. The program also offers a great deal of flexibility as a basis for further study or career paths. However, transferring students who wish to pursue liberal arts degrees are encouraged to consider the Liberal Arts and Science program, which is specifically designed for this purpose. Other transferring students should ask their advisor to recommend the best program to meet their specific needs.

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.

A Note about Program Requirements

The program requirements listed in this Catalog are for students entering into this program in Fall 2017 or Spring 2018. Students who entered the program during a prior semester will find their specific requirements listed in the Catalog under which they entered. Archived Catalogs are accessible through the college website at <http://mxcc.edu/catalogs-and-schedules/>.



2017-18 CATALOG

Middlesex Community College
General Studies
 Associate in Science Degree
 GRADUATION CHECKLIST

This program is intended for students who wish to design a personalized degree program for exploration or to meet educational and career goals, and for students who may have credits from several colleges who wish to “collect” their credits into an Associate Degree credential. **This program is not designed primarily for transfer purposes.** It does not provide adequate guidance for meeting bachelor’s degree requirements without careful assistance from an advisor.

| Category | Course | Cr | Semester Taken | Grade |
|---|------------------------------------|--------------|----------------|-------|
| General Education Requirements for Career Programs (21-23 credits) | | | | |
| Aesthetic Dimensions Elective | | 3 | | |
| Two courses chosen from any of these competencies: Aesthetic Dimensions, Historical Knowledge, Oral Communication, Social Phenomena, and/or Written | Elective 1: | 3 | | |
| | Elective 2: | 3 | | |
| Quantitative Reasoning Any MAT* course numbered 100 and above | MAT* | 3-4 | | |
| Scientific Knowledge OR Scientific Reasoning Elective | | 3-4 | | |
| Social Phenomena Elective | | 3 | | |
| Written Communication | ENG* 101: Composition | 3 | | |
| Program Requirements (15 credits) | | | | |
| Continuing Learning/ Information Literacy Elective | | 3 | | |
| Critical Analysis/Logical Thinking Elective | | 3 | | |
| Historical Knowledge Elective | | 3 | | |
| Oral Communication Elective | | 3 | | |
| Written Communication | ENG* 102: Literature & Composition | 3 | | |
| Open Electives (24 credits) | | | | |
| <i>Any credit courses offered by the college to meet a student’s interests and goals. Courses must be numbered 100 and above.</i> | | | | |
| Open Elective | | | | |
| Open Elective | | | | |
| Open Elective | | | | |
| Open Elective | | | | |
| Open Elective | | | | |
| Open Elective | | | | |
| Open Elective | | | | |
| Open Elective | | | | |
| TOTAL CREDITS | | 60-62 | | |

Two (2) courses (6 credits minimum) numbered 200 or higher are required to complete graduation requirements for the General Studies Degree.

College-Wide Program

LIBERAL ARTS & SCIENCES

Associate Degree

College-Wide Program

Division Directors:**Dr. Lin Lin (thru Aug. 2017)****Mr. Jaime Flores**

Allied Health, Business, STEM

Arts & Media, Humanities, Social Sciences

Office Location:**Wheaton Hall 209****Snow Hall 508****Telephone:****(860) 343-5763****(860) 343-5757****Email:****llin@mxcc.edu****jflores@mxcc.edu****Description**

This curriculum is designed for students who wish to transfer to a liberal arts program at a four-year institution. It consists of a broad program of general knowledge in the humanities and contains a science option for those students wishing to focus more intently in the sciences. Students should choose electives with consideration toward their intended field of specialization.

Learning Outcomes

Upon successful completion of all program requirements, graduates will be able to:

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.

A Note about Program Requirements

The program requirements listed in this Catalog are for students entering into this program in Fall 2017 or Spring 2018. Students who entered the program during a prior semester will find their specific requirements listed in the Catalog under which they entered. Archived Catalogs are accessible through the college website at <http://mxcc.edu/catalogs-and-schedules/>.



Middlesex Community College
Liberal Arts & Sciences
 Associate in Arts Degree
 GRADUATION CHECKLIST

This program is a **Transfer-Oriented Degree** that is intended to be completed before you continue your education at the baccalaureate level. Individual articulation agreements may exist with specific universities so that your degree is completely accepted with all credits transferring. Please check with your Academic Advisor to ensure you enroll in the appropriate courses to ensure seamless transfer to your intended transfer institution.

| Category | | Course | Cr | Semester Taken | Grade |
|--|---|------------------------------------|-----|----------------|-------|
| General Education Requirements for Transfer Programs (31-32 credits) | | | | | |
| Aesthetic Dimensions Elective | | | 3 | | |
| Historical Knowledge Elective | | | 3 | | |
| Oral Communication | | | 3 | | |
| Quantitative Reasoning Elective | | | 3 | | |
| Scientific Knowledge Elective | At least one should have a laboratory component | | 7-8 | | |
| Scientific Reasoning Elective | | | | | |
| Social Phenomena Elective (1 of 2) | | | 3 | | |
| Social Phenomena Elective (2 of 2) | | | 3 | | |
| Written Communication (1 of 2) | | ENG* 101: Composition | 3 | | |
| Written Communication (2 of 2) | | ENG* 102: Literature & Composition | 3 | | |

| | | | | | |
|--|--|--|--------------|--|--|
| Program Requirements (minimum 30 credits) | | | | | |
| Continuing Learning/ Information Literacy Elective | | | 3 | | |
| * Foreign Language Elective (1 of 2) | | | 3 (or 4) | | |
| * Foreign Language Elective (2 of 2) | | | 3 (or 4) | | |
| Three courses chosen from any of these competencies: Aesthetic Dimensions, Historical Knowledge, Oral Communication, Quantitative Reasoning, Scientific Knowledge & Understanding, Scientific Reasoning, Social Phenomena, and/or Written Communication. <i>Some math and science courses are offered for 4 credits.</i> | | | 3 (or 4) | | |
| | | | 3 (or 4) | | |
| | | | 3 (or 4) | | |
| Open Elective (1 of 3) | | | 3 | | |
| Open Elective (2 of 3) | | | 3 | | |
| Open Elective (3 of 3) | | | 3 | | |
| Open Elective (only if necessary to complete a minimum total of 60 credits) | | | 3 | | |
| TOTAL CREDITS | | | 61-62 | | |

* 4-credit language courses will transfer in for 4 credits. Foreign language requirements may be waived for previous coursework (including American Sign Language), native fluency, AP/CLEP/Subject SAT exams, or documented disability exemptions. In such cases, a student will need to substitute open electives to complete a minimum of 60 total credits for the Associate Degree.

Allied Health (Non-Credit)

CERTIFIED NURSE AIDE

Continuing Education Division

Program Advisor: Diane Bordonaro, MSN, RN, Director of Non-Credit Programs
Program Office: Snow Hall 514
Telephone: (860) 343-5716
Email: dbordonaro@mxcc.edu

About Non-Credit Certificates

Non-credit Certificate programs may be comprised of a single course or several courses generally intended for occupational training, upgrading, or retraining. These programs often emphasize skills required for employment or career advancement and are offered to respond to identified workforce education needs within the respective College community. Many of these programs are designed with employers to meet or exceed industry standards and may lead to State or professional certification or licensure for successful participants.

Description

WIOA, SNAP, HCAP funding eligible. Certified Nurse Aides (CNAs) play a vital role in healthcare delivery by providing routine patient care. Working under the supervision of a nurse, CNAs perform vital patient measurements, including temperatures, pulses, and blood pressures. CNAs have direct patient contact assisting with daily activities, such as, bathing, walking, and eating. The Certified Nurse Aide training program consists of lectures, skills development, and clinical training. Learn the proper way to perform nursing procedures essential to meeting the needs of patients under your care. The program is approved by the Connecticut State Department of Public Health. **Note: Convicted felons may have difficulty finding employment in the healthcare industry.**

Prerequisites

1) High-school diploma or GED, 2) English language competency. An ESL evaluation is strongly recommended. To schedule your evaluation please call the MxCC Academic Success Center at 860-343-5770 and ask for an appointment to take the CNA ESL test. There is no charge. 3) Health Form signed by your physician including immunization information, PPD test for Tuberculosis, and seasonal flu vaccine. 4) Must be at least 18 years of age with valid identification. 5) Artificial nails not permitted. 6) A criminal background check may be required. **Students who have a record of felonies or misdemeanors may be denied access to clinical training sites.**

NEW! Online Option

Our new CNA Hybrid Online program provides an option for students who wish to take advantage of distance learning opportunities. This program is offered in a hybrid format and includes online modules with in-person clinical learning. Students complete six weekly modules of nursing theory that cover all of the same material as in-class CNA courses. Students also complete skills training in our nursing lab and clinical training at a local nursing facility. CNA online classes are supported by the Blackboard Learn course management system. *This program is approved by the State Department of Public Health.*

Financial Assistance

Non-credit courses and certificates are not eligible for traditional college financial aid. Payment plans are available. Workforce development and other grants may be available; eligibility requirements vary. Contact Information:

- WIOA funding – American Job Center • 203-238-3688
- SNAP funding– Patrice Barrett • pbarrett@mxcc.edu
- HCAP funding – Omayra Vega • 203-624-1493 ext.216 / ovega@workforcealliance.biz or TaMesha Greene • 203-238-3688 ext.307 / tgreene@workforcealliance.biz.

Allied Health (Non-Credit)

EMERGENCY MEDICAL TECHNICIAN

Continuing Education Division

Program Advisor: Diane Bordonaro, MSN, RN, Director of Non-Credit Programs
Program Office: Snow Hall 514
Telephone: (860) 343-5716
Email: dbordonaro@mxcc.edu

About Non-Credit Certificates

Non-credit Certificate programs may be comprised of a single course or several courses generally intended for occupational training, upgrading, or retraining. These programs often emphasize skills required for employment or career advancement and are offered to respond to identified workforce education needs within the respective College community. Many of these programs are designed with employers to meet or exceed industry standards and may lead to State or professional certification or licensure for successful participants.

Description

WIOA, HCAP funding eligible. The Patient Care Technician (PCT) Certificate program is an exciting opportunity for Certified Nurse Aides to advance their skills, earn a better salary, and have more job options in a changing employment market. PCTs are valued members of many health care teams. They work in hospitals, rehabilitation settings, physician offices, clinics, and long-term care facilities. Upon completion of this program, students are eligible to sit for the National Health Career Association Certified Patient Care Technician Exam. This program does not prepare students to become Certified Phlebotomy Technicians or certified EKG technicians.

Prerequisites

1) Current CNA license required, 2) High-school diploma or GED, and 3) English language competency. An ESL evaluation is recommended. To schedule your evaluation please call the MxCC Academic Success Center at 860-343-5770 and ask for an appointment to take the CNA ESL test. There is no charge. 4) A criminal background check and drug screen are required. Students who have a criminal record are denied access to clinical training sites. **Note:** Convicted felons may have difficulty finding employment in the healthcare field.

Program Requirements

The following 5 courses are included in the PCT program:

- 1) Advanced Nurse Aide
- 2) Phlebotomy Skills for the PCT
- 3) ECG and Pulse Oximetry
- 4) CPR or BLS
- 5) Hospital Clinical Experience (optional)

Financial Assistance

Non-credit courses and certificates are not eligible for traditional college financial aid. Payment plans are available. Workforce development and other grants may be available; eligibility requirements vary. Contact Information:

- WIOA funding – American Job Center • 203-238-3688
- HCAP funding – Omayra Vega • 203-624-1493 ext.216 / ovega@workforcealliance.biz or TaMesha Greene • 203-238-3688 ext.307 / tgreene@workforcealliance.biz.

Allied Health (Non-Credit)

MEDICAL BILLING & CODING

Continuing Education Division

Program Advisor: Diane Bordonaro, MSN, RN, Director of Non-Credit Programs
Program Office: Snow Hall 514
Telephone: (860) 343-5716
Email: dbordonaro@mxcc.edu

About Non-Credit Certificates

Non-credit Certificate programs may be comprised of a single course or several courses generally intended for occupational training, upgrading, or retraining. These programs often emphasize skills required for employment or career advancement and are offered to respond to identified workforce education needs within the respective College community. Many of these programs are designed with employers to meet or exceed industry standards and may lead to State or professional certification or licensure for successful participants.

Description

WIOA, HCAP funding eligible. The Medical Office Billing & Coding Certificate Program is designed for those who want to begin medical billing and coding careers or prepare for a nationally-recognized certification exam. The training in this program will also provide you with the necessary skills required by employers seeking a medical biller or medical coder. Medical billers are responsible for submitting claims to insurance companies, Medicare, Medicaid, and in some instances, patients themselves on behalf of their employers or clients. Professional medical coders transform verbal descriptions of diseases, injuries, and procedures into numeric or alphanumeric codes. The coding of health-related data permits access to medical records by diagnoses and procedures for use in clinical care, research, and education. Students who successfully complete this program will be qualified to sit for the American Academy of Professional Coders (AAPC) – Certified Professional Coder Exam (CPC). For more information on the national certification exams or student membership with the AAPC or AHIMA, please visit either: www.aapc.com or www.ahima.org. **Students who pass the CPC exam are eligible to receive college credit through Charter Oak State College.**

Program Requirements

The following 5 courses are included in the Medical Office Billing & Coding Program:

- 1) Medical Coding I
- 2) Medical Coding II
- 3) Medical Office Electronic Health Records
- 4) Medical Insurance
- 5) Medical Terminology and Anatomy for Coders

Financial Assistance

Non-credit courses and certificates are not eligible for traditional college financial aid. Payment plans are available. Workforce development and other grants may be available; eligibility requirements vary. Contact Information:

- WIOA funding – American Job Center • 203-238-3688
- HCAP funding – Omayra Vega • 203-624-1493 ext.216 / ovega@workforcealliance.biz or TaMesha Greene • 203-238-3688 ext.307 / tgreene@workforcealliance.biz.

Allied Health (Non-Credit)

MEDICAL CODING SPECIALIST

Continuing Education Division

Program Advisor: Diane Bordonaro, MSN, RN, Director of Non-Credit Programs
Program Office: Snow Hall 514
Telephone: (860) 343-5716
Email: dbordonaro@mxcc.edu

About Non-Credit Certificates

Non-credit Certificate programs may be comprised of a single course or several courses generally intended for occupational training, upgrading, or retraining. These programs often emphasize skills required for employment or career advancement and are offered to respond to identified workforce education needs within the respective College community. Many of these programs are designed with employers to meet or exceed industry standards and may lead to State or professional certification or licensure for successful participants.

Description

Medical Coding Specialists are essential to healthcare organizations because they have an impact on revenues and health outcome data. Certification in this field has become an industry standard. The Medical Coding Specialist certificate offers students a diverse plan of study that provides an understanding of the many aspects of the emerging field of healthcare technology and information management. Students learn the skills necessary to classify medical data from patient records for coding in a facility, such as, a hospital. Students gain knowledge of medical terminology, disease processes, and pharmacology. Those completing this program could code medical records or find employment in health information divisions in government agencies and healthcare facilities. Upon completion of the program students are eligible to take the American Health Information Management Association (AHIMA) Certified Coding Specialist (CCS) examination. For more information visit www.ahima.org. **This program takes 16 months to complete and includes online course work.**

Program Requirements

Placement testing required. Must be eligible for MAT 137 and ENG 101. The following 5 courses are included in the Medical Coding Specialist Program:

- 1) Medical Terminology
- 2) Human Biology with Lab
- 3) Health Information Management Principles
- 4) Pharmacology
- 5) Medical Coding I
- 6) Medical Coding II
- 7) Pathophysiology
- 8) Professional Practice Experience I, II, III
- 9) Certification Exam Prep

Allied Health (Non-Credit)

PATIENT CARE TECHNICIAN

Continuing Education Division

Program Advisor: Diane Bordonaro, MSN, RN, Director of Non-Credit Programs
Program Office: Snow Hall 514
Telephone: (860) 343-5716
Email: dbordonaro@mxcc.edu

About Non-Credit Certificates

Non-credit Certificate programs may be comprised of a single course or several courses generally intended for occupational training, upgrading, or retraining. These programs often emphasize skills required for employment or career advancement and are offered to respond to identified workforce education needs within the respective College community. Many of these programs are designed with employers to meet or exceed industry standards and may lead to State or professional certification or licensure for successful participants.

Description

WIOA, HCAP funding eligible. The Patient Care Technician (PCT) Certificate program is an exciting opportunity for Certified Nurse Aides to advance their skills, earn a better salary, and have more job options in a changing employment market. PCTs are valued members of many health care teams. They work in hospitals, rehabilitation settings, physician offices, clinics, and long-term care facilities. Upon completion of this program, students are eligible to sit for the National Health Career Association Certified Patient Care Technician Exam. This program does not prepare students to become Certified Phlebotomy Technicians or certified EKG technicians.

Prerequisites

1) Current CNA license required, 2) High-school diploma or GED, and 3) English language competency. An ESL evaluation is recommended. To schedule your evaluation please call the MxCC Academic Success Center at 860-343-5770 and ask for an appointment to take the CNA ESL test. There is no charge. 4) A criminal background check and drug screen are required. Students who have a criminal record are denied access to clinical training sites.

Note: Convicted felons may have difficulty finding employment in the healthcare field.

Program Requirements

The following 5 courses are included in the PCT program:

- 1) Advanced Nurse Aide
- 2) Phlebotomy Skills for the PCT
- 3) ECG and Pulse Oximetry
- 4) CPR or BLS
- 5) Hospital Clinical Experience (optional)

Financial Assistance

Non-credit courses and certificates are not eligible for traditional college financial aid. Payment plans are available. Workforce development and other grants may be available; eligibility requirements vary. Contact Information:

- WIOA funding – American Job Center • 203-238-3688
- HCAP funding – Omayra Vega • 203-624-1493 ext.216 / ovega@workforcealliance.biz or TaMesha Greene • 203-238-3688 ext.307 / tgreene@workforcealliance.biz.

Allied Health (Non-Credit)

PERSONAL TRAINER

Continuing Education Division

Program Advisor: Diane Bordonaro, MSN, RN, Director of Non-Credit Programs
Program Office: Snow Hall 514
Telephone: (860) 343-5716
Email: dbordonaro@mxcc.edu

About Non-Credit Certificates

Non-credit Certificate programs may be comprised of a single course or several courses generally intended for occupational training, upgrading, or retraining. These programs often emphasize skills required for employment or career advancement and are offered to respond to identified workforce education needs within the respective College community. Many of these programs are designed with employers to meet or exceed industry standards and may lead to State or professional certification or licensure for successful participants.

Description

Certified Personal Trainer Course with Test Voucher Included

Get all the information needed to start an exciting fitness career & become a Certified Personal Trainer. It is a great way to become a successful Certified Personal Trainer with an option to complete an employer internship that can walk you into jobs. This challenging course is for candidates wanting LIVE instruction with in-depth, hands-on practical labs to master the essential career skills & knowledge. The course consists of 15 hours of lecture on key topics like biomechanics, exercise physiology, fitness testing, equipment usage, health assessment & 15 hours of hands-on practical training labs with role playing drills on assessing clients, programming, performing proper exercises, presentation skills and more. Included in this course is a 200-page student workbook, access to online student study tools and test vouchers to take the Certified Personal Trainer exams. You can work right after passing the exams with proof of CPR with AED which awards you **Level 1 Certified Personal Trainer** credential. As a special bonus, you can take advantage of our 30-hour employer internship to get the advanced **Level 2 Certified Personal Trainer** at no additional cost. Students must provide their own transportation to practical site.

Financial Assistance

Non-credit courses and certificates are not eligible for traditional college financial aid. Payment plans are available.

Allied Health (Non-Credit)

PHARMACY TECHNICIAN

Continuing Education Division

Program Advisor: Diane Bordonaro, MSN, RN, Director of Non-Credit Programs
Program Office: Snow Hall 514
Telephone: (860) 343-5716
Email: dbordonaro@mxcc.edu

About Non-Credit Certificates

Non-credit Certificate programs may be comprised of a single course or several courses generally intended for occupational training, upgrading, or retraining. These programs often emphasize skills required for employment or career advancement and are offered to respond to identified workforce education needs within the respective College community. Many of these programs are designed with employers to meet or exceed industry standards and may lead to State or professional certification or licensure for successful participants.

Description

WIOA, HCAP, SNAP funding eligible. This program is offered in partnership with the Connecticut Pharmacists Association. This comprehensive, 60-hour course prepares you for an entry-level position in a community, hospital, or long-term care setting. Topics include medical terminology specific to the pharmacy, reading and interpreting prescriptions, and defining drugs by generic and brand names. Learn dosage calculation, I.V. flow rates, drug compounding, and dose conversion. Develop your knowledge of prescription dispensing, inventory control, billing, and insurance reimbursement. This program is an excellent review for the Pharmacy Technician Certification Board (PTCB) national certification exam (not included in this course fee). Note: Individuals convicted of a felony are not permitted to sit for the exam.

Prerequisite

Students must take a math Basic Skills Assessment prior to enrollment. To schedule an appointment, call the Academic Success Center at 860-343-5770 and ask for the Pharmacy Technician math assessment. This requirement is waived for students who submit SAT or ACT scores, or a transcript showing enrollment in a college level math course. Proficiency in English literacy (may need to take the Accuplacer English test to assess level) and proof of high school diploma or GED are also required.

Pharmacy Technician Certification Exam Information

The Pharmacy Technician Certification Board (PTCB) offers the Pharmacy Technician Certification Exam. For more information please visit www.ptcb.org. **Students who complete the Pharmacy Technician program are eligible to receive college credit through Charter Oak State College.**

Financial Assistance

Non-credit courses and certificates are not eligible for traditional college financial aid. Payment plans are available. Workforce development and other grants may be available; eligibility requirements vary. Contact Information:

- WIOA funding – American Job Center • 203-238-3688
- SNAP funding – Patrice Barrett • pbarrett@mxcc.edu.
- HCAP funding – Omayra Vega • 203-624-1493 ext.216 / ovega@workforcealliance.biz or TaMeshia Greene • 203-238-3688 ext.307 / tgreene@workforcealliance.biz.

Allied Health (Non-Credit)

PHLEBOTOMY TECHNICIAN

Continuing Education Division

Program Advisor: Diane Bordonaro, MSN, RN, Director of Non-Credit Programs
Program Office: Snow Hall 514
Telephone: (860) 343-5716
Email: dbordonaro@mxcc.edu

About Non-Credit Certificates

Non-credit Certificate programs may be comprised of a single course or several courses generally intended for occupational training, upgrading, or retraining. These programs often emphasize skills required for employment or career advancement and are offered to respond to identified workforce education needs within the respective College community. Many of these programs are designed with employers to meet or exceed industry standards and may lead to State or professional certification or licensure for successful participants.

Description

WIOA, HCAP, SNAP funding eligible. Phlebotomy technicians are valuable members of the healthcare team who collect and prepare lab specimens for analysis. In this course, you will learn about phlebotomy procedures and practice blood drawing techniques. This is a 120-hour program that includes classroom learning and simulation labs. Topics include medical terminology, anatomy and physiology, venipuncture, specimen collection procedures, safety and universal precautions, common laboratory tests with clinical significance to body systems and disease processes, and laboratory equipment. Following the program, you will complete an internship at Middlesex Hospital Outpatient Laboratory. Weekday internships are scheduled by the instructor and may extend past the last class date. Scheduling requests can be made, but are not guaranteed. Students must have transportation to internship sites. This program is recognized by American Medical Technologists, a premier national certification agency. Upon completion of this program, students are eligible for National Certification through American Medical Technologists.

Prerequisite

Must be 18 years old. 2) High school diploma or GED. 3) Health form complete with immunizations and 2 step TST. 4) Personal medical insurance. 5) Clean criminal background. A criminal background check may be performed. **Students who have a criminal record are denied access to clinical internship sites.**

Financial Assistance

Non-credit courses and certificates are not eligible for traditional college financial aid. Payment plans are available. Workforce development and other grants may be available; eligibility requirements vary. Contact Information:

- WIOA funding – American Job Center • 203-238-3688
- SNAP funding – Patrice Barrett • pbarrett@mxcc.edu.
- HCAP funding – Omayra Vega • 203-624-1493 ext.216 / ovega@workforcealliance.biz or TaMesha Greene • 203-238-3688 ext.307 / tgreene@workforcealliance.biz.

Allied Health (Non-Credit)

VETERINARY ASSISTANT

Continuing Education Division

Program Advisor: Diane Bordonaro, MSN, RN, Director of Non-Credit Programs
Program Office: Snow Hall 514
Telephone: (860) 343-5716
Email: dbordonaro@mxcc.edu

About Non-Credit Certificates

Non-credit Certificate programs may be comprised of a single course or several courses generally intended for occupational training, upgrading, or retraining. These programs often emphasize skills required for employment or career advancement and are offered to respond to identified workforce education needs within the respective College community. Many of these programs are designed with employers to meet or exceed industry standards and may lead to State or professional certification or licensure for successful participants.

Description

WIOA, SNAP funding eligible. Do you love working with animals? Are you looking for employment in the animal care industry? The Veterinary Assistant Training Program is a great way to begin your career in the animal field. The Introduction to Veterinary Assisting course provides students with the opportunity to determine if this is the right career path for them. Following the Introduction course, this program dives deeper into the animal care field focusing on the care of small animals, large animals and exotic pets in the veterinary profession. This 20-week program, involves 4 hours of weekly lectures and 4 hours of weekly clinical/internship experience where students will complete routine tasks and specialized procedures done in the veterinary hospital. Internships provide each student with an individualized experience working in a veterinary hospital. This program follows the National Association of Veterinary Technicians guidelines for Veterinary Assistant Programs and can be a stepping stone to a Veterinary Technician Certification Program or entry level position at a veterinary facility. MxCC partners with Pieper Memorial Veterinary Hospital to offer this program.

Prerequisite

1) English language competency (may need to take Accuplacer ESL test to evaluate literacy level) 2) grey scrub top and pants. 3) Health form required. Must be physically fit, capable of kneeling to work with larger dogs, and able to lift 50 pounds. 4) Students must provide their own transportation to clinical sites.

Financial Assistance

Non-credit courses and certificates are not eligible for traditional college financial aid. Payment plans are available. Workforce development and other grants may be available; eligibility requirements vary. Contact Information:

- WIOA funding – American Job Center • 203-238-3688
- SNAP funding – Patrice Barrett • pbarrett@mxcc.edu.

COMPUTED TOMOGRAPHY

Post-Primary Certification

School of Allied Health, Business, and STEM

Program Coordinator: Professor Dr. Judy Wallace
Office Location: Wheaton Hall 209
Telephone: (860) 343-5780
Email: jwallace@mxcc.edu

Description

Middlesex Community College's Computed Tomography (CT) program is a two-semester, 21-credit program designed to prepare certified Radiographers for immediate employment in the workplace as CT Technicians in hospitals, clinics, and medical offices. The program emphasizes that quality patient care will be provided by individuals who have received instruction based on educational and instructional guidelines consistent with the profession. **The program accepts and starts a new class during the fall semester each year.**

Following the successful completion of all Program requirements and obligations to the college, students are awarded Certificate in Computed Tomography and may sit for the professional Registry exam sponsored by the American Registry of Radiologic Technologists (ARRT). A minimum score of 75 on the national post-primary certification examination is required for certification as a Computed Tomographer.

Our graduates are allied health professionals who administer ionizing radiation to humans for diagnostic, therapeutic or research purposes. They perform CT procedures and related techniques producing data at the request of and interpretation by a licensed independent practitioner. Employment opportunities include education, sub-specialization, sales and applications, and administration.

| Requirements | Cr | Semester Taken | Grade |
|--|-----------|----------------|-------|
| CAT* 201: Cross Sectional Anatomy I | 1 | | |
| CAT* 202: CT Image Display, Post Processing and Quality Assurance I | 2 | | |
| CAT* 203: CT Procedures and Instrumentation I | 2 | | |
| CAT* 204: Clinical Experience I | 4 | | |
| CAT* 205: Cross Sectional Anatomy II | 2 | | |
| CAT* 206: CT Image Display, Post Processing and Quality Assurance II | 3 | | |
| CAT* 207: CT Procedures and Instrumentation II | 3 | | |
| CAT* 208: Clinical Experience II | 4 | | |
| TOTAL CREDITS | 21 | | |

HEALTH CAREER PATHWAYS

Certificate

School of Allied Health, Business, and STEM

| | |
|-------------------------|--|
| Pathway Advisor: | Professor Dr. Judy Wallace |
| Office Location: | Wheaton Hall 209 |
| Telephone: | (860) 343-5780 |
| Email: | <u>jwallace@mxcc.edu</u> |

Description

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 for their program of interest.

Learning Objectives:

Upon successful completion of all program requirements, the student should be able to:

1. Demonstrate competence in written and oral communication.
2. Demonstrate critical thinking, logical reasoning and problem solving skills.
3. Effectively utilize 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.

A Note about Program Requirements

The program requirements listed in this Catalog are for students entering into this program in Fall 2017 or Spring 2018. Students who entered the program during a prior semester will find their specific requirements listed in the Catalog under which they entered. Archived Catalogs are accessible through the college website at <http://mxcc.edu/catalogs-and-schedules/>.



2017-18 CATALOG

Middlesex Community College

Health Career Pathways Certificate

GRADUATION CHECKLIST

Deadline to Apply:

Fall: November 10, 2017

Spring/Summer: April 16, 2018

Graduation Year: 20____

Year of Catalog being used: _____

| Requirements | Cr | Semester Taken | Grade |
|--|-----------|----------------|-------|
| ENG*101: Composition | 3 | | |
| ¹ MAT*137: Intermediate Algebra | 3 | | |
| PSY*111: General Psychology I | 3 | | |
| BIO*105: Introduction to Biology OR BIO*115: Human Biology OR BIO*121: General Biology I | 4 | | |
| BIO*211: Human Anatomy & Physiology I | 4 | | |
| BIO*212: Human Anatomy & Physiology II | 4 | | |
| CHE*111: Concepts of Chemistry | 4 | | |
| HLT*103: Investigations in Health Careers | 3 | | |
| TOTAL CREDITS | 28 | | |

¹MAT*136 from Norwalk C.C. or MAT*138 from Manchester C.C. will also fill this requirement.

HEALTH INFORMATION MANAGEMENT Associate Degree

School of Allied Health, Business, and STEM

| | |
|-----------------------------|--|
| Program Coordinator: | Assistant Professor Jill Flanigan |
| Office Location: | Wheaton Hall 311 |
| Telephone: | (860) 343-5791 |
| Email: | jflanigan@mxcc.edu |

Description

The Health Information Management (HIM) program provides an understanding of the many aspects of the emerging field of healthcare technology and information management. HIM professionals are involved in the design, collection, storage, utilization, and transmission of data required to meet the professional, legal, and administrative record-keeping requirements of healthcare delivery systems. They also work with clinical, financial, epidemiological, administrative, and coded healthcare and insurance data. This associate's degree program will provide students the skills necessary to enter the job market as a HIM technician. This curriculum provides the foundation of a baccalaureate HIM degree and students may choose to transfer to a four-year college, or pursue employment in the field.

Learning outcomes

Upon successful completion of all program requirements, graduates will be able to:

1. Apply knowledge of data content structure and standards to evaluate data sources, apply classification system guidelines including ICD-10-CM, ICD-10-PCS, CPT, HCPCS II, and SNOMED, and ensure health record documentation is complete and accurate.
2. Protect health information by controlling access, ensuring information security, and understanding the legal and ethical issues in the use of health data.
3. Participate in the implementation and use of information technology in the healthcare organization including establishing data standards, ensuring data quality, utilizing decision support tools, and performing data analysis.
4. Utilize healthcare data to manage the revenue cycle of the healthcare organization through understanding of payment methods and systems in all care settings.
5. Evaluate organization compliance with regulations and standards to support licensing, accreditation, and reimbursement.
6. Apply information governance principles by collecting, storing, protecting, and using organizational data strategically, especially in performance improvement activities.
7. Understand and apply knowledge of pathophysiology, pharmacology, anatomy & physiology, medical terminology, computer concepts and computer applications as they relate to health information management.

A Note about Program Requirements

The program requirements listed in this Catalog are for students entering into this program in Fall 2017 or Spring 2018. Students who entered the program during a prior semester will find their specific requirements listed in the Catalog under which they entered. Archived Catalogs are accessible through the college website at <http://mxcc.edu/catalogs-and-schedules/>.



2017-2018 CATALOG

Middlesex Community College
Health Information Management
 Associate in Science Degree
 GRADUATION CHECKLIST

This program is a **Career-Oriented Degree** that provides skills and knowledge, often in the form of a credential or qualification, that allow for direct entry into the work force. These degrees may serve as transfer degrees with or without a guarantee that additional credits will not be needed at the baccalaureate level within the CSU system.

| Category | Course | Cr | Semester Taken | Grade |
|---|--|----|----------------|-------|
| General Education Requirements for Career Programs (22 credits) | | | | |
| Aesthetic Dimensions Elective | | 3 | | |
| Two courses chosen from any of these competencies: Aesthetic Dimensions, Historical Knowledge, Oral Communication, Social Phenomena, and/or Written Communication | ENG* 102: Literature and Composition | 3 | | |
| | COM* 173: Public Speaking | 3 | | |
| Quantitative Reasoning (Career) | MAT* 167: Principles of Statistics | 3 | | |
| Scientific Knowledge OR Scientific Reasoning | BIO* 115: Human Biology | 4 | | |
| Social Phenomena Elective | SOC*160: Introduction to Public Health | 3 | | |
| Written Communication | ENG* 101: Composition | 3 | | |

| | | | | |
|--|--|-----------|--|--|
| Program Requirements (38 credits) | | | | |
| Program Requirement | MED*125: Medical Terminology | 3 | | |
| Program Requirement | HIM* 201: Health Information Management Principles | 3 | | |
| Program Requirement | CSA* 140: Database Applications | 3 | | |
| Program Requirement | HIM* 203: Pathophysiology | 3 | | |
| Program Requirement | HIM* 205: Medical Coding I | 3 | | |
| Program Requirement | HIM* 256: Legal and Ethical Issues of HIM | 3 | | |
| Program Requirement | HIM* 206: Medical Coding II | 3 | | |
| Program Requirement | HIM*157: Healthcare Informatics | 3 | | |
| Program Requirement | HIM*113: Healthcare Delivery Systems and Reimbursement | 3 | | |
| Program Requirement | HIM*212: Pharmacology for HIM | 1 | | |
| Program Requirement | HIM*230: Healthcare Statistics and Data Analysis | 3 | | |
| Program Requirement | HIM* 220: Supervision/Quality Management | 3 | | |
| Program Requirement | HIM* 295: Health Information Management Internship | 3 | | |
| Program Requirement | HIM*290: Certification Exam Preparation | 1 | | |
| TOTAL CREDITS | | 60 | | |

HEALTH INFORMATION MANAGEMENT

Certificate

School of Allied Health, Business, and STEM

| | |
|-----------------------------|--|
| Program Coordinator: | Assistant Professor Jill Flanigan |
| Office Location: | Wheaton Hall 311 |
| Telephone: | (860) 343-5791 |
| Email: | jflanigan@mxcc.edu |

Description

The HIM Certificate offers students a curriculum that is focused on the medical coding and reimbursement aspects of the health information management field while still introducing student to privacy, compliance, and ethics. Information technology is an integral part of the medical world, and health information management is a growing field which has experienced expansion in recent years with the transition in healthcare from traditional practices using paper to highly efficient electronic record-keeping. HIM professionals are involved in the design, collection, storage, utilization, and transmission of data required to meet the professional, legal, and administrative record-keeping requirements of healthcare delivery systems. They also work with clinical, financial, epidemiological, administrative, and coded healthcare and insurance data.

Learning Outcomes

Upon completion of the Certificate, graduates will be able to:

1. Apply knowledge of data content structure and standards to apply classification system guidelines including ICD-10-CM, ICD-10-PCS, CPT, HCPCS II, and SNOMED, and ensure health record documentation is complete and accurate.
2. Protect health information by controlling access, ensuring information security, and understanding the legal and ethical issues in the use of health data.
3. Utilize healthcare data to manage the revenue cycle of the healthcare organization through understanding of payment methods and systems in all care settings.
4. Evaluate organization compliance with regulations and standards to support reimbursement.
5. Understand and apply knowledge of pathophysiology, pharmacology, anatomy & physiology, medical terminology, computer concepts and computer applications as they relate to health information management.

A Note about Program Requirements

The program requirements listed in this Catalog are for students entering into this program in Fall 2017 or Spring 2018. Students who entered the program during a prior semester will find their specific requirements listed in the Catalog under which they entered. Archived Catalogs are accessible through the college website at <http://mxcc.edu/catalogs-and-schedules/>.



Middlesex Community College
Health Information Management Certificate
GRADUATION CHECKLIST – CATALOG YEAR 2017-18

Deadline to Apply:
 Fall: November 10, 2017
 Spring/Summer: April 16, 2018

Graduation Year: 20____
 Year of Catalog being used: _____

| Requirements | Cr | Semester Taken | Grade |
|--|-----------|----------------|-------|
| MED*125: Medical Terminology | 3 | | |
| BIO*115: Human Biology | 4 | | |
| HIM*201: Health Info Management Principles | 3 | | |
| HIM*203: Pathophysiology | 3 | | |
| HIM*212: Pharmacology for HIM | 1 | | |
| HIM*205: Medical Coding I | 3 | | |
| HIM*206: Medical Coding II | 3 | | |
| HIM*215: Clinical Coding PPE I | 3 | | |
| HIM*216: Clinical Coding PPE II | 3 | | |
| HIM*295: Clinical Coding PPE III | 3 | | |
| HIM*290: Certification Exam Preparation | 1 | | |
| TOTAL CREDITS | 30 | | |

MAMMOGRAPHY

Post-Primary Certification

School of Allied Health, Business, and STEM

Program Coordinator: Professor Dr. Judy Wallace
Office Location: Wheaton Hall 209
Telephone: (860) 343-5780
Email: jwallace@mxcc.edu

Description

The Middlesex Community College Mammography Certificate program is a one-semester program for certified Radiographers interested in a career as a Mammographer. Students are trained to meet the standards contained in the Practice Standards for Medical Imaging and Radiation Therapy Technologists Mammography Practice Standards; http://media.asrt.org/pdf/governance/practicestandards/ps_mamm.pdf

Following the successful completion of all Program requirements and obligations to the college, students are awarded Certificate in Mammography and may sit for the professional Registry exam sponsored by the American Registry of Radiologic Technologists (ARRT). A minimum score of 75 on the national post-primary certification examination is required for certification as a Mammographer.

The program adheres to MXCC Student and Faculty Non-Discrimination policies in that there is no discrimination of student or faculty on the basis of race, color, national or ethnic origin, religion, age, sex, marital or veteran status, sexual orientation, physical disability, or any other legally protected status.

Our graduates are allied health professionals who administer ionizing radiation and high frequency sound waves for diagnostic, therapeutic or research purposes. A mammography technologist performs breast imaging procedures and related techniques producing data at the request of and with interpretation by a licensed independent practitioner. The mammographer performs the breast imaging procedures that create mammographic and sonographic images needed for diagnosis. Employment opportunities include education, sub-specialization, sales and applications, and administration.

| Requirements | Cr | Semester Taken | Grade |
|--|----------|----------------|-------|
| MAM*201: Principles of Mammography | 4 | | |
| MAM*202: Mammography Clinical Experience | 4 | | |
| TOTAL CREDITS | 8 | | |

OPHTHALMIC MEDICAL ASSISTING**Certificate****School of Allied Health, Business, and STEM****Interim Program Coordinator:** Professor René “Skip” Rivard**Office Location:** Chapman Hall 625**Telephone:** (860) 343-5846**Email:** rrivard@mxcc.edu**Description**

This program is designed for individuals who are interested in becoming ophthalmic or optometric assistants. Successful completion of this program will prepare our students for employment as an ophthalmic or optometric assistant and will assist the student in preparing for National Certification as a Certified Ophthalmic Assistant (COA). The courses will utilize the text, *Ophthalmic Medical Assisting, An Independent Study Source* (5th Edition), published by the American Academy of Ophthalmology (AAO) and recommended by the Joint Commission on Allied Health Personnel in Ophthalmology (JCAHPO) for preparation for the Certified Ophthalmic Assistant examination.

Students will be provided with all of the information they need to register for and take the certification exam once they have completed the coursework and clinical hours requirement. The College will offer assistance in placing students in employment in ophthalmology or optometry practices in the state or region. Enrollment in the program is restricted because of limited lab facilities, and early application is encouraged. Only completed applications with all required documents will be considered. Students are admitted in either the fall or spring semester. Students must take the placement test and place into ENG*101 Composition or ENG*101E or show evidence of successful completion of an equivalent level of English course(s) to be eligible for this program.

| Requirements | Cr |
|---|-----------|
| CSC*101: Intro to Computers | 3 |
| OMA*101: Introduction to Ophthalmic Medical Assisting | 3 |
| OMA*102: Ocular Anatomy, Physiology, and Pathology | 3 |
| OMA*103: Ophthalmic Clinical Skills and Procedures | 4 |
| OMA*104: Healthcare Policies and Procedures | 3 |
| TOTAL CREDITS | 16 |

OPHTHALMIC DESIGN & DISPENSING Associate Degree

School of Allied Health, Business, and STEM

Interim Program Coordinator: Professor René “Skip” Rivard

Office Location: Chapman Hall 625

Telephone: (860) 343-5846

Email: rrivard@mxcc.edu

Description

This program is designed for individuals who are interested in becoming licensed opticians. Successful completion of this program will be accepted in lieu of the four-year, 8000-hour apprenticeship requirement to become a licensed optician.

Enrollment in the program is restricted because of limited lab facilities, and early application is encouraged. Only completed applications with all documents will be considered. Students are admitted to the fall term only. Students must take the placement test and place into ENG*101 Composition and MAT*137 to be eligible for this program. Official transcripts are required for transfer credit. Ophthalmic Design and Dispensing students must receive a grade of C or better in Ophthalmic Dispensing courses in order to obtain a degree in this program.

The Ophthalmic Design and Dispensing Program is accredited by the Commission on Opticianry Accreditation, One Dupont Circle NW, Suite 510, Washington DC 20036-1135.

Learning Outcomes

Upon successful completion of all program requirements, graduates will be able to:

1. Communicate effectively through development of proficiency in oral/written/electronic communication skills
2. Demonstrate proficiency in critical thinking and problem solving skills
3. Complete the requirements for National Certification by the American Board of Opticianry
4. Complete the requirements for National Certification by the National Contact Lens Examiners
5. Demonstrate the practical skills required to successfully complete the optical portion of the State of Connecticut – Board of Examiners State Practical Exam
6. Demonstrate the practical skills required to successfully complete the contact lens portion of the State of Connecticut – Board of Examiners State Practical Exam
7. Demonstrate familiarity with the statutes and regulations in Chapter 381 (Opticians) of the Connecticut General Statutes and Regulations and successfully complete the State Law portion of the State of Connecticut – Board of Examiners State Practical Exam
8. Meet the minimum education requirement for licensing as an optician in all of the states requiring licensure for opticians

A Note about Program Requirements

The program requirements listed in this Catalog are for students entering into this program in Fall 2017 or Spring 2018. Students who entered the program during a prior semester will find their specific requirements listed in the Catalog under which they entered. Archived Catalogs are accessible through the college website at <http://mxcc.edu/catalogs-and-schedules/>.



Middlesex Community College
Ophthalmic Design & Dispensing
 Associate in Science Degree
 GRADUATION CHECKLIST

This program is a **Career-Oriented Degree** that provides skills and knowledge, often in the form of a credential or qualification, that allow for direct entry into the work force. These degrees may serve as transfer degrees with or without a guarantee that additional credits will not be needed at the baccalaureate level within the CSU system.

| Category | Course | Cr | Semester Taken | Grade |
|---|--|----|----------------|-------|
| General Education Requirements for Career Programs (22 credits) | | | | |
| Aesthetic Dimensions Elective | | 3 | | |
| Two courses chosen from any of these competencies: Aesthetic Dimensions, Historical Knowledge, Oral Communication, Social Phenomena, and/or Written Communication | COM*173: Public Speaking | 3 | | |
| | PSY*111: General Psychology I | 3 | | |
| Quantitative Reasoning | MAT*137: Intermediate Algebra | 3 | | |
| Scientific Knowledge OR Scientific Reasoning | BIO*118: Anatomy and Physiology of the Eye | 4 | | |
| Social Phenomena Elective | | 3 | | |
| Written Communication | ENG* 101: Composition | 3 | | |

| | | | | |
|--|---|-----------|--|--|
| Program Requirements (46 credits) | | | | |
| Program Requirement | BMG*202: Principles of Management | 3 | | |
| Program Requirement | ODD*101: Intro to Ophthalmic Dispensing | 4 | | |
| Program Requirement | ODD*102: Ophthalmic Dispensing I | 4 | | |
| Program Requirement | ODD*103: Ophthalmic Dispensing II | 3 | | |
| Program Requirement | ODD*104: Ophthalmic Dispensing III | 3 | | |
| Program Requirement | ODD*109: Optical Business Management | 3 | | |
| Program Requirement | ODD*110: Ophthalmic Materials I | 4 | | |
| Program Requirement | ODD*111: Ophthalmic Materials II | 4 | | |
| Program Requirement | ODD*112: Ophthalmic Materials III | 4 | | |
| Program Requirement | ODD*120: Contact Lenses I | 3 | | |
| Program Requirement | ODD*121: Contact Lenses II | 4 | | |
| Program Requirement | ODD*122: Contact Lenses III | 4 | | |
| Program Requirement | ODD*130: Low Vision | 1 | | |
| Program Requirement | ODD*299: Opticianry Practicum | 2 | | |
| TOTAL CREDITS | | 68 | | |

RADIOLOGIC TECHNOLOGY

Associate Degree

School of Allied Health, Business, and STEM

Program Coordinator: Professor Dr. Judy Wallace
Office Location: Wheaton Hall 209
Telephone: (860) 343-5780
Email: jwallace@mxcc.edu

Description

The Radiologic Technology Program prepares students for entry level employment as radiologic technologists in hospitals and medical offices. It is offered as an academic program by Middlesex Community College in collaboration with Middlesex Hospital. General education courses are held at the College, while those courses requiring specialized laboratories, equipment, and hands-on practical experience are held at Middlesex Healthcare system facilities. The curriculum covers a 22-month period, including a 5 month internship (Jan-May).

Enrollment in the program is restricted by clinical facility capacity as per JRCERT accreditation guidelines.

Applicants must first meet the general college admissions procedures (see college catalog). Once these requirements are met, the applicant must provide the college with the following information by April 1 of the year in which admission is sought: three completed Applicant/Information Reference Forms, a one-page biography stating goals/reasons for program entry, and present the Observation/Documentation Form demonstrating completion of a two hour program observation at an imaging department within a hospital facility. In addition, college applicants need a 2.7 GPA for all college work. A grade of C+ or better taken within the past five years is required in Anatomy & Physiology I & II. Final admission procedures for candidate selection involves an interview with an interview committee and a personal background check, which is a hospital requirement to do clinical training at Middlesex Health Care System facilities. Admission to the college does NOT GUARANTEE admission to the radiology technology program.

The Radiologic Technology Program is accredited by the Joint Review Committee on Education in Radiologic Technology (JRCERT), 20 N. Wacker Drive, Suite 2850, Chicago, IL 60606-3182. <http://www.jrcert.org/>

A Note about Program Requirements

The program requirements listed in this Catalog are for students entering into this program in Fall 2017 or Spring 2018. Students who entered the program during a prior semester will find their specific requirements listed in the Catalog under which they entered. Archived Catalogs are accessible through the college website at <http://mxcc.edu/catalogs-and-schedules/>.



2017-18 CATALOG

Middlesex Community College
Radiologic Technology
Associate in Science Degree
GRADUATION CHECKLIST

This program is a **Career-Oriented Degree** that provides skills and knowledge, often in the form of a credential or qualification, that allow for direct entry into the work force. These degrees may serve as transfer degrees with or without a guarantee that additional credits will not be needed at the baccalaureate level within the CSCU system.

| Category | Course | Cr | Semester Taken | Grade |
|---|---|-----------|----------------|-------|
| Program Admission Requirements (11 [14] credits) | | | | |
| General Education Requirement: Scientific Knowledge / Scientific Reasoning | BIO* 211: Human Anatomy and Physiology I + | 4 | | |
| Admissions Prerequisite | BIO* 212: Human Anatomy and Physiology II + | 4 | | |
| Admissions Prerequisite | Computer Skills Competency Demonstrated by a "pass" on the MxCC Computer Proficiency Exam, or successful completion of CSC*101 "Introduction to Computers" or equivalent course. | 0 (3) | | |
| General Education Requirement: Written Communication | ENG* 101: Composition + | 3 | | |
| General Education Requirements in addition to those listed above (16 credits) | | | | |
| Aesthetic Dimensions Elective | | 3 | | |
| Two courses chosen from any of these competencies: Aesthetic Dimensions, Historical Knowledge, Oral Communication, Social Phenomena, and/or Written Communication | PSY* 111: General Psychology I | 3 | | |
| | RAD* 109: Methods of Patient Care I | 1 | | |
| Quantitative Reasoning | MAT* 137: Intermediate Algebra | 3 | | |
| Social Phenomena | RAD* 271: Advanced Clinical Internship | 6 | | |
| Program Requirements (42 credits) | | | | |
| Program Requirement | MED* 125: Medical Terminology | 3 | | |
| Program Requirement | PHY* 110: Introductory Physics | 4 | | |
| Program Requirement | RAD* 105: Radiographic Anatomy & Procedures I | 3 | | |
| Program Requirement | RAD* 171: Radiographic Clinical Practicum I | 2 | | |
| Program Requirement | RAD* 172: Radiographic Clinical Practicum II | 2 | | |
| Program Requirement | RAD* 200: Radiographic Physics & Diagnostic Imaging | 3 | | |
| Program Requirement | RAD* 204: Radiographic Anatomy & Procedures II | 3 | | |
| Program Requirement | RAD* 206: Quality Assurance | 3 | | |
| Program Requirement | RAD* 209: Methods of Patient Care II | 3 | | |
| Program Requirement | RAD* 215: Radiographic Pathology | 2 | | |
| Program Requirement | RAD* 219: Radiographic Equipment and Image Production | 3 | | |
| Program Requirement | RAD* 222: Radiobiology and Protection | 3 | | |
| Program Requirement | RAD* 240: Radiographic Clinical Practicum III | 4 | | |
| Program Requirement | RAD* 241: Radiographic Clinical Practicum IV | 3 | | |
| PROGRAM TOTAL CREDITS | | 68 | | |

VETERINARY TECHNOLOGY

Associate Degree

School of Allied Health, Business, and STEM

| | |
|-----------------------------|---|
| Program Coordinator: | Assistant Professor Dr. Chris Gargamelli |
| Office Location: | Snow Hall 407 |
| Telephone: | (860) 343-5763 |
| Email: | cgargamelli@mxcc.edu |

Description

The Veterinary Technology program prepares students for immediate employment in veterinary offices, biological research facilities, stables, dairies, drug and feed manufacturing companies, and in the animal production industry. The objective of the program is to provide the classroom, laboratory, and field experience that will prepare students to be competent for entry-level job opportunities, or advancement at their current employers.



The Vet Tech Program is offered in collaboration between Middlesex Community College and Pieper-Olson Veterinary Hospital, both located in Middletown, CT. General education courses are held at the College, while those courses requiring specialized laboratories, equipment, and hands-on practical experience are held at Pieper-Olson, 730 Randolph Road, Middletown. All students must participate in a supervised Externship experience under the direction of a licensed veterinarian, certified technician, or animal research technician. Students will refine skills learned in all veterinary technology courses through placement at an off-site veterinary hospital, private practice, or laboratory facility. The

Veterinary Technology program is accredited by the American Veterinary Medical Association – Committee on Veterinary Technician Education and Activities.

Learning Outcomes

Upon successful completion of all program requirements, graduates will have completed coursework including:

1. Office and hospital procedures, client relations, and communication

- Participate in facility management utilizing traditional and electronic media and appropriate veterinary medical terminology and abbreviations.
- Communicate in a professional manner in all formats – written, oral, non-verbal, and electronic.
- Follow and uphold applicable laws and the veterinary technology profession's ethical codes to provide high quality care to patients.

2. Pharmacy and pharmacology

- Safely and effectively administer prescribed drugs to patients.
- Accurately dispense and explain prescribed drugs to clients.

3. Animal care and nursing

- Demonstrate and perform patient assessment techniques in a variety of animal species.
- Understand and demonstrate husbandry, nutrition, therapeutic and dentistry techniques appropriate to various animal species.
- Safely and effectively handle common laboratory animals used in animal research.

4. Anesthesia, Analgesia, and Surgical Nursing

- a. Safely and effectively manage patients in all phases of anesthetic procedures.
- b. Safely and effectively select, utilize and maintain anesthetic delivery and monitoring instruments and equipment.
- c. Understand and integrate all aspects of patient management for common surgical procedures in a variety of animal species.
- d. Understand and provide the appropriate instruments, supplies and environment to maintain asepsis during surgical procedures.

5. Veterinary laboratory procedures

- a. Properly package, handle and store specimens for laboratory analysis.
- b. Properly carry out analysis of laboratory specimens.

6. Diagnostic imaging

- a. Safely and effectively produce diagnostic radiographic and non-radiographic images.

7. Dentistry

- a. Perform routine dental prophylaxis (manual and machine)
- b. Perform routine dental radiographic imaging techniques



Middlesex Community College
Veterinary Technology
 Associate in Science Degree
 GRADUATION CHECKLIST

This program is a **Career-Oriented Degree** that provides skills and knowledge, often in the form of a credential or qualification, that allow for direct entry into the work force. These degrees may serve as transfer degrees with or without a guarantee that additional credits will not be needed at the baccalaureate level within the CSCU system.

| Category | Course | Cr | Semester Taken | Grade |
|---|---|-----------|----------------|-------|
| Program Admissions Requirements (11 [17] credits) | | | | |
| Admissions Prerequisite | BIO* 121: General Biology I | 4 | | |
| Admissions Prerequisite | CHE* 111: Concepts of Chemistry | 4 | | |
| Admissions Prerequisite | Computer Skills Competency Demonstrated by a "pass" on the MxCC Computer Proficiency Exam, or successful completion of CSC*101 "Introduction to Computers" or equivalent course. | 0 (3) | | |
| General Education Requirement: Written Communication | ENG* 101: Composition | 3 | | |
| General Education Requirement: Quantitative Reasoning (Career) | Mathematics Competency Demonstrated by Placement Test/SAT/ACT scores which place the student above MAT* 137 "Intermediate Algebra"; or, a grade of "C" or better in MAT*137 or equivalent or higher. | 0 (3) | | |
| General Education Requirements in addition to those listed above (15 credits) | | | | |
| Aesthetic Dimensions Elective | | 3 | | |
| Two courses chosen from any of these competencies: Aesthetic Dimensions, Historical Knowledge, Oral Communication, Social Phenomena, and/or Written Communication | VET* 102: Veterinary Office Management & Communication | 3 | | |
| | VET* 280: Veterinary Technician Externship I & VET* 286: Veterinary Technician Externship II | 2 | | |
| Scientific Knowledge OR Scientific Reasoning | BIO* 235: Microbiology | 4 | | |
| Social Phenomena Elective | | 3 | | |
| Program Requirements (42 credits) | | | | |
| Program Requirement | MED* 125: Medical Terminology | 3 | | |
| Program Requirement | VET* 101: Introduction to Veterinary Technology | 3 | | |
| Program Requirement | VET* 100: Introduction to Animal Care | 2 | | |
| Program Requirement | VET* 151: Small Animal Veterinary Technology with Lab | 4 | | |
| Program Requirement | VET* 152: Large Animal Veterinary Technology with Lab | 4 | | |
| Program Requirement | VET* 201: Veterinary Anatomy & Physiology I with Lab | 4 | | |
| Program Requirement | VET* 202: Veterinary Anatomy & Physiology II with Lab | 4 | | |
| Program Requirement | VET* 205: Veterinary Laboratory Procedures | 2 | | |
| Program Requirement | VET* 212: Principles of Imaging with Lab | 1 | | |
| Program Requirement | VET* 220: Animal Pathology | 3 | | |
| Program Requirement | VET* 230: Vet. Anesthesia & Surgical Nursing with Lab | 4 | | |
| Program Requirement | VET* 238: Parasitology | 3 | | |
| Program Requirement | VET* 240: Periodontology and Oral Radiology | 2 | | |
| Program Requirement | VET* 250: Principles of Pharmacology for Vet Tech | 3 | | |
| PROGRAM TOTAL CREDITS | | 68 | | |

NUTRITION & DIETETICS Advising Pathway to Gateway CC

School of Allied Health, Business, and STEM

Pathway Advisor: **Professor Dr. Judy Wallace**
Office Location: **Wheaton Hall 209**
Telephone: **(860) 343-5780**
Email: **jwallace@mxcc.edu**

Description

Careers in nutrition or dietetics are available to individuals with Associate's, Bachelor's and Master's Degrees and include a wide range of professional opportunities including food preparation and management, nutrition program implementation, public health, education and research, and private practice.

The Nutrition & Dietetics Advising Pathway allows MxCC students to take 30 credit hours which will transfer as nine courses (29 credits) required by Gateway Community College's Nutrition and Dietetics Program. Gateway's program prepares students as Dietetic Technicians, Registered, qualified to take the DTR Examination. Please see notes (below) for information regarding course equivalencies. The transfer agreement is reflected in a Memorandum of Understanding.

Courses Taken at MxCC Credits

| | | |
|--|---|-----------|
| HLT*103 | Investigations into Health Careers | 3 |
| NTR*100 | Introduction to Nutrition and Dietetics | 3 |
| BIO*115 | Human Biology | 3 |
| BIO*111 | Introduction to Nutrition | 3 |
| ENG*101 | Composition | 3 |
| ENG*102 | Literature and Composition | |
| or ENG*200 | Advanced Composition | 3 |
| MAT*137 | Intermediate Algebra | 3 |
| COM*173 | Public Speaking | 3 |
| CHE*111 | Concepts of Chemistry | 4 |
| Social Science Elective | | 3 |
| (SOC/HLT 160, Introduction to Public Health, recommended but not required) | | |
| Total credits: | | 30 |

Note these course equivalencies:

| MxCC Advising Pathway | Gateway AS |
|------------------------------|-------------------|
| BIO*111 | NTR*102 |
| MAT*137 | MAT*115 |
| COM*173 | COM*171 |
| HLT*103 + NTR*100 | NTR*101 |

ART STUDIES

Associate Degree

School of Allied Health, Business, and STEM

Program Coordinator: Professor Judith DeGraffenried
Office Location: Snow Hall 407
Telephone: (860) 343-5871
Email: jdegraffenried@mxcc.edu



This program is a Connecticut State Colleges & Universities Transfer Ticket!

Transfer Tickets are new degree programs providing pathway for community college students to complete degree programs that transfer to Connecticut State Universities (Central, Eastern, Southern, and Western) and Charter Oak State College without losing any credits or being required to take extra credits in order to complete a bachelor's degree in that same discipline. You will be able to transfer, apply to competitive admissions majors, and complete your BA/BS degree in the same time and with the same course requirements as students who start at a CSU or COSC.

| Category | Course | Cr | Semester Taken | Grade |
|---|---|-----|----------------|-------|
| General Education Requirements for Transfer Programs (31-32 credits) | | | | |
| Aesthetic Dimensions Elective | ART*112 Drawing II Recommended | 3 | | |
| Historical Knowledge Elective | | 3 | | |
| Oral Communication | | 3 | | |
| Quantitative Reasoning Elective | MAT*137 Intermediate Algebra | 3 | | |
| Scientific Knowledge Elective | At least one should have a laboratory component | 7-8 | | |
| Scientific Reasoning Elective | | | | |
| Social Phenomena (1 of 2) Elective | | 3 | | |
| Social Phenomena (2 of 2) Elective | | 3 | | |
| Written Communication (1 of 2) | ENG* 101: Composition | 3 | | |
| Written Communication (2 of 2) (Circle One) | | 3 | | |

| | | | | |
|--|--|--------------|--|--|
| Program Requirements (30 credits) | | | | |
| Program Requirement | ART*101 Art History I | 3 | | |
| Program Requirement | ART*102 Art History II | 3 | | |
| Program Requirement | ART*109 Color Theory | 3 | | |
| Program Requirement | ART*111 Drawing I | 3 | | |
| Program Requirement | ART*121 2-D Design | 3 | | |
| Program Requirement | ART*122 3-D Design | 3 | | |
| Open Elective | ART*215 Illustration Recommended | 3 | | |
| Open Elective | ART*131 Sculpture or ART*163 Ceramics Recommended | 3 | | |
| Open Elective | ART*253 Oil Painting I recommended | 3 | | |
| Open Elective | ART*254 Oil Painting II recommended | 3 | | |
| TOTAL CREDITS | | 61-62 | | |

AUDIO & MUSIC PRODUCTION

Certificate

School of Arts & Media, Humanities, and Social Sciences

Program Coordinator: Professor Richard Lenoce
Office Location: Chapman Hall 606
Telephone: (860) 343-5796
Email: rlenoce@mxcc.edu



Description

Audio and Music Production is a career-oriented certificate program designed to prepare students to work in various types of audio-related positions in music recording and media. Students can specialize in either music production or audio production for media, with some overlap between these two areas. The program emphasizes hands-on training using professional-level, state-of-the-art, digital audio technology and software with some required coursework in music. While not designed as a transfer program, the curriculum includes several courses modeled after those offered by similar bachelor degree programs and should allow for easy transfer to these types of programs. MxCC's new audio recording and post-production studios and labs are Pro Tools based and will allow students to learn the advanced-level skills necessary to be competent professional audio technicians.

This certificate is a 30-credit certificate program intended as a stackable credential for students looking to specialize in audio and music recording and production. When enrolling in this program as a standalone occupational certificate, it is recommended that students entering the program either have an associate's degree or higher or are enrolled in the Digital Media Production Associate's degree program to improve employability upon graduation.

As the certificate is comprised entirely of courses within MxCC's Digital Media Production A.S. degree, students may switch to pursue the full degree instead of or in addition to the certificate with no penalties.

| Requirements | |
|--|-----------|
| Course | CR |
| COM*131 – Audio Production | 3 |
| MUS*111 - Fundamentals of Music | 3 |
| MUS*117 – Electronic Music | 3 |
| MUS*219 – Electronic Music Composition/Audio Technology II | 3 |
| MUS*237 – Principles of Music Recording | 3 |
| MUS*238 – Adv. Music Mixing & Processing | 4 |
| Music Studies Elective - MUS*101 or MUS*104 or MUS*137 or MUS*138 | 3 |
| COM *287 Advanced Media Production or COM*295 Internship | 3 |
| MUS*/COM*/DGA* Electives | 3 |
| Open Elective | 3 |
| Total Credits | 30 |

BROADCAST COMMUNICATIONS**Certificate***School of Arts & Media, Humanities, and Social Sciences*

Program Coordinator: Professor Richard Lenoce
Office Location: Chapman Hall 606
Telephone: (860) 343-5796
Email: rlenoce@mxcc.edu

**Description**

This certificate program is comprised of 30 credits of directed electives from Communication and Digital Arts courses. This program intended is for those students who have earned a degree in another area of study or are working in the field and looking to obtain additional course work in communications and professional certification. Each student's program is tailored to their career goals and must be developed in consultation with and approved by the Digital Media Production Program Coordinator.

| Requirements | | | |
|---|-----|----------------|-------|
| Course | CR | Semester Taken | Grade |
| ENG*101 College Composition | 3 | | |
| MAT* Elective | 3-4 | | |
| Directed Elective in Communications or Digital Arts | 3 | | |
| Directed Elective in Communications or Digital Arts | 3 | | |
| Directed Elective in Communications or Digital Arts | 3 | | |
| Directed Elective in Communications or Digital Arts | 3 | | |
| Directed Elective in Communications or Digital Arts | 3 | | |
| Directed Elective in Communications or Digital Arts | 3 | | |
| Directed Elective in Communications or Digital Arts | 3 | | |
| Directed Elective in Communications or Digital Arts | 3 | | |
| Total Credits | 30 | | |

CORPORATE MEDIA PRODUCTION

Certificate

School of Arts & Media, Humanities, and Social Sciences

Program Coordinator: Professor Richard Lenoce
Office Location: Chapman Hall 606
Telephone: (860) 343-5796
Email: rlenoce@mxcc.edu



Description

The Corporate Media certificate program offers hands-on education in video productions as used in business. Emphasis is on creating marketing, training, instructional and promotional videos. The COM*287, COM*295 and COM*293 Corporate Media Practicum act as capstone courses providing students with experience in producing corporate video productions for businesses, non-profits and government agencies in preparation for employment.

This certificate is a 30-credit occupational certificate program intended as a stackable credential for students looking to specialize in Corporate Media production. When enrolling in this program as a standalone occupational certificate, it is recommended that students entering the program either have an associate's degree or higher or are enrolled in the Digital Media Production Associate's degree program to improve employability upon graduation.

As the certificate is comprised entirely of courses within MxCC's Digital Media Production A.S. degree, students may switch to pursue the full degree instead of or in addition to the certificate (with no penalties).

| Requirements | |
|---|-----------|
| Course | CR |
| BMG*204, Managerial Communications or BES*118 Small Business Management | 3 |
| BMK*201 Principles of Marketing | 3 |
| COM*111 Scriptwriting | 3 |
| COM*129 Digital Video Production | 3 |
| COM*131 Audio Production or COM*125 New Media Production | 3 |
| ART*/COM*147 Digital Cinematography | 3 |
| COM*264 Advanced Editing Workshop | 3 |
| COM*287 Advanced Media Production or COM*295 Internship | 3 |
| COM*293 Corporate Media Practicum | 3 |
| Open Elective | 3 |
| Total Credits | 30 |

Program Objectives

1. Provide students with a knowledge and experience with technology used in corporate media production, business and new media such as cameras, video editing workstations, microphones, video recorders and web-based applications.
2. Provide students with critical thinking skills so that style can be applied to their productions.
3. Familiarize students with media content produced for business including sales, marketing and employee videos, educational television, event production, public relations and advertising.
4. Prepare students for entry-level positions with course work, a developed resume, portfolio and internship experience.
5. Develop students' ability to apply written, oral, and visual communications to business environments.
6. Develop students' ability to learn new concepts and techniques as required for continuing professional development.

COMMUNICATION STUDIES

Associate Degree

School of Arts & Media, Humanities, and Social Sciences

Pathway Advisor:

Professor John Shafer

Office Location:

Chapman Hall 606

Telephone:

(860) 343-5811

Email:

jshafer@mxcc.edu



This program is a Connecticut State Colleges & Universities Transfer Ticket!

Transfer Tickets are new degree programs providing pathway for community college students to complete degree programs that transfer to Connecticut State Universities (Central, Eastern, Southern, and Western) and Charter Oak State College without losing any credits or being required to take extra credits in order to complete a bachelor's degree in that same discipline. You will be able to transfer, apply to competitive admissions majors, and complete your BA/BS degree in the same time and with the same course requirements as students who start at a CSU or COSC.

Description

This program provides a foundation of skills and knowledge in communication and media as well as a solid core of liberal arts courses. The program is primarily designed for students intending to transfer to a bachelor degree program in communication or media, or a related field such as writing, public relations, journalism, advertising, organizational or corporate communications. It can also prepare students for employment in fields where communication skills and knowledge are valuable.

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.

A Note about Program Requirements

The program requirements listed in this Catalog are for students entering into this program in Fall 2017 or Spring 2018. Students who entered the program during a prior semester will find their specific requirements listed in the Catalog under which they entered. Archived Catalogs are accessible through the college website at <http://mxcc.edu/catalogs-and-schedules/>.



2017-18 CATALOG

Middlesex Community College
Communication Studies
 Associate in Arts Degree
 GRADUATION CHECKLIST



This program is a **CSCU TAP Transfer Degree** that is intended for Connecticut Community College students to transfer to Connecticut State Universities and Charter Oak State College without either losing any credits or being required to take extra credits in order to complete a bachelor's degree in that same discipline.

| Category | | Course | Cr | Semester Taken | Grade |
|--|---|---|-----|----------------|-------|
| General Education Requirements for Transfer Programs (31-32 credits) | | | | | |
| Aesthetic Dimensions Elective | | | 3 | | |
| Historical Knowledge Elective | | | 3 | | |
| Oral Communication | | COM* 173: Public Speaking | 3 | | |
| Quantitative Reasoning Elective | | | 3 | | |
| Scientific Knowledge Elective | At least one should have a laboratory component | | 7-8 | | |
| Scientific Reasoning Elective | | | | | |
| Social Phenomena (1 of 2) Elective | | | 3 | | |
| Social Phenomena (2 of 2) Elective | | | 3 | | |
| Written Communication (1 of 2) | | ENG* 101: Composition | 3 | | |
| Written Communication (2 of 2) (Circle One) | | COM* 111: Scriptwriting OR COM* 226: Journalism OR ENG* 102: Literature & Composition OR ENG* 200: Advanced Composition OR ENG* 202: Technical Writing OR ENG* 281: Creative Writing | 3 | | |

| | | | | | |
|-----------------------------------|--|--|-------|--|--|
| Program Requirements (30 credits) | | | | | |
| Program Requirement | | COM* 101: Introduction to Mass Communication | 3 | | |
| Program Requirement | | COM* 142: Television Production | 3 | | |
| Program Requirement | | COM* 154: Film Study and Appreciation | 3 | | |
| Program Requirement | | DGA* 101: Introduction to Digital Arts | 3 | | |
| Program Requirement | | DGA* 110: Computer Graphics | 3 | | |
| COM* OR DGA* Elective | | | 3 | | |
| COM* OR DGA* Elective | | | 3 | | |
| PHL* Elective | | PHL* | 3 | | |
| Open Elective | | | 3 | | |
| Open Elective | | | 3 | | |
| TOTAL CREDITS | | | 61-62 | | |

DIGITAL MEDIA PRODUCTION

Associate Degree with Embedded Certificates

School of Arts & Media, Humanities, and Social Sciences

Program Coordinator: Professor Richard Lenoce
Office Location: Chapman Hall 606
Telephone: (860) 343-5796
Email: rlenoce@mxcc.edu



Description

The Digital Media Production Associate in Applied Science (A.A.S.) degree qualifies students to work in the many industries that require skills in digital technology and media production such as video production, broadcast television, digital cinema, digital and interactive media, audio recording and mixing, radio, social media, computer graphics, web design, audio and music production, and animation. During the first semester, full-time students take the same classes within the major and have the same schedule. Before the end of their first semester students are required to enroll in a certificate, specializing in one of several areas of media production: Audio and Music, Corporate Media, Film and Video, Multimedia Design, News and Sports, and Web Design and Development. To meet graduation requirements, each student will produce a thesis project and participate in an internship in their area of specialization. Placement in ENG*101 is required for most courses.

Learning Outcomes

Upon successful completion of all program requirements, graduates will be able to:

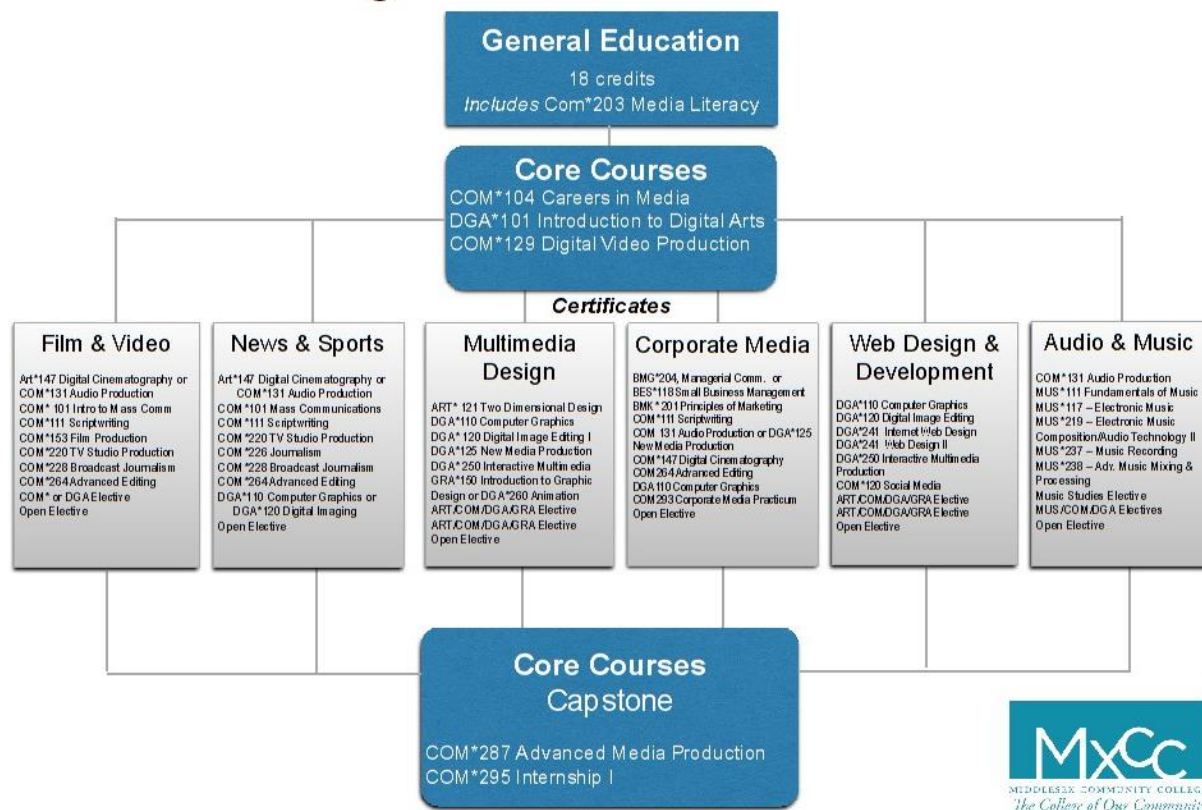
1. Effectively use a variety of industry standard tools and processes for producing contemporary forms of digital media across multiple delivery platforms and delivery systems.
2. Use advanced technologies within a chosen area of specialization with the goal of successfully transitioning from school to working in the industry.
3. Plan, create and maintain a professional portfolio highlighting and marketing professional skills and capabilities. Showcase this portfolio via websites, blogs, and social media to achieve employment and educational goals.
4. Demonstrate key competencies in media writing, video production, audio production, graphic design, interactive media, photography and other technologies within digital media arts.
5. Apply critical thinking and aesthetic judgments in creating collaborative Digital Media projects.
6. Communicate clearly, concisely, visually, verbally and in writing, using techniques appropriate for the intended audience.
7. Apply course knowledge and gain media production experience in a work environment through experiential learning including internships, practicums and community engaged learning.

Assessments of Student Learning

- Equipment and software certification tests
- Project and instructor portfolio review
- Workflow analysis and instructor review
- Review of effective project delivery across platforms
- Work site supervisor and evaluation
- Continuous instructor review of online portfolio and social media presence

- Grading of written materials
- Application of aesthetic techniques to class projects
- Thesis project instructor review and/or review by professional
- Ability to apply aesthetics examined in media works to personal and class projects
- Demonstrate successful collaboration with peers and professionals as needed
- Demonstrate media literacy skills through presentation of written, aural and visual media
- Research and evaluate media through audience analysis and critiques
- Instructor review of experiential learning blogs and logs
- On-site work supervisor evaluations of student work ethic, projects and collaboration
- Instructor review of student experiential learning evaluation

Digital Media Production



Digital Media Production Degree with Audio & Music Embedded Certificate

| Category | Course | Cr | Semester Taken | Grade |
|---|--|--------------|----------------|-------|
| General Education Requirements for Career Programs (21-23 credits) | | | | |
| Aesthetic Dimensions | COM*129 Digital Video Production | 3 | | |
| Two courses chosen from any of these competencies: Aesthetic Dimensions, Historical Knowledge, Oral Communication, Social Phenomena, and/or Written | COM*203 Media Literacy | 3 | | |
| | | 3 | | |
| Quantitative Reasoning (Career) Elective (MAT*104 or higher) | | 3-4 | | |
| Scientific Knowledge OR Scientific Reasoning Elective | | 3-4 | | |
| Social Phenomena Elective | | 3 | | |
| Written Communication | ENG* 101: Composition | 3 | | |
| Program Requirements (15 Credits) | | | | |
| Program Requirement | COM* 104 Careers in Media | 3 | | |
| Program Requirement | COM* 104 Careers in Media | 3 | | |
| Program Requirement | COM*129 Digital Video Production | 3 | | |
| Program Requirement | COM*287 Advanced Media Production (Capstone) | 3 | | |
| Program Requirement | COM* 295: Internship (Capstone) | 4 | | |
| Area of Specialization / Certificate | | | | |
| Program Requirement | COM*131 – Audio Production | 3 | | |
| Program Requirement | MUS*111 - Fundamentals of Music | 3 | | |
| Program Requirement | MUS*117 – Electronic Music | 3 | | |
| Program Requirement | MUS*219 – Electronic Music Composition/Audio Technology II | 3 | | |
| Program Requirement | MUS*237 – Principles of Music Recording | 3 | | |
| Program Requirement | MUS*238 – Adv. Music Mixing & Processing | 3 | | |
| MUS*101 or MUS*104 or MUS*137 or MUS*138 | | 3 | | |
| COM* or DGA* Elective | | 3 | | |
| Open Elective | | 3 | | |
| Total Credits | | 60-62 | | |



2017-18 CATALOG

Middlesex Community College
**Digital Media Production -
 Corporate Media**
 Associate of Science Degree/Certificate



This program is a **Career-Oriented Degree** that provides skills and knowledge, often in the form of a credential or qualification, that allow for direct entry into the work force. These degrees may serve as transfer degrees with or without a guarantee that additional credits will not be needed at the baccalaureate level within the CSU system.

| Category | Course | Cr | Semester Taken | Grade |
|---|---|-------|----------------|-------|
| General Education Requirements for Career Programs (21-23 credits) | | | | |
| Aesthetic Dimensions | COM*129 Digital Video Production | 3 | | |
| Two courses chosen from any of these competencies: Aesthetic Dimensions, Historical Knowledge, Oral Communication, Social Phenomena, and/or Written | COM*203 Media Literacy | 3 | | |
| | | 3 | | |
| Quantitative Reasoning (Career) Elective (MAT*104 or higher) | | 3-4 | | |
| Scientific Knowledge OR Scientific Reasoning Elective | | 3-4 | | |
| Social Phenomena Elective | | 3 | | |
| Written Communication | ENG* 101: Composition | 3 | | |
| Program Requirements (12 Credits) | | | | |
| Program Requirement | COM* 104 Careers in Media | 3 | | |
| Program Requirement | DGA101 Introduction to Digital Arts | 3 | | |
| Program Requirement | COM*287 Advanced Media Production (Capstone) | 3 | | |
| Program Requirement | COM* 295: Internship (Capstone) | 3 | | |
| Area of Specialization / Certificate (27 Credits) | | | | |
| Program Requirement | BMG*204, Managerial Communications or BES*118 Small Business Management | 3 | | |
| Program Requirement | BMK* 201 Principles of Marketing | 3 | | |
| Program Requirement | COM*111 Scriptwriting | 3 | | |
| Program Requirement | COM 131 Audio Production or COM*/DGA*125 New Media Production | 3 | | |
| Program Requirement | COM*147 Digital Cinematography | 3 | | |
| Program Requirement | COM264 Advanced Editing | 3 | | |
| Program Requirement | DGA*110 Computer Graphics | 3 | | |
| Program Requirement | Corporate Media Practicum | 3 | | |
| Open Elective | | 3 | | |
| Total Credits | | 60-62 | | |



Middlesex Community College
Digital Media Production-
Multimedia Design
 Associate in Science Degree/Certificate
GRADUATION CHECKLIST



This program is a **Career-Oriented Degree** that provides skills and knowledge, often in the form of a credential or qualification, that allow for direct entry into the work force. These degrees may serve as transfer degrees with or without a guarantee that additional credits will not be needed at the baccalaureate level within the CSU system.

| Category | Course | Cr | Semester Taken | Grade |
|---|---|--------------|----------------|-------|
| General Education Requirements for Career Programs (21-23 credits) | | | | |
| Aesthetic Dimensions | COM*129 Digital Video Production | 3 | | |
| Two courses chosen from any of these competencies: Aesthetic Dimensions, Historical Knowledge, Oral Communication, Social Phenomena, and/or Written | COM*203 Media Literacy | 3 | | |
| | | 3 | | |
| Quantitative Reasoning (Career) Elective (MAT*104 or higher) | | 3-4 | | |
| Scientific Knowledge OR Scientific Reasoning Elective | | 3-4 | | |
| Social Phenomena Elective | | 3 | | |
| Written Communication | ENG* 101: Composition | 3 | | |
| Program Requirements | | | | |
| Program Requirement | COM* 104 Careers in Media | 3 | | |
| Program Requirement | DGA*101 Introduction to Digital Arts | 3 | | |
| Program Requirement | COM*287 Advanced Media Production (Capstone) | 3 | | |
| Program Requirement | COM* 295: Internship (Capstone) | 4 | | |
| Area of Specialization / Certificate | | | | |
| Program Requirement | ART* 121 Two-Dimensional Design | 3 | | |
| Program Requirement | DGA*110 Computer Graphics | 3 | | |
| Program Requirement | DGA* 120 Digital Image Editing I | 3 | | |
| Program Requirement | DGA*125 New Media Production | 3 | | |
| Program Requirement | DGA* 250 Interactive Multimedia Production | 3 | | |
| Program Requirement | GRA*150 Introduction to Graphic Design or DGA*260 Animation | 3 | | |
| ART*/COM*/DGA* Elective | | 3 | | |
| ART*/COM*/DGA* Elective | | 3 | | |
| Open Elective | | 3 | | |
| Total Credits | | 60-62 | | |



Middlesex Community College
**Digital Media Production -
 News & Sports**
 Associate of Science Degree/Certificate



This program is a **Career-Oriented Degree** that provides skills and knowledge, often in the form of a credential or qualification, that allow for direct entry into the work force. These degrees may serve as transfer degrees with or without a guarantee that additional credits will not be needed at the baccalaureate level within the CSU system.

| Category | Course | Cr | Semester Taken | Grade |
|---|--|--------------|----------------|-------|
| General Education Requirements for Career Programs (21-23 credits) | | | | |
| Aesthetic Dimensions | COM*129 Digital Video Production | 3 | | |
| Two courses chosen from any of these competencies: Aesthetic Dimensions, Historical Knowledge, Oral Communication, Social Phenomena, and/or Written | COM*203 Media Literacy | 3 | | |
| | | 3 | | |
| Quantitative Reasoning (Career) Elective (MAT*104 or higher) | | 3-4 | | |
| Scientific Knowledge OR Scientific Reasoning Elective | | 3-4 | | |
| Social Phenomena Elective | | 3 | | |
| Written Communication | ENG* 101: Composition | 3 | | |
| Program Requirements (12 Credits) | | | | |
| Program Requirement | COM* 104 Careers in Media | 3 | | |
| Program Requirement | DGA101 Introduction to Digital Arts | 3 | | |
| Program Requirement | COM*287 Advanced Media Production (Capstone) | 3 | | |
| Program Requirement | COM* 295: Internship (Capstone) | 3 | | |
| Area of Specialization / Certificate (27 Credits) | | | | |
| Program Requirement | Art*147 Digital Cinematography or COM*131 Audio Production | 3 | | |
| Program Requirement | DGA*110 Computer Graphics or DGA*120 Digital Imaging | 3 | | |
| Program Requirement | COM101 Mass Communications | 3 | | |
| Program Requirement | COM*111 Scriptwriting | 3 | | |
| Program Requirement | COM*220 Television Studio Production | 3 | | |
| Program Requirement | COM*226 Journalism | 3 | | |
| Program Requirement | COM*228 Broadcast Journalism | 9 | | |
| Program Requirement | COM*264 Advanced Editing | 3 | | |
| Open Elective | | 3 | | |
| Total Credits | | 60-62 | | |



2017-18 CATALOG

Middlesex Community College
Digital Media Production-
Video and Film
 Associate in Science Degree/Certificate
GRADUATION CHECKLIST



This program is a **Career-Oriented Degree** that provides skills and knowledge, often in the form of a credential or qualification, that allow for direct entry into the work force. These degrees may serve as transfer degrees with or without a guarantee that additional credits will not be needed at the baccalaureate level within the CSCU system.

| Category | Course | Cr | Semester Taken | Grade |
|---|--|--------------|----------------|-------|
| General Education Requirements for Career Programs (21-23 credits) | | | | |
| Aesthetic Dimensions | COM*129 Digital Video Production | 3 | | |
| Two courses chosen from any of these competencies: Aesthetic Dimensions, Historical Knowledge, Oral Communication, Social Phenomena, and/or Written | COM*203 Media Literacy (or COM*154 - Film Study & Appreciation may be substituted for COM*203) | 3 | | |
| | | 3 | | |
| Quantitative Reasoning (Career) Elective (MAT*104 or higher) | | 3-4 | | |
| Scientific Knowledge OR Scientific Reasoning Elective | | 3-4 | | |
| Social Phenomena Elective | | 3 | | |
| Written Communication | ENG* 101: Composition | 3 | | |
| Program Requirements (12) | | | | |
| Program Requirement | COM* 104 Careers in Media | 3 | | |
| Program Requirement | DGA101 Introduction to Digital Arts | | | |
| Program Requirement | COM*287 Advanced Media Production (Capstone) | 3 | | |
| Program Requirement | COM* 295: Internship (Capstone) | 4 | | |
| Area of Specialization / Certificate (27 credits) | | | | |
| Program Requirement | Art*147 Digital Cinematography or COM*131 Audio Production | 3 | | |
| Program Requirement | COM*101 Intro. to Mass Communication | 3 | | |
| Program Requirement | COM*111 Scriptwriting | 3 | | |
| Program Requirement | COM*153 Film Production | 3 | | |
| Program Requirement | COM*220 Television Studio Production | 3 | | |
| Program Requirement | COM*228 Broadcast Journalism | 3 | | |
| COM*/DGA* Elective | COM*264 Advanced Editing | 3 | | |
| COM*/DGA* Elective | | 3 | | |
| Open Elective | | 3 | | |
| Total Credits | | 60-62 | | |

FILM & VIDEO PRODUCTION

Certificate

School of Arts & Media, Humanities, and Social Sciences

Program Coordinator: Professor Richard Lenoce
Office Location: Chapman Hall 606
Telephone: (860) 343-5796
Email: rlenoce@mxcc.edu



Description

The Film and Video certificate program teaches video production as applied to the broadcast television, film, corporate and digital media industries with an emphasis on narrative, documentary/news and informational programming. This hands-on program teaches all aspects of field, studio and video post-production on advanced technology in the college's Center for New Media. The Advanced Media Production and Internship act as capstone courses providing students with portfolio examples of professional work and on-site work experience in preparation for entry level positions or contract employment in the field.

This 30-credit certificate program is intended as a stackable credential for students looking to specialize in digital video production. When enrolling in this program as a standalone occupational certificate, it is recommended that students entering the program either have an associate's degree or higher or are enrolled in the Digital Media Production Associate's degree program to improve employability upon graduation.

As the certificate is comprised entirely of courses within MxCC's Digital Media Production A.S. degree, students may switch to pursue the full degree instead of or in addition to the certificate with no penalties

| Requirements | |
|--|-----------|
| Course | CR |
| COM*129 Digital Video Production | 3 |
| Art*147 Digital Cinematography or COM*131 Audio Production | 3 |
| COM* 101 Introduction to Mass Communication | 3 |
| COM*111 Scriptwriting | 3 |
| COM*153 Film Production | 3 |
| COM*220 Television Studio Production | 4 |
| COM*228 Broadcast Journalism | 3 |
| COM*264 Advanced Editing | 3 |
| ENG101* College Composition or Open Elective when taken as part of the New Media Production degree program or if student already has a degree. | 3 |
| COM*287 Advanced Media Production or COM*295 Internship | 3 |
| Total Credits | 30 |

FINE ARTS / FINE ARTS: GRAPHIC DESIGN

Associate Degree

School of Arts & Media, Humanities, and Social Sciences

Program Coordinator: Professor Judith DeGraffenried
Office Location: Snow Hall 407
Telephone: (860) 343-5871
Email: jdegraffenried@mxcc.edu

Description

Students may follow one of two tracks to earn a Fine Arts degree:

The Fine Arts Track provides a transfer program in the fine arts for students who wish to continue in this field after graduation. In addition to the primary transfer function, this program also provides cultural enrichment for students wishing only the associate's degree.

The Graphic Design Track provides students with the basic skills required for entry level employment as graphic designers and illustrators in design studios, publishing companies, printeries, and service bureaus. This track emphasizes the development of aesthetic sensibilities using traditional mediums as well as new technologies. Students should take required courses first, then choose electives to meet their specific career goals.

Students who plan to transfer to a four-year college are advised to check with the intended college concerning the number of transferable credits. Completion of the requirements of an additional program "track" does not constitute a different degree.

Learning Outcomes

Upon successful completion of all program requirements, graduates will be able to:

1. Implement fundamental design skills as they relate to graphic design
2. Demonstrate a level of technical as well as creative skills appropriate for employment in the graphic design industry
3. Demonstrate an understanding and application of terminology used in today's graphic design environments
4. Demonstrate competency in the use of the computer and in the use of the major programs that have been created for the graphic design field
5. Make use of the fundamentals of typography, and use that knowledge to effectively integrate text and image within a cohesive design
6. Work effectively within a team environment with a diverse employment population.
7. Demonstrate effective presentation skills
8. Demonstrate the traits and attitudes that promote ongoing success and strong work ethic as related to the graphic design industry (good communication skills, research ability, meeting deadlines, punctuality).
9. Apply the integrated skills and knowledge to the successful completion of an on-the-job graphic design internship.

A Note about Program Requirements

The program requirements listed in this Catalog are for students entering into this program in Fall 2017 or Spring 2018. Students who entered the program during a prior semester will find their specific requirements listed in the Catalog under which they entered. Archived Catalogs are accessible through the college website at <http://mxcc.edu/catalogs-and-schedules/>.



Middlesex Community College
Fine Arts
Associate in Science Degree
GRADUATION CHECKLIST

2017-18 CATALOG

This program is a **Career-Oriented Degree** that provides skills and knowledge, often in the form of a credential or qualification, that allow for direct entry into the work force. These degrees may serve as transfer degrees with or without a guarantee that additional credits will not be needed at the baccalaureate level within the CSU system.

| Competency or Program Requirement | Course | Cr | Semester Taken | Grade |
|---|------------------------------|-----|----------------|-------|
| General Education Requirements for Career Programs (21-23 credits) | | | | |
| Aesthetic Dimensions | ART*111 Drawing I | 3 | | |
| Two courses ("mix and match") from Aesthetic Dimensions, Historical Knowledge, Oral Communication, Social Phenomena, and/or Written Communication | ART*101 Art History I | 3 | | |
| | ART*102 Art History II | 3 | | |
| Quantitative Reasoning | MAT*137 Intermediate Algebra | 3-4 | | |
| Scientific Knowledge OR Scientific Reasoning | Science Elective | 3-4 | | |
| Social Phenomena | Social Science Elective | 3 | | |
| Written Communication | ENG* 101: Composition | 3 | | |

| Program Requirements (39 credits) | | | | |
|---|--|--------------|--|--|
| ART*109 Color Theory | | 3 | | |
| ART*112 Drawing II | | 3 | | |
| ART*121 2-Dimensional Design | | 3 | | |
| ART*122 3-Dimensional Design | | 3 | | |
| ART*131 Sculpture | | 3 | | |
| ART*155 Watercolors | | 3 | | |
| ART* 163 Ceramics OR ART*165 Metal & Jewelry Design | | 3 | | |
| ART*215 Illustration | | 3 | | |
| ART*250 Digital Photography | | 3 | | |
| ART*253 Oil Painting I | | 3 | | |
| ART*254 Oil Painting II | | 3 | | |
| ART* OR DGA* Elective | | 3 | | |
| ART* OR DGA* Elective | | 3 | | |
| TOTAL CREDITS | | 60-62 | | |



Middlesex Community College
Graphic Design
 Associate in Science Degree
 GRADUATION CHECKLIST

2017-18 CATALOG

This program is a **Career-Oriented Degree** that provides skills and knowledge, often in the form of a credential or qualification, that allow for direct entry into the work force. These degrees may serve as transfer degrees with or without a guarantee that additional credits will not be needed at the baccalaureate level within the CSCU system.

| Competency or Program Requirement | Course | Cr | Semester Taken | Grade |
|---|--------------------------------|-----|----------------|-------|
| General Education Requirements for Career Programs (21-23 credits) | | | | |
| Aesthetic Dimensions | ART*121 Two-Dimensional Design | 3 | | |
| Two courses ("mix and match") from Aesthetic Dimensions, Historical Knowledge, Oral Communication, Social Phenomena, and/or Written Communication | ART*100 Art Appreciation | 3 | | |
| | ART*102 Art History II | 3 | | |
| Quantitative Reasoning | MAT*137 Intermediate Algebra | 3-4 | | |
| Scientific Knowledge OR Scientific Reasoning | Science Elective | 3-4 | | |
| Social Phenomena | Social Science Elective | 3 | | |
| Written Communication | ENG* 101 Composition | 3 | | |

| Program Requirements (39 credits) | | | | |
|--|--|--------------|--|--|
| ART*111 Drawing I | | 3 | | |
| ART*112 Drawing II | | 3 | | |
| ART*122 3-Design | | 3 | | |
| ART*109 Color Theory | | 3 | | |
| ART*215 Illustration | | 3 | | |
| ART*250 Digital Photography | | 3 | | |
| DGA*231 Digital Page Design | | 3 | | |
| DGA*241 Internet Web Design I | | 3 | | |
| DGA*120 Digital Image Editing or DGA*223 Digital III Illustration | | 3 | | |
| DGA*110 Computer Graphics | | 3 | | |
| GRA*150 Intro to Graphic Design | | 3 | | |
| GRA*251 Advanced Graphic Design | | 3 | | |
| GRA*296 Graphic Design Internship | | 3 | | |
| TOTAL CREDITS | | 60-62 | | |

MULTIMEDIA DESIGN

Certificate

School of Arts & Media, Humanities, and Social Sciences

Program Coordinator: Professor Richard Lenoce
Faculty Advisor: Professor Richard Eriksen
Office Location: Chapman Hall 606
Telephone: (860) 343-5796 [Lenoce] • (860) 343-5795 [Eriksen]
Email: rlenoce@mxcc.edu • reriksen@mxcc.edu



Description

The Multimedia Design certificate program prepares students for careers in the field of interactive multimedia used in business, marketing, education, entertainment and the World Wide Web. Students learn interactive multimedia design, authoring and production including graphics, audio, video and animation. Graduates leave with a portfolio of work and experience that prepare them for careers as multimedia producers, web designers, project managers or media production specialists. COM*287 Advanced Media Production and COM*295 Internship act as capstone courses providing students with portfolio work and on-site work experiences in preparation for employment. Upon graduation, students will receive an Associate's degree in Digital Media and an occupational certificate in Multimedia Design attesting to their specialized knowledge and skills in this area.

This 30-credit certificate program is intended as a stackable credential for students looking to specialize in interactive multimedia design. When enrolling in this program as a standalone occupational certificate, it is recommended that students entering the program either have an associate's degree or higher or are enrolled in the Digital Media Production Associate's degree program to improve employability upon graduation.

As the certificate is comprised entirely of courses within MxCC's Digital Media Production A.S. degree, students may switch to pursue the full degree instead of or in addition to the certificate with no penalties.

| Requirements | |
|---|-----------|
| Course | CR |
| ART* 121 Two-Dimensional Design | 3 |
| DGA*110 Computer Graphics | 3 |
| DGA* 120 Digital Image Editing I | 3 |
| DGA*125 New Media Production | 3 |
| DGA* 250 Interactive Multimedia Production | 3 |
| GRA*150 Introduction to Graphic Design or DGA*260 Animation | 3 |
| ART/COM/DGA/GRA Elective | 3 |
| ART/COM/DGA/GRA Elective | 3 |
| ENG101 College Composition or Open Elective when taken as part of the New Media Production degree program or if student already has a degree. Open Elective | 3 |
| COM*287 Advanced Media Production or COM*295 Internship | 3 |
| Total Credits | 30 |

NEWS & SPORTS PRODUCTION

Certificate

School of Arts & Media, Humanities, and Social Sciences

Program Coordinator: Professor Richard Lenoco
Office Location: Chapman Hall 606
Telephone: (860) 343-5796
Email: rlenoco@mxcc.edu



Description

The News and Sports Certificate offers hands-on education in the exciting field of news and sports production as used in the broadcast, event videography and digital media industries. Students will learn news and sports journalism as well as field, studio, and remote production in their courses. COM*295 Internship act as a capstone course providing students with portfolio work and on-site work experiences in preparation for employment.

This 30-credit certificate program is intended as a stackable credential for students looking to specialize in news and sports video production. When enrolling in this program as a standalone occupational certificate, it is recommended that students entering the program either have an associate's degree or higher or are enrolled in the Digital Media Production Associate's degree program to improve employability upon graduation.

As the certificate is comprised entirely of courses within MxCC's Digital Media Production A.S. degree, students may switch to pursue the full degree instead of or in addition to the certificate (with no penalties).

| Requirements | |
|--|-----------|
| Course | CR |
| COM*129 Digital Video Production | 3 |
| Art*147/COM*147 Digital Cinematography or COM*131 Audio Production | 3 |
| DGA*110 Computer Graphics or DGA*120 Digital Imaging | 3 |
| ENG101 College Composition or COM101 Mass Communications if student holds a degree or enrolled in the Digital Media production degree program. | 3 |
| COM*111 Scriptwriting | 3 |
| COM*220 Television Studio Production | 3 |
| COM*226 Journalism | 3 |
| COM*228 Broadcast Journalism | 3 |
| COM*264 Advanced Editing | 3 |
| COM*295 Internship | 3 |
| Total Credits | 30 |

WEB DESIGN & DEVELOPMENT

Certificate

School of Arts & Media, Humanities, and Social Sciences

Program Coordinator: Professor Richard Lenoce
Faculty Advisor: Professor Richard Eriksen
Office Location: Chapman Hall 606
Telephone: (860) 343-5796 [Lenoce] • (860) 343-5795 [Eriksen]
Email: rlenoce@mxcc.edu • reriksen@mxcc.edu



Description

The Web Design and Development Certificate offers students opportunities to integrate the world of computers, Internet, art and multimedia in completion of the certificate. It covers relevant areas of web site construction, including designing and programming pages, developing multimedia content, as well as building and managing a web site. This program is designed not only for the person who wants to design and develop a personal web site, but also for the systems, publishing or business professional who would like to understand the capabilities of this powerful technology and to use it to provide innovative solutions to business problems. Courses from the Multimedia Certificate will transfer to the Multimedia A.S. Degree.

As the certificate is comprised entirely of courses within MxCC's Digital Media Production A.S. degree, students may switch to pursue the full degree instead of or in addition to the certificate.

This 30-credit certificate program is intended as a stackable credential for students looking to specialize in Web Design and Development. When enrolling in this program as a standalone occupational certificate, it is recommended that students entering the program either have an associate's degree or higher or are enrolled in the Digital Media Production Associate's degree program to improve employability upon graduation.

| Requirements | |
|---|-----------|
| Course | CR |
| DGA*110 Computer Graphics | 3 |
| DGA* 120 Digital Image Editing I | 3 |
| DGA*241 Internet Web Design I | 3 |
| COM*120 Social Media | 3 |
| DGA*241 Web Design II | 3 |
| DGA* 250 Interactive Multimedia Production | 3 |
| ART/COM/DGA/GRA Elective | 3 |
| ART/COM/DGA/GRA Elective | 3 |
| COM*287 Advanced Media Production or COM*295 Internship | 3 |
| Open Elective | 3 |
| Total Credits | 30 |

ACCOUNTING ASSISTANT

Certificate

School of Allied Health, Business, and STEM

Program Coordinator: Professor Nancy Kelly
Office Location: Wheaton Hall 313
Telephone: (860) 343-5761
Email: nkelly@mxcc.edu

Description

This ten-course, 30-credit certificate program provides individuals with the skills necessary to be employed in the accounting field at positions of full charge bookkeepers or accounting assistants. Courses from the Accounting Assistant Certificate will transfer to the Accounting Associate Degree.

| Requirements | Cr |
|---|-----------|
| ACC* 113: Principles of Financial Accounting | 3 |
| ACC* 117: Principles of Managerial Accounting | 3 |
| ACC* 271: Intermediate Accounting I | 3 |
| ACC* 272: Intermediate Accounting II | 3 |
| BMG* 202: Principles of Management | 3 |
| BMG* 204: Managerial Communications | 3 |
| CSA* 135: Spreadsheet Applications | 3 |
| Computer Course Elective: CSC* 101, CSA* 140 or CST* 201 | 3 |
| ENG* 101: Composition | 3 |
| ACC* 125 Accounting Computer Applications I | 3 |
| TOTAL CREDITS | 30 |

ACCOUNTING TECHNICIAN**Certificate****School of Allied Health, Business, and STEM**

Program Coordinator: Professor Nancy Kelly
Office Location: Wheaton Hall 313
Telephone: (860) 343-5761
Email: nkelly@mxcc.edu

Description

This seven-course, 21-credit certificate program is designed for specific training in accounting and other business subjects for entry level positions in the accounting field as an accounting clerk, payroll clerk, or entry level bookkeeper. Courses from the Accounting Technician Certificate will transfer to the Accounting Associate Degree.

| Requirements | Cr |
|---|-----------|
| ACC* 100 Basic Accounting OR ACC*113 Principles of Financial Accounting | 3 |
| ACC*113 Principles of Financial Accounting OR ACC*117 Principles of Managerial Accounting | 3 |
| ACC*125: Accounting Computer Applications I | 3 |
| BBG*294 Business Internship or BBG* 295: Co-op Work Experience 1 | 3 |
| Computer Course Elective: CSC* 101, CSA* 140 or CST* 201 | 3 |
| CSA* 135: Spreadsheet Applications | 3 |
| BBG*115: Business Software Application | 3 |
| TOTAL CREDITS | 21 |

ACCOUNTING

Associate Degree

School of Allied Health, Business, and STEM

| | |
|-----------------------------|------------------------------|
| Program Coordinator: | Professor Nancy Kelly |
| Office Location: | Wheaton Hall 313 |
| Telephone: | (860) 343-5761 |
| Email: | nkelly@mxcc.edu |

Description

This program is designed to serve both the student who wishes to acquire the requisite skills to pursue a career in accounting upon graduation or improve present skills, and for the student who wishes to transfer to a four-year college. Students intending to transfer should meet with the Coordinator of the Accounting program for advising.

Learning Outcomes

Upon successful completion of all program requirements, graduates will be able to:

1. Organize, analyze, and interpret numerical data through knowledge and comprehension of accounting concepts and principles.
2. Identify, gather, measure summarize, verify, analyze, and interpret useful financial and non-financial data.
3. Identify and solve unstructured problems in unfamiliar setting and exercise judgment based on facts.
4. Communicate through development of proficiency in oral/written/electronic communication skills and the development of the ability to explain financial data to others.
5. Demonstrate leadership skill through the development of the ability to work collaboratively with a diverse team, including organization, control, and assessment of group-based work, and provide leadership when appropriate.
6. Apply current technology including the ability to use spreadsheet software to analyze business problems, communicate using word processing and presentation software, develop accounting information using general ledger software, access information via internet, and understand information integrity and security issues.
7. Develop a professional orientation through awareness of legal, regulatory, and ethical issues facing the profession, awareness of global financial practices, and understanding the methods for creating and managing change in organizations.

A Note about Program Requirements

The program requirements listed in this Catalog are for students entering into this program in Fall 2017 or Spring 2018. Students who entered the program during a prior semester will find their specific requirements listed in the Catalog under which they entered. Archived Catalogs are accessible through the college website at <http://mxcc.edu/catalogs-and-schedules/>.



Middlesex Community College
Accounting
 Associate in Science Degree
 GRADUATION CHECKLIST

This program is a **Transfer-Oriented Degree** that is intended to be completed before you continue your education at the baccalaureate level. Individual articulation agreements may exist with specific universities so that your degree is completely accepted with all credits transferring. Please check with your Academic Advisor to ensure you enroll in the appropriate courses to ensure seamless transfer to your intended transfer institution.

| Category | Course | Cr | Semester Taken | Grade |
|--|-------------------------------------|----|----------------|-------|
| General Education Requirements for Transfer Programs (31 credits) | | | | |
| Aesthetic Dimensions Elective | | 3 | | |
| Historical Knowledge Elective | | 3 | | |
| Oral Communication | BMG* 204: Managerial Communications | 3 | | |
| Quantitative Reasoning | MAT*167: Principles of Statistics | 3 | | |
| Scientific Knowledge Elective – WITH LAB | | 4 | | |
| Scientific Reasoning | PSY* 111: General Psychology I | 3 | | |
| Social Phenomena (1 of 2) | ECN* 101: Macroeconomics | 3 | | |
| Social Phenomena (2 of 2) | ECN* 102: Microeconomics | 3 | | |
| Written Communication (1 of 2) | ENG* 101: Composition | 3 | | |
| Written Communication (2 of 2) Elective | | 3 | | |

| | | | | |
|--|---|-----------|--|--|
| Program Requirements (30 credits) | | | | |
| Program Requirement | ACC* 113: Principles of Financial Accounting | 3 | | |
| Program Requirement | ACC* 117: Principles of Managerial Accounting | 3 | | |
| Program Requirement | ACC* 271: Intermediate Accounting I | 3 | | |
| Program Requirement | ACC* 272: Intermediate Accounting II | 3 | | |
| Program Requirement | BBG* 231: Business Law I OR BBG* 234: Legal Environment of Business | 3 | | |
| Program Requirement | BFN* 201: Principles of Finance OR CSA* 135: Spreadsheet Applications | 3 | | |
| Program Requirement | BMG* 202: Principles of Management | 3 | | |
| Program Requirement | BMK* 201: Principles of Marketing | 3 | | |
| Program Requirement | Computer Course Elective (Circle One) CSC* 101, CSA* 135, CSA* 140 OR CST* 201 | 3 | | |
| Program Requirement | ACC*125 Accounting Computer Applications I | 3 | | |
| TOTAL CREDITS | | 61 | | |

CSC* 101: Introduction to Computers
 CSA* 135: Spreadsheet Applications
 CSA* 140: Database Applications
 CST* 201: Introduction to Management Information Systems

ADVERTISING & SALES PROMOTION

Certificate

School of Allied Health, Business, and STEM

Program Coordinator: Associate Professor Susan Lugli
Office Location: Wheaton Hall 313
Telephone: (860) 343-5840
Email: slugli@mxcc.edu

Description

This ten-course, 30-credit certificate prepares students for opportunities in media-related careers, or for work in creating printed materials for organizations. Courses balance essential skills with a liberal arts component, which emphasizes a communications competence. Students are prepared for job opportunities within the field. Students will be able to pursue a career or apply courses to an Associate in Science degree in Marketing.

| Requirements | Cr |
|--|-----------|
| ART* 121: Two-Dimensional Design | 3 |
| BMG* 202: Principles of Management | 3 |
| BMG* 204: Managerial Communications | 3 |
| BMK* 201: Principles of Marketing | 3 |
| BMK* 230: Advertising & Promotion | 3 |
| COM* 101: Intro to Mass Communication | 3 |
| DGA* 110: Computer Graphics | 3 |
| DGA* 231: Digital Page Design I | 3 |
| ENG* 101: Composition | 3 |
| GRA* 150: Introduction to Graphic Design | 3 |
| TOTAL CREDITS | 30 |

BUSINESS SKILLS

Certificate

School of Allied Health, Business, and STEM

Program Coordinator: Associate Professor Susan Lugli
Office Location: Wheaton Hall 313
Telephone: (860) 343-5840
Email: slugli@mxcc.edu

Description

This ten-course, 30-credit certificate program is designed to give students not majoring in business sufficient basic business skills to be able to function adequately at a rudimentary level in a workplace environment immediately upon completion. This certificate is comprised of courses designed to provide students with a basic understanding of business in society, basic technology skills, communication skills (both oral and written), and math skills. The certificate is tailored to meet individual student needs and interests by incorporating business elective courses. Students are encouraged to develop their individual areas of interest or maximize employment opportunities by choosing a specific elective option. Students deciding to continue on for an Associate in Science degree will find that all of the courses taken in this certificate program may apply to an Associate of Science in Business Administration, Accounting, or General Studies at Middlesex Community College.

| Requirements | Cr |
|---|-----------|
| ENG* 101: Composition | 3 |
| ECN* 102: Principles of Microeconomics | 3 |
| ECN* 101: Principles of Macroeconomics | 3 |
| ACC* 113: Financial Accounting | 3 |
| ACC*117: Managerial Accounting | 3 |
| CST* 201: Intro to Management Information Systems | 3 |
| BMG* 202: Principles of Management | 3 |
| BMK*201: Principles of Marketing | 3 |
| BMG* 204: Managerial Communications | 3 |
| BFN*201:Principles of Finance | 3 |
| TOTAL CREDITS | 30 |

BUSINESS STUDIES

Associate Degree

School of Allied Health, Business, and STEM

Pathway Advisor: Associate Professor Susan Lugli
Office Location: Wheaton Hall 313
Telephone: (860) 343-5840
Email: slugli@mxcc.edu



This program is a Connecticut State Colleges & Universities Transfer Ticket!

Transfer Tickets are new degree programs providing pathway for community college students to complete degree programs that transfer to Connecticut State Universities (Central, Eastern, Southern, and Western) and Charter Oak State College without losing any credits or being required to take extra credits in order to complete a bachelor's degree in that same discipline. You will be able to transfer, apply to competitive admissions majors, and complete your BA/BS degree in the same time and with the same course requirements as students who start at a CSU or COSC.

| Category | Course | Cr | Semester Taken | Grade |
|--|--|--------------|----------------|-------|
| General Education Requirements for Transfer Programs (31-32 credits) | | | | |
| Aesthetic Dimensions Elective | | 3 | | |
| Historical Knowledge Elective | | 3 | | |
| Oral Communication | BBG*115 Business Software Applications or COM*173: Public Speaking | 3 | | |
| Quantitative Reasoning Elective | MAT*167 Principles of Statistics | 3 | | |
| Scientific Knowledge Elective | At least one should have a laboratory component | 7-8 | | |
| Scientific Reasoning Elective | | | | |
| Social Phenomena Elective (1 of 2) | ECN*102 Microeconomics | 3 | | |
| Social Phenomena Elective (2 of 2) | ECN*101 Macroeconomics | 3 | | |
| Written Communication (1 of 2) | ENG* 101: Composition | 3 | | |
| Written Communication (2 of 2) | ENG* 102: Literature & Composition | 3 | | |
| Program Requirements (30 credits) | | | | |
| Program Requirement | ACC* 113: Principles of Financial Accounting | 3 | | |
| Program Requirement | BMG*202 Principles of Management | 3 | | |
| Program Requirement | ACC* 117: Principles of Managerial Accounting | 3 | | |
| Program Requirement | BMK* 201: Principles of Marketing | 3 | | |
| Program Requirement | BBG* 231: Business Law I OR BBG* 234: Legal Environment of Business | 3 | | |
| Program Requirement | BFN* 201: Principles of Finance | 3 | | |
| Program Requirement | MAT*158 Functions, Graphs, and Matrices | 3 | | |
| Program Requirement | BMG* 204: Managerial Communications | 3 | | |
| Program Requirement | Directed BUS* BBG* 234, BBG* 294, BBG*115, BBG*295,BES* 118, BMG* 210, BMG* 220, CST*201 | 3 | | |
| Open Elective | | 3 | | |
| TOTAL CREDITS | | 61-62 | | |
| BBG*234: Legal Environment of Business BBG*295: Cooperative Work Experience BMG*210: Principles of Organizational Behavior CST*201: Intro. to Management Information Systems BBG* 294: Business Internship BES*118: Small Business Management BMG*220: Human Resource Management BBG*115 Business Software Applications | | | | |

BUSINESS ADMINISTRATION

Associate Degree

School of Allied Health, Business, and STEM

| | |
|-----------------------------|--|
| Program Coordinator: | Associate Professor Susan Lugli |
| Office Location: | Wheaton Hall 313 |
| Telephone: | (860) 343-5840 |
| Email: | <u>slugli@mxcc.edu</u> |

Description

This program is designed to prepare students for exciting and dynamic career opportunities in the 21st century. It is designed to qualify students for entry level managerial and administrative positions or transfer to a four-year institution. With proper advising, students have successfully transferred with a maximum of earned college credit. Before registering, it is the student's responsibility to seek advising with a Business Administration faculty advisor or counselor.

Learning Outcomes

1. Upon successful completion of all program requirements, graduates will be able to:
2. Analyze principles, techniques and major functions of management and business organizations
3. Work independently and with others of diverse backgrounds
4. Rationalize and present solutions to problems using business knowledge and knowledge from humanities, social sciences, mathematics and science disciplines
5. Develop a sound ethical, philosophical and moral skill-set necessary to success in business
6. Demonstrate a responsible attitude in relationships with employers and peers
7. Demonstrate proficiencies in reading, writing, listening, presentation and analytical skills
8. Prepare and interpret financial statements and use accounting for managerial decisions
9. Understand and discuss financial issues dealing with the external environment and the market
10. Understand the U.S. legal system and be able to apply the principles to the legal environment in which organizations conduct business
11. Understand marketing principles and methods as they apply to satisfying consumers and society as a whole
12. Demonstrate computer proficiency in word processing, electronic spreadsheet, database management, general ledger accounting systems and presentation software
13. Demonstrate an understanding of how the American economic system is organized, how it functions and how it impacts the global economy

A Note about Program Requirements

The program requirements listed in this Catalog are for students entering into this program in Fall 2017 or Spring 2018. Students who entered the program during a prior semester will find their specific requirements listed in the Catalog under which they entered. Archived Catalogs are accessible through the college website at <http://mxcc.edu/catalogs-and-schedules/>.



2017-18 CATALOG

Middlesex Community College
Business Administration
 Associate in Science Degree
GRADUATION CHECKLIST

This program is a **Transfer-Oriented Degree** that is intended to be completed before you continue your education at the baccalaureate level. Individual articulation agreements may exist with specific universities so that your degree is completely accepted with all credits transferring. Please check with your Academic Advisor to ensure you enroll in the appropriate courses to ensure seamless transfer to your intended transfer institution.

| Category | | Course | Cr | Semester Taken | Grade |
|--|---|--|-----|----------------|-------|
| General Education Requirements for Transfer Programs (31-32 credits) | | | | | |
| Aesthetic Dimensions Elective | | | 3 | | |
| Historical Knowledge Elective | | | 3 | | |
| Oral Communication | | BBG* 115: Business Software Applications | 3 | | |
| Quantitative Reasoning Elective | | MAT*167: Principles of Statistics | 3 | | |
| Scientific Knowledge Elective | At least one should have a laboratory component | | 7-8 | | |
| Scientific Reasoning Elective | | | | | |
| Social Phenomena (1 of 2) | | ECN* 101: Macroeconomics | 3 | | |
| Social Phenomena (2 of 2) | | ECN* 102: Microeconomics | 3 | | |
| Written Communication (1 of 2) | | ENG* 101: Composition | 3 | | |
| Written Communication (2 of 2) | | ENG*102 Literature Composition | 3 | | |

| Program Requirements (30 credits) | | | | |
|--|---|--------------|--|--|
| Program Requirement | ACC* 113: Principles of Financial Accounting | 3 | | |
| Program Requirement | BBG* 231: Business Law I OR BBG* 234: Legal Environment of Business | 3 | | |
| Program Requirement | ACC* 117: Principles of Managerial Accounting | 3 | | |
| Program Requirement | BMG*202 Principles of Management | 3 | | |
| Program Requirement | BMK*201: Principles of Marketing | 3 | | |
| Program Requirement | CST* 201: Intro to Management Information Systems | 3 | | |
| Open Elective | | 3 | | |
| Program Requirement | BMG* 204: Managerial Communications | 3 | | |
| Program Requirement | Directed BUS* Elective (Circle One) BES*118, BMG*210, BMG*220, BFN*201, BBG*234, BBG*294 OR BBG*295, MAT*158 | 3 | | |
| Program Requirement | Directed BUS* Elective (Circle One) BES*118, BMG*210, BMG*220, BFN*201, BBG*234, BBG*294 OR BBG*295, MAT*158 | 3 | | |
| TOTAL CREDITS | | 61-62 | | |

BBG* 234: Legal Environment of Business
 BBG* 295: Cooperative Work Experience
 BFN* 201: Principles of Finance
 BMG* 220: Human Resource Management

BBG* 294: Business Internship
 BES* 118: Small Business Management
 BMG* 210: Principles of Organizational Behavior
 MAT* 158: Functions, Graphs, and Matrices

CUSTOMER SERVICE MANAGEMENT**Certificate****School of Allied Health, Business, and STEM**

Program Coordinator: Associate Professor Susan Lugli
Office Location: Wheaton Hall 313
Telephone: (860) 343-5840
Email: slugli@mxcc.edu

Description

This ten-course, 30-credit certificate is designed for an individual seeking a foundation in customer service or who is interested in starting one's own business. The program will provide the knowledge, skills and attitudes necessary to enter the field or to complement experience already acquired on the job. Successfully completed courses will apply to an Associate in Science degree in Marketing.

| Requirements | Cr |
|---|-----------|
| BBG*115: Business Software Applications OR CST*201: Intro to Management Information Systems | 3 |
| BMG*202: Principles of Management | 3 |
| BMG*204: Managerial Communications | 3 |
| BMK*106: Principles of Selling | 3 |
| BMK*123: Principles of Customer Service | 3 |
| BMK*201: Principles of Marketing | 3 |
| COM*173: Public Speaking | 3 |
| ENG* 101: Composition | 3 |
| Select 2 of the following: | 6 |
| BMK*103: Principles of Retailing | 3 |
| BMG*210: Principles of Organizational Behavior | 3 |
| BMK*216: Internet Marketing | 3 |
| BMK*230: Advertising and Promotion | 3 |
| TOTAL CREDITS | 30 |

ENTREPRENEURSHIP**Certificate****School of Allied Health, Business, and STEM**

Program Coordinator: Associate Professor Susan Lugli
Office Location: Wheaton Hall 313
Telephone: (860) 343-5840
Email: slugli@mxcc.edu

Description

This ten-course, 30-credit certificate program is designed for individuals interested in owning their own business. Students completing the program will possess the fundamental knowledge and skills necessary to succeed in a self owned business. Sanctioned by the United States Small Business Administration, this certificate combines a liberal arts component which emphasizes a communications competence and provides the technical knowledge and perspective needed to start, manage or grow a business. A student will be able to pursue a career or apply courses to an Associate in Science degree.

| Requirements | Cr |
|---|-----------|
| ACC*113: Principles of Financial Accounting | 3 |
| BBG*115: Business Software Applications OR CST*201: Intro to Management Information Systems | 3 |
| BES* 118: Small Business Management | 3 |
| BMG*202: Principles of Management | 3 |
| BMG*204: Managerial Communications | 3 |
| BMK*106: Principles of Selling | 3 |
| BMK*201: Principles of Marketing | 3 |
| COM*173: Public Speaking | 3 |
| ECN*102: Microeconomics | 3 |
| ENG*101: Composition | 3 |
| TOTAL CREDITS | 30 |

MARKETING

Associate Degree

School of Allied Health, Business, and STEM

Program Coordinator: Associate Professor Susan Lugli
Program Office: Wheaton Hall 313
Telephone: (860) 343-5840
Email: slugli@mxcc.edu

Description

This program is designed to provide a wide education in the liberal arts, as well as the skills necessary to pursue a career in retail or wholesale merchandising upon graduation. Students who have completed this program may seek immediate employment or may transfer to a four-year institution. With proper advising, students have successfully transferred to many colleges with a minimum loss of college credit. Before registering, it is the student's responsibility to seek transfer advising with a Marketing advisor or counselor.

Learning Outcomes

Upon successful completion of all program requirements, graduates will be able to:

1. Demonstrate an understanding of marketing and its contribution to the economic system and the global marketplace
2. Demonstrate an understanding of marketing principles and methods as they apply to satisfying consumers and society as a whole
3. Demonstrate an understanding of the marketing mix and its applications to product/service planning, price determination, distribution and promotion
4. Demonstrate market research, market information and promotional strategies
5. Apply and demonstrate the principles, methods and techniques of salesmanship and retailing
6. Demonstrate an understanding of the interrelationship between marketing and all other functional areas within a business
7. Demonstrate an understanding of electronic marketing and its importance on the future of business and industry
8. Analyze managerial principles, techniques and functions of marketing organizations
9. Demonstrate an understanding of how the United States economic system is organized, how it functions and how it impacts the global economy
10. Demonstrate proficiencies in reading, writing, listening, presentation and analytical skills
11. Demonstrate an understanding of the importance of moral and ethical marketing decisions
12. Demonstrate computer proficiency in word processing, electronic spreadsheet, database management, general ledger accounting systems and presentation software

A Note about Program Requirements

The program requirements listed in this Catalog are for students entering into this program in Fall 2017 or Spring 2018. Students who entered the program during a prior semester will find their specific requirements listed in the Catalog under which they entered. Archived Catalogs are accessible through the college website at <http://mxcc.edu/catalogs-and-schedules/>.



2017-18 CATALOG

Middlesex Community College
Marketing Associate in Science Degree
GRADUATION CHECKLIST

This program is a **Career-Oriented Degree** that provides skills and knowledge, often in the form of a credential or qualification, that allow for direct entry into the work force. These degrees may serve as transfer degrees with or without a guarantee that additional credits will not be needed at the baccalaureate level within the CScU system.

| Category | Course | Cr | Semester Taken | Grade |
|---|--|-----|----------------|-------|
| General Education Requirements for Career Programs (21-22 credits) | | | | |
| Aesthetic Dimensions | Choose One from: ART* 121, DGA* 101, DGA* 110, DGA* 231 OR DGA* 241 | 3 | | |
| Two courses chosen from any of these competencies: Aesthetic Dimensions, Historical Knowledge, Oral Communication, Social Phenomena, and/or Written Communication | Choose two from: ART* 121, DGA* 101, DGA* 110, DGA* 231, DGA* 241, BBG*115, PSY*111, SOC*101, ENG*102 | 3 | | |
| | COM*120 OR COM*125 | 3 | | |
| Quantitative Reasoning (Career) | MAT*167: Principles of Statistics | 3 | | |
| Scientific Knowledge OR Scientific Reasoning Elective | | 3-4 | | |
| Social Phenomena | ECN*101: Principles of Macroeconomics OR ECN*102: Principles of Microeconomics | 3 | | |
| Written Communication | ENG*101: Composition | 3 | | |

| Program Requirements (39 credits) | | | | |
|--|--|--------------|--|--|
| BMG*202: Principles of Management | | 3 | | |
| BMK*201: Principles of Marketing | | 3 | | |
| BBG*231: Business Law I OR BBG* 234: Legal Environment of Business | | 3 | | |
| ACC*113: Principles of Financial Accounting OR ACC*100: Basic Accounting | | 3 | | |
| BMG*204: Managerial Communications | | 3 | | |
| Choose one from: (Circle One) ACC*117: Principles of Managerial Accounting, BBG* 234: Legal Environment of Business, BBG*295: Cooperative Work Experience, BES* 118: Small Business Management OR BFN*201: Principles of Finance | | 3 | | |
| BBG*115: Business Software Applications OR CST*201: Intro to Management Information Systems | | 3 | | |
| Choose four from: BMK*103: Principles of Retailing, BMK*106: Principles of Selling, BMK*123: Principles of Customer Service, BMK*216: Internet Marketing, OR BMK*230: Advertising and Promotion COM*120: Social Media | | 3 | | |
| | | 3 | | |
| | | 3 | | |
| | | 3 | | |
| Choose two from: ART*121, COM*173, COM*201, CSA*135, CSA*140, DGA*101, DGA*110, DGA*120, DGA* 231 OR DGA* 241 | | 3 | | |
| | | 3 | | |
| TOTAL CREDITS | | 60-61 | | |

ART*121: Two-Dimensional Design
 COM*173: Public Speaking
 CSA*140: Database Applications
 DGA*120: Digital Imaging I
 ENG*102: Literature & Composition

COM*120: Social Media
 COM*201: Public Relations
 DGA*101: Introduction to Digital Arts
 DGA*231: Digital Page Design I
 PSY*111: General Psychology I

COM*125: New Media Production
 CSA*135: Spreadsheet Applications
 DGA*110: Computer Graphics
 DGA*241: Internet Web Design I
 SOC*101: Principles of Sociology

Business (Non-Credit)

REAL ESTATE PRINCIPLES & PRACTICES

Continuing Education Division

Program Advisor: Diane Bordonaro, MSN, RN, Director of Non-Credit Programs
Program Office: Snow Hall 514
Telephone: (860) 343-5716
Email: dbordonaro@mxcc.edu

About Non-Credit Certificates

Non-credit Certificate programs may be comprised of a single course or several courses generally intended for occupational training, upgrading, or retraining. These programs often emphasize skills required for employment or career advancement and are offered to respond to identified workforce education needs within the respective College community. Many of these programs are designed with employers to meet or exceed industry standards and may lead to State or professional certification or licensure for successful participants.

Description

WIOA funding eligible. Interested in stepping foot onto the path of becoming a licensed real estate salesperson? You have come to right place. Middlesex Community College is working with the CT Department of Consumer Protection to give students an extensive understanding of how the real estate marketplace works.

You will learn about land use controls and regulations, market analysis, financing, contracts and transfer of titles. This course prepares you for the practice of real estate and provides you with an understanding of real estate law and ethical practice. Students must attend 60 hours and pass this course with a grade of 70 in order to qualify for the state licensing exam (PSI exam).

Financial Assistance

Non-credit courses and certificates are not eligible for traditional college financial aid. Payment plans are available. Workforce development and other grants may be available; eligibility requirements vary. Contact Information:

- WIOA funding – American Job Center • 203-238-3688

ENGLISH STUDIES

Associate Degree

School of Arts & Media, Humanities, and Social Sciences

Discipline Coordinator: Professor Dr. Donna Bontatibus
Office Location: Snow Hall 520
Telephone: (860) 343-5802
Email: dbontatibus@mxcc.edu



This program is a Connecticut State Colleges & Universities Transfer Ticket!

Transfer Tickets are new degree programs providing pathway for community college students to complete degree programs that transfer to Connecticut State Universities (Central, Eastern, Southern, and Western) and Charter Oak State College without losing any credits or being required to take extra credits in order to complete a bachelor's degree in that same discipline. You will be able to transfer, apply to competitive admissions majors, and complete your BA/BS degree in the same time and with the same course requirements as students who start at a CSU or COSC.

| Category | Course | Cr | Semester Taken | Grade |
|---|--|-----|----------------|-------|
| General Education Requirements for Transfer Programs (31-32 credits) | | | | |
| Aesthetic Dimensions Elective | | 3 | | |
| Historical Knowledge Elective | | 3 | | |
| Oral Communication | | 3 | | |
| Quantitative Reasoning Elective | | 3 | | |
| Scientific Knowledge Elective | <i>At least one should have a laboratory component</i> | 7-8 | | |
| Scientific Reasoning Elective | | | | |
| Social Phenomena (1 of 2) Elective | | 3 | | |
| Social Phenomena (2 of 2) Elective | | 3 | | |
| Written Communication (1 of 2) | ENG* 101: Composition | 3 | | |
| Written Communication (2 of 2) | ENG* 102: Literature & Composition | 3 | | |

| Program Requirements (30 credits) | | | | |
|--|--|----------------------|--------------|--|
| Program Requirement | ENG* 221: American Literature I* AND ENG* 232: British Literature II* OR ENG* 222: American Literature II* AND ENG* 231: British Literature I* | 6 | | |
| Program Requirement | ENG* 291: Mythology* | 3 | | |
| Open Elective** | | 3 | | |
| Open Elective** | | 3 | | |
| Open Elective** | | 3 | | |
| Open Elective** | | 3 | | |
| Open Elective** | | 3 | | |
| Open Elective** | | 3 | | |
| Open Elective** | | 3 | | |
| | | TOTAL CREDITS | 60-61 | |

ENG 110: Introduction to Literature does NOT serve as a pre-requisite for major courses in the English Studies degree program.

**You are free to choose any courses at or above 100-level to complete unrestricted electives, although you may need to use these credits to take courses that prepare you for required courses in the degree program. You should also consider using unrestricted electives to meet foreign language requirements for your programs or to begin work on completing a minor. Central Connecticut State University will require that you complete a minor by earning at least 18 credits in one area outside your major field. You can also complete other General Education requirements for CCSU, SCSU, WCSU, and COSC—but not ECSU. You are encouraged to meet with your advisor to determine which courses to select.

FRENCH STUDIES

Associate Degree

School of Arts & Media, Humanities, and Social Sciences

Pathway Advisor: Professor Angelo Glaviano
Office Location: Snow Hall 520
Telephone: (860) 343-5807
Email: aglaviano@mxcc.edu



NEW! These programs are Connecticut State Colleges & Universities Transfer Tickets!

Transfer Tickets are new degree programs providing pathway for community college students to complete degree programs that transfer to Connecticut State Universities (Central, Eastern, Southern, and Western) and Charter Oak State College without losing any credits or being required to take extra credits in order to complete a bachelor's degree in that same discipline. You will be able to transfer, apply to competitive admissions majors, and complete your BA/BS degree in the same time and with the same course requirements as students who start at a CSU or COSC.

| Category | | Course | Cr | Semester Taken | Grade |
|--|---|-------------------------------------|-----|----------------|-------|
| General Education Requirements for Transfer Programs (31-32 credits) | | | | | |
| Aesthetic Dimensions Elective | | | 3 | | |
| Historical Knowledge Elective | | HIS* 121 World Civilization I | 3 | | |
| Oral Communication | | | 3 | | |
| Quantitative Reasoning Elective | | | 3 | | |
| Scientific Knowledge Elective | At least one should have a laboratory component | | 7-8 | | |
| Scientific Reasoning Elective | | | | | |
| Social Phenomena (1 of 2) Elective | | GEO* 101: Introduction to Geography | 3 | | |
| Social Phenomena (2 of 2) Elective | | | 3 | | |
| Written Communication (1 of 2) | | ENG* 101: Composition | 3 | | |
| Written Communication (2 of 2) (Circle One) | | | 3 | | |

| Program Requirements (30 credits) | | | | |
|-----------------------------------|--------------------------------|-------|--|--|
| Program Requirement | FRE 101 Elementary French I | 3 | | |
| Program Requirement | FRE 102 Elementary French II | 3 | | |
| Program Requirement | FRE 201 Intermediate French I | 3 | | |
| Program Requirement | FRE 202 Intermediate French II | 3 | | |
| Open Elective | | 3 | | |
| Open Elective | | 3 | | |
| Open Elective | | 3 | | |
| Open Elective | | 3 | | |
| Open Elective | | 3 | | |
| Open Elective | | 3 | | |
| TOTAL CREDITS | | 61-62 | | |

SPANISH STUDIES

Associate Degree

School of Arts & Media, Humanities, and Social Sciences

Pathway Advisor: Professor Angelo Glaviano
Office Location: Snow Hall 520
Telephone: (860) 343-5807
Email: aglaviano@mxcc.edu



NEW! These programs are Connecticut State Colleges & Universities Transfer Tickets!

Transfer Tickets are new degree programs providing pathway for community college students to complete degree programs that transfer to Connecticut State Universities (Central, Eastern, Southern, and Western) and Charter Oak State College without losing any credits or being required to take extra credits in order to complete a bachelor's degree in that same discipline. You will be able to transfer, apply to competitive admissions majors, and complete your BA/BS degree in the same time and with the same course requirements as students who start at a CSU or COSC.

| Category | Course | Cr | Semester Taken | Grade |
|---|---|-----|----------------|-------|
| General Education Requirements for Transfer Programs (31-32 credits) | | | | |
| Aesthetic Dimensions Elective | | 3 | | |
| Historical Knowledge Elective | HIS* 121 World Civilization I | 3 | | |
| Oral Communication | | 3 | | |
| Quantitative Reasoning Elective | | 3 | | |
| Scientific Knowledge Elective | At least one should have a laboratory component | 7-8 | | |
| Scientific Reasoning Elective | | | | |
| Social Phenomena (1 of 2) Elective | GEO* 101: Introduction to Geography | 3 | | |
| Social Phenomena (2 of 2) Elective | | 3 | | |
| Written Communication (1 of 2) | ENG* 101: Composition | 3 | | |
| Written Communication (2 of 2) (Circle One) | | 3 | | |

| | | | | |
|--|---------------------------------|--------------|--|--|
| Program Requirements (30 credits) | | | | |
| Program Requirement | SPA 101 Elementary Spanish I | 3 | | |
| Program Requirement | SPA 102 Elementary Spanish II | 3 | | |
| Program Requirement | SPA 201 Intermediate Spanish I | 3 | | |
| Program Requirement | SPA 202 Intermediate Spanish II | 3 | | |
| Open Elective | | 3 | | |
| Open Elective | | 3 | | |
| Open Elective | | 3 | | |
| Open Elective | | 3 | | |
| Open Elective | | 3 | | |
| Open Elective | | 3 | | |
| TOTAL CREDITS | | 61-62 | | |

CRIMINAL JUSTICE

Associate Degree

School of Arts & Media, Humanities, and Social Sciences

| | |
|-----------------------------|--|
| Program Coordinator: | Associate Professor Rebecca Rist-Brown |
| Office Location: | Snow Hall 508 |
| Telephone: | (860) 343-5849 |
| Email: | <u>rristbrown@mxcc.edu</u> |

Description

Students interested in careers in law enforcement, corrections, security, and the court system should consider this program. The Associate in Science degree will allow a student to pursue a career immediately upon completion or transfer to a four year institution. This degree program provides preparation for career opportunities in criminal justice and for the continuation of education at a four-year college or university. The curriculum examines police science, law, judicial studies, and corrections.

Learning Outcomes

Upon successful completion of all program requirements, graduates will be able to:

1. Demonstrate an understanding of the fundamental concepts requisite for successful entry into a career in the field of Criminal Justice.
2. Demonstrate an understanding of the constitutional, administrative, organizational and procedural variables used in the Criminal Justice system to serve the community.
3. Demonstrate an understanding of the Federal, State, and Local court rulings and statutes and organizational policies and procedures pertaining to adult and juvenile offenders.
4. Apply federal, state, and municipal laws and ordinances to criminal and traffic cases.
5. Analyze contemporary criminal justice efforts in identifying and resolving sociological and other variables affecting agencies and individuals within the Criminal Justice system.
6. Analyze the variables contributing to and impacting the United States Criminal Justice system on American society.

A Note about Program Requirements

The program requirements listed in this Catalog are for students entering into this program in Fall 2017 or Spring 2018. Students who entered the program during a prior semester will find their specific requirements listed in the Catalog under which they entered. Archived Catalogs are accessible through the college website at <http://mxcc.edu/catalogs-and-schedules/>.



2017-18 CATALOG

Middlesex Community College
Criminal Justice
 Associate in Science Degree
 GRADUATION CHECKLIST

This program is a **Career-Oriented Degree** that provides skills and knowledge, often in the form of a credential or qualification, that allow for direct entry into the work force. These degrees may serve as transfer degrees with or without a guarantee that additional credits will not be needed at the baccalaureate level within the CSCU system.

| Competency or Program Requirement | Course | Cr | Semester Taken | Grade |
|---|---|-----|----------------|-------|
| General Education Requirements for Career Programs (21-23 credits) | | | | |
| Aesthetic Dimensions | Elective | 3 | | |
| Two courses ("mix and match") from Aesthetic Dimensions, Historical Knowledge, Oral Communication, Social Phenomena, and/or Written Communication | Historical Knowledge Elective | 3 | | |
| | Written Communication Elective | 3 | | |
| Quantitative Reasoning | MAT 137: Intermediate Algebra or higher | 3-4 | | |
| Scientific Knowledge OR Scientific Reasoning | PSY 111: General Psychology I | 3 | | |
| Social Phenomena | SOC 101: Principles of Sociology | 3 | | |
| Written Communication | ENG 101: Composition | 3 | | |

| Program Requirements (39 credits) | | | | |
|--|---|--------------|--|--|
| Program Requirement | SOC 240: Criminology | 3 | | |
| Program Requirement | Scientific Knowledge Elective | 3-4 | | |
| Program Requirement | CJS 101: Introduction to Criminal Justice | 3 | | |
| Program Requirement | CJS 211: Criminal Law I | 3 | | |
| Program Requirement | CJS 213: Evidence and Procedures | 3 | | |
| Program Requirement | CJS 294: Contemporary Issues in Criminal Justice | 3 | | |
| Program Requirement | CJS 290: Practicum or CJS 288: Career in CJ or CJS Elective | 3 | | |
| CJS Elective | | 3 | | |
| CJS Elective | | 3 | | |
| CJS Elective | | 3 | | |
| CJS Elective | | 3 | | |
| Open Elective | | 3 | | |
| Open Elective | | 3 | | |
| TOTAL CREDITS | | 60-62 | | |

CRIMINOLOGY STUDIES

Associate Degree

School of Arts & Media, Humanities, and Social Sciences

Program Coordinator: Associate Professor Rebecca Rist-Brown
Office Location: Snow Hall 508
Telephone: (860) 343-5849
Email: rristbrown@mxcc.edu



This program is a Connecticut State Colleges & Universities Transfer Ticket!

Transfer Tickets are new degree programs providing pathway for community college students to complete degree programs that transfer to Connecticut State Universities (Central, Eastern, Southern, and Western) and Charter Oak State College without losing any credits or being required to take extra credits in order to complete a bachelor's degree in that same discipline. You will be able to transfer, apply to competitive admissions majors, and complete your BA/BS degree in the same time and with the same course requirements as students who start at a CSU or COSC.

| Category | Course | Cr | Semester Taken | Grade |
|--|------------------------------------|----|----------------|-------|
| General Education Requirements for Transfer Programs (31 credits) | | | | |
| Aesthetic Dimensions Elective | | 3 | | |
| Historical Knowledge Elective | | 3 | | |
| Oral Communication | | 3 | | |
| Quantitative Reasoning Elective | MAT* 167: Principles of Statistics | 3 | | |
| Scientific Reasoning Elective | PSY* 111: General Psychology | 3 | | |
| Scientific Knowledge and Understanding Elective with Lab | | 4 | | |
| Social Phenomena (1 of 2) Elective | SOC* 101: Principles of Sociology | 3 | | |
| Social Phenomena (2 of 2) Elective | | 3 | | |
| Written Communication (1 of 2) | ENG* 101: Composition | 3 | | |
| Written Communication (2 of 2) | | 3 | | |

| | | | | |
|--|---|-----------|--|--|
| Program Requirements (30 credits) | | | | |
| Program Requirement | CJS* 101: Introduction to Criminal Justice | 3 | | |
| Program Requirement | CJS* 102: Introduction to Corrections | 3 | | |
| Program Requirement | CJS* 105: Introduction to Law Enforcement | 3 | | |
| Program Requirement | CJS* 213: Evidence and Criminal Procedure | 3 | | |
| Program Requirement | SOC* 240: Criminology | 3 | | |
| Program Requirement | Choose one course from: CJS* 211: Criminal Law I SOC* 241: Juvenile Delinquency CJS* 220: Criminal Investigation CJS* 225: Forensic Science CJS* 290: Practicum in Criminal Justice CJS* 294: Contemporary Issues in Policing CJS* 298: Special Topics in Criminal Justice | 3 | | |
| Open Elective | | 3 | | |
| Open Elective | | 3 | | |
| Open Elective | | 3 | | |
| Open Elective | | 3 | | |
| TOTAL CREDITS | | 61 | | |

CHILD DEVELOPMENT ASSOCIATE (CDA) CREDENTIAL Certificate

School of Arts & Media, Humanities, and Social Sciences

Program Coordinator: Assistant Professor Norma Rosado-Javier
Office Location: Snow Hall 508
Telephone: (860) 343-5758
Email: NRosado-Javier@mxcc.edu

Description

The Child Development Associate Credential is designed to train individuals who wish to be certified by the Council for Early Childhood Professional Recognition. The CDA is a performance-based assessment of childcare workers, home visitors, center and family childcare providers.

The courses provide students with 120 hours of training for the CDA credentialing program. CDA credits can be transferred to the Early Childhood Certificate and Associate Degree programs. Successful completion of this 12-credit program will enable the candidate to apply for a CDA credential from the Council for Early Childhood Professional Recognition.

CDA trainees are expected to demonstrate the ability to nurture children's physical, social, emotional, and intellectual development. The CDA credential is proof of the childcare provider's competence in all areas of child growth and development.

Students completing the program will be able to find employment in daycare centers, preschool programs, Head Start programs, or similar settings.

Each of the CDA classes runs for 6 weeks if offered for cohort of students through Connecticut-Charts-A-Course agency or other child care Program contract courses.

A Note about Program Requirements

The program requirements listed in this Catalog are for students entering into this program in Fall 2017 or Spring 2018. Students who entered the program during a prior semester will find their specific requirements listed in the Catalog under which they entered. Archived Catalogs are accessible through the college website at <http://mxcc.edu/catalogs-and-schedules/>.

REQUIREMENTS

| | GRADE | | GRADE |
|-----------------|-------|----------|-------|
| ECE* 101 | _____ | ECE* 176 | _____ |
| ECE* 103 or 141 | _____ | ECE* 180 | _____ |

EARLY CHILDHOOD EDUCATION

Associate Degree

School of Arts & Media, Humanities, and Social Sciences

Program Coordinator: Assistant Professor Norma Rosado-Javier
Office Location: Snow Hall 508
Telephone: (860) 343-5758
Email: NRosado-Javier@mxcc.edu

Description

The Associate in Science Program in Early Childhood Education is designed for students who wish to enter the field of early childhood education or who are already employed in an early childhood education setting and wish to earn a credential and expand their knowledge and competency in working with young children. The program provides students with the skills and competencies necessary to work effectively with children from birth through age eight. Students may be either full-time or part-time.

Graduates of the program will be able to find employment in day care centers, preschool programs, Head Start programs, or similar. Associate degree holders would also be eligible for head teacher status in child care centers or could seek further education in a Connecticut Early Childhood Education Teacher Certification program. It will also allow one to transfer to a four-year institution.



The Early Childhood Education Program is accredited by the National Association for the Education of Young Children, 1313 L Street, NW, Suite 500, Washington, DC 20005.

Learning Outcomes

Upon successful completion of all program requirements, graduates will be able to:

1. Promote child development and learning by understanding of what young children are like; understanding what influences their development; and using this understanding to create great environments where all children can thrive. This knowledge of how children develop and learn will help to provide opportunities that support the physical, social, emotional, language, cognitive, and aesthetic development of all young children from birth through age eight.
2. Build family and community relationships through understanding and valuing children's families and communities; create respectful, reciprocal relationships; and involve all families in their children's development and learning.
3. Observe, document, and assess through understanding the purposes of assessment; use effective assessment strategies; and use assessment responsibly, to positively influence children's development and learning.
4. Teach and learn through building close relationships with children and families; use developmentally effective teaching and learning strategies; have sound knowledge of academic disciplines or content areas; and be able to combine all of these to give children experiences that promote development and learning.
5. Become a professional by identifying themselves with the early childhood profession; are guided by ethical and other professional standards; are continuous, collaborative learners; thinks reflectively and critically; and advocate for children, families, and the profession.



2017-18 CATALOG

Middlesex Community College
Early Childhood Education
Associate in Science Degree
GRADUATION CHECKLIST

This program is a **Career-Oriented Degree** that provides skills and knowledge, often in the form of a credential or qualification, that allow for direct entry into the work force. These degrees may serve as transfer degrees with or without a guarantee that additional credits will not be needed at the baccalaureate level within the CSCU system.

| Category | Course | Cr | Semester Taken | Grade |
|---|--|-----|----------------|-------|
| General Education Requirements for Career Programs (21-23 credits) | | | | |
| Aesthetic Dimensions: ART* Department Elective | ART* 100, ART* 101, ART* 102, MUS* 101, MUS* 104 | 3 | | |
| Two courses chosen from any of these competencies: Aesthetic Dimensions, Historical Knowledge, Oral Communication, Social Phenomena, and/or Written | COM* 173: Public Speaking | 3 | | |
| | PSY* 111: General Psychology | 3 | | |
| Quantitative Reasoning (Career) Elective | MAT* 104 or Higher | 3-4 | | |
| Scientific Knowledge OR Scientific Reasoning Elective | Science Elective | 3-4 | | |
| Social Phenomena | SOC* Elective | 3 | | |
| Written Communication | ENG* 101: Composition | 3 | | |

| | | | | |
|--|---|--------------|--|--|
| Program Requirements (39 credits) | | | | |
| Program Requirement | ECE* 101: Introduction to Early Childhood Education | 3 | | |
| Program Requirement | ECE* 103: Creative Art Experiences for Young Children | 3 | | |
| Program Requirement | ECE* 106: Music and Movement for Young Children | 3 | | |
| Program Requirement | ECE* 131: Children's Literature | 3 | | |
| Program Requirement | ECE* 176: Health, Safety, and Nutrition | 3 | | |
| Program Requirement | PSY* 204: Child and Adolescent Development | 3 | | |
| Program Requirement | ECE* 210: Observation and Participation Seminar | 3 | | |
| Program Requirement | ECE* 215: The Exceptional Learner | 3 | | |
| Program Requirement | ECE* 231: Early Language and Literacy Development | 3 | | |
| Program Requirement | ECE* 275: Child, Family, and School Relations | 3 | | |
| Program Requirement | ECE* 295: Student Teaching Practicum | 6 | | |
| Program Requirement | Directed Electives (select <u>one</u> from the list below): ECE* 141: Infant/Toddler Growth and Development ECE* 180: CDA Preparation Course | 3 | | |
| TOTAL CREDITS | | 60-62 | | |

EARLY CHILDHOOD EDUCATION

Certificate

School of Arts & Media, Humanities, and Social Sciences

Program Coordinator: Assistant Professor Norma Rosado-Javier
Office Location: Snow Hall 508
Telephone: (860) 343-5758
Email: NRosado-Javier@mxcc.edu

Description

The nine-course, 30-credit Certificate Program in Early Childhood Education (ECE) is designed for students who wish to enter the field of early childhood education or who are already employed in an early childhood education setting and wish to earn a credential and expand their knowledge and competency in working with young children. The program will provide students with the skills and competencies necessary to work effectively with children from birth through age eight. Students may be either full-time or part-time. Graduates of the program will be able to find employment in day care centers, preschool programs, Head Start programs, or similar. **Courses from the Early Childhood Certificate will transfer to the Early Childhood Associate in Science degree program.**

| Requirements | Cr | Semester Taken | Grade |
|--|-----------|----------------|-------|
| ECE*101 Intro. to Early Childhood Education | 3 | | |
| ENG*101 Composition | 3 | | |
| PSY*111 General Psychology | 3 | | |
| One of the following: ECE* 103 Creative Art Experiences for Young Children or ECE*106 Music and Movement for Children | 3 | | |
| ECE*176 Health, Safety, and Nutrition | 3 | | |
| PSY*204 Child and Adolescent Psychology (ECE*182) | 3 | | |
| ECE*210 Observation and Participation | 3 | | |
| ECE*295 Student Teaching | 6 | | |
| Directed Electives (select one from the list below) ECE*141 Infant/Toddler Development ECE*215 The Exceptional Learner ECE*231 Early Literacy Development ECE*275 Child, Family, and School Relations | 3 | | |
| TOTAL CREDITS | 30 | | |

HUMAN SERVICES

Associate Degree

School of Arts & Media, Humanities, and Social Sciences

| | |
|-------------------------|---|
| Program Contact: | Division Director Mr. Jaime Flores |
| Office Location: | Snow Hall 508 |
| Telephone: | (860) 343-5757 |
| Email: | jflores@mxcc.edu |

Description

This curriculum is designed to prepare students to perform effectively in a human service setting and/or to transfer to a baccalaureate program in human services, social work, psychology, counseling, or other fields in the helping profession. Emphasis is on the empirical and theoretical aspects of the disciplines of psychology, sociology, social work, counseling, and group work, with application through practicum experience in community facilities and settings. Students are trained to work with specialists in psychology, social work, community services, anti-poverty programs, mental health, mental retardation, gerontology, juvenile justice, substance abuse, education, and advocacy. Certificates in [Juvenile Justice](#), [Therapeutic Recreation](#), and [Substance Abuse Education](#) may be taken concurrently with the Human Services Associate Degree. All human services students must be advised by full-time faculty from the Human Services Program.

Learning Outcomes

Upon successful completion of all program requirements, graduates will be able to:

1. Explain and compare the theories pertaining to adjustment and development;
2. Explain and compare the theories of treatment methods and intervention modalities;
3. Explain and compare the etiological factors in psychopathology, including the biological, sociological, and psychological factors;
4. Demonstrate attitudes of openness, candor, cooperation, and support through group work and interaction;
5. Demonstrate the use of methods of research and reporting, using psychological, sociological, and clinical terminology;
6. Demonstrate an understanding of the personality and behavioral factors, both integrative (adaptive) and disintegrative (maladaptive) which contribute to individuals/clients' coping skills dealing with stress, conflict, and hardship;
7. Demonstrate an understanding of the normative developmental patterns that occur in individuals from conception through old age and how this understanding impacts our understanding of abnormal behavior and clinical interventions;
8. Integrate knowledge and skill in achieving competency in functional and responsive therapeutic abilities;
9. Demonstrate skill in client needs assessment and in the provision of information and referral for client access to resources, whether the client be an individual, family, group, or community;
10. Demonstrate an awareness of themselves as change agents through the use of such vehicles as recreational activities, modeling, contracting, client and community intervention, advocacy, and constructive use of confrontation;
11. Analyze the impact of collaborative social service systems.

A Note about Program Requirements

The program requirements listed in this Catalog are for students entering into this program in Fall 2017 or Spring 2018. Students who entered the program during a prior semester will find their specific requirements listed in the Catalog under which they entered. Archived Catalogs are accessible through the college website at <http://mxcc.edu/catalogs-and-schedules/>.



Middlesex Community College
Human Services
 Associate in Sciences Degree
GRADUATION CHECKLIST

This program is a **career-oriented degree** that is intended to prepare you for entry level positions in the field of Human Services. With appropriate advising, the program can also transfer to Baccalaureate programs in Human Services or Social Work.

| Category | Cour | Cr | Semester Taken | Grade |
|--|---|-----|----------------|-------|
| DESIGNATED General Education Requirements for Transfer Programs (31-32 credits) | | | | |
| Aesthetic Dimensions Elective | | 3 | | |
| Historical Knowledge Elective | | 3 | | |
| Oral Communication | COM* 173: Public Speaking | 3 | | |
| Quantitative Reasoning | | 3-4 | | |
| Scientific Knowledge Elective | | 4 | | |
| Scientific Reasoning | PSY* 111: General Psychology | 3 | | |
| Social Phenomena (1 of 2) | HSE* 101: Introduction to Human Services | 3 | | |
| Social Phenomena (2 of 2) | SOC* 101: Principles of Sociology OR SOC* 103: Social Problems | 3 | | |
| Written Communication (1 of 2) | ENG* 101: Composition | 3 | | |
| Written Communication Elective | | 3 | | |

| Program Requirements (30 credits) | | | | |
|--|---|--------------|--|--|
| Program Requirement | HSE* 202: Introduction to Interviewing/ Counseling | 3 | | |
| Program Requirement | HSE* 288: Developmental Practicum | 3 | | |
| Program Requirement | HSE* 289: Psychiatric Practicum | 3 | | |
| Program Requirement | PSY* 201: Life Span Development or PSY*204: Child and Adolescent Development | 3 | | |
| Program Requirement | PSY* 245: Abnormal Psychology | 3 | | |
| Program Requirement | SOC* 120: Group Dynamics | 3 | | |
| SOC*, PSY*, or SSC elective * | | 3 | | |
| Elective (HS certificate courses can be used here) | | 3 | | |
| Elective (HS certificate courses can be used here) | | 3 | | |
| Elective (HS certificate courses can be used here.) | | 3 | | |
| TOTAL CREDITS | | 61-62 | | |

* For students wishing to transfer, the following SSC courses are recommended: ANT 101 or 205; ECN 101 or 102; POL 111.

HUMAN SERVICES: JUVENILE JUSTICE

Certificate

School of Arts & Media, Humanities, and Social Sciences

Program Contact: Division Director Mr. Jaime Flores
Office Location: Snow Hall 508
Telephone: (860) 343-5757
Email: jflores@mxcc.edu

Description

This 12-course, 36-credit certificate program brings together multiple disciplines in the study of child and adolescent services. In addition to developing more generalized counseling and intervention skills, specific learning objectives include the development of:

1. Culturally specific community opportunities
2. Gender specific programming
3. Training components for at risk youth in their communities
4. Drop-out prevention awareness
5. Conflict resolution training
6. Assessment and intervention in teen violence
7. Leisure and educational programming
8. Youth activism and advocacy
9. Strategies for safe schools and health initiatives

| Requirements | Cr |
|---|-----------|
| ENG*101 Composition | 3 |
| PSY*111 General Psychology | 3 |
| Also recommended: completion of six credits in the Behavioral and Social Sciences | 6 |
| HSE*202 Introduction to Counseling | 3 |
| HSE*116 Youth Advocacy in Community Organizations | 3 |
| PSY*204 Child and Adolescent Psychology | 3 |
| HSE*224 Social Problems of Youth OR SOC*103 Social Problems | 3 |
| SOC*241 Juvenile Delinquency | 3 |
| PSY*251 Behavior Disorders of Children & Adolescents | 3 |
| HSE*289 Psychiatric Practicum | 3 |
| SOC*120 Group Dynamics | 3 |
| TOTAL CREDITS | 36 |

HUMAN SERVICES: THERAPEUTIC RECREATION

Certificate

School of Arts & Media, Humanities, and Social Sciences

Program Contact: Division Director Mr. Jaime Flores
Office Location: Snow Hall 508
Telephone: (860) 343-5757
Email: jflores@mxcc.edu

Description

This program is designed to qualify students to work in the field of gerontology as Therapeutic Recreation Specialists and to provide in-service professional development. Students who complete the courses listed below, and thereby qualify for the Certificate, meet the standards established in the public health code of the State of Connecticut for workers in chronic care, long term care facilities, and Assisted Living facilities. This program emphasizes work with elder populations through studies in written communications, sociology, psychology, human services, therapeutic recreation, and field work.

| Requirements | Cr |
|--|-----------|
| ENG*101 Composition | 3 |
| HSE*202 Introduction to Counseling and Interviewing | 3 |
| HSE*288 Developmental Practicum | 3 |
| PSY*103 Introduction to Holistic Wellness | 3 |
| PSY*111 General Psychology | 3 |
| RLS*121 Introduction to Therapeutic Recreation | 3 |
| RLS*122 Processes and Techniques in Therapeutic Recreation | 3 |
| SOC*120 Group Dynamics | 3 |
| Directed Electives (choose two) Emphasis: Older Adults SOC 114 Sociology of Aging or PSY 208 Adult Develop./Aging RLS 221 Therapeutic Recreation Emphasis: Developmental, Behavioral, or Psychiatric Disabilities PSY 245 Abnormal Psychology PSY 251 Behavior Disorders of Children and Youth | 6 |
| Total Credits | 30 |

POLITICAL SCIENCE STUDIES

Associate Degree

School of Arts & Media, Humanities, and Social Sciences

Pathway Advisor:

Office Location:

Telephone:

Email:

Division Director Mr. Jaime Flores

Snow Hall 508

(860) 343-5757

jflores@mxcc.edu



This program is a Connecticut State Colleges & Universities Transfer Ticket!

Transfer Tickets are new degree programs providing pathway for community college students to complete degree programs that transfer to Connecticut State Universities (Central, Eastern, Southern, and Western) and Charter Oak State College without losing any credits or being required to take extra credits in order to complete a bachelor's degree in that same discipline. You will be able to transfer, apply to competitive admissions majors, and complete your BA/BS degree in the same time and with the same course requirements as students who start at a CSU or COSC.

| Category | | Course | Cr | Semester Taken | Grade |
|--|---|-----------------------|-----|----------------|-------|
| General Education Requirements for Transfer Programs (31-32 credits) | | | | | |
| Aesthetic Dimensions Elective | | | 3 | | |
| Historical Knowledge Elective | | | 3 | | |
| Oral Communication | | | 3 | | |
| Quantitative Reasoning Elective | | | 3 | | |
| Scientific Knowledge Elective | At least one should have a laboratory component | | 7-8 | | |
| Scientific Reasoning Elective | | | | | |
| Social Phenomena (1 of 2) Elective | | | 3 | | |
| Social Phenomena (2 of 2) Elective | | | 3 | | |
| Written Communication (1 of 2) | | ENG* 101: Composition | 3 | | |
| Written Communication (2 of 2) (Circle One) | | | 3 | | |

| Program Requirements (30 credits) | | | | | |
|--|--|-------------------------------|--------------|--|--|
| Program Requirement | | POL* 111: American Government | 3 | | |
| Program Requirement | | POL* Elective | 3 | | |
| Program Requirement | | POL* Elective | 3 | | |
| Open Elective | | | 3 | | |
| Open Elective | | | 3 | | |
| Open Elective | | | 3 | | |
| Open Elective | | | 3 | | |
| Open Elective | | | 3 | | |
| Open Elective | | | 3 | | |
| Open Elective | | | 3 | | |
| TOTAL CREDITS | | | 61-62 | | |

PSYCHOLOGY STUDIES

Associate Degree

School of Arts & Media, Humanities, and Social Sciences

Discipline Coordinator: Associate Professor Dr. Andrea Levy
Office Location: Snow Hall 508
Telephone: (860) 343-5815
Email: alevy@mxcc.edu



This program is a Connecticut State Colleges & Universities Transfer Ticket!

Transfer Tickets are new degree programs providing pathway for community college students to complete degree programs that transfer to Connecticut State Universities (Central, Eastern, Southern, and Western) and Charter Oak State College without losing any credits or being required to take extra credits in order to complete a bachelor's degree in that same discipline. You will be able to transfer, apply to competitive admissions majors, and complete your BA/BS degree in the same time and with the same course requirements as students who start at a CSU or COSC.

| Category | Course | Cr | Semester Taken | Grade |
|---|--|--------------|----------------|-------|
| General Education Requirements for Transfer Programs (31-32 credits) | | | | |
| Aesthetic Dimensions Elective | | 3 | | |
| Historical Knowledge Elective | | 3 | | |
| Oral Communication | | 3 | | |
| Quantitative Reasoning Elective | MAT 167: Principles of Statistics | 3 | | |
| Scientific Knowledge | At least one should have a laboratory component. | 7-8 | | |
| Scientific Reasoning | | | | |
| Social Phenomena (1 of 2) Elective | | 3 | | |
| Social Phenomena (2 of 2) Elective | | 3 | | |
| Written Communication (1 of 2) | ENG* 101: Composition | 3 | | |
| Written Communication (2 of 2) | | 3 | | |
| Program Requirements (30 credits) | | | | |
| Program Requirement | PSY* 111: General Psychology I | 3 | | |
| Program Requirement | PSY* 201: Life Span Development (Required for CCSU) OR PSY 204: Child and Adolescent Development (Required for ECSU, SCSU & WCSU) OR PSY 208: Psychology of Adult Dev. and Aging | 3 | | |
| Program Requirement | PSY* 245: Abnormal Psychology | 3 | | |
| Program Requirement | Additional two courses Select from the following: PSY* 240: Social Psychology PSY* 243: Theories of Personality PSY* 247: Industrial and Organizational Psychology | 6 | | |
| Open Elective (Recommend PSY* elective) | | 3 | | |
| Open Elective | | 3 | | |
| Open Elective | | 3 | | |
| Open Elective | | 3 | | |
| Open Elective | | 3 | | |
| TOTAL CREDITS | | 61-62 | | |

Social Sciences (Non-Credit)

SECURITY OFFICER CERTIFICATION

Continuing Education Division

| | |
|-------------------------|--|
| Program Advisor: | Diane Bordonaro, MSN, RN, Director of Non-Credit Programs |
| Program Office: | Snow Hall 514 |
| Telephone: | (860) 343-5716 |
| Email: | dbordonaro@mxcc.edu |

About Non-Credit Certificates

Non-credit Certificate programs may be comprised of a single course or several courses generally intended for occupational training, upgrading, or retraining. These programs often emphasize skills required for employment or career advancement and are offered to respond to identified workforce education needs within the respective College community. Many of these programs are designed with employers to meet or exceed industry standards and may lead to State or professional certification or licensure for successful participants.

Description

Security Officer positions are available in many businesses, such as, security agencies, retail, hospitals, banks, housing complexes and construction. Connecticut General Statute #29-161(q) mandates that all State of Connecticut security officers complete an 8-hour training course for certification. Successful completion of this day-long course fulfills the requirement. You will be learning essential information required for security officers from an instructor approved by the Commissioner of the Department of Public Safety to teach this course. The course covers an overview of private security, public safety issues, search and seizure, use of force, basic criminal justice and basic first aid. Participants are required to complete a written exam at the end of the course and achieve a passing grade of 75%. Upon successful completion, students apply for a Security Office Identification Card from the State of Connecticut at an additional cost. This procedure will be covered in class. Please bring a lunch to class. **Note: students who have a criminal background are not eligible for State of Connecticut Security Officer Certification.**

Financial Assistance

Non-credit courses and certificates are not eligible for traditional college financial aid. Payment plans are available.

SOCIAL WORK STUDIES

Associate Degree

School of Arts & Media, Humanities, and Social Sciences

Program Contact: Division Director Mr. Jaime Flores
Office Location: Snow Hall 508
Telephone: (860) 343-5757
Email: jflores@mxcc.edu



This program is a Connecticut State Colleges & Universities Transfer Ticket!

Transfer Tickets are new degree programs providing pathway for community college students to complete degree programs that transfer to Connecticut State Universities (Central, Eastern, Southern, and Western) and Charter Oak State College without losing any credits or being required to take extra credits in order to complete a bachelor's degree in that same discipline. You will be able to transfer, apply to competitive admissions majors, and complete your BA/BS degree in the same time and with the same course requirements as students who start at a CSU or COSC.

| Category | Course | Cr | Semester Taken | Grade |
|---|--|--------------|----------------|-------|
| General Education Requirements for Transfer Programs (31-32 credits) | | | | |
| Aesthetic Dimensions Elective | | 3 | | |
| Historical Knowledge Elective | | 3 | | |
| Oral Communication Elective | | 3 | | |
| Quantitative Reasoning | MAT*167: Principles of Statistics | 3 | | |
| Scientific Knowledge | BIO* 115: Human Biology, with Lab | 4 | | |
| Scientific Reasoning | | 3-4 | | |
| Social Phenomena (1 of 2) Elective | SOC* 101: Principles of Sociology | 3 | | |
| Social Phenomena (2 of 2) Elective | POL* 111: American Government | 3 | | |
| Written Communication (1 of 2) | ENG* 101: Composition | 3 | | |
| Written Communication (2 of 2) (Circle One) | | 3 | | |
| Program Requirements (30 credits) | | | | |
| Program Requirement | HSE* 101: Introduction to Human Services | 3 | | |
| Program Requirement | SOC* 103: Social Problems | 3 | | |
| Program Requirement | ANT* 205: Cultural Anthropology | 3 | | |
| Program Requirement | PSY* 111: General Psychology | 3 | | |
| Program Requirement | Choose two: HSE* 202: Introduction to Counseling and Interviewing HSE* 288: Developmental Practicum HSE* 289: Psychiatric Practicum | 6 | | |
| Open Elective | | 3 | | |
| Open Elective | | 3 | | |
| Open Elective | | 3 | | |
| Open Elective | | 3 | | |
| TOTAL CREDITS | | 61-62 | | |

SOCIOLOGY STUDIES

Associate Degree

School of Arts & Media, Humanities, and Social Sciences

Discipline Coordinator: Professor Dr. John Ambenge
Office Location: Snow Hall 508
Telephone: (860) 343-5810
Email: jambenge@mxcc.edu



This program is a Connecticut State Colleges & Universities Transfer Ticket!

Transfer Tickets are new degree programs providing pathway for community college students to complete degree programs that transfer to Connecticut State Universities (Central, Eastern, Southern, and Western) and Charter Oak State College without losing any credits or being required to take extra credits in order to complete a bachelor's degree in that same discipline. You will be able to transfer, apply to competitive admissions majors, and complete your BA/BS degree in the same time and with the same course requirements as students who start at a CSU or COSC.

| Category | Course | Cr | Semester Taken | Grade |
|---|--|-----|----------------|-------|
| General Education Requirements for Transfer Programs (31-32 credits) | | | | |
| Aesthetic Dimensions Elective | ART* 100 OR ART*111 | 3 | | |
| Historical Knowledge Elective | MUS* 101, MUS* 104, HIS* 101, HIS*102 | 3 | | |
| Oral Communication | COM*173, HSE* 202, SOC*120 | 3 | | |
| Quantitative Reasoning Elective | Central recommends MAT* 168: Elementary Statistics and Probability | 3 | | |
| Scientific Knowledge Elective | BIO* 105, BIO* 115 or BIO* 121 | 3-4 | | |
| Scientific Reasoning Elective with Lab | PSY*111, PSY* 240, SOC* 240 | 4 | | |
| Social Phenomena (1 of 2) Elective | COM* 120, POL* 102, POL* 111 | 3 | | |
| Social Phenomena (2 of 2) Elective | ANT* 205 or ECN* 220 | 3 | | |
| Written Communication (1 of 2) | ENG* 101: Composition | 3 | | |
| Written Communication (2 of 2) | ENG* 102 or ENG* 200 | 3 | | |

| Program Requirements (30 credits) | | | | |
|--|--|--------------|--|--|
| Program Requirement | SOC* 101: Principles of Sociology | 3 | | |
| SOC* Elective | SOC* 103, SOC* 111, SOC* 117, SOC* 277 | 3 | | |
| SOC* Elective (at 200 level) | SOC* 221, SOC* 240, SOC* 255 | 3 | | |
| SOC* Elective (at 200 level) | SOC* 202, SOC* 210, SOC* 241 | 3 | | |
| Open Elective | | 3 | | |
| Open Elective | | 3 | | |
| Open Elective | | 3 | | |
| Open Elective | | 3 | | |
| Open Elective | | 3 | | |
| Open Elective | | 3 | | |
| TOTAL CREDITS | | 61-62 | | |

STEM (Science, Technology, Engineering, Math)

BIOLOGY STUDIES

Associate Degree

School of Allied Health, Business, and STEM

Pathway Advisor: Associate Professor Dr. Patrick Bryan
Office Location: Wheaton Hall 209
Telephone: (860) 343-5880
Email: pbryan@mxcc.edu



This program is a Connecticut State Colleges & Universities Transfer Ticket!

Transfer Tickets are new degree programs providing pathway for community college students to complete degree programs that transfer to Connecticut State Universities (Central, Eastern, Southern, and Western) and Charter Oak State College without losing any credits or being required to take extra credits in order to complete a bachelor's degree in that same discipline. You will be able to transfer, apply to competitive admissions majors, and complete your BA/BS degree in the same time and with the same course requirements as students who start at a CSU or COSC.

| Category | Course | Cr | Semester Taken | Grade |
|--|------------------------------|----|----------------|-------|
| General Education Requirements for Transfer Programs (33 credits) | | | | |
| Aesthetic Dimensions Elective | | 3 | | |
| Historical Knowledge Elective | | 3 | | |
| Oral Communication Elective | | 3 | | |
| Quantitative Reasoning | MAT* 186: Pre-Calculus | 4 | | |
| Scientific Knowledge and Understanding | CHE* 121 General Chemistry I | 4 | | |
| Scientific Reasoning | BIO* 121 General Biology I | 4 | | |
| Social Phenomena (1 of 2) Elective | | 3 | | |
| Social Phenomena (2 of 2) Elective | | 3 | | |
| Written Communication (1 of 2) | ENG* 101: Composition | 3 | | |
| Written Communication (2 of 2) Elective | | 3 | | |

| Program Requirements (28 credits) | | | | |
|--|---|-----------|--|--|
| Program Requirement | BIO* 122: General Biology II | 4 | | |
| Program Requirement | Select two from BIO* 235: Microbiology, BIO* 270: Ecology, BIO* 211: Human Anatomy & Physiology I, BIO* 212: Human Anatomy & Physiology II, BIO* 222: Molecular Biotechniques OR BIO* 263: Molecular Genetics | 4 | | |
| | | 4 | | |
| Program Requirement | CHE* 122: General Chemistry II | 4 | | |
| Program Requirement | PHY* 121: General Physics I | 4 | | |
| Program Requirement | PHY* 122 General Physics II | 4 | | |
| Program Requirement | MAT* 254: Calculus I | 4 | | |
| TOTAL CREDITS | | 61 | | |

STEM (Science, Technology, Engineering, Math)

BIOTECHNOLOGY

Certificate

School of Allied Health, Business, and STEM

Program Coordinator: Interim Assistant Professor Dr. Frank Stellabotte
Office Location: Wheaton Hall 209
Telephone: (860) 343-5747
Email: fstellabotte@mxcc.edu

Description

The Biotechnology Certificate is a 22-credit, 6-course program that can be completed in one year for full-time students. This certificate is a stackable credential for students who already possess a related A.S. or B.S. degree from the U.S. or abroad – and who are returning to school for employment and technology-based training. It equips students with necessary skills and knowledge, along with good management practices that focus on quality, sterility, documentation, regulatory compliance, and safety in the laboratory environment. These key qualifications are crucial to working in today's biotechnology field.

| Requirements | Cr |
|--|-----------|
| BIO* 109: Principles of Biotechnology | 3 |
| BIO* 222: Molecular Biotechniques | 4 |
| BIO* 235: Microbiology OR BIO* 263: Molecular Genetics | 4 |
| CHE* 112: Principles Organic Chemistry & Biochem. OR CHE* 220: Biochemistry | 4 |
| CHE* 250: Instrumental Analysis | 4 |
| BIO* 296: Biotechnology Internship | 3 |
| TOTAL CREDITS | 22 |

This certificate program – which includes an internship – keeps students current with the newest discoveries and advancements in biotechnology. It increases and improves their laboratory techniques skills – from the basics such as solution preparation and micropipetting to more advanced skills including performing bacterial transformations and operating large benchtop equipment such as a High Performance Liquid Chromatograph (HPLC).

As the certificate is comprised entirely of courses within MxCC's Biotechnology A.S. degree, students may switch to pursue the full degree instead of or in addition to the certificate (with no penalties).

Learning Outcomes

Upon successful completion of all program requirements, graduates will be able to:

1. Conduct themselves as biotechnology lab technicians with the basic skills and knowledge required to function effectively in a research setting.
2. Demonstrate proficiencies in both basic and advanced principles of chemistry and biology that are required by a person working as a lab technician or planning to enter into a four-year college science program.
3. Explain the basic principles of genetics, molecular biology, cell biology, chemistry, biochemistry, and microbiology.
4. Employ sterile technique in the handling of microbial cultures with knowledge of what is safe and what is hazardous.
5. Prepare solutions and perform accurate measurements using precision instruments such as balances and micropipettors.
6. Demonstrate skills in the use of recombinant DNA techniques, PCR, DNA sequence analysis, HPLC, gas chromatography, mass spectroscopy, IR spectroscopy, UV/VIS spectroscopy, as well as the use of the computer to collect and analyze experimental data.
7. Recognize the ethical issues that are relevant to the field of biotechnology.

STEM (Science, Technology, Engineering, Math)

BIOTECHNOLOGY

Associate Degree

School of Allied Health, Business, and STEM

| | |
|-----------------------------|--|
| Program Coordinator: | Interim Assistant Professor Dr. Frank Stellabotte |
| Office Location: | Wheaton Hall 209 |
| Telephone: | (860) 343-5747 |
| Email: | fstellabotte@mxcc.edu |

Description

The Biotechnology degree program is designed for students who wish to enter the field of scientific research or who wish to transfer to a four-year program in biology, chemistry or a related field. The program will provide students with skills and knowledge necessary to work in the biotechnology, pharmaceutical, or basic research fields. This program will also provide the majority of the freshman and sophomore level coursework required of biology majors at most four-year institutions. Students may be either full-time or part-time. This program is appropriate for the traditional or nontraditional student. Graduates of the program will be able to find employment in a variety of research settings, including the biotechnology and pharmaceutical industries, private and university research laboratories and State run labs. Graduates are well prepared to continue their education in a biology related field immediately after graduation, or later in their careers.

Learning Outcomes

Upon successful completion of all program requirements, graduates will be able to:

1. Conduct themselves as lab technicians in a biotechnology laboratory with the basic skills and knowledge required to function effectively in a research setting.
2. Demonstrate proficiencies in both basic and advanced principles of chemistry and biology that are required by a person working as a lab technician or planning to enter into a four-year college science program.
3. Explain the basic principles of genetics, molecular biology, cell biology, chemistry, biochemistry, and microbiology.
4. Employ sterile technique in the handling of microbial cultures with knowledge of what is safe and what is hazardous.
5. Prepare solutions and perform accurate measurements using precision instruments such as balances and micropipettors.
6. Demonstrate skills in the use of recombinant DNA techniques, PCR, DNA sequence analysis, HPLC, gas chromatography, mass spectroscopy, IR spectroscopy, UV/VIS spectroscopy, as well as the use of the computer to collect and analyze experimental data.
7. Recognize the ethical issues that are relevant to the field of biotechnology.

A Note about Program Requirements

The program requirements listed in this Catalog are for students entering into this program in Fall 2017 or Spring 2018. Students who entered the program during a prior semester will find their specific requirements listed in the Catalog under which they entered. Archived Catalogs are accessible through the college website at

<http://mxcc.edu/catalogs-and-schedules/>.



Middlesex Community College
Biotechnology
 Associate in Science Degree
 GRADUATION CHECKLIST

This program is a **Career-Oriented Degree** that provides skills and knowledge, often in the form of a credential or qualification, that allow for direct entry into the work force. These degrees may serve as transfer degrees with or without a guarantee that additional credits will not be needed at the baccalaureate level within the CSU system.

| Category | Course | Cr | Semester Taken | Grade |
|---|---|----|----------------|-------|
| General Education Requirements for Career Programs (22 credits) | | | | |
| Aesthetic Dimensions Elective | | 3 | | |
| Two courses chosen from any of these competencies: Aesthetic Dimensions, Historical Knowledge, Oral Communication, Social Phenomena, and/or Written Communication | COM*173: Public Speaking OR ENG* 202: Technical Writing | 3 | | |
| | BIO* 109: Principles of Biotechnology | 3 | | |
| Quantitative Reasoning (Career) | MAT*167: Principles of Statistics | 3 | | |
| Scientific Knowledge OR Scientific Reasoning | BIO* 121: General Biology I | 4 | | |
| Social Phenomena Elective | | 3 | | |
| Written Communication | ENG* 101: Composition | 3 | | |

| | | | | |
|--|--|-----------|--|--|
| Program Requirements (38 credits) | | | | |
| Program Requirement | BIO* 222: Molecular Biotechniques | 4 | | |
| Program Requirement | BIO* 235: Microbiology | 4 | | |
| Program Requirement | BIO* 263: Molecular Genetics | 4 | | |
| Program Requirement | BIO* 296: Biotechnology Internship | 3 | | |
| Program Requirement | CHE* 121: General Chemistry I | 4 | | |
| Program Requirement | CHE* 122: General Chemistry II | 4 | | |
| Program Requirement | CHE* 220: Biochemistry | 4 | | |
| Program Requirement | CHE* 250: Instrumental Analysis | 4 | | |
| Program Requirement | CSC* 101: Introduction to Computers OR higher | 3 | | |
| Program Requirement | MAT* 173: College Algebra OR higher | 4 | | |
| TOTAL CREDITS | | 60 | | |

STEM (Science, Technology, Engineering, Math)

CHEMISTRY STUDIES

Associate Degree

School of Allied Health, Business, and STEM

Pathway Advisor:

Assistant Professor James Quinlan

Office Location:

Wheaton Hall 217

Telephone:

(860) 343-5773

Email:

jquinlan@mxcc.edu



This program is a Connecticut State Colleges & Universities Transfer Ticket!

Transfer Tickets are new degree programs providing pathway for community college students to complete degree programs that transfer to Connecticut State Universities (Central, Eastern, Southern, and Western) and Charter Oak State College without losing any credits or being required to take extra credits in order to complete a bachelor's degree in that same discipline. You will be able to transfer, apply to competitive admissions majors, and complete your BA/BS degree in the same time and with the same course requirements as students who start at a CSU or COSC.

| Category | Course | Cr | Semester Taken | Grade |
|--|-------------------------------------|-----------|----------------|-------|
| General Education Requirements for Transfer Programs (33 credits) | | | | |
| Aesthetic Dimensions Elective | | 3 | | |
| Historical Knowledge Elective | | 3 | | |
| Oral Communication Elective | | 3 | | |
| Quantitative Reasoning | MAT* 254: Calculus I | 4 | | |
| Scientific Knowledge and Understanding | CHE* 122: General Chemistry II | 4 | | |
| Scientific Reasoning | CHE* 121 General Chemistry I | 4 | | |
| Social Phenomena (1 of 2) Elective | | 3 | | |
| Social Phenomena (2 of 2) Elective | | 3 | | |
| Written Communication (1 of 2) | ENG* 101: Composition | 3 | | |
| Written Communication (2 of 2) Elective | | 3 | | |
| Program Requirements (20 credits) | | | | |
| Program Requirement | CHE* 211: Organic Chemistry I + | 4 | | |
| Program Requirement | CHE* 212: Organic Chemistry II + | 4 | | |
| Program Requirement | PHY* 221: Calculus-based Physics I | 4 | | |
| Program Requirement | PHY* 222: Calculus-based Physics II | 4 | | |
| Program Requirement | MAT* 256: Calculus II | 4 | | |
| Unrestricted Electives (9 credits) ** | | | | |
| Unrestricted Elective | | 3 | | |
| Unrestricted Elective | | 3 | | |
| Unrestricted Elective | | 3 | | |
| TOTAL CREDITS | | 62 | | |

* Middlesex does not offer these two courses, so in order to complete this pathway, you will have to take them at another institution.

** You are free to choose any courses at or above 100-level to complete unrestricted electives, although you may need to use these credits to take courses that prepare you for required courses in the degree program. You should also consider using unrestricted electives to meet foreign language requirements for your program. You can also complete other General Education requirements for CCSU, SCSU, WCSU, and COSC- but not more than two requirements for ECSU. You are encouraged to meet with your advisor to determine which courses to select.



2017-18 CATALOG

Middlesex Community College
Computer Science Studies
 Associate in Arts Degree
 GRADUATION CHECKLIST

This program is a **CSCU TAP Transfer Degree** that is intended for Connecticut Community College students to transfer to Connecticut State Universities and Charter Oak State College without either losing any credits or being required to take extra credits in order to complete a bachelor's degree in that same discipline. In order to graduate and be guaranteed admission to a State University or to Charter Oak State College, you must earn an overall 2.0 grade point average.

| Category | Course | Cr | Semester Taken | Grade |
|--|--|----|----------------|-------|
| General Education Requirements for Transfer Programs (33 credits) | | | | |
| Aesthetic Dimensions Elective | | 3 | | |
| Historical Knowledge Elective | | 3 | | |
| Oral Communication Elective | | 3 | | |
| Quantitative Reasoning | MAT* 186 Pre- Calculus | 4 | | |
| Scientific Knowledge and Understanding | Choose one from: BIO* 121: General Biology I, CHE* 121: General Chemistry I OR PHY* 221: Calculus-Based Physics I | 4 | | |
| Scientific Reasoning | Select the same second course in the sequence: BIO* 122: General Biology II, CHE* 122: General Chemistry II OR PHY* 222: Calculus-Based Physics II | 4 | | |
| Social Phenomena Elective (1 of 2) | | 3 | | |
| Social Phenomena Elective (2 of 2) | | 3 | | |
| Written Communication (1 of 2) | ENG* 101: Composition | 3 | | |
| Written Communication (2 of 2) Elective | | 3 | | |

| Program Requirements (27 credits) | | | | |
|--|--|-----------|--|--|
| Program Requirement | CSC* 105 Programming Logic ¹ | 3 | | |
| Program Requirement | CSC* 220 Object-Oriented Programming Using Java ¹ | 3 | | |
| Program Requirement | CSC* 231: Database Design ¹ | 3 | | |
| Program Requirement | MAT* 254 Calculus I ¹ | 4 | | |
| Program Requirement | MAT* 256 Calculus II ² | 4 | | |
| Program Requirement | CSC XXX Client-Side Web Development ³ | 3 | | |
| Program Requirement | EET XXX Digital Systems ^{2,3} | 4 | | |
| Program Requirement | MAT 210 Discrete Math ^{1,3} | 3 | | |
| TOTAL CREDITS | | 60 | | |

¹ Requires C or above² Requires C- or above³ MxCC does not offer these courses. In order to complete the degree, you will need to take these courses online or at another campus.

COMPUTER ENGINEERING TECHNOLOGY

Technology Studies Associate Degree Option

School of Allied Health, Business, and STEM • Statewide College of Technology

| | |
|-----------------------------|--|
| Program Coordinator: | Associate Professor Dr. Lin Lin |
| Office Location: | Wheaton Hall 209 (through Aug. 2017), then Wheaton Hall 313 |
| Telephone: | (860) 343-5763 |
| Email: | <u>llin@mxcc.edu</u> |

Description

This program prepares students for transfer to institutions with Bachelor's Degree programs in Computer Engineering Technology, Industrial Technology, Networking Technology, or other related fields, or for entry into computer-based industry positions. The objectives of this hands-on, technically oriented program include:

- Provide students with a background in electric circuits, computer hardware and software, networking, and engineering standards to the building, testing, operation, and maintenance of computer systems and associated software systems.
- Provide students with the ability to apply science, engineering, and mathematical analysis in solving computer engineering technology problems.
- Prepare students to take the industry-based certification exams.
- Develop students' ability to apply written, oral, and graphical communication in both technical and non-technical environments.
- Develop students' ability to learn new concepts and techniques as required for continuing professional development.

The target audience for this program includes both full and part time students with an interest in pursuing a career as an IT Professional (including Network Administrator, Systems Administrator, Systems Analyst, Support Specialist), Programmer/Software Developer, or Computer Technologist or Engineer (Hardware/Software). This is a College of Technology Pathway Program with articulation agreements with four year institutions. Successful completion of the program allows students to enter their junior year in the Computer Engineering Technology Program at Central Connecticut State University. Consultation with the Program Coordinator is strongly recommended if students wish to transfer to other related programs or other institutions.

A Note about Program Requirements

The program requirements listed in this Catalog are for students entering into this program in Fall 2017 or Spring 2018. Students who entered the program during a prior semester will find their specific requirements listed in the Catalog under which they entered. Archived Catalogs are accessible through the college website at <http://mxcc.edu/catalogs-and-schedules/>.



Middlesex Community College
Technology Studies: Computer Engineering
Technology
Associate in Science Degree
GRADUATION CHECKLIST

This program is a **College of Technology Transfer-Oriented Degree** that is intended to be completed before you continue your education at the baccalaureate level. Individual articulation agreements may exist with specific universities so that your degree is completely accepted with all credits transferring. Please check with your Academic Advisor to ensure you enroll in the appropriate courses to ensure seamless transfer to your intended transfer institution.

| Category | Course | Cr | Semester Taken | Grade |
|---|--|----|----------------|-------|
| General Education Requirements for College of Technology Programs (31 credits) | | | | |
| Aesthetic Dimensions Elective | | 3 | | |
| Historical Knowledge Elective | | 3 | | |
| Oral Communication | COM* 173: Public Speaking | 3 | | |
| Quantitative Reasoning | MAT* 167: Principles of Statistics | 3 | | |
| Scientific Knowledge | EGR* 111: Introduction to Engineering | 3 | | |
| Scientific Reasoning | PHY* 121: General Physics I | 4 | | |
| Social Phenomena (1 of 2) | ECN* 102: Principles of Microeconomics | 3 | | |
| Social Phenomena (2 of 2) Elective | | 3 | | |
| Written Communication (1 of 2) | ENG* 101: Composition | 3 | | |
| Written Communication (2 of 2) | ENG* 202: Technical Writing | 3 | | |

| | | | | |
|--|---|-----------|--|--|
| Program Requirements (31 credits) | | | | |
| Program Requirement | CSC* 101: Intro to Computers | 3 | | |
| Program Requirement | CSC* 105: Programming Logic | 3 | | |
| Program Requirement | CSC* 220: Object-Oriented Programming Using JAVA | 3 | | |
| Program Requirement | CST* 141: Computer Hardware | 4 | | |
| Program Requirement | CST* 231: Data Communication and Networking | 3 | | |
| Program Requirement | EGR* 221: Introduction to Electric Circuit Analysis | 4 | | |
| Program Requirement | MAT* 254: Calculus I | 4 | | |
| PHL* Elective | PHL* | 3 | | |
| Program Requirement | PHY* 122: General Physics II | 4 | | |
| TOTAL CREDITS | | 62 | | |

STEM (Science, Technology, Engineering, Math)

COMPUTER INFORMATION TECHNOLOGY

Associate Degree

School of Allied Health, Business, and STEM

Program Coordinator: Professor Donna Hylton
Office Location: Snow Hall 512
Telephone: (860) 343-5774
Email: dhylton@mxcc.edu

Description:

The Computer Information Technology (CIT) program is designed to provide students with a well-rounded technical foundation and options in which they can concentrate their skills in either software development or networking. For students who enter the program without a firm grasp on a career direction, the program's core gives a broad range of subject areas that the students can experience before formalizing their concentration. A report published by the U.S. Bureau of Labor explains, "To keep IT systems running, a large workforce is needed to maintain networks, create new software, and ensure information security. In addition, the proliferation of smart phones has given rise to a new "app economy," in which new employment opportunities are available for workers who create the programs that run on mobile devices." The CIT degree incorporates networking, programming, database design, network security, and mobile device programming. All of these are high-demand areas of IT. An internship experience allows the student to apply their skills to an on-the-job experience. Upon graduation, the student is prepared to obtain a job in the IT field or pursue an advanced degree at a four-year college or university.

Learning Outcomes

Upon successful completion of all program requirements, graduates will be able to:

1. Develop the ability to analyze, develop, and design code through knowledge and comprehension of information systems concepts and skills.
2. Develop strategic and critical thinking skills through development of the ability to identify, gather, measure, summarize, verify, analyze, design, develop and test programs and hardware design.
3. Develop the ability to identify and solve unstructured problems in unfamiliar settings and exercise judgment based on facts.
4. Develop mastery in communication by gaining proficiency in oral/written/electronic communication skills and the ability to explain programming concepts and code and related technical issues to others.
5. Develop leadership skills through the development of the ability to work collaboratively with a diverse team, including organization, control, and assessment of group-based work, and provide leadership when appropriate.
6. Develop the skills to apply current technology, analyze business problems, and design and develop software and solve technical issues; apply word processing, spreadsheet, database, presentation, email, and collaborative software skills in a professional context.
7. Develop the skills to communicate using network technologies, access information via internet, and understand information integrity and security issues.

A Note about Program Requirements

The program requirements listed in this Catalog are for students entering into this program in Fall 2017 or Spring 2018. Students who entered the program during a prior semester will find their specific requirements listed in the Catalog under which they entered. Archived Catalogs are accessible through the college website at <http://mxcc.edu/catalogs-and-schedules/>.



Middlesex Community College
Computer Information Technology
 Associate in Science Degree
 GRADUATION CHECKLIST

This program is a **Career-Oriented Degree** that provides skills and knowledge, often in the form of a credential or qualification, that allow for direct entry into the work force. These degrees may serve as transfer degrees with or without a guarantee that additional credits will not be needed at the baccalaureate level within the CSU system.

| Category | Course | Cr | Semester Taken | Grade |
|---|--|-----|----------------|-------|
| General Education Requirements for Career Programs (21-23 credits) | | | | |
| Aesthetic Dimensions Elective | | 3 | | |
| Two courses chosen from any of these competencies: Aesthetic Dimensions, Historical Knowledge, Oral Communication, Social Phenomena, and/or Written Communication | COM* 173: Public Speaking | 3 | | |
| | ENG* 202: Technical Writing | 3 | | |
| Quantitative Reasoning (Career) | MAT* 137: Intermediate Algebra (OR higher) | 3-4 | | |
| Scientific Knowledge OR Scientific Reasoning Elective | | 3-4 | | |
| Social Phenomena | ECN* 102: Principle of Microeconomics | 3 | | |
| Written Communication | ENG* 101: Composition | 3 | | |

| | | | | |
|--|--|---------------------------------------|--|--|
| Program Requirements (39-40 credits) | | | | |
| Program Requirement | CSA* 140: Database Applications | 3 | | |
| Program Requirement | CSC* 105: Programming Logic OR CSC* 115: Introduction to Programming with Alice | 3 | | |
| Program Requirement | CSC* 231: Database Design I | 3 | | |
| Program Requirement | CSC* 295: Coop Ed/Work Experience | 3 | | |
| Program Requirement | CST* 120: Introduction to Operating Systems | 3 | | |
| Program Requirement | CST* 201: Introduction to Management Information Systems | 3 | | |
| Program Requirement | CST* 270: Network Security Fundamentals | 3 | | |
| Program Requirement | CST* 141: Computer Hardware OR DGA*, CSA*, CSC*, CST* Elective | 3-4 | | |
| PSY* OR SOC* Elective | | 3 | | |
| Program Requirement | CSC*101 or Open Elective (Students may choose an open elective if they have proven mastery by earning a "Pass" on the MxCC Computer Proficiency Exam) | 3 | | |
| CHOOSE ONE OF THE FOLLOWING DIRECTED ELECTIVE TRACKS: | | | | |
| NETWORKING TRACK REQUIREMENTS | | PROGRAMMING TRACK REQUIREMENTS | | |
| CST* 163: Window Server Administration | CSC* 220: Object-Oriented Programming Using JAVA | 3 | | |
| CST* 228: Voice and Data Interworking | CSC*249 Contemporary Business Application Development I | 3 | | |
| CST* 231: Data Communication and Networking | CSC* 262: Programming Mobile Devices I | 3 | | |
| TOTAL CREDITS | | 60-63 | | |

STEM (Science, Technology, Engineering, Math)

COMMUNICATIONS NETWORKING

Certificate

School of Allied Health, Business, and STEM

Program Coordinator: Professor Donna Hylton
Office Location: Snow Hall 512
Telephone: (860) 343-5774
Email: dhylton@mxcc.edu

Description

The certificate program will provide students with strong fundamentals in both data networking technologies and telecommunications networking technologies and will demonstrate the students understanding of networking concepts. An emphasis will be placed on CISCO network training in order to prepare students to take the CCNA (CISCO Certified Network Associate) exam. Students completing the program will receive training in Windows Server Administration that prepares them to complete the Microsoft 70-640 certification exam. There is also specialize instruction in computer security that is aligned with the industry-recognized CompTIA Security+ exam. Completing the certificate program will lead to such jobs as help desk staff, network technician, network coordinator. The Networking Certificate program is a 22-credit program; the courses required by this certificate may transfer to the Computer Information Technology Associate's degree program at MxCC.

| Requirements | Cr |
|---|-----------|
| CSC* 295: Coop Ed/Work Experience | 3 |
| CST* 120: Introduction to Operating Systems | 3 |
| CST* 141: Computer Hardware | 4 |
| CST* 163: Window Server Administration | 3 |
| CST* 228: Voice and Data Interworking | 3 |
| CST* 231: Data Communication & Networking | 3 |
| CST* 270: Network Security Fundamentals | 3 |
| TOTAL CREDITS | 22 |

STEM (Science, Technology, Engineering, Math)

HELP DESK TECHNICIAN

Certificate

School of Allied Health, Business, and STEM

Program Coordinator: Professor Donna Hylton
Office Location: Snow Hall 512
Telephone: (860) 343-5774
Email: dhylton@mxcc.edu

Description

This certificate program prepares students to be software and hardware help desk technicians. The help desk technician is frequently the first position available to an Information Technology professional and it can lead to network administration and network support positions. Students in the program will learn to design and use problem solving techniques; use oral and written communication within a business environment; implement management and customer service skills in team building activities; learn terminology in networking environments; and use technical skills in implementing software and hardware installations. Additional training is obtained through a required on-the-job internship. Upon completion of the program students will be able to design and use critical thinking to solve problems and work in an Information Technology department applying software, hardware, and technical skills. The Help Desk Technician Certificate program is a 25-credit program; the courses required by this certificate may transfer to the Computer Information Technology Associate's degree program at MxCC.

| Requirements | Cr |
|--|-----------|
| BMK*123: Principles of Customer Service | 3 |
| CSC*295: Coop Ed/Work Experience | 3 |
| CST*120: Introduction to Operating Systems | 3 |
| CST*141: Computer Hardware | 4 |
| CST*163: Windows Server Administration | 3 |
| CST*231: Data Communication and Networking | 3 |
| CST*270: Network Security Fundamentals | 3 |
| CST*201: Intro to Management Information Systems OR any CSA*/CSC*Elective | 3 |
| TOTAL CREDITS | 25 |

STEM (Science, Technology, Engineering, Math)

ENGINEERING SCIENCE

Associate Degree

School of Allied Health, Business, and STEM

| | |
|-----------------------------|--|
| Program Coordinator: | Associate Professor Dr. Lin Lin |
| Office Location: | Wheaton Hall 209 (through Aug. 2017), then Wheaton Hall 313 |
| Telephone: | (860) 343-5763 |
| Email: | <u>llin@mxcc.edu</u> |

Description

The MxCC Engineering Science associate degree program is part of the Connecticut College of Technology Pathways program, which prepares students to complete an Associate of Science degree in Engineering Science and make seamless transition into a Bachelor of Science Degree Program in Engineering with junior level status in the receiving institution.

Learning Outcomes

Upon successful completion of the program, students will be able to:

1. Identify and formulate engineering problems by applying engineering, mathematical, scientific and technological principles and concepts.
2. Solve engineering problems using critical thinking and problem-solving skills.
3. Work as a member of a team.
4. Recognize the need for (or Engage in) life-long learning and remain current in one's field.

A Note about Program Requirements

The program requirements listed in this Catalog are for students entering into this program in Fall 2017 or Spring 2018. Students who entered the program during a prior semester will find their specific requirements listed in the Catalog under which they entered. Archived Catalogs are accessible through the college website at <http://mxcc.edu/catalogs-and-schedules/>.



Middlesex Community College
Engineering Science
 Associate in Science Degree
 GRADUATION CHECKLIST

This program is a **College of Technology Transfer-Oriented Degree** that is intended to be completed before you continue your education at the baccalaureate level. Individual articulation agreements may exist with specific universities so that your degree is completely accepted with all credits transferring. Please check with your Academic Advisor to ensure you enroll in the appropriate courses to ensure seamless transfer to your intended transfer institution.

| Category | Course | Cr | Semester Taken | Grade |
|---|---|----|----------------|-------|
| DESIGNATED General Education Requirements for Transfer Programs (27 credits) | | | | |
| Aesthetic Dimensions | ART* 101: Art History I OR ART* 102: Art history II | 3 | | |
| Historical Knowledge | HIS* 101: Western Civilization I OR HIS* 102: Western Civilization II | 3 | | |
| Quantitative Reasoning | MAT* 254: Calculus I | 4 | | |
| Scientific Knowledge | CHE* 121: General Chemistry I | 4 | | |
| Scientific Reasoning | PHY* 221: Calculus-Based Physics I | 4 | | |
| Social Phenomena Elective | | 3 | | |
| Written Communication (1 of 2) | ENG* 101: Composition | 3 | | |
| Written Communication (2 of 2) | ENG* 102: Literature and Composition | 3 | | |

| Program Requirements (37-38 credits) | | | | |
|---|--|--------------|--|--|
| Program Requirement | CSC* 105: Programming Logic | 3 | | |
| Program Requirement | CHE* 122: General Chemistry II OR EGR* 214: Engineering Thermodynamics | 3-4 | | |
| Program Requirement | EGR* 111: Introduction to Engineering | 3 | | |
| Program Requirement | EGR* 211: Applied Mechanics I (Statics) | 3 | | |
| Program Requirement | EGR* 212: Applied Mechanics II (Dynamics) | 3 | | |
| Program Requirement | EGR* 221: Introduction to Electric Circuit Analysis | 4 | | |
| Program Requirement | MAT* 256: Calculus II | 4 | | |
| Program Requirement | MAT* 268: Calculus III: Multivariable | 4 | | |
| Program Requirement | MAT* 285: Differential Equations | 3 | | |
| Program Requirement | PHL* 111: Ethics | 3 | | |
| Program Requirement | PHY* 222: Calculus-Based Physics II | 4 | | |
| TOTAL CREDITS | | 64-65 | | |

STEM (Science, Technology, Engineering, Math)

ENGINEERING TECHNOLOGY

Technology Studies Associate Degree Option

School of Allied Health, Business, and STEM

| | |
|-----------------------------|--|
| Program Coordinator: | Associate Professor Dr. Lin Lin |
| Office Location: | Wheaton Hall 209 (through Aug. 2017), then Wheaton Hall 313 |
| Telephone: | (860) 343-5763 |
| Email: | <u>llin@mxcc.edu</u> |

Description

The Connecticut College of Technology Pathways program allows students to complete an associate degree at MxCC, and continue on to complete a bachelor degree in Industrial Technology, Engineering Technology, Electronic Technology, Computer-Aided Design or Technology Education at Central Connecticut State University's School of Engineering, Science and Technology. The Technology Studies: Engineering Technology Option prepares students primarily to transfer to complete a B.S. degree in civil or mechanical engineering technology.

Upon successful completion of all Technology Studies options program requirements, students will be able to:

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.

A Note about Program Requirements

The program requirements listed in this Catalog are for students entering into this program in Fall 2017 or Spring 2018. Students who entered the program during a prior semester will find their specific requirements listed in the Catalog under which they entered. Archived Catalogs are accessible through the college website at <http://mxcc.edu/catalogs-and-schedules/>.



Middlesex Community College
Technology Studies: Engineering Technology
Associate in Science Degree
GRADUATION CHECKLIST

This program is a **College of Technology Transfer-Oriented Degree** that is intended to be completed before you continue your education at the baccalaureate level. Individual articulation agreements may exist with specific universities so that your degree is completely accepted with all credits transferring. Please check with your Academic Advisor to ensure you enroll in the appropriate courses to ensure seamless transfer to your intended transfer institution.

| Category | Course | Cr | Semester Taken | Grade |
|---|-----------------------------------|----|----------------|-------|
| General Education Requirements for College of Technology Programs (29 credits) | | | | |
| Aesthetic Dimensions Elective | Fine Arts Elective | 3 | | |
| Oral Communication | COM* 173: Public Speaking | 3 | | |
| Quantitative Reasoning | MAT*167: Principles of Statistics | 3 | | |
| Scientific Knowledge | CHE* 121: General Chemistry I | 4 | | |
| Scientific Reasoning | PHY* 121: General Physics I | 4 | | |
| Social Phenomena (1 of 2): ECN* Elective | ECN* | 3 | | |
| Social Phenomena (2 of 2) Elective: PSY* OR SOC* Elective | PSY* OR SOC* | 3 | | |
| Written Communication (1 of 2) | ENG* 101: Composition | 3 | | |
| Written Communication (2 of 2) | ENG* 202: Technical Writing | 3 | | |

| | | | | |
|--|---|-----------|--|--|
| Program Requirements (37 credits) | | | | |
| Program Requirement | MAT* 186: Precalculus | 4 | | |
| Program Requirement | MAT* 254: Calculus I | 4 | | |
| Program Requirement | MAT* 256: Calculus II | 4 | | |
| Program Requirement | CHE* 122: General Chemistry II OR PHY* 122: General Physics II | 4 | | |
| Program Requirement | CAD* 110: Introduction to CAD OR CAD* 219: Drafting 3 | 3 | | |
| Program Requirement | EGR* 211: Applied Mechanics I (Statics) | 3 | | |
| Program Requirement | EGR* 212: Applied Mechanics II (Dynamics) | 3 | | |
| Program Requirement | Directed Elective ++ | 3 | | |
| HIS* OR ECN* Elective | HIS* OR ECN* | 3 | | |
| GEO*, HIS* OR POL* Elective | GEO*, HIS* OR POL* | 3 | | |
| PHL* Elective | PHL* | 3 | | |
| TOTAL CREDITS | | 66 | | |

++ Please consult Advisor

STEM (Science, Technology, Engineering, Math)

ENVIRONMENTAL SCIENCE

Associate Degree

School of Allied Health, Business, and STEM

Program Coordinator: Professor Christine Witkowski
Office Location: Wheaton Hall 217
Telephone: (860) 343-5781
Email: cwitkowski@mxcc.edu

Description

This curriculum is designed to prepare students for employment at the assistant or semi-professional level in public or private organizations dealing with pollution prevention and control. It is intended to be flexible by allowing substitution of courses that will tailor the curriculum to individual student needs or occupational objectives.

As a final experience students complete an internship that provides valuable job training and frequently leads to full time employment.

Learning Outcomes

Upon successful completion of all program requirements, graduates will be able to:

1. Discuss the major environmental issues facing society, including their short- and long-term impacts and the potential for applying sustainable technologies and solutions.
2. Demonstrate knowledge of the fundamental scientific principles underlying environmental issues, emphasizing interrelationships between biological, chemical, and geological processes in the Earth system.
3. Apply the scientific method of inquiry to environmental questions using a combination of laboratory skills, field skills, knowledge of experimental design, statistical analysis, and critical thinking.
4. Use appropriate computational, graphical, and communication methods to analyze and present scientific data effectively, using up-to-date technologies as appropriate.
5. Research and assess the accuracy of information from a variety sources, including print publications, broadcast media, and online resources.
6. Work effectively both individually and as a team member to assess environmental problems and conduct scientific investigations.
7. Perform work in accordance with standard laboratory and field safety procedures.
8. Identify career options and educational pathways for a variety of environmental science careers locally, regionally, and nationally, including skills and knowledge needed to be successful.

A Note about Program Requirements

The program requirements listed in this Catalog are for students entering into this program in Fall 2017 or Spring 2018. Students who entered the program during a prior semester will find their specific requirements listed in the Catalog under which they entered. Archived Catalogs are accessible through the college website at <http://mxcc.edu/catalogs-and-schedules/>.



Middlesex Community College
Environmental Science
 Associate in Science Degree
GRADUATION CHECKLIST

This program is a **Transfer-Oriented Degree** that is intended to be completed before you continue your education at the baccalaureate level. Individual articulation agreements may exist with specific universities so that your degree is completely accepted with all credits transferring. Please check with your Academic Advisor to ensure you enroll in the appropriate courses to ensure seamless transfer to your intended transfer institution.

| Category | Course | Cr | Semester Taken | Grade |
|---|---|-----|----------------|-------|
| General Education Requirements for Transfer Programs (32-33 credits) | | | | |
| Aesthetic Dimensions Elective | | 3 | | |
| Historical Knowledge Elective | | 3 | | |
| Oral Communication | COM* 173: Public Speaking | 3 | | |
| Quantitative Reasoning Elective | MAT*167: Principles of Statistics (or higher) | 3-4 | | |
| Scientific Knowledge | GLG* 120: Dynamic Earth | 4 | | |
| Scientific Reasoning | CHE* 121: General Chemistry I | 4 | | |
| Social Phenomena (1 of 2) Elective | | 3 | | |
| Social Phenomena (2 of 2) Elective | | 3 | | |
| Written Communication Requirement | ENG* 101: Composition | 3 | | |
| Written Communication Elective | | 3 | | |

| Program Requirements (minimum 28-29 credits) | | | | |
|---|---|--------------|--|--|
| Program Requirement | BIO* 173: Intro to Ecology | 4 | | |
| Program Requirement | CSC*101: Intro to Computers OR higher | 3 | | |
| Program Requirement | EVS* 100: Intro to Environmental Science | 3 | | |
| Program Requirement | EVS* 111: Environmental Science Laboratory | 1 | | |
| Program Requirement | EVS* 135: Exploring Environmental Career | 1 | | |
| Program Requirement | MAT*173: College Algebra (or higher) | 4 | | |
| Scientific Knowledge/Reasoning OR EGR* Elective * | | 3-4 | | |
| Program Requirement | Choose two from: BIO*121: General Biology I, BIO*122: General Biology II, CHE*122: General Chemistry II, CHE*250: Instrumental Analysis, PHY*121: General Physics I, or PHY*122: General Physics II | 4 | | |
| | | 4 | | |
| TOTAL CREDITS | | 60-62 | | |

* ENV* 292 is recommended for students who would benefit from further career exploration or work experience. EGR* 111 is recommended for students interested in Environmental Engineering.

STEM (Science, Technology, Engineering, Math)

MANAGEMENT INFORMATION SYSTEMS Associate Degree

School of Allied Health, Business, and STEM

Program Coordinator: Professor Donna Hylton
Office Location: Snow Hall 512
Telephone: (860) 343-5774
Email: dhylton@mxcc.edu

Description

The Management Information Systems program combines Business and Information Technology curricula which includes general education, business, and computer courses that are normally taken at a baccalaureate institution. Business and computer science majors may see this degree as a conduit that transitions them into the highly desirable field of technology management. The program will reinforce the communication, business, and technology skills necessary to succeed in the business environment. Courses in this program will transfer to other four-year colleges in the Management Information Systems and/or computer degree programs. Students intending to transfer should meet with the Coordinator of the Management Information Systems program for advising. According to the U.S. Bureau of Labor Statistics, the employment of computer and information systems managers is expected to grow 15% from 2014 to 2024; this is much faster than the average of all occupations. Demand for computer and information systems managers will continue to grow as firms increasingly expand their operations to include digital platforms.

Learning Outcomes

Upon successful completion of all program requirements, graduates will be able to:

1. Analyze, develop, and design code through knowledge and comprehension of information systems concepts and skills
2. Identify, gather, measure summarize, verify, analyze, design, develop and test programs and hardware design.
3. Identify and solve unstructured problems in unfamiliar setting and exercise judgment based on facts.
4. Communicate through development of proficiency in oral/written/electronic communication skills and the development of the ability to explain programming concepts and code to others.
5. Work collaboratively with a diverse team, including organization, control, and assessments of group-based work, and provide leadership when appropriate.
6. Apply current technology, analyze business problems, and design and develop software.
7. Communicate using network technologies, access information via internet, and understand information integrity and security issues.
9. Gain awareness of legal, regulatory, and ethical issues facing the profession, awareness of information technology and network security, and understanding the methods for creating and managing change in organizations.

A Note about Program Requirements

The program requirements listed in this Catalog are for students entering into this program in Fall 2017 or Spring 2018. Students who entered the program during a prior semester will find their specific requirements listed in the Catalog under which they entered. Archived Catalogs are accessible through the college website at <http://mxcc.edu/catalogs-and-schedules/>.



Middlesex Community College
Management Information Systems
Associate in Science Degree
GRADUATION CHECKLIST

This program is a **Transfer-Oriented Degree** that is intended to be completed before you continue your education at the baccalaureate level. Individual articulation agreements may exist with specific universities so that your degree is completely accepted with all credits transferring. Please check with your Academic Advisor to ensure you enroll in the appropriate courses to ensure seamless transfer to your intended transfer institution.

| Category | Course | Cr | Semester Taken | Grade |
|--|--|----|----------------|-------|
| General Education Requirements for Transfer Programs (31 credits) | | | | |
| Aesthetic Dimensions Elective | | 3 | | |
| Historical Knowledge: HIS* Department Elective | HIS* | 3 | | |
| Oral Communication | COM* 173: Public Speaking | 3 | | |
| Quantitative Reasoning | MAT*167: Principles of Statistics | 3 | | |
| Scientific Knowledge Elective with lab | | 4 | | |
| Scientific Reasoning | CSC* 220: Object-Oriented Programming using JAVA | 3 | | |
| Social Phenomena (1 of 2) | ECN* 101: Principles of Macroeconomics OR ECN* 102: Principles of Microeconomics | 3 | | |
| Social Phenomena (2 of 2) | SOC* 101: Principles of Sociology | 3 | | |
| Written Communication (1 of 2) | ENG* 101: Composition | 3 | | |
| Written Communication (2 of 2) | ENG* 202: Technical Writing | 3 | | |

| Program Requirements (30 credits) | | | | |
|--|--|-----------|--|--|
| Program Requirement | ACC* 113: Principles of Financial Accounting | 3 | | |
| Program Requirement | ACC* 117: Principles of Managerial Accounting OR BFN* 201: Principles of Finance | 3 | | |
| Program Requirement | BBG* 231: Business Law I OR BBG* 234 Legal Environment of Business | 3 | | |
| Program Requirement | BBG* 295: Cooperative Work Experience OR CSC* 295: Coop Ed/Work Experience | 3 | | |
| Program Requirement | BMG* 202: Principles of Management OR BMK* 201: Principles of Marketing | 3 | | |
| Program Requirement | BMG* 204: Managerial Communications | 3 | | |
| Program Requirement | CSC* 105: Programming Logic | 3 | | |
| Program Requirement | CSC* 205: Visual Basic I | 3 | | |
| Program Requirement | CST* 201: Intro to Management Information System | 3 | | |
| Program Requirement | Choose One from: (Circle One) CSA* 140: Database Applications, CST* 120: Introduction to Operating Systems, CST*228 Voice and Data Interworking, CST*231 Data Communication and Networking, OR DGA*241 Internet Web Design | 3 | | |
| TOTAL CREDITS | | 61 | | |

STEM (Science, Technology, Engineering, Math)

MANUFACTURING ENGINEERING TECHNOLOGY

Technology Studies Associate Degree Option

School of Allied Health, Business, and STEM • Statewide College of Technology

| | |
|-------------------------|--|
| Program Advisor: | Associate Professor Hubert Godin |
| Program Office: | Founders Hall 131A (through September 2017) |
| Telephone: | (860) 343-5841 |
| Email: | hgodin@mxcc.edu |

Description

The Manufacturing Engineering Technology degree is a pathway for students wanting to earn a Bachelor of Science degree at Central Connecticut State University and other four year institutions. This program is similar to the Technology Studies: Manufacturing Machine Technology degree program we currently offer with the difference being more of an emphasis on mathematics and science. Although designed to be a transfer program, graduates of pathway program are also well prepared for employment. Graduates are prepared for high tech jobs in manufacturing by developing the technical skills, computer literacy, analytical and critical thinking skills, and soft skills required employment. Since manufacturing jobs make up more than 10% of jobs in the state of Connecticut and with an aging workforce, graduates of this program have strong career prospects. Manufacturing Engineers do interesting work at a higher than average rate of pay with full fringe benefits. Graduates of this pathway have the option of completing a Bachelor of Science degree as either full time or as part time students earning an income and gaining practical experience in their field.

A Note about Program Requirements

The program requirements listed in this Catalog are for students entering into this program in Fall 2017 or Spring 2018. Students who entered the program during a prior semester will find their specific requirements listed in the Catalog under which they entered. Archived Catalogs are accessible through the college website at <http://mxcc.edu/catalogs-and-schedules/>.



Middlesex Community College
Technology Studies: Manufacturing Engineering
Technology Pathway
Associate in Science Degree
GRADUATION CHECKLIST

This program is a **College of Technology Transfer-Oriented Degree** that is intended to be completed before you continue your education at the baccalaureate level. Individual articulation agreements may exist with specific universities so that your degree is completely accepted with all credits transferring. Please check with your Academic Advisor to ensure you enroll in the appropriate courses to ensure seamless transfer to your intended transfer institution.

| Category | Course | Cr | Semester Taken | Grade |
|--|---|----|----------------|-------|
| General Education Requirements for Transfer Programs (33 credits) | | | | |
| Aesthetic Dimensions Elective | | 3 | | |
| Historical Knowledge Elective | | 3 | | |
| Oral Communication | COM* 173: Public Speaking | 3 | | |
| Quantitative Reasoning | MAT* 254: Calculus I | 4 | | |
| Scientific Knowledge | CHE* 121: General Chemistry I | 4 | | |
| Scientific Reasoning | PHY* 121 General Physics I OR PHY* 221 Calculus Based Physics | 4 | | |
| Social Phenomena (1 of 2): ECN* Department Elective | ECN* | 3 | | |
| Social Phenomena (2 of 2) Elective | | 3 | | |
| Written Communication (1 of 2) | ENG* 101: Composition | 3 | | |
| Written Communication (2 of 2) | ENG* 202: Technical Writing | 3 | | |

| | | | | |
|--|---|-----------|--|--|
| Program Requirements (33 credits) | | | | |
| Program Requirement | CAD* 110: Introduction to CAD OR CAD* 220: Parametric Design (Solidworks) | 3 | | |
| Program Requirement | EGR* 112 Engineering Drawing Specifications | 3 | | |
| Program Requirement | EGR*211 Applied Mechanics (Statics) | 3 | | |
| Program Requirement | MAT*256 Calculus II | 4 | | |
| Program Requirement | MFG* 150 Introduction to Machine Technology | 4 | | |
| Program Requirement | MFG*168: CNC I | 3 | | |
| Program Requirement | MFG* 202: Precision Machining | 3 | | |
| Program Requirement | MFG* 203: Precision Machining Lab | 1 | | |
| Program Requirement | MFG*239 Geometric Dimensioning & Tolerancing | 3 | | |
| Program Requirement | MFG*256: Manufacturing Machinery CNC II | 3 | | |
| GEO*, HIS*, POL* Elective | | 3 | | |
| TOTAL CREDITS | | 66 | | |

STEM (Science, Technology, Engineering, Math)

MANUFACTURING MACHINE TECHNOLOGY

Technology Studies Associate Degree Option

School of Allied Health, Business, and STEM • *Statewide College of Technology*

| | |
|-------------------------|--|
| Program Advisor: | Associate Professor Hubert Godin |
| Program Office: | Founders Hall 131A (through September 2017) |
| Telephone: | (860) 343-5841 |
| Email: | hgodin@mxcc.edu |

Description

To consider a career in manufacturing two myths must be dispelled. Myth number one: Manufacturing jobs are dirty, noisy, and repetitious. Most of these jobs have gone overseas and what remains are high tech jobs that require computer literacy, strong analytical and critical thinking skills, and the ability to work as a member of a team. Myth number two: There is no future in manufacturing. Manufacturing jobs make up more than 10% of all jobs in the state of Connecticut. Through attrition and the need for a highly skilled workforce, manufacturers are facing a shortage of skilled workers. This could be an opportunity to explore a career doing interesting work at a higher than average rate of pay with full fringe benefits. Students completing this program can find careers as CNC (Computer Numerical Control) operators, inspectors and Tool & Die apprentices. Students completing a degree at a four-year institution can find careers in sales or management.

A Note about Program Requirements

The program requirements listed in this Catalog are for students entering into this program in Fall 2017 or Spring 2018. Students who entered the program during a prior semester will find their specific requirements listed in the Catalog under which they entered. Archived Catalogs are accessible through the college website at <http://mxcc.edu/catalogs-and-schedules/>.



Middlesex Community College
Technology Studies: Manufacturing Machine
Technology
Associate in Science Degree
GRADUATION CHECKLIST

This program is a **College of Technology Transfer-Oriented Degree** that is intended to be completed before you continue your education at the baccalaureate level. Individual articulation agreements may exist with specific universities so that your degree is completely accepted with all credits transferring. Please check with your Academic Advisor to ensure you enroll in the appropriate courses to ensure seamless transfer to your intended transfer institution.

| Category | Course | Cr | Semester Taken | Grade |
|--|---|----|----------------|-------|
| General Education Requirements for Transfer Programs (33 credits) | | | | |
| Aesthetic Dimensions Elective | | 3 | | |
| Historical Knowledge Elective | | 3 | | |
| Oral Communication | COM* 173: Public Speaking | 3 | | |
| Quantitative Reasoning | MAT* 167: Principles of Statistics | 4 | | |
| Scientific Knowledge | CHE* 111: Concepts of Chemistry OR CHE* 121: General Chemistry I | 4 | | |
| Scientific Reasoning | PHY* 110 Introductory Physics OR PHY* 121 General Physics I | 4 | | |
| Social Phenomena (1 of 2): ECN* Department Elective | ECN* | 3 | | |
| Social Phenomena (2 of 2) Elective | | 3 | | |
| Written Communication (1 of 2) | ENG* 101: Composition | 3 | | |
| Written Communication (2 of 2) | ENG* 202: Technical Writing | 3 | | |

| | | | | |
|---|--|--------------|--|--|
| Program Requirements (34-36 credits) | | | | |
| Program Requirement | CAD* 110: Introduction to CAD OR CAD* 220: Parametric Design (Solidworks) | 3 | | |
| Program Requirement | MFG* 124 Blueprint Reading I or EGR*112 Engineering Drawing Specifications | 2-3 | | |
| Program Requirement | MFG* 105: Manufacturing Math II or MAT* 186 Pre-Calculus | 3-4 | | |
| Program Requirement | MFG* 150: Introduction to Machine Technology | 4 | | |
| Program Requirement | MFG* 168: CNC I | 3 | | |
| Program Requirement | MFG* 202: Precision Machining or MFG* 165 Intermediate Machine Technology | 3 | | |
| Program Requirement | MFG* 203: Precision Machining Lab* (Not required if student completes MFG* 165) | 1 | | |
| Program Requirement | MFG* 160 Introduction to GD&T or MFG* 239 Geometric Dimensioning & Tolerancing | 3 | | |
| Program Requirement | MFG* 256: Manufacturing Machinery CNC II | 3 | | |
| Program Requirement | QUA* 114: Principles of Quality Control | 3 | | |
| GEO*, HIS*, POL* Elective | | 3 | | |
| PHL* Elective | PHL* | 3 | | |
| TOTAL CREDITS | | 67-69 | | |

STEM (Science, Technology, Engineering, Math)

MANUFACTURING MACHINE TECHNOLOGY Certificate

School of Allied Health, Business, and STEM • Statewide College of Technology

Program Advisor: Associate Professor Hubert Godin
Program Office: Founders Hall 131A (through September 2017)
Telephone: (860) 343-5841
Email: hgodin@mxcc.edu

Description

Manufacturing jobs today make up more than 10 percent of all jobs in the state of Connecticut. Through attrition and the need for a highly skilled workforce, manufacturers are facing a shortage of skilled workers. This could be an opportunity to explore a career doing interesting work at a higher-than-average pay rate, with full benefits.

Students completing this program can find careers as CNC (Computer Numerical Control) operators, inspectors and Tool & Die apprentices. Students wishing to advance their careers may do coursework on a full-time basis and complete the program within one year or on a part-time basis. We are currently offering a part-time night and weekend program. This program is designed to appeal to students that don't have the time to enroll and complete coursework as full-time college students. The goals are to encourage single parents and those that feel they are underemployed to pursue careers in manufacturing and to provide the opportunity for completion of the program within two years.

A Note about Program Requirements

The program requirements listed in this Catalog are for students entering into this program in Fall 2017 or Spring 2018. Students who entered the program during a prior semester will find their specific requirements listed in the Catalog under which they entered. Archived Catalogs are accessible through the college website at <http://mxcc.edu/catalogs-and-schedules/>.

| Requirements | Cr |
|---|--------------|
| CAD*110: Introduction to CAD or CAD*220 Parametric Design (SolidWorks) | 3 |
| MFG*105 Manufacturing Math II | 3 |
| MFG*120: Metrology | 3 |
| MFG*124: Blueprint Reading I or EGR*112 Engineering Drawing Specifications | 2 or 3 |
| MFG*125 Blueprint Reading II | 3 |
| MFG*150: Introduction to Machine Technology | 4 |
| MFG*160: Introduction to GD&T or MFG*239 Geometric Dimensioning & Tolerancing | 3 |
| MFG*165 Intermediate Machine Technology or MFG*202 Precision Machining | 3 |
| MFG*203 Precision Machining Lab (Not required if student completes MFG*165) | 1 |
| MFG*166: Benchwork | 1 |
| MFG*168: CNC I | 3 |
| MFG*256 Manufacturing Machinery CNC II | 3 |
| QUA*114: Principles of Quality Control | 3 |
| TOTAL CREDITS | 35-36 |

STEM (Science, Technology, Engineering, Math)

MATHEMATICS STUDIES

Associate Degree

School of Allied Health, Business, and STEM

Discipline Coordinator: Professor Steve Krevisky
Office Location: Wheaton Hall 310
Telephone: (860) 343-5
Email: skrevisky@mxcc.edu



This program is a Connecticut State Colleges & Universities Transfer Ticket!

Transfer Tickets are new degree programs providing pathway for community college students to complete degree programs that transfer to Connecticut State Universities (Central, Eastern, Southern, and Western) and Charter Oak State College without losing any credits or being required to take extra credits in order to complete a bachelor's degree in that same discipline. You will be able to transfer, apply to competitive admissions majors, and complete your BA/BS degree in the same time and with the same course requirements as students who start at a CSU or COSC.

| Category | Course | Cr | Semester Taken | Grade |
|--|---|----|----------------|-------|
| General Education Requirements for Transfer Programs (33 credits) | | | | |
| Aesthetic Dimensions Elective | | 3 | | |
| Continued Learning and Information Literacy Elective | | 3 | | |
| Historical Knowledge Elective | | 3 | | |
| Oral Communication Elective | | 3 | | |
| Quantitative Reasoning | MAT* 186 Pre- Calculus | 4 | | |
| Scientific Knowledge and Understanding | Choose one from: BIO* 122: General Biology II, CHE* 122: General Chemistry II OR PHY* 122: General Physics II | 4 | | |
| Scientific Reasoning | Choose one from: BIO* 121: General Biology I, CHE* 121: General Chemistry I OR PHY* 121: General Physics I | 4 | | |
| Social Phenomena Elective | | 3 | | |
| Written Communication (1 of 2) | ENG* 101: Composition | 3 | | |
| Written Communication (2 of 2) Elective | | 3 | | |

| | | | | |
|---|--|-----------|--|--|
| Program Requirements (18 credits) | | | | |
| Program Requirement | MAT* 254: Calculus I | 4 | | |
| Program Requirement | MAT* 256: Calculus II | 4 | | |
| Program Requirement | MAT* 268: Calculus III | 4 | | |
| Program Requirement | MAT* 272: Linear Algebra OR MAT* 285: Differential Equations | 3 | | |
| Program Requirement | CSC* 105: Programming Logic | 3 | | |
| Unrestricted Electives (9 credits) * | | | | |
| Unrestricted Elective | | 3 | | |
| Unrestricted Elective | | 3 | | |
| Unrestricted Elective | | 3 | | |
| TOTAL CREDITS | | 60 | | |

* You are free to choose any courses at or above 100-level to complete unrestricted electives, although you may need to use these credits to take courses that prepare you for required courses in the degree program. You should also consider using unrestricted electives to meet foreign language requirements for your program. You can also complete other General Education requirements for CCSU, SCSU, WCSU, and COSC- but not more than two requirements for ECSU. You are encouraged to meet with your advisor to determine which courses to select.

STEM (Science, Technology, Engineering, Math)

PHYSICS STUDIES

Associate Degree

School of Allied Health, Business, and STEM

Pathway Advisor: Professor Mark Busa
Office Location: Wheaton Hall 313
Telephone: (860) 343-5779
Email: mbusa@mxcc.edu



This program is a Connecticut State Colleges & Universities Transfer Ticket!

Transfer Tickets are new degree programs providing pathway for community college students to complete degree programs that transfer to Connecticut State Universities (Central, Eastern, Southern, and Western) and Charter Oak State College without losing any credits or being required to take extra credits in order to complete a bachelor's degree in that same discipline. You will be able to transfer, apply to competitive admissions majors, and complete your BA/BS degree in the same time and with the same course requirements as students who start at a CSU or COSC.

| Category | Course | Cr | Semester Taken | Grade |
|--|-------------------------------------|-----------|----------------|-------|
| General Education Requirements for Transfer Programs (33 credits) | | | | |
| Aesthetic Dimensions Elective | | 3 | | |
| Continued Learning and Information Literacy Elective | | 3 | | |
| Historical Knowledge Elective | | 3 | | |
| Oral Communication Elective | | 3 | | |
| Quantitative Reasoning | MAT*254 Calculus I | 4 | | |
| Scientific Knowledge and Understanding | CHE* 122: General Chemistry II | 4 | | |
| Scientific Reasoning | CHE* 121: General Chemistry I | 4 | | |
| Social Phenomena Elective | | 3 | | |
| Written Communication (1 of 2) | ENG* 101: Composition | 3 | | |
| Written Communication (2 of 2) Elective | | 3 | | |
| Program Requirements (19 credits) | | | | |
| Program Requirement | MAT* 256: Calculus II | 4 | | |
| Program Requirement | MAT* 268: Calculus III | 4 | | |
| Program Requirement | MAT* 285: Differential Equations | 3 | | |
| Program Requirement | PHY* 221: Calculus Based Physics I | 4 | | |
| Program Requirement | PHY* 222: Calculus Based Physics II | 4 | | |
| Unrestricted Electives (9 credits) * | | | | |
| Unrestricted Elective | | 3 | | |
| Unrestricted Elective | | 3 | | |
| Unrestricted Elective | | 3 | | |
| TOTAL CREDITS | | 61 | | |

* You are free to choose any courses at or above 100-level to complete unrestricted electives, although you may need to use th credits to take courses that prepare you for required courses in the degree program. You should also consider using unrestrict electives to meet foreign language requirements for your program. You can also complete other General Education requirements CCSU, SCSU, WCSU, and COSC- but not more than two requirements for ECSU. You are encouraged to meet with your adviso determine which courses to select.

STEM (Science, Technology, Engineering, Math)

SOFTWARE DEVELOPER

Certificate

School of Allied Health, Business, and STEM

Program Coordinator: Professor Donna Hylton
Office Location: Snow Hall 512
Telephone: (860) 343-5774
Email: dhylton@mxcc.edu

Description

This certificate targets the skills required in the field of software development, including algorithm design, writing programs in Java and C#, developing applications for mobile devices, and designing and creating databases. Additionally, students will learn about the systems development life cycle and how technology is used to solve business problems. Students will problem solve, learn about the Information Technology (IT) industry, and explore object-oriented programming languages. Certificate recipients may apply these skills to seek entry-level positions in related areas of IT.

The Software Developer Certificate program is a 24-credit program; the courses required by this certificate may transfer to the Computer Information Technology Associate's degree programs at MxCC.

A Note about Program Requirements

The program requirements listed in this Catalog are for students entering into this program in Fall 2017 or Spring 2018. Students who entered the program during a prior semester will find their specific requirements listed in the Catalog under which they entered. Archived Catalogs are accessible through the college website at <http://mxcc.edu/catalogs-and-schedules/>.

| Requirements | Cr |
|--|-----------|
| CSA*140: Database Applications | 3 |
| CSC*105: Programming Logic | 3 |
| CSC*220: Object-Orient Programming Using Java | 3 |
| CSC*231: Database Design I | 3 |
| CSC*249: Contemporary Business Application Development I | 3 |
| CSC*262: Programming Mobile Devices | 3 |
| CSC*295: Coop Ed/Work Experience | 3 |
| CST*201: Intro to Management Information Systems | 3 |
| TOTAL CREDITS | 24 |

STEM (Science, Technology, Engineering, Math)

TECHNOLOGY STUDIES

Associate Degree

School of Allied Health, Business, and STEM • Statewide College of Technology

| | |
|-----------------------------|--|
| Program Coordinator: | Associate Professor Dr. Lin Lin |
| Office Location: | Wheaton Hall 209 (through Aug. 2017), then Wheaton Hall 313 |
| Telephone: | (860) 343-5763 |
| Email: | <u>llin@mxcc.edu</u> |

Description

The College of Technology is a specialized curriculum that allows a student to begin technology or engineering technology studies at any of the state's twelve Community Colleges with the ultimate goal of achieving a 4-year, baccalaureate degree in Technology at Central Connecticut State University or Charter Oak State College. The curriculum is designed to serve as the first two years of the Bachelor of Science degree. Some courses in this program are not offered at Middlesex Community College but can be taken at other Connecticut community colleges.



Middlesex Community College
Technology Studies
Associate in Science Degree
GRADUATION CHECKLIST

This program is a **College of Technology Transfer-Oriented Degree** that is intended to be completed before you continue your education at the baccalaureate level. Individual articulation agreements may exist with specific universities so that your degree is completely accepted with all credits transferring. Please check with your Academic Advisor to ensure you enroll in the appropriate courses to ensure seamless transfer to your intended transfer institution.

| Category | Course | Cr | Semester Taken | Grade |
|---|---|----|----------------|-------|
| General Education Requirements for College of Technology Programs (29 credits) | | | | |
| Aesthetic Dimensions Elective | Fine Arts Elective | 3 | | |
| Oral Communication | COM* 173: Public Speaking | 3 | | |
| Quantitative Reasoning | MAT*167: Principles of Statistics | 3 | | |
| Scientific Knowledge | CHE* 111: Concepts Of Chemistry OR CHE* 121: General Chemistry I | 4 | | |
| Scientific Reasoning | PHY* 110 Introductory Physics OR PHY* 121 General Physics I | 4 | | |
| Social Phenomena (1 of 2): ECN* Department Elective | ECN* | 3 | | |
| Social Phenomena (2 of 2) Elective | PSY * OR SOC * Elective | 3 | | |
| Written Communication (1 of 2) | ENG* 101: Composition | 3 | | |
| Written Communication (2 of 2) | ENG* 202: Technical Writing | 3 | | |

| | | | | |
|---|------------------------|-----------|--|--|
| Program Requirements (37credits) | | | | |
| Program Requirement | MAT* 186: Precalculus | 4 | | |
| Program Requirement | CAD* Elective | 3 | | |
| Program Requirement | Directed Elective ++ | 3 | | |
| | | 3 | | |
| Program Requirement | Technical Electives ++ | 3 | | |
| | | 3 | | |
| | | 3 | | |
| | | 3 | | |
| | | 3 | | |
| HIS* OR ECN* Elective | HIS* OR ECN* | 3 | | |
| GEO*, HIS* OR POL* Elective | GEO*, HIS* OR POL* | 3 | | |
| PHL* Elective | PHL* | 3 | | |
| TOTAL CREDITS | | 66 | | |

++ Please consult Advisor.

CREDIT COURSE DESCRIPTIONS

Credit Course Numbering System in Connecticut's Community Colleges

000-099 — “Intensive” remedial courses which some students may be required to take as preparation for college level work. Since they are not college-level courses, they do not count toward graduation in any degree or certificate program at MxCC.

100-199 — “Introductory” courses, general education courses, and courses taken in a college major within the first year (the first 30 credits) of college study.

200-299 — “Upper level” general education courses, and courses taken in a college major within the second year (the next 30 credits) of college study. Typically, these courses first require students to complete prior courses in the same subject (prerequisites).

Most courses at MxCC expect students to be ready for college level work in reading, writing, and math. This can be demonstrated through scores on a placement test or standardized test (SAT, ACT), or successfully completing a remedial course. MxCC also has many courses which have no required prerequisites. A list of these courses begins on the next page.

Courses usually count for three (3) credits per semester. One credit hour is equal to one hour of classroom work, plus two hours of study, preparation, and homework outside of class time. Thus, a 3-credit course requires 9 hours of time on the students' part. Exceptions include laboratory or studio courses and some mathematics, accounting and language courses. The credits and classroom hours (if different) for all courses are listed next to the course titles in the course descriptions.

Interested in transferring to a State University, Charter Oak State College, or UConn

Look up MxCC course equivalencies at the Connecticut State Universities, Charter Oak State College, and the University of Connecticut, on our Transfer Planning page.

Courses with No Prerequisites

The following courses are open to all students. None of them require placement testing, completion of previous college courses, or enrollment in a specific academic program. All are 3 college credits/3 contact hours per week, except where indicated. **\$\$ - Supplemental Course Fee applies.**

Accounting (ACC*)

ACC*100, Basic Accounting

Art (ART*)

ART*109, Color Theory

ART*111, Drawing I (3 credits/4 contact hours) [\\$\\$](#)

ART*116, Perspective Drawing (3 credits/4 contact hours) [\\$\\$](#)

ART*121, Two-Dimensional Design (3 credits/4 contact hours) [\\$\\$](#)

ART*122, Three-Dimensional Design (3 credits/4 contact hours) [\\$\\$](#)

ART*147/COM*147, Digital Cinematography

ART*163, Ceramic Handbuilding (3 credits/4 contact hours) [\\$\\$](#)

ART*165, Metal and Jewelry Design I (3 credits/4 contact hours) [\\$\\$](#)

ART*166, Metal and Jewelry Design II (3 credits/4 contact hours) [\\$\\$](#)

ART*250, Digital Photography

Computer-Aided Drafting (CAD*)

CAD*110, Introduction to CAD

CAD*171, Mechanical 3-D CAD (Autodesk Inventor)

Chinese (CHI*)

CHI*101, Elementary Chinese I

College Success (COL*)

COL*101, College & Career Success

Communications (COM*)

COM*104, Careers in Media

COM*125/DGA*125, New Media Production

COM*129, Digital Video Production

COM*130, Introduction to Broadcast Communications

COM*131, Audio Production

COM*147/ART*147, Digital Cinematography

COM*179/THR*113, Performance for Film and Television

COM*283, Broadcast Engineering

COM*294, Media Arts Workshop

Computer Science (CS *)

CSC*095, Basic Computer Skills (1 Developmental Credit, Not for graduation credit)

CSC*101, Introduction to Computers

CSC*115, Introduction to Programming with Alice

Criminal Justice (CJS*)

CJS*151, Criminal Justice Supervision and Administration

CJS*298, Special Topics in Criminal Justice

Digital Arts/Multimedia (DGA*)

DGA*101, Introduction to Digital Arts

DGA*110, Computer Graphics

COM*125/DGA*125, New Media Production

Early Childhood Education (ECE*)

ECE*103, Creative Art Experiences for Children

ECE*106, Music and Movement for Children

ECE*141, Infant/Toddler Growth & Development

ECE*176, Health, Safety, and Nutrition

ECE*180, CDA Preparation Course

Economics (ECN*)

ECN*100, Introduction to Economics

Engineering (EGR*)

EGR*112, Engineering Drawing Interpretations

English (ENG*)

EDUC 1003, English Fast Track (Reading-Writing Workshop (0 credits, 24-30 classroom hours)

EDUC 1010, Fast Track: Grammar (0 credits, 5-15 classroom hours)

EDUC 1011, Fast Track: Reading (0 credits, 5-15 classroom hours)

EDUC 1012, Fast Track: Essay Writing (0 credits, 5-15 classroom hours)

EDUC 1017, College and Career Success (0 credits)
EDUC 1020, English Brush-Up Reading/Writing
Workshop (0 credits, 24-30 classroom hours)
ENG*096, Introduction to College English
(6 credits)

Environmental Science (EVS*)

EVS*135, Exploring Environmental Science (1
credit)

French (FRE*)

FRE*101, Elementary French I

Freshman Seminar (FS)

FS100, Freshman Seminar
FS110, College Success

Geography (GEO*)

GEO*101, Introduction to Geography

History (HIS*)

HIS*101, Western Civilization I
HIS*102, Western Civilization II
HIS*107, History of Puerto Rico
HIS*121, World Civilization I
HIS*122, World Civilization II
HIS*201, United States History I
HIS*202, United States History II
HIS*244, Europe in the 20th Century

Human Services (DFS*, HSE*)

DFS*110, Orientation to Deafness
HSE*101, Introduction to Human Services
HSE*116, Youth Advocacy and Community
Organization
HSE*167, Nature & Needs of Persons with Mental
Retardation
HSE*191, Problem Gambling, Treatment, and
Prevention

Italian (ITA*)

ITA*101, Elementary Italian I

Manufacturing (MFG*)

MFG*051, Manufacturing Math I (3 developmental
credits; does not count toward graduation)
MFG*120, Metrology

MFG*123, Measurement for Manufacturing (2
credits)
QUA*114, Principles of Quality Control

Mathematics (MAT*)

EDUC 1002, Fast-Track Math Workshop
(0 credits, 30 classroom hours)
MAT*095-I, Pre-Algebra & Elementary Algebra
Foundations (6 Credits)

Music (MUS*)

MUS*101, Music History and Appreciation I
MUS*104, World Music
MUS*111, Fundamentals of Music I
MUS*117, Electronic Music
MUS*137, History and Appreciation of Jazz
MUS*138, Rock and Roll History and Appreciation
MUS*152, Drumming and Percussion Ensemble

Political Science & Law (POL*)

POL* 103, Introduction to International Relations
POL*111, American Government
POL*112, State and Local Government
POL*120, Introduction to Law
POL*293, Connecticut Legislative Internship
(6 Credits)

Psychology (PSY*)

PSY*103, Introduction to Holistic Wellness
PSY*247, Industrial & Organizational Psychology

Spanish (SPA*)

SPA*101, Elementary Spanish I

Therapeutic Recreation (RLS*)

RLS*121, Intro to Therapeutic Recreation Services
RLS*122, Processes and Techniques in Therapeutic
Recreation

Theater (THR*)

THR*110, Acting I
THR*113/COM*179, Performance for Film and
Television

Accounting (ACC*)

School of Allied Health, Business, and STEM

ACC*100, Basic Accounting (3 Credits)

Gen Ed Competency: Critical Analysis & Logical Thinking

A course in the basic accounting principles with emphasis on recording procedures and payroll for service businesses and professional offices. Students with no previous accounting exposure and limited college course experience should consider taking this course before taking ACC*113 Principles of Financial Accounting. It will satisfy a business or open elective requirement. **May not be taken after ACC*113 or ACC*115 unless the student received a D or F.**

ACC*113, Principles of Financial Accounting (3 Cr.)

This course replaces ACC*115. Students may not get credit for both ACC*113 and ACC*115.

An introduction to financial accounting fundamentals. The basic accounting equation, recording procedures and analysis of corporate statements and specific business accounts are studied.

Prerequisites: Eligible for ENG*101E or ENG*101, and eligible for MAT*137 OR permission of instructor.

ACC*115, Financial Accounting (4 Credits)

This course was replaced by ACC*115. Students may not get credit for both ACC*113 and ACC*115.

ACC*117, Principles of Managerial Accounting (3 cr.)

This course replaces ACC*118. Students may not get credit for both ACC*117 and ACC*118.

An introduction to managerial accounting fundamentals. It is the study of accounting that generates confidential information for use in decision-making and managing and operating a business. It studies cost-benefit criteria, behavioral implications of actions and strategies for setting long and short-range goals.

Prerequisite: ACC*113 or ACC*115.

ACC*118, Managerial Accounting (4 credits)

This course was replaced by ACC*117. Students may not get credit for both ACC*117 and ACC*118.

ACC*125, Accounting Computer Applications I (3 credits)

Use of a computer programs will be used to simulate actual accounting applications on computers. The commercial accounting program includes general ledger, accounts receivable, accounts payable, and payroll. Additional projects are prepared using spreadsheet programs. No previous computer knowledge is required. **Prerequisite:** ACC*113.

ACC*271, Intermediate Accounting I (3 credits)

Gen Ed Competencies: Continuing Learning/ Information Literacy, Critical Analysis & Logical Thinking

An examination of generally accepted accounting principles related to preparation of the financial statements, including the cash flow statement. Valuation and disclosure of current assets including cash, accounts receivable, and inventory are studied in detail. A computerized commercial accounting project is incorporated into the course. **Prerequisite:** ACC*117 or ACC*118.

ACC*272, Intermediate Accounting II (3 credits)

Gen Ed Competencies: Continuing Learning/ Information Literacy, Critical Analysis & Logical Thinking

Continuation of topics begun in ACC*271, including long assets, current liabilities, long term liabilities, stockholder's equity, present value concepts and payroll. A financial statement analysis project is incorporated into the course. **Prerequisite:** ACC*271. *Fulfills an "L" course requirement for students who enrolled in a degree program prior to the Fall 2016 semester.*

Anthropology (ANT*)

School of Arts & Media, Humanities, and Social Sciences

ANT*101, Introduction to Anthropology (3 credits)

Gen Ed Competency: Social Phenomena

A survey of the major fields of anthropology – physical anthropology, archaeology, and cultural anthropology – with an emphasis on the distinctive anthropological perspective on human beings and their works. Non-western cultures will be a focus of the cultural analysis. **Prerequisite:** Eligible for either ENG*101E or ENG*101. *Fulfills an "L" course requirement for students who enrolled in a degree program prior to the Fall 2016 semester.*

ANT*205, Cultural Anthropology (3 credits)

Gen Ed Competency: Social Phenomena

An introduction to the cross-cultural study of human behavior and society. Focus will be on political organization, marriage and family, community organization, economic institutions, culture and personality, religion, social movements and change.

Prerequisite: Eligible for either ENG*101E or ENG*101. *Fulfills a "D" course requirement for students who enrolled in a degree program prior to the Fall 2016 semester.*

ANT*212, Anthropology, Psychology, and Religion (3 credits)

– This cultural anthropology course uses a psychological approach to study of the effects of major world religions on the development of the individual personality in selected cultures. **Prerequisite:** ANT*101, completion of 20 college credits, and permission of the instructor.

Art (ART*)

School of Arts & Media, Humanities, and Social Sciences

\$\$ Supplemental Course Fee: Many studio art courses require a separate fee added at the time of registration in order to cover the cost of additional instructional time, supplies, and materials used by students.

ART*100, Art Appreciation (3 credits)

Gen Ed Competency: Aesthetic Dimensions

This initial course in the visual arts explores the constantly changing world of art, discovering how this form of expression is defined and the rich, varied ways in which it can be appreciated. The study of the individual elements and principles that constitute a work of art is undertaken in this exploration of creativity. Visits to galleries, studios, and museums are an integral part of the course. **Prerequisite:** *Eligible for either ENG*101E or ENG*101. Fulfills a "D" course requirement for students who enrolled in a degree program prior to the Fall 2016 semester.*

ART*101, Art History I (3 credits)

Gen Ed Competency: Aesthetic Dimensions

A study of Western art and architecture from prehistory through the 14th century. **Prerequisite:** *Eligible for either ENG*101E or ENG*101. Fulfills a "D" course requirement for students who enrolled in a degree program prior to the Fall 2016 semester.*

ART*102, Art History II (3 credits)

Gen Ed Competency: Aesthetic Dimensions

Painting, sculpture, and architecture from the Early Christian and Byzantine through the Renaissance, Baroque, and Rococo periods, with consideration of the political, social, economic, and religious influences of the times. **Prerequisite:** *Eligible for either ENG*101E or ENG*101. Fulfills a "D" course requirement for students who enrolled in a degree program prior to the Fall 2016 semester.*

ART*109, Color Theory (3 credits)

Gen Ed Competency: Aesthetic Dimensions

This course is an examination of the action and interaction of color and a study of the visual and psychological factors related to color perception. Students are responsible for purchasing their own supplies.

ART*111, Drawing I (3 credits/4 contact hours)

\$\$ Supplemental Course Fee

Gen Ed Competency: Aesthetic Dimensions

A study of form through gesture, contour line, and the use of light and shade. Various mediums including conte crayon, charcoal, and ink are used in the study of still life and controlled subject matter. Composition is emphasized.

ART*112, Drawing II (3 credits/4 contact hours)

\$\$ Supplemental Course Fee

Gen Ed Competency: Aesthetic Dimensions

Continuation of ART*111 applied to the human figure through the use of "life" models. The course also includes experimental and creative use of materials. **Prerequisite:** ART*111.

ART*116, Perspective Drawing (3 cr./4 contact hours)

\$\$ Supplemental Course Fee

Gen Ed Competency: Aesthetic Dimensions

The system of linear perspective as a method of producing a two-dimensional representation of the three-dimensional world. Problems in one, two, and three-point perspective with some use of projection methods.

ART*121, Two-Dimensional Design (3 credits/4 contact hours)

\$\$ Supplemental Course Fee

Gen Ed Competency: Aesthetic Dimensions

Background in the fundamentals of art through an examination of the basic elements and principles of design. Exercises in composition using paper, ink, and paint. The second half of the semester consists of the study of color and includes problems dealing with physical and relative properties.

ART*122, Three-Dimensional Design

(3 credits/4 contact hours) **\$\$ Supplemental Course Fee**

Gen Ed Competency: Aesthetic Dimensions

Use of a variety of materials to investigate the interrelationships of spaces, planes, and volumes.

ART*131, Sculpture I (3 credits/4 contact hours)

\$\$ Supplemental Course Fee

Gen Ed Competency: Aesthetic Dimensions

An introduction to the language of sculpture in its many facets. Projects will include modeling in clay, mold making, cement casting, direct carving, and found object composition. Personal expression through both representation and abstraction is encouraged. Students will need to purchase their own materials and tools. **Prerequisite:** ART*121 or permission of the instructor.

Recommended: ART*122.

ART*147, Digital Cinematography (3 Credits)

Gen Ed Competency: Aesthetic Dimensions

An introduction to photographic principles as they apply to movies and video. This course will use both digital still and video cameras, and cover topics such as composition, depth-of-field, lenses, focal length, exposure, focus, filters, camera angles, camera operation, camera movement, visual effects, and principles of lighting and color; as well as the roles of the Director of Photography and other camera and lighting crew on a production. This is a hands-on course with students

completing a series of practical exercises and production assignments.

ART*155, Watercolor I (3 credits/4 contact hours)

\$\$ Supplemental Course Fee

Gen Ed Competency: Aesthetic Dimensions

In this introductory course basic methods and techniques of watercolor and opaque water-media are presented. Assignments and exercises in acrylic/gouache and watercolor are designed to encourage exploration of the wide range of effects possible with water-media. Experimental methods will be demonstrated as well as traditional techniques such as glazing, wet on wet, and layering. Students will be introduced to the transparent, translucent, and opaque capabilities of water-media painting. Composition, color, design, and art historical reference are emphasized in each of the media. **Prerequisite:** ART*121.

ART*163, Ceramic Handbuilding

(3 credits/4 contact hours) *\$\$ Supplemental Course Fee*

Gen Ed Competency: Aesthetic Dimensions

An Introduction to the fundamentals of ceramic design and construction. Pinch, coil, slab, and modeling techniques will be employed to create functional and sculptural works in clay. Surface treatments, glazing applications, kiln loading and firing processes will be covered. Historical and contemporary approaches to ceramics will be emphasized. Students will need to purchase their own materials and tools.

ART*165, Metal and Jewelry Design I

(3 credits/4 contact hours) *\$\$ Supplemental Course Fee*

Gen Ed Competency: Aesthetic Dimensions

An introduction to basic jewelry techniques such as metal forming, metal weaving, sawing, soldering, and working with hand tools. Students work in base metals such as copper and bronze, or in sterling silver. Design will be heavily emphasized. Students will furnish their own hand tools and materials, which will cost about \$50.

ART*166, Metal and Jewelry Design II

(3 credits/4 contact hours) *\$\$ Supplemental Course Fee*

Gen Ed Competency: Aesthetic Dimensions

An introduction to casting techniques: the primitive techniques such as coal casting, drop casting, cuttle bone casting that are used in less developed countries, as well as the sophisticated technique of lost-wax casting; students will learn how to carve wax, make temporary molds, and ultimately spin molten metal, translating their wax patterns into finished pieces of jewelry. Some materials and tools to be provided by the student, which will cost about \$50.

ART*167, Printmaking I (3 credits/4 contact hours)

\$\$ Supplemental Course Fee

Basic concepts of printmaking are introduced, though mainly relief processes are studied. These include lino cut, woodcut, collage, and mono printing, in black and white and color. A working knowledge of the tools, materials and process of the traditional relief print will be learned, and an imaginative approach taken to the print as a work of fine art. **Prerequisite:** ART*121.

ART*168, Printmaking II (3 credits/4 contact hours)

\$\$ Supplemental Course Fee

The basic intaglio processes of printmaking as an art medium. Techniques of etching, aquatint, engraving, and dry point. **Prerequisite:** ART*167.

ART*215, Illustration (3 credits/4 contact hours)

\$\$ Supplemental Course Fee

Gen Ed Competency: Aesthetic Dimensions

*Students who have taken GRA*220 will not earn credit for ART*215.* Creative exploration of the processes of illustration including design, visualization and sequential imaging, lighting effects, and advanced rendering techniques. Problems presented to develop conceptual, compositional, and technical skills.

Prerequisite: ART*111 or ART*121 or permission of the instructor.

ART*250, Digital Photography (3 credits)

Gen Ed Competencies: Aesthetic Dimensions, Continuing Learning/ Information Literacy,

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 3 megapixel (or greater) digital camera with manual, aperture priority and/or shutter priority exposure modes. There will be some additional expenses. Basic computer and photographic experience preferred.

ART*253, Oil Painting I (3 credits/4 contact hours) *\$\$*

Supplemental Course Fee

Gen Ed Competency: Aesthetic Dimensions

An introduction to the materials and techniques of oil painting. Development of composition through color, form, and textures to meet requirements of a controlled aesthetic concept.

Prerequisites: ART*111 and ART*121.

ART*254, Oil Painting II (3 credits/4 contact hours)

\$\$ Supplemental Course Fee

Gen Ed Competency: Aesthetic Dimensions

Continuation of ART*253 with an emphasis on artistic growth and development of painterly skills. Critical exploration of paint properties and the illusionary effects of color. **Prerequisite:** ART*253.

ART*280, Advanced Digital Photography (3 credits)

Gen Ed Competency: Aesthetic Dimensions

Advanced study of photographic aesthetics, capture and printing techniques, and the history of photography. Students will utilize the latest image editing software to create a portfolio of sophisticated digital images that reflect their personal creativity and vision. Other projects will explore studio lighting, high dynamic range (HDR) imaging and fine art. 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 inkjet output. Students are required to provide their own manually adjustable digital cameras (SLR preferred), printing substrate as specified, and other photographic equipment and materials; a complete list is available from the instructor. A manually adjustable digital camera is a requirement for this course. **Prerequisites:** ART*250 or Demonstrated knowledge of strong computer skills as determined by the Program Coordinator.

ART*299, Independent Study (1-3 Credits)

Students will have an opportunity to pursue with greater depth studio or research projects of particular interest. Must be arranged in the semester prior to registration with departmental approval and with the supervision of an art faculty member. **Prerequisite:** Departmental approval.

Art-Graphic Design (GRA*)

School of Arts & Media, Humanities, and Social Sciences

GRA*150, Introduction to Graphic Design (3 credits)

Gen Ed Competency: Aesthetic Dimensions

An introduction to graphic design, a creative process that uses art, technology, and the written word to produce effective visual communication. Creativity is encouraged through hands-on exercises using fundamental design elements and skills to solve thought-provoking communications problems. Various techniques and mediums, including the computer, are explored in the execution of solutions. **Prerequisites:** ART*121 and DGA*110. **Recommended:** ART*111.

GRA*246, Digital Pre-Press I (3 credits)

An introduction to the principles of color separation and preparation of files for digital output to various media. Includes an understanding of color models, fonts, trapping, scanning, resolution, and data formats. **Prerequisite:** DGA*110. **Recommended:** DGA*231.

GRA*251, Advanced Graphic Design (3 credits)

Gen Ed Competency: Aesthetic Dimensions

Real world execution of visual communications including discussions and exercises in the use of typography, the use of a layout grid, the commissioning of illustration/ photography, print production, and the business side of graphic design. Computer skills are emphasized in the solving of visual communications problems typical of today's graphic design industry. **Prerequisites:** GRA*150 and DGA*231. **Recommended:** DGA*120 or DGA*223.

GRA*296, Graphic Design Internship (3 credits)

Gen Ed Competency: Aesthetic Dimensions

Students work for design companies, printeries, service bureaus, or other relevant businesses. For Graphic Design majors who have nearly completed the requirements for the A.S. degree/Graphic Design Track. Minimum of 120 hours required for 3 credits. **Prerequisite:** Permission of Program Coordinator.

Astronomy (AST*)

School of Allied Health, Business, and STEM

AST*101, Principles of Astronomy (3 credits)

Gen Ed Competency: Scientific Knowledge & Understanding

An introduction to the study of the solar system, the stars, galaxies, nebulae, and newly discovered celestial bodies. Laboratory activities and field trips included. **Prerequisites:** Eligible for either ENG*101E or ENG*101 and either MAT*085, MAT*095-I, or MAT*095 with a "C-" or better or taken concurrently.

Biology (BIO*)

School of Allied Health, Business, and STEM

\$\$ Supplemental Course Fee: Many science lab courses require a separate fee added at the time of registration in order to cover the cost of additional instructional time, supplies, and materials used by students.

BIO*105, Intro. to Biology (4 credits/6 contact hours)

\$\$ Supplemental Course Fee

Gen Ed Competencies: Scientific Knowledge & Understanding, Scientific Reasoning

A course for non-science majors. Topics covered include cell biology, diversity, biotechnology, basic chemistry, cellular respiration and photosynthesis, ecology, genetics, behavior, and evolution. Labs may involve dissection of plant and animal specimens, microscope work, and elementary biochemistry experiments. This course is recommended for students who do not need a full year of laboratory biology. Lecture: 3 hours per week. Laboratory: 3 hours per week. **Prerequisites:** *Eligible for ENG*101 and eligible for MAT*095 (or higher).*

BIO*109, Principles of Biotechnology (3 credits)

Gen Ed Competencies: Historical Knowledge, Scientific Reasoning

This course provides a basic introduction to the field of biotechnology. Students will gain a broad understanding of the goals, products, practices, regulations, ethics, and career paths in the biotechnology industry. Students will acquire the fundamental knowledge of the biotechnology industry through the introduction of molecular biology, contemporary techniques, and applications. In addition, students will learn about current topics from lectures, as well as guest speakers from industry partners. This course is intended for students in the biotechnology program, as well as students exploring career options in the field of science. **Prerequisite:** *Eligible for ENG*101.*

BIO*110, Principles of the Human Body (3 credits)

Gen Ed Competency: Scientific Knowledge & Understanding

This is an introductory course dealing with the structure and function of the human organism and the issues facing humans in today's world. It is intended for students with a limited science background. **Prerequisite:** *Eligible for ENG*101 and eligible for MAT*095 or higher.*

BIO*111, Introduction to Nutrition (3 credits)

Gen Ed Competency: Scientific Knowledge & Understanding

A study of the science of nutrition including the chemical structure, function, digestion, absorption, and metabolism of nutrients. Class discussion will emphasize how poor dietary habits contribute to the formation of diseases associated with the Western diet. Students critically analyze their own diets with respect to nutritional content and adequacy. **Prerequisite:** *High school biology, BIO*110 or permission of instructor.*

BIO*115, Human Biology (4 credits/6 contact hours)

\$\$ Supplemental Course Fee

Gen Ed Competencies: Scientific Knowledge & Understanding, Scientific Reasoning

This course provides a basic introduction to fundamental biological principles and the structure and function of the human body. Selected topics of relevance to humans will be highlighted through case studies. Application of scientific processes, including the scientific method, analysis of data, and drawing appropriate conclusions will be integrated in the laboratory and classroom setting. This course will serve to provide a foundation in biology enabling the student to become a more informed citizen in science. This course is not open to students who have passed a higher level human anatomy and physiology course. **Prerequisite:** *Eligible for ENG*101 and eligible for MAT*137 or higher.*

BIO*118, Anatomy and Physiology of the Eye

This course is listed under Ophthalmic Design & Dispensing (ODD).*

BIO*121, General Biology I

(4 credits/6 contact hours) *\$\$ Supplemental Course Fee*

Gen Ed Competencies: Scientific Knowledge & Understanding, Scientific Reasoning

An introduction to the structure and function of cells including, but not limited to, membrane structure and function, basic biochemistry, cellular respiration, photosynthesis, modern genetics, gene expression, and cell division. Recommended for science majors and pre-allied health students. Lecture: 3 hours per week. Laboratory: 3 hours per week. **Prerequisite:** *Eligible for ENG*101 and eligible for MAT*137 or higher.*

BIO*122, General Biology II

(4 credits/6 contact hours) *\$\$ Supplemental Course Fee*

Gen Ed Competencies: Scientific Knowledge & Understanding, Scientific Reasoning

A study of the diversity of life including evolution, population genetics, phylogenetics, and an overview of the kingdoms of life. Emphasis on structure, function and evolutionary relationships of organisms. Laboratory involves experimental design and

hypothesis testing along with observation of living and preserved specimens, some dissection required. Lecture: 3 hours per week. Laboratory: 3 hours per week. **Prerequisites:** Eligible for ENG*101 and eligible for MAT*137 or higher.

BIO*145, General Zoology (4 credits/6 contact hours)
\$\$ Supplemental Course Fee

Major taxonomic groups of the animal kingdom are studied. Morphology, functional processes, evolutionary relationships and ecology of the various groups are emphasized. Laboratory work encompasses dissection and microscopic examination of appropriate specimens. Lecture: 3 hours per week. Laboratory: 3 hours per week. **Prerequisites:** Eligible for ENG*101 and eligible for MAT*137 or higher.

BIO*173, Introduction to Ecology (4 credits/6 contact hours) *\$\$ Supplemental Course Fee*

Gen Ed Competencies: Scientific Knowledge & Understanding, Scientific Reasoning

This course will explore key concepts and principles of ecology – the study of interactions between organisms and their physical, chemical, and biological environment – within an evolutionary framework and the context of human-caused changes to the natural world. Topics include key physical and chemical environmental features and processes; organismal adaptations; population, community and ecosystem interactions; biodiversity and biogeography; human activities that effect ecosystem processes and biodiversity; and the conservation of ecosystems. This course is intended for both environmental science majors and non-majors. **Prerequisites:** Eligible for ENG*101 and eligible for MAT*095 or higher.

BIO*211, Human Anatomy & Physiology I (4 credits/6 contact hours) *\$\$ Supplemental Course Fee*

Gen Ed Competencies: Scientific Knowledge & Understanding, Scientific Reasoning

This course is the first semester of a two-semester sequence designed to provide a comprehensive study of human anatomy and physiology. Topics include anatomical terminology, chemistry, cellular and general biological principles, histology, and an in-depth study of the integumentary, skeletal, muscular, and nervous systems. Emphasis is on function and homeostasis. Aging and relevant diseases are also presented. Laboratory dissection and physiology experimentation are coordinated with the lecture material. Dissection is required. Three hours of lecture and three hours of laboratory per week. **Prerequisites:** ENG*101E or ENG*101, CHE*111 or higher, and BIO*121 taken within the past 5 years, all with a “C” or better. Fulfills a “D” course requirement for students who enrolled in a degree program prior to the Fall 2016 semester.

BIO*212, Human Anatomy & Physiology II (4 credits/6 contact hours) *\$\$ Supplemental Course Fee*

Gen Ed Competencies: Scientific Knowledge & Understanding, Scientific Reasoning

This course is a continuation of BIO*211 with an emphasis on the anatomy and physiology of the major body systems. Topics include metabolism and energetics, fluid, electrolyte and acid-base balances, development and inheritance, and an in-depth study of the endocrine, cardiovascular, immune, respiratory, digestive, urinary, and reproductive systems. Emphasis is on function and homeostasis. Aging and relevant diseases are also presented. Laboratory dissection and physiology experimentation are coordinated with the lecture material. Dissection is required. Three hours of lecture and three hours of laboratory per week.

Prerequisite: BIO* 211 with a grade of ‘C’ or better taken within the past five years. Fulfills a “D” course requirement or an “L” course requirement for students who enrolled in a degree program prior to the Fall 2016 semester.

BIO*222, Molecular Biotechniques

(4 credits/6 contact hours) *\$\$ Supplemental Course Fee*

A laboratory course designed to introduce molecular biology techniques such as plasmid and chromosomal DNA isolation, restriction enzyme mapping, agarose gel electrophoresis, and manipulation of DNA fragments. Lecture: 3 hours per week. Laboratory: 3 hours per week. **Prerequisite:** CHE*112 or higher and either BIO*121 or BIO*235, OR permission of the instructor.

BIO*235, Microbiology (4 credits/6 contact hours)
\$\$ Supplemental Course Fee

Gen Ed Competencies: Scientific Knowledge & Understanding, Scientific Reasoning

This is an introduction to general microbiology. The course is designed to meet the needs of pre-allied health students as well as biology or science majors. Topics include the structure, physiology, and molecular biology of microorganisms as well as the interactions between microbes and their hosts, including their role in the environment. Students also learn how microbes are studied and how they can cause disease and yet are essential to human well-being. There are laboratory exercises each week that will teach the basics of aseptic techniques as well as handling, culturing, and identifying microbes. Lecture: 3 hours per week. Laboratory: 3 hours per week. **Prerequisites:** ENG*101E or 101, CHE*111 or higher with a grade of “C” or better, and either BIO*105 or BIO*121 taken within the past five years. All with a grade of “C” or better. Fulfills an “L” course requirement for students who enrolled in a degree program prior to the Fall 2016 semester.

BIO*260, Principles of Genetics (3 credits)

This course deals with classical principles of human genetics as well as topics in modern molecular genetics in areas such as recombinant DNA, biotechnology, gene mapping and diagnosis

of human genetic diseases. **Prerequisite:** BIO*121 or BIO*122 OR permission of the instructor. Fulfills an "L" course requirement for students who enrolled in a degree program prior to the Fall 2016 semester.

BIO*263, Molecular Genetics (4 credits/6 contact hours) *\$\$ Supplemental Course Fee*

Gen Ed Competencies: Scientific Knowledge & Understanding, Scientific Reasoning

A study of the basic theory and application of classical and molecular genetics including human genetics, Mendelian inheritance, chromosomes, DNA structure and gene expression. The laboratory will emphasize application of genetic principles in model systems and will introduce modern molecular biology techniques such as DNA isolation, restriction enzyme analysis, agarose gel electrophoresis, recombinant DNA techniques and PCR analysis. Lecture: 3 hours per week. Laboratory: 3 hours per week. **Prerequisites:** CHE*112 or BIO*121 or BIO*235, OR permission of the instructor.

BIO*270, Ecology (4 credits/6 contact hours) *\$\$ Supplemental Course Fee*

A principles oriented investigation of the relationships between organisms and their environments. Structural and functional aspects of the ecosystem, community types, population and succession related field and laboratory investigations. Lecture: 3 hours per week. Laboratory: 3 hours per week. **Prerequisite:** BIO*122.

BIO*296, Biotechnology Internship (3 credits)

Students will work a minimum of 160 hours in an industrial or research biotechnology laboratory learning new research skills and practicing skills learned in lab classes. **Prerequisite:** Permission of the Program Coordinator.

Business

(BBG*, BES*, BFN*, BMG*, BMK*)

School of Allied Health, Business, and STEM

Business – General (BBG*)

BBG*101, Introduction to Business (3 credits)

Gen Ed Competency: Critical Analysis & Logical Thinking

This introductory course examines business and how it operates in our private enterprise system, a multicultural society and a global marketplace. The focus will be on a practical understanding and application of business, emphasizing the relationship of business to an individual's everyday life, and the organization's social responsibility and response to change in a technological society. Areas of basic study include: marketing,

management, finance, information systems and career opportunities. **Prerequisite:** Eligible for either ENG*101E or ENG*101.

BBG*115, Business Software Applications (3 credits)

SPECIAL NOTE: Effective with the Fall 2016 semester, CSC*101 and BBG*115 are treated as separate, unique courses such that students can earn six credits for taking both courses. This policy will NOT be applicable retroactively for students who took both courses prior to the Fall 2016 semester.

Gen Ed Competencies: Continuing Learning/ Information Literacy, Oral Communication in English

This course is an examination of problem solving techniques using computer applications software. With the MS Office Suite, students will learn to use each software package to contribute value to business. Focus is on preparing professional documents with Word, building flexible spreadsheets on Excel, using Access to analyze data to produce valid results and PowerPoint to effectively present and communicate. Social networking sites and their impact upon business will be explored. Individual and group projects will require students to utilize the MS Suite to prepare business documents, produce in-house publications and create and business presentations using themes, tables and graphs. A primary focus is the in-depth use of spreadsheets and databases to solve business problems. Interpretation and effective communication of results, both written and oral are practiced. **Prerequisite:** Eligible for either ENG*101E or ENG*101.

BBG*125, The Future and Business Organizations (3 credits)

Gen Ed Competency: Critical Analysis & Logical Thinking

This course provides an introduction to business organization in our changing economic system and the global market. It includes an extensive look at the external environmental factors and their impact upon business/industry. Environmental scanning, from an organization perspective, is used to forecast, adjust and adapt to future trends. Students will analyze business organizations in the present and develop future-oriented thinking skills.

Prerequisite: Eligible for either ENG*101E or ENG*101.

BBG*135, Exploring Business & Technology Careers (3 credits)

Gen Ed Competency: Critical Analysis & Logical Thinking

This course is designed to expose students to various career pathways in the fields of business and computer technology. Students will learn about the world of business and will be given information about how to be successful in various business occupational areas. The student will have the opportunity to explore the workplace firsthand. Students will learn how to develop a personal career strategy and will develop a complete

career portfolio. **Prerequisite:** *Eligible for either ENG*101E or ENG*101.*

BBG*215, Global Business (3 credits)

Gen Ed Competencies: Critical Analysis & Logical Thinking, Social Phenomena

An introductory course designed to provide students with the foundations for conducting international business and an understanding of the impact of the social, cultural, economic, political, religious, and legal environments in international trade. The course will focus on the importance of globalization, foreign investment, international marketing, international management, and operations of multinational corporations. **Prerequisite:** *Eligible for ENG*101.*

BBG*231, Business Law I (3 credits)

Gen Ed Competency: Critical Analysis & Logical Thinking

An introductory study of the legal system of the United States and its relationship to the business manager. Topics include contracts, sales (general background in torts and product liability under Article 2 of the UCC), negotiable instruments and administrative agencies. **Prerequisite:** *Eligible for ENG*101.*

BBG*232, Business Law II (3 credits)

Gen Ed Competency: Critical Analysis & Logical Thinking

This course focuses on the Uniform Commercial Code with special emphasis on the sale of goods, commercial paper, and secured transactions. In addition, bankruptcy law, business formation, employment law and labor law are covered.

Prerequisite: *Eligible for ENG*101.*

BBG*234, Legal Environment of Business (3 credits)

Gen Ed Competency: Critical Analysis & Logical Thinking

An in-depth study of business organizations including agency and securities regulation and antitrust regulations with emphasis on real and personal property including an in-depth study of secured transactions under Article 9 of UCC. **Prerequisite:** *Eligible for ENG*101.*

BBG*294, Business Internship (3 credits)

Gen Ed Competency: Critical Analysis & Logical Thinking

This course will enable students, individually and as part of a team, to become involved in problem-solving and decision-making activities in the business community. A research project or activity will be cooperatively undertaken by the students and representatives from business and industry. The students will participate in seminars presented by the instructor. To be eligible, students must demonstrate academic ability, personal ability to be self-paced and work with people in various business situations. **Prerequisites:** *completion of 24 college credits and permission of the instructor.*

BBG*295, Cooperative Work Experience I (3 credits)

Gen Ed Competency: Critical Analysis & Logical Thinking

This course enables a student who has completed 24 credits with a G.P.A. of 2.5 or higher to earn college credit for work experience in a career which correlates with his/her business program of study. Student must work a minimum of 15 hours per week in a college-approved position as well as attend seminars. **Prerequisite:** *completion of 24 completed college credits, GPA 2.5 and permission of the instructor.*

Business – Entrepreneurship (BES*)

BES*118, Small Business Management (3 credits)

Gen Ed Competency: Critical Analysis & Logical Thinking

An introduction to small business management, including the attitude, knowledge and skills needed to own and operate a small business. Topics include the resources needed in the formation of new ventures, an understanding of the basic business skills needed to finance, market and manage a small business, risk taking and the formulation of a well-conceived business plan.

Prerequisite: *Eligible for either ENG*101E or ENG*101.*

Business – Finance (BFN*)

BFN*110, Personal Finance (3 credits)

Gen Ed Competency: Continuing Learning/ Information Literacy

This course introduces the student to the concepts, tools, and applications of personal finance and investment. It reviews the institutions, instruments and techniques of personal financial planning concentrating on risk management, establishing budgets, tax management, investments, retirement and estate planning. **Prerequisite:** *Eligible for either ENG*101E or ENG*101, and eligible for MAT*095 or higher.*

BFN*201, Principles of Finance (3 credits)

Gen Ed Competency: Continuing Learning/ Information Literacy, Critical Analysis & Logical Thinking

This course provides basic principles involved in the process of making financial decisions. Topics include the time value of money, ratio analysis of financial statements, leverage, cash flow and working capital and the relationship of risk to return.

Prerequisites: *A grade of "C-" or better in all of the following courses: ACC*113/ACC*115, ECN*101, ECN*102, and*

*MAT*167/MAT*168. MAT*167 may be taken concurrently.*

Business – Management (BMG*)

BMG*202, Principles of Management (3 credits)

Gen Ed Competencies: Continuing Learning/ Information Literacy, Critical Analysis & Logical Thinking

An introduction to the principles of management and their application to business organizations. Emphasis is placed upon the management functions; development of a philosophy of total quality management; interpersonal behavior; and business problem solving activities. *Prerequisite:* Eligible for ENG*101. *Fulfills a "D" course requirement for students who enrolled in a degree program prior to the Fall 2016 semester.*

BMG*204, Managerial Communications (3 credits)

Gen Ed Competencies: Critical Analysis & Logical Thinking, Oral Communication in English

The development of effective written, oral and electronic business communication. Selected assignments include writing business memos, letter and short reports, nonverbal communication, oral presentations, electronic mail and listening. *Prerequisite:* ENG*101 or ENG*101E. *Fulfills an "L" course requirement for students who enrolled in a degree program prior to the Fall 2016 semester.*

BMG*210, Prin. of Organizational Behavior (3 cr.)

Gen Ed Competency: Critical Analysis & Logical Thinking

This course examines concepts and theories that help managers understand, motivate, and supervise employees. Emphasis is placed upon interaction of individuals and groups relative to management's actions and the organization's needs. Contemporary case studies are presented to develop an effective management skill set. No credit awarded to students who have previously taken BMG*105, Supervision and Organizational Behavior. *Prerequisite:* BMG* 202.

BMG*220, Human Resource Management (3 credits)

Gen Ed Competency: Continuing Learning/ Information Literacy

This course examines the decision-making process of managing human resources. Topics include organizational environments; recruitment, selection, training and development, and performance appraisal; leadership and motivational philosophies and strategies; and group behavior. Emphasis upon current labor market and case study analysis. *Prerequisite:* BMG*202.

Business – Marketing (BMK*)

BMK*103, Principles of Retailing (3 credits)

Gen Ed Competency: Critical Analysis & Logical Thinking

The study of the retail sector of our economy and the role it plays in the marketing process. Emphasis is placed upon current trends in retailing and the factors responsible for change. The organization and operation of conventional retailing institutions and non-store methods of retailing will be explored.

Prerequisite: Eligible for ENG*101-ALP, ENG*101E, or ENG*101.

BMK*106, Principles of Selling (3 credits)

Gen Ed Competency: Critical Analysis & Logical Thinking

A study of sales principles and techniques used in the sale of consumer and industrial goods and services. Emphasis is placed upon the characteristics of successful sales associates, psychology of selling and sales techniques. An interactive approach to the sales process is emphasized. *Prerequisite:* Eligible for ENG*101-ALP, ENG*101E, or ENG*101.

BMK*123, Principles of Customer Service (3 credits)

Gen Ed Competency: Critical Analysis & Logical Thinking

This course is designed to develop the necessary skills for success as a customer service provider. The course examines various service situations and develops an attitude of superior customer service, which is critical to success in all organizations.

Prerequisite: Eligible for either ENG*101E or ENG*101.

BMK*201, Principles of Marketing (3 credits)

Gen Ed Competencies: Continuing Learning/ Information Literacy, Critical Analysis & Logical Thinking

An overview of the multifaceted discipline of marketing in a service-oriented economy. Consideration is given to market segmentation, target markets, consumer and industrial markets. Emphasis is placed upon developing a marketing mix, including product planning; pricing; the role of distribution; and promotional strategies. *Prerequisite:* Eligible for ENG*101.

BMK*216, Internet Marketing (3 credits)

Gen Ed Competencies: Continuing Learning/ Information Literacy, Critical Analysis & Logical Thinking

This course introduces the student to this exciting, significant part of a business' marketing mix: marketing on the Internet. Students will use the Internet as a source for market research, a communication medium and as a distribution channel. Cyberspace is very fluid and every effort will be made to take full advantage of this medium. Some basic marketing and computer knowledge is necessary. *Prerequisite:* Eligible for ENG*101.

BMK*230, Advertising & Promotion (3 credits)

Gen Ed Competency: Critical Analysis & Logical Thinking

A study of an organization's marketing communications with consumers and other stakeholders. Theory characteristics and management of various promotion mix elements are surveyed, including advertising, sales promotion, public relations, direct marketing and personal selling. **Prerequisite:** BMK*201.

Chemistry (CHE*)

School of Allied Health, Business, and STEM

\$\$ Supplemental Course Fee: Many science lab courses require a separate fee added at the time of registration in order to cover the cost of additional instructional time, supplies, and materials used by students.

CHE*101, Introductory Chemistry (3 credits)

Gen Ed Competency: Scientific Knowledge & Understanding

This course is intended for non-science majors. It does not have additional laboratory time, and will not count toward a lab science requirement at MxCC and other colleges or universities. An introduction and survey course in chemistry which discusses atomic structure, bonding, energy changes, gas laws, stoichiometry, solutions, electrochemistry, organic chemistry, and biochemistry.

Prerequisites: Eligible for ENG*101E or ENG*101 and eligible for MAT*137 or higher.

CHE*111, Concepts of Chemistry

(4 credits/6 contact hours) \$\$ Supplemental Course Fee

Gen Ed Competencies: Scientific Knowledge & Understanding, Scientific Reasoning

An introduction to inorganic chemistry. Topics include atomic structure, bonding, nomenclature, gases, solutions, equilibrium, nuclear chemistry, and acids & bases. Lecture: 3 hours per week. Laboratory: 3 hours per week. **Prerequisites:** Eligible for ENG*101E or ENG*101, and eligible for MAT*137 or higher.

CHE*112, Principles of Organic and Biochemistry

(4 credits/6 contact hours) \$\$ Supplemental Course Fee

Gen Ed Competencies: Scientific Knowledge & Understanding, Scientific Reasoning

An introduction to organic and biochemistry. Topics will include the major organic functional groups, carbohydrates, lipids, proteins, nucleic acids, as well as glycolysis, Krebs cycle, electron transport, protein synthesis, and DNA/RNA. Lecture: 3 hours per week. Laboratory: 3 hours per week. **Prerequisite:** CHE*111 or CHE*121.

CHE*121, General Chemistry I

(4 credits/6 contact hours) \$\$ Supplemental Course Fee

Gen Ed Competencies: Scientific Knowledge & Understanding, Scientific Reasoning

The first of a two-semester sequence, this course introduces fundamental concepts, models, and techniques including stoichiometry, periodicity, atomic structure, reaction types, and molecular shape. This course also prepares the student for continued study in CHE*122. Lecture: 3 hours per week. Laboratory: 3 hours per week. **Prerequisites:** MAT*137E or MAT*137 with a grade of "C-" or better, eligible for ENG*101, and one of the following: either High School Chemistry or CHE*101 or CHE*111.

CHE*122, General Chemistry II

(4 credits/6 contact hours) \$\$ Supplemental Course Fee

Gen Ed Competencies: Scientific Knowledge & Understanding, Scientific Reasoning

The second of a two-semester sequence, this course builds upon concepts presented in CHE*121, including discussions of kinetics, equilibrium, and thermodynamics. Lecture: 3 hours per week. Laboratory: 3 hours per week. **Prerequisite:** CHE*121 with a grade of "C-" or better.

CHE*220, Biochemistry (4 credits/6 contact hours)

\$\$ Supplemental Course Fee

Gen Ed Competencies: Scientific Knowledge & Understanding, Scientific Reasoning

This intermediate level course focuses on the details of the structure, function, and properties of biological molecules. The chemistry and metabolism of carbohydrates, lipids, proteins, and the role of enzymes and nucleic acids will be covered in detail. Concepts are discussed in the context of real world examples. This course includes laboratory work that will teach techniques such as pipetting, solution preparation, spectrophotometry, culturing, DNA manipulation, computer analysis, and gel electrophoresis. **Prerequisites:** BIO*121 and CHE*122 with a grade of "C" or better in both.

CHE*250, Instrumental Analysis

(4 credits/6 contact hours) \$\$ Supplemental Course Fee

Gen Ed Competencies: Scientific Knowledge & Understanding, Scientific Reasoning

This course is a theoretical and hands-on introduction to analytical instruments commonly used in chemical, biological, and environmental analyses. Students will become familiar with polarimetry, refractometry, spectrophotometry (infrared, ultraviolet, visible, and atomic absorption), and chromatography (paper, thin layer, gas-liquid, and liquid-liquid). Sample preparation, analysis, and data evaluation will be emphasized. Lecture: 3 hours per week. Lab: 3 hours per week. **Prerequisite:** CHE*121 with a grade of "C-" or better, OR permission of the instructor.

Chinese (CHI*)

School of Arts & Media, Humanities, and Social Sciences

CHI*101, Elementary Chinese I (3 credits)

Presents the essentials of Modern Standard Mandarin Chinese. Includes grammatical structures and vocabulary needed to read, write, and interact in Chinese using simple phrases and common expressions while highlighting the diverse cultures of Chinese-speaking peoples.

CHI*102, Elementary Chinese II (3 credits)

Builds on and expands skills learned in CHI*101 with further study on Chinese grammar, sentence patterns, and vocabulary of native Chinese-speaking peoples. Students learn simple transactions and address the challenges of daily life in Chinese cultures. **Prerequisite:** CHI*101.

College Success (COL*)

COL*101, College & Career Success (3 credits)

This course prepares students for a successful college and career experience. Students will explore and navigate the college's resources, develop college success strategies, cultivate critical and creative thinking, and participate in major and career exploration. Additionally, students will learn a variety of skills and strategies to support their studies across the curriculum. Topics include reading and study strategies, note taking, test preparation, interpersonal and oral communication, and information literacy.

Communications (COM*)

School of Arts & Media, Humanities, and Social Sciences

COM*101, Intro. to Mass Communication (3 credits)

Gen Ed Competency: Social Phenomena

An examination of the effect and impact of mass media on contemporary life. Emphasis is on the influence of cable and broadcast television, radio, film, the internet and the press in such areas as entertainment, news, politics, advertising, popular culture and human behavior. **Prerequisite:** Eligible for either ENG*101ALP, ENG*101E, or ENG*101.

COM*104, Careers in Media (3 credits)

Exploration and research of careers in media covering the fields of journalism, advertising, public relations, broadcasting, television, film making, recording, digital multimedia and other media arts. Course utilizes guest speakers discussing career preparation, job requirements and responsibilities. Job targeting,

networking, interviewing skills, resume and portfolio preparation are also taught.

COM*111, Scriptwriting (3 credits)

Practice and analysis in all aspects of script writing for motion pictures, television and radio. Course covers basic formats as well as techniques for narrative development, story structuring, etc. **Prerequisite:** ENG*101E or ENG*101.

COM*116, Publications Workshop (3 credits)

This hands-on course is designed to train students to produce The Flying Horse, the student newspaper. Students will practice all aspects of production, including writing, editing, managing, layout and design, photography, proofreading, and pre-press work (including digital imaging). Students will learn to judge appropriate news content, check facts, and investigate legal and ethical concerns. The course will also allow students to specialize in one or two supporting areas of newspaper production, including editing, layout and management. Advertising (sales and design) may also be part of this course. **Prerequisite:** Eligible for either ENG*101ALP, ENG*101E, or ENG*101 and basic computer literacy.

COM*120, Social Media (3 credits)

Gen Ed Competency: Social Phenomena

This course will introduce students to various forms of social media and how to use them strategically. Students will learn about leading social media platforms and tools, who uses them, and how they have transformed the way we interconnect and interact with the world, both personally and professionally. Students will be expected to apply their knowledge by participating on different social media platforms through interactive class projects. **Prerequisite:** Eligible for ENG*101.

COM*125/DGA*125, New Media Production

Gen Ed Competency: Social Phenomena

This course is an introduction to the production of new media. New media is an emerging communications technology that adds on-demand interactive access to media content fostering creative participation and community formation. Students will learn to develop and produce a variety of digital media including, audio, video, photography, animation and web-design, and make that media accessible over the Internet and mobile devices through wikis, blogs, podcasts, and social media. Students will use professional media creation tools such as cameras, video and audio edition applications, content management systems and Internet radio, music creation, and podcast software.

COM*129, Digital Video Production (3 credits)

Gen Ed Competency: Aesthetic Dimensions

This course is an introduction to single camera video field production and post-production techniques with an emphasis on visual storytelling. Students will learn story development, proposal and script preparation, high definition camera operation, portable lighting techniques, sound recording, video editing, motion graphics, visual effects and preparing finished programs for distribution. Students will create news, documentary instructional and narrative programming for a variety of platforms including mobile, Internet streaming and broadcast television.

COM*130, Introduction to Broadcast Communications (3 credits)

This course serves as an introduction to broadcast writing, production, and distribution. Areas covered include program development, copy and scriptwriting, production techniques, FCC regulations, broadcast technology and operation, and new methods of program delivery. Emphasis will be on developing effective communication skills through written assignments, research, and the production of radio and television programming.

COM*131, Audio Production (3 credits)

Students will learn the techniques and technologies used in creative sound design for radio, television, film and the Internet. Emphasis is on the technical skills used in recording, mixing, and editing. Students will create projects focusing on the fundamentals of sound design for various applications.

COM*142, Television Production (4 credits)

Gen Ed Competency: Aesthetic Dimensions

Introduction to the techniques, aesthetics and processes involved in professional television production. Equipment operations and techniques of field and studio production will be covered including scriptwriting, project planning, camera and recorder operation, lighting, scenery, microphones and linear and non-linear editing. Students will output projects to various media including tape, web, and DVD. Broadcast-Cinema majors should take this course concurrently with COM *203. **Prerequisite:** Eligible for either ENG*101ALP, ENG*101E, or ENG*101.

COM*153, Film Production (3 credits)

A hands-on, collaborative approach to narrative film production techniques, including pre-production organization, cameras, lighting, shooting strategies, sound recording, crewing, and editing. Students will specialize in a specific area of production and collaborate with fellow students to produce a short original film during the semester. Creative use of the medium for dramatic story telling will be emphasized using current

technologies. **Prerequisite:** Either ENG*101ALP, ENG*101E, or ENG*101. **Recommended:** COM*142

COM*154, Film Study and Appreciation (3 credits)

Gen Ed Competency: Aesthetic Dimensions

An introduction to the art, history, and influence of film. Students will learn about significant genres and styles of film, influential films and directors, film language and technique. Selected films will be viewed and analyzed weekly. **Prerequisite:** Eligible for either ENG*101ALP, ENG*101E, or ENG*101. *Fulfills a "D" course requirement for students who enrolled in a degree program prior to the Fall 2016 semester.*

COM*155, History of Film I (3 credits)

Survey of the film's history, techniques, and aesthetics to the end of World War II. Film classics shown weekly. **Prerequisite:** Either ENG*101ALP, ENG*101E, or ENG*101. *Fulfills a "D" course requirement or an "L" course requirement for students who enrolled in a degree program prior to the Fall 2016 semester.*

COM*156, History of Film II (3 credits)

Survey of the film's history, techniques, and aesthetics from the end of World War II. Film classics shown weekly. **Prerequisite:** Either ENG*101ALP, ENG*101E, or ENG*101. *Fulfills a "D" course requirement or an "L" course requirement for students who enrolled in a degree program prior to the Fall 2016 semester.*

COM*172, Interpersonal Communication (3 credits)

Gen Ed Competency: Oral Communication in English

This course focuses on developing positive interpersonal communication skills necessary for building and maintaining healthy, productive relationships in both a personal and professional environment. This includes both one-on-one as well as small group situations. Topics may include: verbal and non-verbal communication, perception of self and others, listening techniques, cultural and gender considerations, conflict avoidance and management, effective leadership skills, group dynamics and decision-making, and interpersonal communication within organizations. The course will expose students to various interpersonal communication theories and processes, while developing skills through practical exercises and activities. **Prerequisite:** Eligible for either ENG*101ALP, ENG*101E, or ENG*101.

COM*173, Public Speaking (3 credits)

Gen Ed Competency: Oral Communication in English

Students will develop oral messages of varying lengths and styles that communicate across a variety of settings. **Prerequisite:** Either ENG*101ALP, ENG*101E, or ENG*101. *Fulfills an "L" course requirement for students who enrolled in a degree program prior to the Fall 2016 semester.*

COM*179/THR*113, Performance for Film and Television (3 credits)

Gen Ed Competency: Aesthetic Dimensions

This course will develop performance and acting skills used in radio, television, and film including voice-over techniques, television news reporting and anchoring, dramatic acting, and comedic performance. Skills include voice articulation, projection and inflection, script analysis and interpretation. Students will analyze scripts and develop characters to improve acting and directing techniques and understand the importance of subtext to scenes. Students perform using microphones, Teleprompters, lighting, and cameras. This course is designed for students interested in on-screen performance across a range of media as well as those interested in film and television directing and production.

COM*201, Intro. to Public Relations (3 credits)

A comprehensive survey of public relations theories and practices as they function in organizations and society. The course examines the roles and responsibilities of public relations professionals and the evolution of the profession. Students study the process of public relations planning; examine the strategies and tactics used to establish and maintain positive relationships with constituents; review relevant legal and ethical concerns; and explore the practice of public relations in various contexts, including event planning, promotions, publicity, traditional media as well as new social and digital media campaigns, and crisis management. Students will apply what they have learned by developing and presenting a public relations strategic plan and other PR materials. **Prerequisite:** ENG*101.

COM*203, Media Literacy (3 credits)

Gen Ed Competency: Aesthetic Dimensions

An examination of the techniques used by media communicators to share meaning, influence and entertain mass audiences with sounds and images. Broadcast-Cinema majors should take this course concurrently with COM *142. **Prerequisite:** Eligible for either ENG*101ALP, ENG*101E, or ENG*101.

COM*220, Television Studio Production (3 credits)

Gen Ed Competency: Aesthetic Dimensions

An introduction to the fundamentals of studio television production with an emphasis on multi-camera production techniques and procedures including directing, camera switching, studio camera and robotic camera operation, studio lighting, digital video effects, audio mixing, video graphics, recording and distribution. Students will produce various projects such as news/sports, talk, drama and informational programming for broadcast over local cable television and the Internet.

Prerequisite: COM*129.

COM*226, Journalism I (3 credits)

Practice in the methods and techniques of newsgathering, writing, editing, and analysis. Students will also specialize in one or more areas of newspaper production and be involved in creating the college newspaper. *Either* ENG*101ALP, ENG*101E, *or* ENG*101. *Fulfills an "L" course requirement for students who enrolled in a degree program prior to the Fall 2016 semester.*

COM*228, Broadcast Journalism Workshop (3 cr.)

Students will develop and produce a weekly news or public affairs program for broadcast on local television. Emphasis is on story research, writing and producing a program under strict deadlines. Formats can include news, magazine and talk show while program topics can include local news, the arts, sports, community affairs, etc. **Prerequisite:** COM*142 and either ENG*101ALP, ENG*101E, or ENG*101.

COM*231, Radio Production (3 credits)

This course introduces the skills needed for general radio, commercial, news, and spoken word production. Current practices in radio production and broadcasting will be covered including station automation, FCC regulations, studio operations, Podcasting, Internet radio, and other forms of digital broadcasting. Research, scriptwriting, and workshop-based projects in informational and music-based programming including regular programs for the college's radio station are required. **Prerequisite:** Either ENG*101ALP, ENG*101E, or ENG*101. **Recommended:** COM*131

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. **Prerequisite:** Either ENG*101ALP, ENG*101E, or ENG*101.

COM*264, Advanced Editing Workshop (3 credits)

Gen Ed Competency: Aesthetic Dimensions

The operation of advanced video editing equipment and advanced editing techniques will be covered. This will include media organization, editing aesthetics, editing dialog and action sequences, montage, the integration of effects and transitions and equipment interfacing. **Prerequisite:** COM*142.

COM*283, Broadcast Engineering (3 credits)

Course emphasizes both studio and field engineering practices including system design and timing, station operations, reading of waveform monitors and vectors copes, camera theory and adjustments, and RF equipment. Digital and analog theory and IT integration will also be covered.

COM*287, Advanced Media Production (3 credits)

Advanced work in video, audio, or digital multimedia leading to the development and production of a completed professional project. Emphasis on using professional approaches in pre-production and production. Students will specialize in their preferred area of production for which they must have had prior production experience. Majors should see a program advisor to make sure they have taken the necessary sequence of courses prior to enrolling in this class. **Prerequisite:** *One of the following: COM*131, COM*142, DGA*241, DGA*260, or DGA*250.*

COM*293, Corporate Media Practicum (3 credits)

Students work on professional corporate video and multimedia productions. All aspects of production including meeting with clients, proposal writing, budgeting, scriptwriting, video production, postproduction and delivery of video will be covered. *Entry into this class will be based on instructor evaluation and academic standing. Enrollment is limited to 5 students.*

COM*294, Media Arts Workshop (3 credits)

The Media Arts Workshop is a summer honors program with the goal of producing a collaborative work of outstanding professional quality. This workshop is open to students in Broadcast-Cinema, Communications Arts, Multimedia or a related discipline. Students will learn by working with media professionals for training and guidance and by working together as a team to complete a film, video or interactive media presentation. *Enrollment is by application only. Prerequisites are courses and/or experience in the student's field of study and presentation of an accomplished portfolio and possible interview.*

COM*295, Internship I (3 credits)

Students gain practical work experience by interning with approved broadcast, cable, multimedia, education, media production companies or public service organizations for academic credit. Minimum of 120 hours of practical experience as well as written assignments and evaluation required for 3 credits. Students should arrange internship during the semester prior to registration. **Prerequisite:** *Permission of the instructor.*

COM*296, Internship II (3 credits)

(Communications/Multimedia Internship II) Students gain practical work experience by interning with approved broadcast, cable, multimedia, education, media production companies or public service organizations for academic credit. Minimum of 120 hours of practical experience as well as written assignments and evaluation required for 3 credits. Students should arrange internship during the semester prior to registration.

Prerequisite: *Permission of the instructor.*

Computers (CSA*, CSC*, CST*)

School of Allied Health, Business, and STEM

Computer Applications (CSA*)

CSA*135, Spreadsheet Applications (3 credits)

Gen Ed Competencies: Continuing Learning/ Information Literacy, Critical Analysis & Logical Thinking

Microsoft EXCEL for Windows, which contains spreadsheet, database, and graphics features, will be utilized to capture, organize, process, and store data for business applications.

Prerequisite: *Eligible for either ENG*101E or ENG*101.*

CSA*140, Database Applications (3 credits)

Gen Ed Competencies: Continuing Learning/ Information Literacy, Critical Analysis & Logical Thinking

This course will provide an introduction to database software. Students will learn to create and manipulate databases using leading database packages currently popular in business and industry. Students will get an overview of the range of available database management systems and an understanding of fundamental theory. Hands-on work will be emphasized.

Prerequisite: *Eligible for either ENG* 101E or ENG*101.*

CSA*205, Advanced Applications (3 credits)

Gen Ed Competencies: Continuing Learning/ Information Literacy, Critical Analysis & Logical Thinking

This course explores the intermediate and advanced features of popular business software applications. Students will learn how to apply word processing, spreadsheet, database, and presentation tools to achieve productivity gains. The course will also include software integration and collaboration software using cloud computing. The goal of this course is to challenge students to move beyond the basics of the Office applications to a much higher level of proficiency in a broad range of business software applications. Additionally, this course will assist in preparing students to take the industry-recognized Microsoft Office Specialist (MOS) Certification exam. Permission to enroll without the prerequisite may be granted based on a student's prior knowledge of Microsoft Office applications. **Prerequisite:** *CSC*101.*

Computer Science (CSC*)

CSC*095, Basic Computer Skills (1 Credit)

This preparatory course gives students the fundamental skills necessary to gain a basic understanding of how to use a personal computer. The course teaches basic keyboarding techniques, the fundamentals of the Windows environment, file management, Internet research, and email. Students with little or no hands-on experience with computers should take this basic skills course

before taking any of the computer courses. **This course cannot be counted toward graduation credit.**

CSC*101, Introduction to Computers (3 credits)

Gen Ed Competency: Continuing Learning/ Information Literacy

This course prepares students to use the computer as a productivity tool. It offers both Mac and PC users essential computer skills for personal and professional applications. The fundamentals of information technology concepts, operating systems functions, cloud computing, and computer security are covered. Students will complete hand-on projects using popular productivity software that include word-processing, spreadsheet, database, and presentation applications. Also included are topics in Web design, Internet basics, information literacy, and productivity apps. Students will gain knowledge to be well-informed consumers of computer technology. **Recommended:** *Students taking this course should possess hands-on familiarity with computers. CSC*095 Basic Computer Skills course is recommended for students who do not possess the requisite computer skills.*

CSC*105, Programming Logic (3 credits)

Gen Ed Competency: Scientific Reasoning

In this course students are introduced to the fundamental concepts of object-oriented programming and the basic structures of programming including linear, selection, and iteration. They will learn the algorithm design using flowcharts, pseudo code and UML diagrams, and the algorithm implementation through editing, compiling, running, and debugging. Students will become familiar with variables, expressions, control structures, methods, arrays, objects, and GUI applications. **Prerequisite:** *Eligible for MAT*137.*

CSC*115, Introduction to Programming with Alice (3 credits)

Gen Ed Competencies: Continuing Learning/ Information Literacy, Critical Analysis & Logical Thinking

This course teaches students the fundamentals of object-oriented programming using Alice, a three-dimensional graphical system that is used to create three-dimensional worlds of animation and games. The course allows students to gain an understanding of the same fundamentals object-oriented principles that are taught with traditional languages such as Java or Visual Basic. However, students will learn and practice these techniques as they create exciting virtual worlds, thus making programming easier to learn. The intent is to provide students who are new to programming with an understanding of abstract principles in concrete ways. Students will be able to apply these skills to other object-oriented languages.

CSC*205, Visual Basic I (3 credits)

Gen Ed Competencies: Continuing Learning/ Information Literacy, Critical Analysis & Logical Thinking

Students will gain an understanding of fundamental Visual Basic programming concepts. This will include how Visual Basic's programming environment operates as well as its application language. Concepts covered include window form development, programming controls and how to access databases using the Visual Basic language. **Prerequisite:** *Eligible for ENG*101E or ENG*101.*

CSC*220, Object-Oriented Programming Using JAVA (3 credits)

Gen Ed Competency: Scientific Reasoning

In this course, students will learn to use object-oriented techniques in planning, designing, and implementing Java applets and standalone applications. Topics include object-oriented design, arrays, inheritance, polymorphism, exceptions, recursion and collections. Graphical User Interface and event-driven programming will be covered. **Prerequisite:** *CSC*105.*

CSC*231, Database Design I (3 credits)

Gen Ed Competencies: Continuing Learning/ Information Literacy, Critical Analysis & Logical Thinking

This course uses a DATABASE application software package. The software will be used to construct useful databases for the daily tasks performed by business professionals. Using hands on approach, the student will learn how to store and retrieve records, devise search strategies, and to produce data structures and programming techniques necessary to solving problems. **Prerequisite:** *CSC*140.*

CSC*262, Programming Mobile Devices I

Gen Ed Competencies: Continuing Learning/ Information Literacy, Critical Analysis & Logical Thinking

The course will introduce students to the various platforms in use on small and mobile devices. Platforms will include Apple iPhone, Google Android OS, and Microsoft Windows Phone 7. Students will learn the process involved in developing applications for mobile devices. They will create applications for each platform using specialized development environments. **Prerequisite:** *CSC*205 or CSC*220.*

CSC*295, Coop Ed/Work Experience (3 credits)

Gen Ed Competencies: Continuing Learning/ Information Literacy, Critical Analysis & Logical Thinking,

This course will give the student the opportunity to apply the concepts and skills acquired in the Information Systems Program in an on the job experience at a designated business. The student will be required to attend a specific number of classes during the semester to incorporate system analysis concepts as well as

communication techniques. **Prerequisite:** *All Information Systems required courses and permission of the instructor.*

Computer Technology (CST*)

CST*120, Intro. to Operating Systems (3 credits)

Gen Ed Competencies: Continuing Learning/ Information Literacy, Critical Analysis & Logical Thinking

This course is intended to provide the student with a more advanced knowledge of computer hardware and Operating Systems. Students will learn how to use Windows' advanced features, and how the operating systems interact with hardware both locally and on a network. Topics covered include how to work with computer networks, major components of computer hardware, data back-up, and windows customization.

Prerequisite: *Eligible for either ENG*101E or ENG 101.*

CST*141, Computer Hardware (4 credits)

Gen Ed Competency: Scientific Reasoning

This hands-on course covers essential skills on how to install, upgrade, repair, configure, troubleshoot, optimize, and maintain a personal computer's hardware and peripherals. Topics include power supplies, motherboards, processors, memory, hard drives, I/O devices, and multimedia devices. Four hours of lecture/laboratory per week. **Prerequisites:** *Eligible for MAT*095.*

CST*163, Windows Server Administration (3 credits)

Gen Ed Competencies: Continuing Learning/ Information Literacy, Critical Analysis & Logical Thinking

This course covers the Microsoft Windows Server environment. Students will learn the basics of installing, administering, and maintaining a Windows Server implementation. Administration of user and group accounts, Active Directory, network protocols and services such as virtual private networking. Routing and Remote Access Service, DHCP, DNS, backup, recovery and disaster planning will be covered. **Prerequisite:** *CST*120*

CST*201, Introduction to Management Information Systems (3 credits)

Gen Ed Competencies: Continuing Learning/ Information Literacy, Critical Analysis & Logical Thinking

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 organizational and technical foundations of information systems, theory of information systems design, fundamental database principles, network systems, e-commerce and supply chain systems, information network security management, and meeting global challenges. Microsoft Excel, Access, PowerPoint and Project are used to

demonstrate selected topical concepts. **Prerequisite:** *Eligible for either ENG*101E or ENG*101.*

CST*228, Voice & Data Interworking (3 credits)

Gen Ed Competencies: Continuing Learning/ Information Literacy, Critical Analysis & Logical Thinking

The course covers the engineering of voice technologies. Topics include: voice compression methods, understanding the H.323 protocol, voice over frame-relay, voice over ATM, and voice over IP. The MxCC lab will be used to design and build a voice over IP network. **Prerequisite:** *CST*120.*

CST*231, Data Communication & Networking (3 cr.)

Gen Ed Competencies: Continuing Learning/ Information Literacy, Critical Analysis & Logical Thinking

The course outlines interconnecting computers using communication networks. The seven layer OSI Reference framework, physical layer standards, data link protocols, repeaters, bridges, routers, local area networks, wide area networks, and network configurations will be discussed.

Prerequisites: *CST*120 or CST*141.*

CST*270, Network Security Fundamentals

Gen Ed Competencies: Continuing Learning/ Information Literacy, Critical Analysis & Logical Thinking

This course is designed to meet the needs of students who want to master practical network and computer security. Topics include: malware attacks, application and network attacks, vulnerability assessments for mitigating attacks, data security, network security, wireless network security, authentication and account management, access control fundamentals, basic and advanced cryptography for protecting data, business continuity model, and risk mitigation procedures. **Prerequisites:** *CST*120 or taken concurrently.*

Computed Tomography (CAT*)

School of Allied Health, Business, and STEM

CAT*201, Cross Sectional Anatomy I (1 credit)

Gen Ed Competency: Scientific Reasoning

This course will introduce students to cross sectional imaging of the head and neck. Emphasis will be placed on pathology affecting the cranial cavity and neck in the application of computed tomography imaging. The uses for and administration of pharmacological agents for CT imaging will be included in this course. **Prerequisites:** *Admission to the Computed Tomography (CT) Program, ARRT Registered Radiographer.*

CAT*202, CT Image Display, Post Processing and Quality Assurance I (2 credits)

This course will introduce students imaging parameters. The formation of computed tomography image is discussed as well as the essential component parts of a CT imaging system.

Prerequisites: Admission to the Computed Tomography Program, ARRT Registered Radiographer.

CAT*203, CT Procedures and Instrumentation I (2 credits)

This course will introduce students to the set-up and operation necessary to acquire optimal images of the head and neck. Emphasis will be placed on the acquisition techniques required to obtain optimal images of the head and neck including their respective pathologies. **Prerequisites:** Admission to the Computed Tomography Program, ARRT Registered Radiographer.

CAT*204, Clinical Experience I (4 credits)

This course introduces the student to the clinical setting and the practical skills necessary to operate computed tomography imaging systems. Clinical competency evaluations are performed during this course. **Prerequisites:** Admission to the Computed Tomography Program, ARRT Registered Radiographer.

CAT*205, Cross Sectional Anatomy II (1 credit)

This course will introduce students to cross sectional imaging of the chest, abdomen, pelvis and extremities. Emphasis will be placed on pathology affecting the chest, abdomen, pelvis and extremities in the application of computed tomography imaging. The uses for and administration of pharmacological agents for CT imaging will be included in this course. **Prerequisites:** Admission to the Computed Tomography Program, ARRT Registered Radiographer, CAT*201, CAT*202, CAT*203, and CAT*204 with a "C" or better for all.

CAT*206, CT Image Display, Post Processing and Quality Assurance II (2 credits)

This course will advance the students understanding of imaging parameters. The formation of computed tomography image is discussed as well as essential quality control and assurance testing. **Prerequisites:** Admission to the Computed Tomography Program, ARRT Registered Radiographer, CAT*201, CAT*202, CAT*203, and CAT*204 with a "C" or better for all.

CAT*207, CT Procedures and Instrumentation II (2 credits)

This course will introduce students to the set-up and operation necessary to acquire optimal images of the chest, abdomen, pelvis and extremities. Emphasis will be placed on the acquisition techniques required to obtain optimal images of the chest, abdomen, pelvis and extremities including their respective pathologies. **Prerequisites:** Admission to the Computed Tomography

Program, ARRT Registered Radiographer, CAT*201, CAT*202, CAT*203, and CAT*204 with a "C" or better for all.

CAT*208, Clinical Experience II (4 credits)

This course introduces the student to the clinical setting and the practical skills necessary to operate computed tomography imaging systems. Clinical competency evaluations are performed during this course. **Prerequisites:** Admission to the Computed Tomography Program, ARRT Registered Radiographer, CAT*201, CAT*202, CAT*203, and CAT*204 with a "C" or better for all.

Criminal Justice (CJS*)

School of Arts & Media, Humanities, and Social Sciences

CJS*101, Introduction to Criminal Justice (3 credits)

Gen Ed Competency: Social Phenomena

This course examines an overview of the criminal justice system on the local, state and federal levels in the United States. Students will be exposed to the historical, theoretical, philosophical and practical perspectives of the system's police, court and correctional agencies. The course is required and is a core class in the Criminal Justice major. **Prerequisite:** Eligible for ENG*101-ALP, ENG*101E, or ENG*101. Fulfills a "D" course requirement for students who enrolled in a degree program prior to the Fall 2016 semester.

CJS*102, Introduction to Corrections (3 credits)

Gen Ed Competency: Social Phenomena

A study of the history, philosophy, and evolution of corrections as well as the functions of U.S. jails and prisons. The course also examines the procedures used by state and federal courts that result in the sentencing of offenders to penal institutions and community-based supervision and treatment programs. **Prerequisite:** CJS*101 (can be taken concurrently) and eligible for ENG*101-ALP, ENG*101E, or ENG*101.

CJS*105, Intro. to Law Enforcement (3 credits)

Gen Ed Competency: Social Phenomena

This course offers a comprehensive examination of the public safety and law enforcement functions of government in a modern society. Topics covered will include the evolution, history, and philosophy of the law enforcement function: the role of the police in a democratic society; police accountability, corruption and deviance; police operational principles and practices; and, current problems confronting the police in their relationship to the community they serve. **Prerequisite:** CJS*101 (can be taken concurrently) and eligibility for ENG*101-ALP, ENG*101E, or ENG*101.

CJS*106, Intro. to Homeland Security (3 credits)

Gen Ed Competency: Social Phenomena

An introduction to the fundamental concepts of homeland security in the United States. This course examines the planning, preparedness, management, and response of governmental and non-governmental agencies to man-made and natural disasters. An historical perspective of events related to homeland security will also be examined in addition to technological and transportation implications. **Prerequisite:** *CJS*101, which may be taken concurrently.*

CJS*151, Criminal Justice Supervision and Administration (3 credits)

In this course students study the essentials of personnel administration, management and supervision within criminal justice agencies. Topics include supervisory principles, discipline, motivation, training, ethics, recruitment, managing and supervising in a diverse workplace, and interviewing techniques. *Fulfills a "D" course requirement for students who enrolled in a degree program prior to the Fall 2016 semester.*

CJS*211, Criminal Law I (3 credits)

Gen Ed Competencies: Continuing Learning/ Information Literacy, Critical Analysis & Logical Thinking

The study of the act(s) and mental state(s) 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: *CJS*101 with a "C-" or better, AND ENG*101-ALP, ENG*101E, or ENG*101 with a "C-" or better.*

CJS*212, Criminal Law II (3 credits)

Gen Ed Competencies: Continuing Learning/ Information Literacy, Critical Analysis & Logical Thinking

A study of the act(s) and mental state(s) 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. Content of the course will build on the foundation laid in CJS*211: Criminal Law I.

Prerequisite: *CJS*211 with a "C-" or better.*

CJS*213, Evidence and Criminal Procedure

Gen Ed Competencies: Continuing Learning/ Information Literacy, Critical Analysis & Logical Thinking

This course provides students with fundamental principles relative to procedures and processes within the Criminal Justice system as applied to arrest, the use of force, and search and seizure. The course provides the student with an opportunity to

examine the various types of evidence and "proof" in regard to kind, degree, admissibility, competence, and weight.

Prerequisites: *2016: CJS*101 with a "C-" or better, AND ENG*101-ALP, ENG*101E, or ENG*101 with a "C-" or better.*

CJS*220, Criminal Investigation (3 credits)

Gen Ed Competency: Social Phenomena

In this course students study the fundamental principles and relative theories applicable to criminal investigation. The course includes the consideration of development of information sources, identification of witnesses and suspects, laws and techniques relative to interview and interrogation and admissions, and case preparation techniques. **Prerequisites:** *CJS*101 with a "C-" or better, AND ENG*101-ALP, ENG*101E, or ENG*101 with a "C-" or better. Fulfills a "D" course requirement for students who enrolled in a degree program prior to the Fall 2016 semester.*

CJS*225, Forensic Science (3 credits)

This course was replaced by CJS*285/SCI*285. Students may not get credit for both CJS*225 and CJS*285/SCI*285.

CJS*250, Police Organization and Management (3 cr.)

Gen Ed Competency: Social Phenomena

This course exposes students to the complexities inherent in the administration of modern law enforcement organizations by presenting and analyzing a variety of management styles and administrative techniques used in such organizations. Students will examine many of the internal and external factors that impact contemporary law enforcement organizations (e.g., federal regulations, political structures, community needs, press, etc.). **Prerequisites:** *CJS*101 with a "C-" or better, AND ENG*101-ALP, ENG*101E, or ENG*101 with a "C-" or better. Fulfills a "D" course requirement for students who enrolled in a degree program prior to the Fall 2016 semester.*

CJS*252, Professional Development- Leadership (3 cr)

The course is designed to provide students with fundamental and advanced components of leadership theory as it relates to Criminal justice organizations. **Prerequisite:** *CJS*101 or permission of instructor.*

CJS*255, Ethical Issues in Criminal Justice Leadership (3 credits)

Gen Ed Competency: Social Phenomena

This course is designed to provide students with an understanding of the necessity of high standards of ethical and moral behavior in the justice system. Areas of focus include ethical and moral issues in personal, social, and criminal justice contexts. Comprehensive coverage is achieved through focus on law enforcement, legal practice, sentencing, corrections, research, crime control policy, and philosophical issues. **Prerequisites:**

CJS*101 with a "C-" or better, AND ENG*101-ALP, ENG*101E, or ENG*101 with a "C-" or better.

CJS*285, Forensic Science with Laboratory (4 credits/6 contact hours) *\$\$ Supplemental Course Fee*

Gen Ed Competencies: Scientific Knowledge & Understanding, Scientific Reasoning A study of how the disciplines of Biology, Chemistry, Earth Science, Physical Science, and Physics meld to form the field of Forensic Science. The course will focus on developing the scientific vocabulary necessary for investigators to communicate with scientists. This course is meant to assist students who are pursuing a career in criminal justice. Emphasis of the course is placed on scientific analysis of data rather than detective work. Students will learn to appreciate how the major fields of science are utilized in solving crimes. The laboratory component will provide hands-on opportunities to integrate scientific methodology as it relates to criminal justice and the limitations of scientific testing.

Prerequisite: CJS*101 with a grade of "C-" or better, AND ENG*101-ALP, ENG*101E, or ENG*101 with a grade of "C-" or better. **This course replaces CJS*225 Forensic Science. Students cannot get academic credit for taking both CJS*225 and CJS*285/SCI*285.**

CJS*288, Careers in Criminal Justice (3 credits)

Gen Ed Competency: Social Phenomena

The course is designed to provide students with the practical skills necessary for employment within the field of criminal justice. Students will explore the physical, intellectual, and psychological demands associated with obtaining and maintaining a career within the field of criminal justice. The course will explore various types of job opportunities available within the courts, corrections, and law enforcement community, to include the application and selection process for each of these positions. Students will learn the various physical fitness standards associated with each position as well as the necessary written and oral communication skills. Students will draft both a cover letter and resume, in conjunction with participating in a mock oral board interview. **Prerequisite:** ENG*101-ALP, ENG*101E, or ENG*101 with a grade of "C" or better, AND completion of 12 credits in Criminal Justice courses.

CJS*290, Practicum in Criminal Justice (3 credits)

Gen Ed Competencies: Social Phenomena, Written Communication in English

Open to students in Criminal Justice programs, this practicum offers participants the opportunity to put learned theory to practical application. Assignments are individualized and may vary. Those who are not currently employed in a field directly related to their program may be assigned either a research project/paper or a supervised internship experience. Those currently employed in a field directly related to their study will be

required to relate their experiences through appropriate assignments. **Prerequisites:** Instructor Approval, AND ENG*101-ALP, ENG*101E, or ENG*101 with a "C-" or better.

CJS*294, Contemporary Issues in Criminal Justice (3 credits)

Gen Ed Competencies: Critical Analysis & Logical Thinking, Social Phenomena

In this course students will be exposed to the contemporary issues that impact the functions, and organization of Criminal Justice agencies in the United States. Topics in the course include issues such as: racial profiling, torture, capital punishment, gender, social stratification, social class, politics, and use of force. The focus and content of the course will change each year to reflect the changes in political and social thought and their impact on public policy. **Prerequisites:** ENG*101, ENG*101E, or ENG*101 ALP with a "C-" or better AND CJS*101 with a "C-" or better.

CJS*298, Special Topics in Criminal Justice (1-3 credits)

Special topics courses may be offered for 1 to 3 credits, depending on the content of the class. These courses are designed to expose students to a vast array of specialized topics within the field of criminal justice. Three, 1-credit courses can be bundled to fulfill a criminal justice directed elective requirement.

SOC*240, Criminology (3 credits)

Gen Ed Competencies: Scientific Reasoning, Social Phenomena

The course examines the nature and cause of crime, approaches to the study of crime, and its treatment and prevention. The sociology of criminal law and the nature of criminal behavior are also examined. **Prerequisite:** Eligible for ENG*101-ALP, ENG*101E or ENG*101.

Digital Arts/Multimedia (DGA*)

School of Arts & Media, Humanities, and Social Sciences

DGA*101, Intro. to Digital Arts (3 credits)

Gen Ed Competency: Aesthetic Dimensions

A hands-on introduction to the field of digital multimedia that integrates text, images, graphics, sounds, video, and animation in an interactive computer environment. Students will learn about multimedia technology, terminology, production techniques, and software. Production work will include an introduction to multimedia authoring.

DGA*110, Computer Graphics (3 credits)

Gen Ed Competency: Aesthetic Dimensions

An introduction to the computer as a tool for art and media imaging. Basic computer skills and an introduction to the major applications used for digital illustration, image manipulation, and page layout.

DGA*120, Digital Imaging I (3 credits)

Gen Ed Competency: Aesthetic Dimensions

Students will receive in-depth instruction in the leading digital image editing software that is used in commercial graphics, video production and multimedia. This software is used to edit and manipulate scanned photographs and other images using masking, retouching and other special effects. Topics covered include: image creation and editing; digital scanning; digital color theory and file formats; typographic effects; advanced filter techniques; automation and performance options; and hardware considerations. **Prerequisite:** DGA*110 or permission of the instructor. **Recommended:** ART*121.

DGA*125, New Media Production (3 credits) – See COM*125

DGA*182, Digital Video Technology (3 credits)

Gen Ed Competency: Aesthetic Dimensions

This course examines digital video technology with emphasis on the video production workflow including digital video theory, content acquisition, asset management, post-production and distribution. Students will learn the tools necessary to integrate video footage with computer graphics, animation, visual effects and interactivity. Preparing and compressing video for a variety of applications and platforms including SD/ HD broadcast television, DVD, Internet and network streaming will also be covered. **Prerequisite:** One of the following: COM*142, DGA*101, or DGA*110.

DGA*223, Digital Illustration (3 credits)

Gen Ed Competency: Aesthetic Dimensions

Students will receive in-depth instruction in this leading illustration software package that is used in commercial graphics, video production and multimedia. This software explores the use of spline-based drawing tools and the various techniques used to create vector-based artwork. Topics covered include Bezier curve construction, path editing, color and custom gradients, patterns, typographic effects, filter techniques, printing and output options, and hardware considerations. **Prerequisite:** DGA*110 or permission of the instructor. **Recommended:** ART*121.

DGA*231, Digital Page Design I (3 credits)

Gen Ed Competency: Aesthetic Dimensions

Students will receive in-depth instruction in this leading desktop publishing software package that is used in commercial graphics and multimedia. Desktop publishing software is used for creating layouts of text, graphics, photographs and other visual images for print. This course provides the hands-on instruction to create publication files and templates for typical office documents, technical manuals, marketing literature, books, newsletters, magazines and package design. Topics include: digital typography; style sheets, layout grids and master page techniques, graphic design fundamentals, image processing effects, overprinting, trapping and color palette systems, plugin architecture and common desktop publishing issues.

Prerequisite: DGA*110 or permission of the instructor.

Recommended: ART*121.

DGA*241, Internet Web Design I (3 credits)

Gen Ed Competency: Aesthetic Dimensions

An introduction to graphic and multimedia design used in web page and site creation by teaching basic design concepts essential to good Web publishing. This course discusses the anatomy of a Web page, identifies design elements and tackles design issues such as the constraints of designing effective web sites across different browsers and platforms, monitor size and resolution, color palettes, and graphic file size. This course also covers the design process including project planning, mapping, interface design, prototyping, analyzing and organizing content, hyperlinks and page layout using tables, grids and frames. Students will use industry standard applications for coding HTML and creating, editing and integrating graphics and multimedia elements.

Prerequisite: DGA*110 or permission of the instructor.

Recommended: DGA*202 and ART*121.

DGA*242, Internet Web Design II (3 credits)

Gen Ed Competency: Aesthetic Dimensions

A continuation of DGA*241 that explores the creative and technical design processes behind successful communicative and interactive Web page construction. Topics covered will include color and typographic relationships; graphic and media production techniques; graphic design and layout considerations; and usefulness and effectiveness of current Web technologies, including audio, video, animation and scripting options. Students' experience will include the production of various Web pages and culminate with the creation of several Web sites.

Prerequisite: DGA*241.

DGA*250, Interactive Multimedia Production (3 cr.)

Gen Ed Competency: Aesthetic Dimensions

Students will explore the various multimedia authoring programs used in the industry. Authoring is the software that integrates sound, images, and graphics in an interactive environment.

Various programming languages particular to each package, importing various media elements and cross platform production will be covered. **Prerequisite:** DGA*101 or permission of the instructor.

DGA*256, 3D Animation Foundations (3 credits)

An introduction to the creative and technical processes involved in the production of 3-dimensional modeling and animation. Through theories, instructions, visual examples, and hands-on production students will learn the fundamental principles of modeling and animating virtual objects and environments using industry-leading software and hardware. Students' experience will include the production of various modeled and animated project to further enhance their production portfolios.

Prerequisite: DGA*101, DGA*110, or permission of the program coordinator.

DGA*257, Motion Graphics and Effects (3 credits)

Gen Ed Competency: Aesthetic Dimensions

An introduction to the creative and technical processes involved in the production of motion graphics and visual effects. Through theories, instructions, visual examples, and hands-on production students will learn the fundamental principles of animating and producing visual effects utilizing industry-leading software and hardware. Topics include: motion graphic animation concepts, compositing, masking, effects, keying, motion tracking, rotoscoping and animating in 3D space. Students' experience will include the production of various animated projects to further enhance their production portfolios. **Prerequisite:** DGA*101, DGA*110, or permission of the program coordinator.

DGA*260, Animation (3 credits)

Gen Ed Competency: Aesthetic Dimensions

An introduction to the creative and technical processes behind the animated image. Through theories, instructions, visual examples, and hands-on production students will learn the fundamental principles of animation. Students will explore 2-dimensional cel, stop-motion, 2-dimensional digital, and motion graphic techniques. Additional topics covered will include: storyboarding; character development; time-lapse photography; collage techniques; and basic editing aesthetics. Students' experience will include the production of various animated projects in a number of different formats ranging from the printed page to computer-based digital image. **Prerequisite:** DGA*110 or permission of the instructor.

Drug & Alcohol Rehab. (DAR*)

School of Arts & Media, Humanities, and Social Sciences

DAR*101, Public Health Issues: Abuse & Addiction (3 credits)

Gen Ed Competency: Social Phenomena

Key issues of the alcohol and drug abuse treatment field from the standpoint of the unique sociological and public health aspects involved. **Prerequisite:** Eligible for either ENG*101E, or ENG*101.

DAR*114, Intro. to Family Systems (3 credits)

Gen Ed Competency: Social Phenomena

Presents an overview of family systems with special emphasis toward families afflicted with substance abuse. The particular areas discussed include the structure and function of the family, role structure, development stages, communications systems and functional and dysfunctional families. **Prerequisite:** HSE*202.

DAR*158, Biology of Addiction (3 credits)

Study of drug abuse in current times, including the pharmacology and pathology of chronic drug abuse with respect to the individual as well as society and the law. **Prerequisite:** Eligible for either ENG*101E or ENG*101.

Early Childhood Education (ECE*)

School of Arts & Media, Humanities, and Social Sciences

ECE*101, Introduction to Early Childhood Education (3 credits)

Gen Ed Competency: Continuing Learning/ Information

Literacy—A study of the historical, philosophical and social perspectives of early care and education. Emphasis will be on modern development and trends, along with an understanding of the organization and composition of early childhood education settings, which include curriculum materials, learning environments and equipment. This course will involve 10 hours of field observation and participation in a preschool setting.

Prerequisites: Eligible for ENG*101E or ENG*101. Fulfills a "D" course requirement for students who enrolled in a degree program prior to the Fall 2016 semester.

ECE*103, Creative Art Experiences for Children (3 credits)

The exploration of the relationship of creative art to the total educational program of the young child. Experimentation with the use of various media techniques and methods will be included.

ECE*106, Music and Movement for Children (3 cr.)

An investigation of the role of music and movement in early childhood development. Emphasis will be on the elements of songs, circle games, rhythmic activities and instruments.

ECE*131, Children's Literature (3 credits)

Gen Ed Competency:-Continuing Learning/ Information Literacy

This course offers an overview of children's literature including its history, genres, and leading authors and illustrators. It covers selection and critical study of books for children, including folklore, poetry, fiction and nonfiction. Issues related to children's literature and literature extension activities will also be explored. **Prerequisites:** ECE*101 and either ENG*101E or ENG*101E.

ECE*141, Infant/Toddler Growth & Development (3 credits)

An introduction to the care and teaching of infants and toddlers, which emphasizes the interrelationship between social, emotional, cognitive, physical and language development. Age appropriate curriculum strategies will be based on developmental theories. Components of a high-quality program will be explored. Students are required to complete 10 hours of field observation and participation in an infant/ toddler program.

ECE*176, Health, Safety, and Nutrition (3 credits)

The relationship between health, safety and nutrition and child development will be explored. 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.

ECE*180, CDA Preparation Course (3 credits)

Child Development Associate Preparation Course: This course will explore the process a student must undertake to be credentialed as a Child Development Associate. In addition, the course will provide a thorough review of each of the eight content areas as identified by the Council for early Childhood Professional Recognition; assist the student in the development of a Professional Resource File; and provide a meaningful field placement opportunity.

ECE*210, Observation & Participation Seminar (3 cr.)

The study of observing and recording children's behavior, focusing on objective observations and the interpretation and understanding of the behavior. Observation and participation placements in approved early childhood settings are required. This course consists of 90 hours of field observation and participation in an approved preschool setting. **Prerequisite:** ECE*101.

ECE*215, The Exceptional Learner (3 credits)

The study of the exceptional or special needs child. Emphasis is on the history, laws, concepts, practices and terminology used by professionals in the field. Educators are assisted in understanding the needs of students with exceptionalities and helped to identify the characteristics, issues, and instructional considerations for students with disabilities. This course consists of 25 hours of field observation and participation in a special education preschool setting. **Prerequisite:** ECE*101. *Fulfills a "D" course requirement for students who enrolled in a degree program prior to the Fall 2016 semester.*

ECE*231, Early Language and Literacy Development (3 credits)

Introduction to language and literacy development in the young child. Students will explore the early childhood language arts curriculum including speaking, listening, writing, and reading skills. The teacher's role and methods of creating a literacy-rich environment that engages children in creative, developmentally appropriate language-arts experiences will be examined. Students will create plans and materials for use with children.

Prerequisite: ECE*101.

ECE*275, Child, Family and School Relation (3 cr.)

An in-depth look at the child, the family, and the relationship between the school and the family. An understanding of child behavior and its guidance will be examined, as will communication with families. Students will explore today's families and how schools can develop working relationships with families. **Prerequisite:** ECE*101. *Fulfills a "D" course requirement for students who enrolled in a degree program prior to the Fall 2016 semester.*

ECE*295, Student Teaching Practicum (6 Credits)

Guided observation, participation and supervised student teaching in NAEYC accredited center or kindergarten is required. The purpose of student teaching is to enable the student to apply child development theory in a learning environment and to work with children under close supervision. Students will manage a classroom independently, plan, organize, implement and evaluate classroom activities. Students will complete 220 hours of student teaching. Weekly seminars devoted to issues in Early Childhood Education and the experience of student teachers will extend the individual's student teaching experience. In addition to the prerequisites below, students must take 9 more credits of Early Childhood Education courses with a grade of 'C' or better. **Prerequisite:** ENG*101E or ENG*101, PSY*204, ECE*101, ECE*210, and permission of instructor.

Earth Science (EAS*)

School of Allied Health, Business, and STEM

EAS*102, Earth Science (3 credits)

Gen Ed Competency: Scientific Knowledge & Understanding

An introductory survey of the planet Earth, which covers topics in astronomy, oceanography, meteorology, and geology. May be taken as a general science elective. Field trips included.

Prerequisite: *Eligible for either ENG*101E or ENG*101, and either MAT*085, MAT*095-I, or MAT*095 with a "C-" or better or taken concurrently.*

EAS*106, Natural Disasters (3 credits)

Gen Ed Competency: Critical Analysis & Logical Thinking, Scientific Knowledge & Understanding

This course examines the science behind different types of natural disasters and our ability or inability to control and predict such events. From this course, students will gain an appreciation of natural disasters and will better understand how the effects of disasters can be reduced. **Prerequisite:** *Eligible for either ENG*101E or ENG*101.*

EAS*107, Earth Resources (3 credits)

Gen Ed Competency: Scientific Knowledge & Understanding

A view of earth's resources, their occurrence, extraction and use, and their impact with the environment. Topics include mineral, energy, metals, and construction and industrial Earth resources.

Prerequisite: *Eligible for either ENG*101E or ENG*101, and eligible for MAT*095 or higher.*

Economics (ECN*)

School of Arts & Media, Humanities, and Social Sciences

ECN*100, Introduction to Economics (3 credits)

Practical microeconomics and macroeconomics in one semester. Excellent foundation for all business and related careers. Essential tools for individual and business decision-making. Fundamentals of how buyers and sellers interact, and prices. Basic economic interrelationships among families, businesses, and government. Understanding inflation, unemployment, taxes, and government policies to improve our economy. Relate current news to our discussions. **Not open to students who have completed ECN*101 or ECN*102.**

ECN*101, Principles of Macroeconomics (3 credits)

Gen Ed Competencies: Critical Analysis & Logical Thinking, Social Phenomena

An elementary study of the macroeconomic system. A study of the interrelationships among the household, business and government sectors. An elementary study of output, income, employment, consumption, inflation, fluctuations in the economy, and fiscal and monetary policy. This course should be taken after ECN*102. **Prerequisites:** *Eligible for either ENG*101E or ENG*101 and eligible for either MAT*137E or MAT*137.*

ECN*102, Principles of Microeconomics (3 credits)

Gen Ed Competencies: Critical Analysis & Logical Thinking, Social Phenomena

An elementary study of the principles of economics related to relative scarcity and resource allocation. The course provides a basic study of a market economy and various kinds of market structures. Some time is devoted to cost and to labor economics. Should be taken before ECN*101. **Prerequisites:** *Eligible for either ENG*101E or ENG*101 and eligible for either MAT*137E or MAT*137.*

ECN*220, International Economics (3 credits)

Gen Ed Competencies: Critical Analysis & Logical Thinking, Social Phenomena

A study of the principles and applications of international trade and finance, comparative advantage, exchange rates, monetary standards, and international economic institutions. Investigation of national policies and balance of payments issues vis-a-vis open-market economics and globalization. The positions in the global economy of China, the United States, and other countries, and regional economic arrangements are examined.

Prerequisite: *ECN*101 and ECN*102; one of these two courses may be taken concurrently. Recommended: MAT*137 and ENG*101.*

Engineering (EGR*)

School of Allied Health, Business, and STEM

EGR*111, Intro. to Engineering (3 Credits)

Gen Ed Competencies: Scientific Knowledge & Understanding, Scientific Reasoning

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.

Prerequisite: *MAT*186 or taken concurrently and eligible for either ENG*101E or ENG*101.*

EGR*112, Engineering Drawing Interpretations (3 Credits)

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.

EGR*211, Applied Mechanics I • Statics (3 Credits)

Gen Ed Competencies: Scientific Knowledge & Understanding, Scientific Reasoning

The fundamentals of statics, including the resolution and composition of forces, the equilibrium of force systems, the analysis of forces acting on structures and machines, centroids, moments of inertia. Vector methods are used. *Prerequisite/Co-requisite: MAT*256.*

EGR*212, Applied Mechanics II • Dynamics (3 Credits)

Gen Ed Competencies: Scientific Knowledge & Understanding, Scientific Reasoning

A basic course in dynamics covering rectilinear and curvilinear motion, translation, rotation, plane motion; work, energy, and power; impulse and momentum. The application of the principles of dynamics to engineering problems. Vector methods are used. *Prerequisite: EGR*211.*

EGR*214, Engineering Thermodynamics (3 Credits)

Gen Ed Competencies: Scientific Knowledge & Understanding, Scientific Reasoning

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: MAT*254 and PHY*221, or taking concurrently.*

EGR*221, Introduction to Electric Circuit Analysis (4 credits)

Gen Ed Competencies: Scientific Knowledge & Understanding, Scientific Reasoning

This course covers the basic concepts, theorems, laws, methods of analysis, and application examples in DC and AC circuits. Topics include resistance, capacitance, inductance, operational amplifiers, Ohm's Law, Kirchhoff's Laws, Thevenin's and Norton's Theorems, Nodal and Loop analysis, first and second order transient circuits, steady-state analysis, and polyphase circuits. Laboratory experiments involve using simulation software and using instruments for circuit building and testing. Four hours of lecture/laboratory per week. *Prerequisite: MAT*254.*

English (ENG*)

School of Arts & Media, Humanities, and Social Sciences

Transitional-Level Courses (Non-Credit)

EDUC 1003, English Fast Track (Reading-Writing) Workshop (0 credits, 24-30 classroom hours)

This non-credit, fast-track workshop is designed to help students refresh their skills in essay writing, grammar, and reading comprehension. The workshop will be particularly beneficial for students placing at the intensive level but are open to all students. At the end of the workshop, students may retake a placement test to see if they can progress to College Level or College Level with Embedded Support.

EDUC 1010, Fast Track: Grammar (0 credits, 5-15 classroom hours)

This noncredit workshop is designed to help students refresh their skills in grammar and punctuation. This grammar workshop would be particularly beneficial for students who need to improve their Accuplacer Sentence Skills score. It is recommended that students who take this workshop also take Fast Track: Essay Writing.

EDUC 1011, Fast Track: Reading (0 credits, 5-15 classroom hours)

This noncredit workshop is designed to help students refresh their skills in reading comprehension and vocabulary. This reading comprehension workshop would be particularly beneficial for students who need to improve their Accuplacer Reading Comprehension score. It is recommended that students who take this workshop also take Fast Track: Essay Writing.

EDUC 1012, Fast Track: Essay Writing (0 credits, 5-15 classroom hours)

This noncredit workshop is designed to help students refresh their skills in essay writing. This workshop would be particularly beneficial for students who would like to become more familiar with college level essay writing. Fast Track: Essay Writing is strongly recommended for students taking Fast Track: Grammar, Fast Track: Reading, or both workshops.

EDUC 1017, College and Career Success (0 credits)

This noncredit course is designed to enhance students' college and career readiness. The course provides an extended orientation to college, teaches skill sets to support college-level courses, and introduces college majors and careers. Some topics included are learning styles, study strategies, note taking, and test preparation.

EDUC 1020, English Brush Up (Reading-Writing) Workshop

(0 credits, 24-30 classroom hours)

This non-credit, English workshop is designed to help students refresh their skills in essay writing, grammar, and reading comprehension.

Intensive-Level Course (No Graduation Credit)

ENG*096, Introduction to College English (6 developmental education credits)

This Intensive-Level developmental course does not meet graduation requirements. 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.

Embedded-Level Courses

(Graduation Credit with Required Non-Credit Support)

The Accelerated Learning Program (ALP) gives students with higher developmental placement scores the opportunity to pass college-ready ENG*101 during the same semester. Students must register for special, linked sections of both ENG*063-ALP and ENG*101-ALP. Prerequisites: by Placement Exam or Recommendation of Instructor.

ENG*099A, Transition to Composition: Accelerated Learning Program (3 developmental education credits)

This course was formerly numbered as ENG*063-ALP. ENG*099-ALP is the paired course to ENG*101-ALP and is part of the Accelerated Learning Program (ALP) in English Composition. The ALP offers students whose placement scores would otherwise not permit them to enroll in ENG*101, the opportunity to pass ENG*101 by taking ENG*099-A, Transition to Composition. ENG*099 is not a separate course but offers students additional support in meeting ENG*101 learning outcomes. Students in this course will meet with their ENG*101 professor in a small group setting and receive more time on task, individualized instruction, and supplemental help with reading, writing, and grammar. Students who register for ENG*099-A must also register for the paired section of ENG*101-ALP. **This course does not satisfy an English requirement or an elective in any degree program, nor do its credits count toward graduation.** Available only to students who place into or are recommended for the Accelerated Learning Program, or students who earn a "C" or higher in ENG*096. Students must also register for the paired ENG*101-ALP during the same semester.

ENG*101-ALP, Composition (3 credits)

Gen Ed Competency: Written Communication in English
Students will develop written texts of varying lengths and styles for different audiences and purposes. They will respond to rhetorical situations, use sources, craft logical arguments, apply language conventions, and formulate effective writing strategies.
Reading Prerequisite: ENG* 073 or ESL *173 with a grade of "C" or better, or placement, or SAT/ACT scores; *Writing Prerequisites:* ENG *063 with a grade of "C" or better; or placement; or SAT/ACT scores; or ENG*096 with a grade of "C" or better. *Fulfills an "L" course requirement for students who enrolled in a degree program prior to the Fall 2016 semester.*

ENG*101E, Composition Embedded

(3 credits/4 contact hours) \$\$ Supplemental Course Fee

Gen Ed Competency: Written Communication in English

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. **Reading**

Prerequisite: ENG*073 or ESL *173 with a grade of "C" or better, or placement, or SAT/ACT scores; **Writing Prerequisites:** ENG *063 with a grade of "C-" or better; or placement; or SAT/ACT scores; or ENG*096 with a grade of "C" or better. *Fulfills an "L" course requirement for students who enrolled in a degree program prior to the Fall 2016 semester.*

College-Level Courses (Graduation Credit)

ENG*101, Composition (3 credits)

Gen Ed Competency: Written Communication in English

Students will develop written texts of varying lengths and styles for different audiences and purposes. They will respond to rhetorical situations, use sources, craft logical arguments, apply language conventions, and formulate effective writing strategies. **Reading Prerequisite:** ENG*073 or ESL *173 with a grade of "C" or better, or placement, or SAT/ACT scores; **Writing Prerequisites:** ENG *063 with a grade of "C" or better; or placement; or SAT/ACT scores; or ENG*096 with a grade of "C" or better. *Fulfills an "L" course requirement for students who enrolled in a degree program prior to the Fall 2016 semester.*

ENG*102, Literature & Composition (3 credits)

Gen Ed Competencies: Critical Analysis & Logical Thinking, Written Communication in English

Students will learn how to develop interpretations of literature through reading short fiction, poetry, drama, and essays. They will be introduced to literary terminology and to standard critical approaches. They will also learn how to use source materials in order to clearly express their views about literature in several argumentative essays, which includes at least one research essay.

Prerequisite: Either ENG*101ALP, ENG*101E, or ENG*101 with a "C" or better. *Fulfills an "L" course requirement for students who enrolled in a degree program prior to the Fall 2016 semester.*

ENG*110, Introduction to Literature (3 credits)

Gen Ed Competency: Critical Analysis & Logical Thinking

This course provides an introduction to fiction, drama, and poetry through reading literature from different genres, historical periods, and of various styles. Students will learn the elements of

fiction, the basics for reading drama, and an introduction to poetics in order to conduct literary analyses. **Prerequisite:** Either ENG*101ALP, ENG*101E, or ENG*101 with a "C" or better.

ENG*200, Advanced Composition (3 credits)

Gen Ed Competencies: Critical Analysis & Logical Thinking, Written Communication in English

A thorough study of rhetoric, prose style, argumentation, and editing through sophisticated non-fiction readings. Minimum of three extensive essays with various levels of research. This may not be used as a 200-level literature course. **Prerequisite:** Either ENG*101ALP, ENG*101E, or ENG*101 with a "B-" or better. *Fulfills an "L" course requirement for students who enrolled in a degree program prior to the Fall 2016 semester.*

ENG*202, Technical Writing (3 credits)

Gen Ed Competencies: Critical Analysis & Logical Thinking, Written Communication in English

Practice and analysis of formats used in scientific and industrial writing. This may not be used as a 200-level literature course.

Prerequisite: Either ENG*101ALP, ENG*101E, or ENG*101. *Fulfills an "L" course requirement for students who enrolled in a degree program prior to the Fall 2016 semester.*

ENG*210, Fiction (3 credits)

Gen Ed Competencies: Critical Analysis & Logical Thinking, Written Communication in English

Students will analyze different forms of fiction to critique its elements and to learn the history of the genre. Students will write analytical essays, including at least one with research.

Prerequisite: Either ENG*101ALP, ENG*101E, or ENG*101 and either ENG*102 or ENG*110. *Fulfills an "L" course requirement for students who enrolled in a degree program prior to the Fall 2016 semester.*

ENG*211, Short Story (3 credits)

Gen Ed Competencies: Critical Analysis & Logical Thinking, Written Communication in English

Reading and analysis of the short story from the 19th century to the present. Focus on literary and historical context, close reading, and interpretation. Researched essays are required.

Prerequisite: Either ENG*101ALP, ENG*101E, or ENG*101 and either ENG*102 or ENG*110. *Fulfills a "D" course requirement or an "L" course requirement for students who enrolled in a degree program prior to the Fall 2016 semester.*

ENG*213, Poetry (3 credits)

Gen Ed Competencies: Critical Analysis & Logical Thinking, Written Communication in English

This course is an introduction to poetry as a literary genre.

Students will learn the elements of poetry and standard critical approaches to read and analyze poems from different historical

periods and of various styles. Students will write analytical essays, including at least one with research. **Prerequisite:** Either ENG*101ALP, ENG*101E, or ENG*101 and either ENG*102 or ENG*110. *Fulfills an "L" course requirement for students who enrolled in a degree program prior to the Fall 2016 semester.*

ENG*214, Drama (3 credits)

Gen Ed Competencies: Critical Analysis & Logical Thinking, Written Communication in English

Reading and analysis of major works of dramatic literature. Focus on literary and historical context, close reading, and interpretation. Researched essays are required. **Prerequisite:** Either ENG*101ALP, ENG*101E, or ENG*101 and either ENG*102 or ENG*110. *Fulfills an "L" course requirement for students who enrolled in a degree program prior to the Fall 2016 semester.*

ENG*218, Autobiography (3 credits)

Gen Ed Competencies: Critical Analysis & Logical Thinking, Written Communication in English

Reading and analysis of major works of classic and contemporary autobiographical writings. Focus on literary and historical context, close reading, and interpretation. Researched essays are required. **Prerequisite:** Either ENG*101ALP, ENG*101E, or ENG*101 and either ENG*102 or ENG*110. *Fulfills a "D" course requirement or an "L" course requirement for students who enrolled in a degree program prior to the Fall 2016 semester.*

ENG*220, Studies in American Literature (3 credits)

Gen Ed Competencies: Critical Analysis & Logical Thinking, Written Communication in English

Reading and analysis of the American novel since World War II. Focus on literary and historical context, close reading, and interpretation. Researched essays are required. **Prerequisite:** Either ENG*101ALP, ENG*101E, or ENG*101 and either ENG*102 or ENG*110. *Fulfills an "L" course requirement for students who enrolled in a degree program prior to the Fall 2016 semester.*

ENG*221, American Literature I (3 credits)

Gen Ed Competencies: Critical Analysis & Logical Thinking, Written Communication in English

Reading and analysis of major works of American literature from early American through the mid-nineteenth century. Focus on literary and historical context, close reading, and interpretation. Researched essays are required. **Prerequisite:** Either ENG*101ALP, ENG*101E, or ENG*101 and either ENG*102 or ENG*110. *Fulfills an "L" course requirement for students who enrolled in a degree program prior to the Fall 2016 semester.*

ENG*222, American Literature II (3 credits)

Gen Ed Competencies: Critical Analysis & Logical Thinking, Written Communication in English

Reading and analysis of major works of American literature from the mid-nineteenth century through the present. Focus on literary and historical context, close reading, and interpretation. Researched essays are required. **Prerequisite:** Either ENG*101ALP, ENG*101E, or ENG*101 and either ENG*102 or ENG*110. *Fulfills an "L" course requirement for students who enrolled in a degree program prior to the Fall 2016 semester.*

ENG*231, British Literature I (3 credits)

Gen Ed Competencies: Critical Analysis & Logical Thinking, Written Communication in English

Reading and analysis of major works of British literature from Old English through the 18th century. Focus on literary and historical context, close reading, and interpretation. Researched essays are required. **Prerequisites:** Either ENG*101, ENG*101E, or ENG*101ALP and either ENG*102 or ENG*110. *Fulfills an "L" course requirement for students who enrolled in a degree program prior to the Fall 2016 semester.*

ENG*232, British Literature II (3 credits)

Gen Ed Competencies: Critical Analysis & Logical Thinking, Written Communication in English

Reading and analysis of major works of British literature from the Romantics through the present. Focus on literary and historical context, close reading, and interpretation. Researched essays are required. **Prerequisite:** Either ENG*101ALP, ENG*101E, or ENG*101 and either ENG*102 or ENG*110. *Fulfills an "L" course requirement for students who enrolled in a degree program prior to the Fall 2016 semester.*

ENG*233, Shakespeare (3 credits)

Gen Ed Competencies: Critical Analysis & Logical Thinking, Written Communication in English

A study of the major plays of Shakespeare with special emphasis on the histories and comedies. Focus on literary and historical context, and close reading and analysis of Shakespeare's poetics and characters. Researched essays are required. **Prerequisite:** Either ENG*101ALP, ENG*101E, or ENG*101 and either ENG*102 or ENG*110. *Fulfills an "L" course requirement for students who enrolled in a degree program prior to the Fall 2016 semester.*

ENG*234, Shakespeare II (3 credits)

Gen Ed Competencies: Critical Analysis & Logical Thinking, Written Communication in English

A study of the major plays of Shakespeare with special emphasis on the tragedies and romances. Focus on literary and historical context, and close reading and analysis of Shakespeare's poetics and characters. Researched essays are required. **Prerequisite:** Either ENG*101ALP, ENG*101E, or ENG*101 and either

ENG*102 or ENG*110. *Fulfills an "L" course requirement for students who enrolled in a degree program prior to the Fall 2016 semester.*

ENG*262, Women in Literature (3 credits)

Gen Ed Competencies: Critical Analysis & Logical Thinking, Written Communication in English

Students will explore the contributions of women authors to literature by reading and analyzing works by women. These works represent the traditional genres of poetry and fiction in addition to autobiography/memoir, diary, speech, and essay. Students will explore feminist literary theory and criticism as well as investigate the roles played by class, sexual orientation, and culture. Students will write analytical essays, including at least one with research. **Prerequisites:** *Either ENG*101, ENG*101E, or ENG*101ALP and either ENG*102 or ENG*110. Fulfills a "D" course requirement or an "L" course requirement for students who enrolled in a degree program prior to the Fall 2016 semester.*

ENG*281, Creative Writing (3 credits)

Gen Ed Competency: Aesthetic Dimensions

Students will learn and practice the craft elements of writing poetry, fiction, and/or non-fiction, examine the works of writers in the genres, and receive and offer critique in workshop setting. Students will submit end of semester portfolio and work for possible publication in *Pegasus* literary journal. **Prerequisite:** *Either ENG*101ALP, ENG*101E, or ENG*101.*

ENG*282, Creative Writing – Poetry (3 credits)

Gen Ed Competency: Aesthetic Dimensions

Is a continuation of creative writing skills begun in ENG*281, Creative Writing, focusing exclusively on the technique of writing poetry. Students will continue to study, model, and practice the craft elements of writing poetry, providing and receiving critique in a workshop setting. Revision, reading, and submission for possible publication will be emphasized. **Prerequisite:** *ENG*281.*

ENG*283, Creative Writing – Fiction (3 credits)

Gen Ed Competency: Aesthetic Dimensions

Focuses on the elements and techniques of fiction writing. Students will study examples of fiction and discuss and practice elements of craft, such as character, conflict development, dialogue, and point of view. Student will write fiction and discuss their work in a workshop environment. **Prerequisite:** *ENG*281.*

ENG*285, Memoir Writing (3 credits)

Gen Ed Competency: Aesthetic Dimensions

The primary focus of the class will be creating personal essays – writing may include travel or political pieces, memoir, interviews, or other forms of nonfiction. Students will share, discuss, and revise their work. Students will read a wide range of published

nonfiction, write reflectively about the published essays, and model the work of established authors. **Prerequisite:** *Either ENG*101ALP, ENG*101E, or ENG*101 with a "B-" or better.*

ENG*291, Mythology (3 credits)

Gen Ed Competencies: Critical Analysis & Logical Thinking, Written Communication in English

This course will explore mythology from ancient to modern periods. Students will read and analyze myths, explore critical approaches, and assess its impact on society. Students will write analytical essays, including at least one with research.

Prerequisite: *Either ENG*101ALP, ENG*101E, or ENG*101 and either ENG*102 or ENG*110. Fulfills an "L" course requirement for students who enrolled in a degree program prior to the Fall 2016 semester.*

ENG*298, Special Topics in English (3 credits)

Gen Ed Competencies: Continuing Learning/ Information Literacy, Critical Analysis & Logical Thinking, Written Communication in English

An in-depth exploration of a specialized topic in literature. Researched essays are required. **Prerequisite:** *Either ENG*101ALP, ENG*101E, or ENG*101 and either ENG*102 or ENG*110. Fulfills an "L" course requirement for students who enrolled in a degree program prior to the Fall 2016 semester.*

Environmental Engineering Technology (ENV*)

School of Allied Health, Business, and STEM

ENV*109, OSHA 40 Hour Training and Emergency Response Procedure (3 credits)

This course provides the training required by 29 CFR 1910.120, and NFPA standards for hazardous waste site workers, and those involved in the emergency response to incidents involving hazardous materials. A minimum of 48 hours of classroom and or hands-on training is required.

ENV*162, Environmental Sampling (3 credits)

An introduction to the techniques of environmental sampling and data collection for contamination and water supply investigations. Topics include soil and groundwater sampling, surface water measurements, aquifer tests, and other basic field techniques. Also included is an introduction to the concept of Brownfields, innovative remediation technologies, and the chemical nature of hazardous substances. This introductory course is intended for students with no prior exposure to field investigation techniques and as a precursor to advanced training and ENV*212.

ENV*212, Site Assessment (3 credits)

An introduction to the environmental site assessment process. Topics include Phase I Environmental Site Assessments under the CT Property Transfer Act, further study of innovative remediation technologies, and an overview of Phase II and III Environmental Site Assessments. Also included is an overview of the CT Remediation Standard Regulations and chemical-specific remediation criteria. This introductory course is intended for students with no prior exposure to Environmental Site Assessments and CT Environmental Regulations. **Prerequisite:** ENV*162.

ENV*292, Environmental Internship (3 credits)

A minimum of 160 hours spent working at an organization concerned with environmental monitoring or control. Placement can include but is not limited to local health departments, DEP, local sanitarians, environmental testing laboratories, and water supply and purification companies. **Prerequisite:** *Permission of program coordinator.*

Environmental Science (EVS*)

School of Allied Health, Business, and STEM

\$\$ Supplemental Course Fee: Many science lab courses require a separate fee added at the time of registration in order to cover the cost of additional instructional time, supplies, and materials used by students.

EVS*100, Intro. to Environmental Science (3 credits)

Gen Ed Competency: Critical Analysis & Logical Thinking, Scientific Knowledge & Understanding

An overview of biological and physical processes in the natural environment, and the impact of human activities. The course will explore current environmental issues both locally and globally, and critically evaluate potential solutions. Topics include threats to species and ecosystems, overpopulation, land use, air and water pollution, climate change, energy resources, resource depletion, and waste management. **Prerequisite:** *Eligible for either ENG*101E or ENG*101.*

EVS*111, Environmental Science Laboratory (1 Credit/3 contact hours) \$\$ Supplemental Course Fee

Gen Ed Competencies: Critical Analysis & Logical Thinking, Scientific Knowledge & Understanding

An introductory laboratory course that provides a survey of concepts and techniques in environmental science. Students will investigate habitats, ecosystems, soils, air quality, climate change, fossil fuels, and renewable energy. Student will develop observational, sampling, and analytical skills in the laboratory and in the field. The course will include fieldwork both on and

off campus, and students may be required to meet at off-campus locations. 3 hours of lab per week. **Prerequisites:** *EVS*100 or taken concurrently, and eligible for MAT*137.*

EVS*135, Exploring Environmental Science (1 Credit)

An introduction to environmental science career pathways. A series of guest speakers from the environmental field, including industry, government, and education, will describe their work and the skills and tools needed to be successful. The course will focus on environmental work in Connecticut with connections to broader trends. The course is open to anyone interested in environmental issues, sustainability, and career opportunities. One hour of lecture per week.

French (FRE*)

School of Arts & Media, Humanities, and Social Sciences

FRE*101, Elementary French I (3 credits)

Fundamentals of grammar with emphasis on the development of speaking, listening, and writing skills. *Fulfills a "D" course requirement for students who enrolled in a degree program prior to the Fall 2016 semester.*

FRE*102, Elementary French II (3 credits)

Continued development of speaking, listening, and writing skills as well as fundamentals of grammar. **Prerequisite:** *FRE*101 or permission of the instructor. Fulfills a "D" course requirement for students who enrolled in a degree program prior to the Fall 2016 semester.*

FRE*201, Intermediate French I (3 credits)

Further study of grammar with continued emphasis on the development of conversational fluency and writing proficiency. Compositions. Introduction to literature. **Prerequisite:** *FRE*102 or permission of the instructor. Fulfills a "D" course requirement for students who enrolled in a degree program prior to the Fall 2016 semester.*

FRE*202, Intermediate French II (3 credits)

Continuation of the study of grammar with further emphasis on the development of conversational fluency and writing proficiency. Compositions. Literature. **Prerequisite:** *FRE*201. Fulfills a "D" course requirement for students who enrolled in a degree program prior to the Fall 2016 semester.*

Freshman Seminar (FS)

FS100, Freshman Seminar (3 credits)

Gen Ed Competency: Continuing Learning/ Information Literacy

The Freshman Seminar introduces the new student to diverse academic content, emphasizing learning strategies and critical thinking skills in preparation for more rigorous college study. This multidisciplinary course combines a faculty lecture series with small-group discussion sessions. Topics to be covered include introductory lectures on social sciences, natural/physical sciences, mathematics, humanities, business, and career opportunities. Highly recommended for both full-time students with two or more college prep placements and part-time students taking college prep courses.

FS110, College Success (1 credit)

This course is designed to introduce new students to the college and its resources; to help them adopt skills necessary for college success; and to help new students feel connected to the college, its faculty and staff, and their fellow students. Special emphasis will be placed on career exploration for the purpose of helping students develop academic and career goals and encouraging them to enroll in career and technical education programs.

Geography (GEO*)

School of Arts & Media, Humanities, and Social Sciences

GEO*101, Introduction to Geography (3 credits)

Gen Ed Competency: Social Phenomena

An introductory study of geography concerned with the basic patterns of physical environment and their relationship to man. Focus is upon not only where people and activities are located on the Earth's surface and the reasons for the location but also upon geography as a social science, emphasizing the relevance of geographic concepts to human problems and conditions. As such the course's use of physical geographic concepts will help students to better understand human behavior. A topical approach is used. Included are analyses of why languages, religions, and ethnicities are arranged as they are in the World and an examination of the significance of the locations of important economic activities, including agriculture, manufacturing, and services. *Fulfills a "D" course requirement for students who enrolled in a degree program prior to the Fall 2016 semester.*

Geology (GLG*)

School of Allied Health, Business, and STEM

GLG*112, Geology of Connecticut (3 credits)

An introduction to the geological features of Connecticut and surrounding areas. Emphasis on field relations and general geological concepts. Review of history on Connecticut Geology. Field trips included. **Prerequisites:** *Eligible for either ENG*101E or ENG*101, and either MAT*085, MAT*095-I, or MAT*095 with a "C-" or better or taken concurrently.*

GLG*120, Dynamic Earth (4 credits/6 contact hours)

\$\$ Supplemental Course Fee

Gen Ed Competencies: Scientific Knowledge & Understanding, Scientific Reasoning

An introduction to the physical geology of the Earth, with an emphasis on interactions between land, air, water, and life, and the cycling of energy and matter over time. This course will investigate how processes within the earth system have produced resources, landforms, catastrophes, climates, and biological evolution throughout Earth's history. Includes consideration of human impacts on the earth system. Lecture: 3 hours per week. Laboratory: 3 hours per week. **Prerequisites:** *Eligible for ENG*101 and eligible for MAT*137 or higher.*

GLG*121, Intro. to Physical Geology (4 credits)

An introduction to the principles governing the composition and structure of the Earth's crust and the study of landforms and geological processes on and within the Earth's surface. Topics include earth materials, geologic time, surface processes, internal processes, and earth structures. **Prerequisites:** *Eligible for either ENG*101E or ENG*101, and either MAT*085, MAT*095-I, or MAT*095 with a "C-" or better or taken concurrently.*

Health (HLT*, HPE*, MED*, NTR*)

School of Allied Health, Business, and STEM

HPE*144, Fitness and Wellness for Everybody (2 Credits)

An introduction to the benefits of healthy lifestyle incorporating fitness and wellness topics within an off-campus lecture and gym based activity setting at a local facility. This course is designed to emphasize the importance of self-responsibility in achieving a high level of wellness. A lecture/physical activity setting will provide the opportunity for students to: 1. Identify and implement one fitness/wellness change that will have a positive impact on their well-being. 2. Participate in classroom lectures that cover a variety of wellness topics. 3. Engage in physical fitness activity.

HLT*103, Investigations in Health Careers (3 credits)

This course is designed to provide the learner students with an overview of the healthcare system, health professions, general anatomy and physiology, principles of the scientific process, medical terminology, documentation, conducting scientific research and the use of information technology in the healthcare environment. The course will also include segments in signs and symptoms of illnesses, medical triage, medical ethics, and the legal responsibilities of healthcare providers. **Prerequisite:** *Eligible for either ENG*101E or ENG 101.*

HLT*160/SOC*160, Introduction to Public Health (3 credits)

Gen Ed Competencies: Scientific Reasoning, Social Phenomena

This course provides a basic overview of public health and various public health systems. It provides a foundation for the understanding of public health principles and practices for any student interested in social work, health careers, biology, health education, or simply being an informed citizen. Topics will include the effects of individual lifestyle decisions and their relation to personal and public health. The course deals with a variety of current public health threats and trends, and how public health professionals play a role in identifying and remediating or avoiding them. **Prerequisite:** *Eligible for either ENG* 101E or ENG*101.*

MED*125, Medical Terminology (3 credits)

This course is an introduction to basic medical terminology including origins of scientific terms, suffixes and prefixes which will enhance student ability to interpret and discuss scientific and clinical concepts. Concentration is on medical terminology which facilitates the student's comprehension of materials in patient records, medical reports and scientific articles. Clinical cases including diagnostic reports are utilized for discussion in this course. **Prerequisite:** *Eligible for either ENG*101E or 101.*

MED*250, Principles of Pharmacology (3 credits)

An examination of the more commonly prescribed medications as they relate to specific body systems. Topics include practices governing the use, dispensing, administration, and storage of pharmaceuticals. Terminology relating to drugs and the administration of drugs is emphasized. **Prerequisite:** *MED*125*

NTR*100, Intro to Nutrition & Dietetics (1 credit)

This course acquaints students with the nutrition and dietetics profession including the many roles of dietetics professionals and training requirements. In addition, the course will cover continuing education requirements for dietetics professionals to maintain their credentials. Students will also learn how nutrition and dietetics professionals function as members of the health

care team. The course complements material presented in HLT*103, Investigations in Health Careers. It may be taken independently, or in conjunction with HLT*103. For students intending to transfer into the Nutrition and Dietetics Associate's Degree Program at Gateway Community College HLT*103 and NTR*100 will meet program requirements for NTR*101.

Prerequisite: *Eligible for either ENG*101E or ENG*101*

Health Information Management (HIM*)

School of Allied Health, Business, and STEM

HIM*102, Intro. to Healthcare Systems (3 credits)

This course has been discontinued. This course introduces the student to the field of health information technology. Topics to be covered include the healthcare delivery system, medical records format and content, various filing systems, the environment where the information is gathered, by who the information is used, and the technology behind health information systems. In addition, the course will cover retention policies and procedures, documentation, confidentiality issues, and legal and regulatory aspects of the medical record.

Prerequisite: *Eligible for either ENG 101E or ENG 101.*

HIM*112, Medical Insurance and Reimbursement (3 credits)

This course has been discontinued.

This course will teach the important issues regarding healthcare today, clerical and administrative skills, medical health insurance and claims processing, insurance terminology, types of insurance, and the eligibility and benefit structure of the insurance plan. This knowledge readies students to work in a private physician's office, a multi-specialty clinic, or a hospital setting. Topics discussed will include the Health Insurance Portability and Accountability Act (HIPPA), Medicare, Medicaid, Managed Care, TRICARE, and Workers' Compensation. Students will learn to generate and manage billing claim forms for the medical office and other organizations. Students will be prepared to analyze and accurately decipher complicated medical claims and oversee the entire billing and reimbursement process. In particular, as the industry is currently updating from ICD-9 to ICD-10, the latest system will be taught to students.

Prerequisite/Co-Requisite: *MED*125.*

HIM*113, Healthcare Delivery Systems & Reimbursement (3 credits)

Students will be able to describe the organizations, services, and personnel that comprise the healthcare delivery system. Students will understand the history and development of payment systems and insurance models and their impact on health, access to care,

and quality of healthcare. Reimbursement issues will include the revenue cycle, coding systems, payment systems, compliance.

Prerequisite: *Eligible for either ENG*101E or ENG*101.*

HIM*156, Electronic Health Records (3 credits)

This course has been discontinued.

Gen Ed Competencies: Continuing Learning/ Information Literacy, Scientific Reasoning

This course is meant to give students an inside look at electronic documentation that is an essential component of healthcare recordkeeping. It offers students fundamental knowledge of health information systems and introduces the use of electronic health record systems and health information exchanges (HIE). This course includes rules, regulations, and innovations in electronic health records, as well as hands-on exercises that use real EHR software to transform theoretical EHR concepts into practical understanding. **Recommended Prerequisite:** CSC*101 Introduction to Computers or working knowledge of Microsoft Windows navigation and file management.

Prerequisites: *MED*125 and HIM*102.*

HIM*157, Healthcare Informatics (3 credits)

Gen Ed Competency: Continuing Learning/ Information Literacy

Students will learn about the role of information technology in the delivery of healthcare services. The course will begin by addressing the hardware and infrastructure to support the use of information technologies. Students will learn about the lifecycle of information systems and the HIM professional's role in system selection, design, and support. The course will address methods for ensuring the privacy and security of health information along with issues of access and usability including health information exchange. The course will cover the variety of software applications and tools used in the healthcare environment. The course will include simulation lab practice using an electronic health record. **Prerequisites:** *Eligible for ENG*101 or ENG*101E, CSC*101 or equivalent with a "C" or better; or a "pass" on the Computer Proficiency Test administered in the MxCC Academic Success Center.*

HIM*201, Health Information Management Principles (3 credits)

This course provides students with an introduction to the health information management profession. Students will explore the variety of healthcare delivery settings and the types of records they create. Students will understand the content requirements of the medical record and will learn to evaluate compliance with regulations and standards for medical record documentation. The course will explain the significance of accuracy and integrity of healthcare data in the revenue cycle and in quality and performance improvement processes. This course introduces students to the operation of an HIM department including

information systems, budgets, diversity, and the professional code of ethics for health information professionals.

Prerequisite: *Eligible for ENG*101 or ENG*101E.*

HIM*203, Pathophysiology (3 credits)

This course provides an introduction to the study of functional changes that accompany human diseases. The purpose of this course is to supply students with basic understanding which will prepare them for the healthcare setting. The most common conditions along with new and emerging diseases will be included. Components of pharmacology will also be included for each category of diseases. **Prerequisite:** *BIO*115.*

HIM*205, Medical Coding 1 (3 credits)

Gen Ed Competency: Critical Analysis & Logical Thinking

This course introduces students to nomenclatures and classification systems used in healthcare. The course provides in-depth coverage of the ICD-10CM and ICD-10-PCS coding systems. Students will begin with simple coding cases and advance to more complex coding and auditing. Healthcare reimbursement issues will be explored with emphasis on the need for documentation to support accurate code assignment and billing for healthcare services. Students will apply the Uniform Hospital Discharge Data Set (UHDDS). The ICD-10-CM will be compared to the DSM-5 codes for behavioral health.

Prerequisites: *BIO*115 or BIO*212, and MED*125, all with a grade of "C" or better.*

HIM*206, Medical Coding 2 (3 credits)

Gen Ed Competency: Critical Analysis & Logical Thinking

Nomenclatures and classification systems used in healthcare covered in this course include the CPT/HCPCS coding systems. Students will begin with simple coding cases and advance to more complex coding and auditing. Students will explore nomenclatures and classification systems commonly used in electronic health records and reporting including SNOMED, LOINC, NDC, along with an introduction to ICD-11.

Prerequisites: *BIO*115 or BIO*212, and MED*125, all with a grade of "C" or better.*

HIM*220, Supervision/Quality Management (3 credits)

This course covers topics of leadership, supervision, and quality management. Students will learn common quality improvement processes in healthcare organizations, and discuss topics related to accreditation, licensure, teamwork, change management, project management, data analysis and other quality measures. Students will also perform financial management tasks such as budgeting, accounting and variance analysis. Employee recruitment and employment law will be explored, along with creating an environment that supports a culture of diversity.

Prerequisites: MAT*167 or MAT*168 with a “C” or better, HIM*201 with a “C” or better, and HIM*113 with a “C” or better.

HIM*230, Healthcare Statistics & Data Analysis(3 cr)

Gen Ed Competency: Quantitative Reasoning

Students will have hands-on practice calculating healthcare statistics and analyzing healthcare data to identify trends. Student will explore publicly available healthcare data. The course will include simulation lab practice using software to analyze data and create data visualizations. Students will learn methods for managing data quality and ensuring the accuracy and integrity of health data. Students will be introduced to the role of the HIM professional in implementing and improving information governance practices in healthcare organizations. **Prerequisites:** MAT*167/MAT*168, HIM*201, HIM*113, HIM*157, HIM*205, and HIM*206 with a “C” or better in all prerequisite courses.

HIM*256, Legal and Ethical Issues of HIM (3 credits)

Students will learn about the legal and ethical issues affecting healthcare today, including legislative and regulatory processes and legal terminology. Special attention will be devoted to issues of electronic record systems from the legal and ethical perspective. Students will study health information/record laws and regulations (such as retention, patient rights/advocacy, advanced directives, privacy.) Confidentiality, privacy, and security policies, procedures and monitoring along with release of information policies and procedures, professional and practice-related ethical issues will also be studied. Students will investigate and recommend solutions to privacy issues and problems. **Prerequisite:** HIM*201.

HIM*290, Certification Exam Prep. (1 credit)

Students completing a degree in health information management usually sit for a professional certification exam in health information management and/or coding. This course will prepare students for certification exams by providing test-taking tips and study strategies. Students will review exam content including coding, privacy and security of health information, and other exam topics. Students will receive assistance in selecting and registering for certification exams and will complete practice tests. Students will have the opportunity to explore career goals and prepare a resume. **Prerequisite:** Permission of Program Coordinator.

HIM*295, Health Information Management Internship (3 credits)

Gen Ed Competency: Critical Analysis & Logical Thinking,

This course provides professional practice experience for HIM students. Students will participate in simulation lab activities covering advanced coding topics and the use of HIM software

applications. Students will gain on-the-job experience through a 40-hour internship in a healthcare organization. **Prerequisites:** ENG*102, CSA*140, MAT*167/MAT*168, HIM*201, HIM*113, HIM*157, HIM*205, and HIM*206 with a “C” or better in all prerequisite courses.

History (HIS*)

School of Arts & Media, Humanities, and Social Sciences

HIS*101, Western Civilization I (3 credits)

Gen Ed Competency: Historical Knowledge

A systematic study of the contributions of the ancient Middle East, Egypt, Greece, and Rome to Western Civilization. The above is followed by an examination of the first 1,200 years of Western History (Middle Ages, Renaissance, American Discovery, the Age of Absolutism) with an emphasis on religious, political, economic, intellectual, and social evolution. *Fulfills a “D” course requirement for students who enrolled in a degree program prior to the Fall 2016 semester.*

HIS*102, Western Civilization II (3 credits)

Gen Ed Competency: Historical Knowledge

Students will explore significant economic, social, political, military, and intellectual trends in Western Society during the past three hundred years. Particular emphasis will be given to the ideas of political and economic freedom, the impact of the Industrial Revolution, changing intellectual climates, colonialism, the two World Wars, and the Cold War. (May be taken without HIS*101.) *Fulfills a “D” course requirement for students who enrolled in a degree program prior to the Fall 2016 semester.*

HIS*107, History of Puerto Rico (3 credits)

Gen Ed Competency: Historical Knowledge This course will explore the political, social, economic and constitutional development of Puerto Rico from the early 16th century to the near present. Four centuries of Spanish colonization and the island’s dual role in the empire as a defensive outpost and producer of sugar, tobacco, and coffee forms the first part of the course. Next, we examine how proximity to the United States in geographical, economic, and political terms has profoundly touched the lives of all Puerto Rican’s and influenced the development of island society. Finally, we consider the history of Puerto Rican communities in the northeastern United States that are the result of successive migratory waves that started early in the 20th century.

HIS*121, World Civilization I (3 credits)

Gen Ed Competency: Historical Knowledge

This course examines the development of global history to 1500. Coverage is organized into seven successive eras of world

history, and focuses on the development of civilization in every region of the world and their interaction with other societies. The latter allows for cross-cultural comparisons and provides insight into the consequences of cultural connections brought about by trade, transportation, and communication. *Fulfills a "D" course requirement for students who enrolled in a degree program prior to the Fall 2016 semester.*

HIS*122, World Civilization II (3 credits)

Gen Ed Competency: Historical Knowledge

This course examines the development of global history since 1500. Coverage is organized into three successive eras of world history. The history of each region is examined as well as the interaction between different parts of the world. The latter focus allows for cross-cultural comparisons and provides insight into the consequences of cultural connections brought about by trade, transportation, and communication. *Fulfills a "D" course requirement for students who enrolled in a degree program prior to the Fall 2016 semester.*

HIS*201, United States History I (3 credits)

Gen Ed Competency: Historical Knowledge

Students will study the development of British North America from the establishment of the first colonies to the founding of the United States with an emphasis on the nature of immigration, slavery, and overall themes of colonialism. Likewise, students will explore United States development from the early days of the republic through the Civil War with a focus on regional development and Westward. *Fulfills a "D" course requirement for students who enrolled in a degree program prior to the Fall 2016 semester.*

HIS*202, United States History II (3 credits)

Gen Ed Competency: Historical Knowledge

A systematic study of the United States from Reconstruction to the present, with special attention given to industrialism's social, economic, and ideological impact, America's changing ethnic make-up, race conflict, and changes in the United States' international position through the two World Wars and the Cold War. (May be taken without HIS*201.) *Fulfills a "D" course requirement for students who enrolled in a degree program prior to the Fall 2016 semester.*

HIS*244, Europe in the 20th Century (3 credits)

Gen Ed Competency: Historical Knowledge

Students will study Europe's changing economic, social, military, and diplomatic trends from the late 19th Century to the present. Special emphasis will be given to the causes of the First World War, the Second World War, and the Cold War.

Honors (HON)

HON 101, Honors Seminar (1 credit)

Gen Ed Competency: Critical Analysis & Logical Thinking

Honors Seminar introduces the student to diverse and enriching academic content. Course design emphasizes college transition skills and critical thinking skills to promote rigorous and interdisciplinary academic study. This multidisciplinary approach combines lecture, discussion, and class activity in order to introduce students to academia and its practices. Students will refine written and oral communication skills, enhance their ability to analyze and synthesize interdisciplinary material, and use a variety of research methods to understand and critically respond to larger social issues. This course may include service-learning activities, participation within extra-curricular events on and off campus, and an introduction to professional and academic policies, procedures, or opportunities. **Prerequisites:** *Enrollment within the Honors Program and placement into ENG*101. This course is required for all first semester Honor students.*

HON 102, Honors Seminar II (1 credit)

Gen Ed Competency: Critical Analysis & Logical Thinking

The Honors Seminar II builds on concepts introduced in Honors Seminar I and it is required before taking subsequent Honors Seminars, HON201 and HON202. In HON102, students being to explore a discipline, topic, or issue for a Capstone Project. Students will also learn the fundamentals of mentoring and collegiate collaboration as they complete a leadership project. This course many include service-learning activities and participation within extra-curricular events on and off campus. **Prerequisites:** *Enrollment within the Honors Program and completion of HON101, ENG*101, and/or instructor permission. This course is required for all Honors students.*

HON 201, Honors Seminar III (1 credit)

Gen Ed Competency: Critical Analysis & Logical Thinking

Honors Seminar III is the third course in the Honors Program seminar sequence. This course aims to build on skills acquired within HON*101 and/or HON*102. In this course, students are required to complete a research proposal and to plan all research required for the Honors Capstone Project (HON 202). HON 201 will further refine student written and oral communication skills, further enrich analytical skills, and further develop comprehension and use of research methods to understand and to critically respond to larger social issues. This course may include service learning activities and participation within extra-curricular events on and off campus. **Prerequisites:** *Enrollment within the Honors Program and completion of HON 102. This course is required for all Honors students prior to taking HON 202.*

HON 202, Honors Capstone Project (1 credit)

Gen Ed Competency: Critical Analysis & Logical Thinking

The Honors Capstone Project requires students to engage in academic research and produce results. Students will work with faculty advisors within the discipline of the project and students will complete all steps of the academic/scientific method from proposal, abstract, research, and presentation. In order to pass HON 202, students will have to publicly present their research to the MxCC community. HON 202 will enhance student written and oral communication skills within academic and professional settings and situations. HON 202 will enrich student use of research methods to understand, to critically respond, and to pose an argument in response to a larger social issue or topic. This course may include service-learning activities and participation within extra-curricular events on and off campus. **Prerequisites:** Enrollment within the Honors Program and completion of (at least) one semester of HON 102.

Human Services (HSE*)

School of Arts & Media, Humanities, and Social Sciences

DFS*110, Orientation to Deafness (3 credits)

An overview of deafness that encompasses three major topics: the nature and experience of deafness; the education of deaf children and adults; and the deaf community. Subtopics are likely to include: language/communications; medical, psychological, social, and vocational.

HSE*101, Intro. to Human Services (3 credits)

Gen Ed Competency: Social Phenomena

An introduction to the scope and nature of the human services profession. Focus is on integrated service delivery and the student's responsibility to the community. *Fulfills a "D" course requirement for students who enrolled in a degree program prior to the Fall 2016 semester.*

HSE*116, Youth Advocacy and Community Organization (3 credits)

This course is intended to provide students with practical skills related to working with at risk children and youth either within residential or community settings. The course is an introduction to the identification, prevention, and solution of individual, family, and community problems, while managing and setting policies for youth servicing agencies. This course includes a 20-hour community service requirement. *Fulfills a "D" course requirement for students who enrolled in a degree program prior to the Fall 2016 semester.*

HSE*167, Nature & Needs of Persons with Mental Retardation (3 credits)

This course is a view of the person who has been labeled mentally retarded. The particular learning deficits unique to retardation will be explored. The history of the care of persons with retardation in Connecticut will be reviewed. Current trends in mental retardation will be considered.

HSE*191, Problem Gambling, Treatment, and Prevention (3 credits)

This course will provide an introduction to the field of problem gambling, treatment, and prevention. Emphasis will be on the social, economic, and personal impact of problem gambling on individuals, families, and communities. Theory and practice regarding the prevention, identification and assessment of problem gambling will also be explored as well as methods of referral and intervention for persons experiencing gambling problems.

HSE*202, Introduction to Counseling/Interviewing (3 credits)

Gen Ed Competency: Oral Communication in English

A systematic study of the basic theories, methods, and techniques utilized in interviewing and counseling. Each student will learn through theory and application. The integration of new techniques into the individual's unique style is anticipated.

Prerequisite: PSY*111.

HSE*224, Social Problems of Youth (3 credits)

Gen Ed Competencies: Historical Knowledge, Oral Communication in English

This course is intended to explore targeted concerns and perspectives regarding problems among youth. Topics to be covered are substance abuse among youth, addiction and prevention, the influence of media on youth, conflict resolution, alternative to incarceration, youth sexuality, and multi-cultural issues. **Prerequisites:** Either ENG*101E or ENG*101 or permission of the instructor.

HSE*288, Developmental Practicum (3 credits)

This course will provide theoretical knowledge and field work placement for students working with either children, adolescents, or adults of any age. This practicum serves as either an introductory field placement experience or to fulfill the practicum requirement for students enrolled in the Therapeutic Recreation Certificate program. **Prerequisite:** HSE*101. Students enrolled in the Therapeutic Recreation Certificate program do not need HSE*101 in order to enroll in this practicum.

HSE*289, Psychiatric Practicum (3 credits)

This course provides theoretical knowledge and field placement experience for students working with challenged populations or engaging in some type of community organization experience. Students in this practicum may work with children, youth, or adults who experience developmental, behavioral, or psychiatric disabilities. It is expected that students in this practicum have had former practicum or work experience which has contributed to skill development. This practicum also fulfills the practicum requirement for the Juvenile Justice and Substance Abuse Education certificate programs. **Prerequisite:** HSE*101 and permission of the instructor.

Italian (ITA*)

School of Arts & Media, Humanities, and Social Sciences

ITA*101, Elementary Italian I (3 credits)

Fundamentals of grammar with emphasis on the development of speaking, listening, and writing skills. *Fulfills a "D" course requirement for students who enrolled in a degree program prior to the Fall 2016 semester.*

ITA*102, Elementary Italian II (3 credits)

Continued development of speaking, listening, and writing skills as well as fundamentals of grammar. **Prerequisite:** ITA*101 or permission of the instructor. *Fulfills a "D" course requirement for students who enrolled in a degree program prior to the Fall 2016 semester.*

Mammography (MAM*)

School of Allied Health, Business, and STEM

MAM*201, Principles of Mammography (4 credits)

This course will review basic patient care and radiation protection. This course will introduce students with radiography backgrounds to the basic principles behind breast imaging (patient care, instrumentation, anatomy and physiology, technique and evaluation). This course will teach students to operate and utilize digital and conventional mammography equipment to produce images of patients' breast tissue. This course will prepare graduates to possess the knowledge, skill, and affect to meet the demands of an entry level-position as a mammographer. Theory presented will prepare and qualify students to participate in the AART Mammography certification examination. **Prerequisite:** Admission to the Mammography Program; *Must be a registered Radiographer (ARRT)*

MAM*202, Mammography Clinical Experience (4 credits)

Gen Ed Competency: Scientific Reasoning

This course will introduce students with radiography backgrounds to the basic principles behind breast imaging (patient care, instrumentation, anatomy and physiology, radiation protection, technique and evaluation). Upon successful completion of the course, the student will be competent in completing the entire mammographic procedure from request through quality control. A minimum of 240 contact hours of supervised instruction is required. Students must perform 75 mammographic examinations (screening and/or diagnostic) in addition to the 25 examinations that are required by the initial Mammography Quality Standards Act (MQSA) mammography requirements. All examinations must be performed on patients (not phantom or simulations). Clinical experience and completion of required examinations will prepare and qualify students to sit for the ARRT Mammography certification examination. **Prerequisite:** Admission to the Mammography Program; *Must be a registered Radiographer (ARRT)*

Manufacturing (CAD*, MFG*, QUA*)

School of Allied Health, Business, and STEM

CAD*110, Introduction to CAD (3 credits)

Gen Ed Competency: Continuing Learning/ Information Literacy

An introduction to the techniques of generating graphic images with computers using AutoCAD. Topics include: overview of CAD terminology, computer terminology, hardware descriptions and requirements, file manipulation and management, two-dimensional geometric construction, symbol library creation, dimensioning, scaling, sectioning, plotting, detail and assembly drawings including tolerance studies.

CAD*171, Mechanical 3-D CAD (Autodesk Inventor) (3 credits)

The primary goal of this course is to introduce students to engineering graphics through the use of computers and Autodesk Inventor. Students learn through a "hands-on" exercise intensive approach to concepts of engineering graphics. Students create rough 2-D sketches, apply/modify constraints and dimensions to the sketch, and extrude, revolve, or swept the design to create a 3-D model. The emphasis of the lessons is placed on graphical analysis, orthographic projection, auxiliary views, dimensioning methods, sectioning, creating assembly and working drawings with adherence to recognized drafting standards.

CAD*220, Parametric Design (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.

Prerequisite: CAD*110.

MFG*051, Manufacturing Math I (3 developmental credits; does not count toward graduation)

First course in manufacturing mathematics. A study of arithmetic and algebraic operations applied to manufacturing circumstances. Fractions, decimals, tolerances, percentages, signed numbers, powers and roots, the metric system, as well as ratios and proportions are studied in depth. This course is not open to students who are eligible for MAT*137 or higher.

MFG*102, Manufacturing Processes (3 credits)

This course studies manufacturing: making goods and wares by industrial processes. The course will provide theoretical experience in the scientific, engineering, and economic principles on which the various manufacturing processes are based.

Prerequisite: Eligible for either ENG*063/ ENG*101ALP or higher or ENG*096 taken concurrently. Concurrent enrollment in MFG*103 highly recommended.

MFG*103, Manufacturing Processes Lab (1 Credit)

This course provides laboratory emphasis on common metal cutting tools and lathe operations, as well as on associated precision measuring tools and instruments. The labs will involve set-ups and procedures for milling machines, lathes, grinders, drill presses, and some measuring instruments. Students will be required to do lab work beyond the lab time scheduled for this course. **Prerequisites:** Eligible for ENG*063/ENG*ALP or higher or ENG*096 taken concurrently, **AND** completion of or concurrent enrollment in MFG*102.

MFG*105, Manufacturing Math II (3 credits)

A study of arithmetic and trigonometric operations applied to manufacturing circumstances. The following geometric entities are studied in detail: the circle, regular and irregular polygons, the right triangle and oblique triangles. The application of angular arithmetic including the study of angle decimal conversion, the Pythagorean theorem, sine, cosine, and tangent functions, and the Law of Sines and Law of Cosines. **Prerequisite:** MFG*051 with "C-" or better OR eligible for MAT*137E or higher.

MFG*109, Intro. to MasterCAM (3 credits)

This course introduces the student to computer-based CAD/CAM (Computer-Aided Drafting/ Computer-Aided Manufacturing) using MasterCAM software, an industry standard. CAD/CAM uses CAD drawing tools to describe geometries of an object. The CAM portion of the program defines the toolpath that directs the motion of a machine tool to create a product that is the exact shape that was drawn. This introductory course familiarizes the student to MasterCAM using mill, lathe, and solids tutorials. **Prerequisite:** Eligible for either ENG*063/ENG*101ALP or higher or ENG*096 taken concurrently.

MFG*120, Metrology (3 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.

MFG*123, Measurement for Manufacturing (2 cr.)

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. In addition to teaching students how to use measuring tools, this course helps prepare students for NIMS (National Institute for Metalworking Skills) credentialing exams in Benchwork and Measurement, Materials, and Safety.

MFG*124, Blueprint Reading I (2 Credits)

First course in blueprint reading. The study of orthographic projection. Topics include lines and their uses, auxiliary views, sectional views, basic and special dimensioning, dimensioning practices for holes, chamfers, angle, tapers, keyways diameters and radii. Also, geometric tolerancing and dimensioning is covered. **Prerequisite:** Eligible for either ENG*063/ENG*101ALP or higher or ENG*096 taken concurrently.

MFG*125, Blueprint Reading II (3 credits)

Second course in blueprint reading. A further study of simple and complex drawings for machining or assembly purposes. Topics include the application and meaning of geometric characteristics and controls, the metric system, weldment, forging and casting drawings and procedures, communication with freehand sketches, blueprint terms and abbreviations.

Prerequisite: Eligible for either ENG*063/ENG*101ALP or higher or ENG*096 taken concurrently.

MFG*150 Intro. to Machine Technology (4 credits)

Introduction to Machine Technology introduces the student to the fundamentals of Metal Machining Technology. The student is introduced to the basic metal machining equipment including Lathe, Miller, Drill Press, Saw, and Grinding Wheels. Students will perform basic lathe operations, which will consist of facing, center-drilling, chuck turning, turning between centers, boring, grooving, tapers, knurling, and single point threading. Students will identify the major parts of the vertical & horizontal mill, align a vise, use an indicator, edge finder, and boring head, determine speeds and feeds, perform simple indexing, mill flat, square surfaces and slots, drill, bore, and tap holes. Prerequisites: None

MFG*156, Manufacturing Machinery CNC I (2 credits/4 contact hours)

First course in CNC machinery and programming. Topics include: Cartesian coordinates, safe use of CNC equipment, set up and operation of 2-axis CNC lathe and 3-axis CNC machining center, CNC programming and execution of these programs. **Prerequisite:** *Eligible for either ENG*063/ENG*101ALP or higher or ENG*096 taken concurrently.*

MFG* 166: Benchwork (1 credit)

A basic course in the fundamentals, principles, practices and tools used in semi-precision and precision layout and in the various tools used in semi-precision and precision layout and in the various tools, methods, and procedures for common machine shop benchwork. Topics include measurement systems, layout principles, hand tools, and power tools. Prerequisites: None

MFG*168: CNC I (3 credits)

First course in CNC machinery and programming. Topics include: Cartesian coordinates, the safe use of CNC equipment, set up and operate a 2-axis CNC lathe and a 3-axis CNC machining center, CNC programming, and execution of these programs. **Prerequisite:** *Placement in ENG*063/101E or higher or enrollment in ENG*096.*

MFG*171, Intro. 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. **Prerequisite:** *Eligible for either ENG*063/ENG*101ALP or higher or ENG*096 taken concurrently.*

MFG*202, Precision Machining (3 credits)

This course explains common methods of machining used to shape parts to specifications with the emphasis on traditional tool room machinery (lathes, milling machines, drilling machines, and grinders). Related topics also include shop safety, hand tools, measurement, layout work, and cutting fluids. Students will apply classroom lessons to the fabrication of parts in the lab course.

Co-requisite: *MFG*203.*

MFG*203, Precision Machining Lab (1 credit)

This course supplements the Precision Machining course by providing the lab time necessary to reinforce classroom lessons. Students use lab machinery and equipment to shape parts to specifications using traditional tool room machinery (lathes, milling machines, drilling machines, and grinders). Related topics also include shop safety, hand tools, measurement, layout work, and cutting fluids. Students will be required to do lab work beyond the lab time scheduled for this course. **Prerequisites:** *Completion of MFG103 and MFG102 co-requisite with a grade of C- or better.*

MFG*239, Geometric Dimensioning & Tolerancing (3 credits)

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 or MFG*124.*

MFG* 256: Manufacturing Machinery CNC II (3 cr.)

Second course in Computer Numerical Controlled programming. A further study of CNC programming for the Lathe and Vertical Machining Center. Topics include setup and tooling, programming simple parts, canned drilling cycles, circular interpolation, special milling cycles, cutter compensation, looping and macros, and special features. Prerequisite: Completion of MFG* 168: CNC I

MFG*258, CNC Operations (3 cr./4 contact hours)

This is the second course in Computer Numerical Controlled machining. It is a continuation of MFG*156, Manufacturing Machinery CNC I and provides a further study of CNC programming and machine operation for the Lathe and Vertical Machining Center. **Prerequisite:** *MFG*156 with a grade of "C-" or better. Students cannot receive academic credit for taking BOTH MFG*256 and MFG*258.*

QUA*114, Principles of Quality Control (3 credits)

Overview of the tools and techniques required in contemporary quality systems. First course in statistical quality control. Topics covered include determination of process capabilities, estimation of process standard deviation from sample data, use of control charts, calculation of probability of simple events. Student will develop SPC and TQM Manufacturing Plans.

Mathematics (MAT*)

School of Allied Health, Business, and STEM

Transitional-Level Course (Non-Credit)

EDUC 1002, Fast-Track Math Workshop (0 credits, 30 classroom hours)

This noncredit workshop is designed to help students refresh their skills in arithmetic and elementary algebra concepts. The workshop is targeted to benefit students placing at the intensive levels. At the end of the workshop, students may retake the placement test to see if they can progress to a course that is College Level or College Level with Embedded Support.

Intensive-Level Courses (No Graduation Credit)

MAT*095-I (formerly MAT*085), Pre-Algebra & Elementary Algebra Foundations (6 Credits)

This Intensive-Level developmental course does not meet graduation requirements. MAT*095-I (formerly MAT*085) is an introductory course that will emphasize the understanding of basic concepts and skills of arithmetic (whole numbers, signed numbers, decimals, fractions, ratios and proportions, percent and estimation), as well as introductory topics in algebra. This course includes a study of the basic properties and theorems of rational numbers; expressions and equations with polynomials, rational and radical expressions, and integer exponents; linear equations in one and two variables; systems of linear equations in two variables; functions; and applications in geometry and algebra. This course will support students with skill levels below 9th grade to achieve the learning outcomes of Beginning Algebra in a single semester. Credit does not count toward meeting degree requirements.

MAT*095, Elementary Algebra Foundations (3 credits)

This Intensive-Level developmental course does not meet graduation requirements. MAT*095 is an introductory course in the basics of algebra. This course includes a study of the basic properties and theorems of rational numbers;

expressions and equations with polynomials, rational and radical expressions, and integer exponents; linear equations in one and two variables; systems of linear equations in two variables; functions; and applications in geometry and algebra. Credit does not count toward meeting degree requirements. **Prerequisite:** MAT*075 with "C" or better OR MAT*085/ MAT*095-I with "D+ or C-" OR Math placement.

Embedded-Level Courses

(Graduation Credit with Required Non-Credit Support)

MAT*137E, Intermediate Algebra with Embedded Review (3 credits/4 contact hours)

\$\$ Supplemental Course Fee

This course cannot be used to satisfy the Quantitative Reasoning competency for transfer programs or pathways.

This version of MAT*137 meets four hours a week to incorporate review topics from Elementary Algebra that are essential for success in Intermediate Algebra and to provide more time to meet the outcomes of MAT*137. Polynomial functions and expressions with special attention to linear, quadratic, exponential, rational, and radical functions are studied. There is an emphasis on modeling and applications for all topics. A graphing calculator is required for this course. **Prerequisites:**

- Eligible for either ENG*101E or ENG*101, together with Math placement into MAT*137E

- OR Eligible for either ENG*101E or ENG*101 and either MAT*085, MAT*095-I, or MAT*095 with a grade of "C-" "C" or better

College-Level Courses

(Graduation Credit ONLY for Career-Oriented Programs)

MAT*104, Quantitative Reasoning (3 credits)

Ged Ed Competency: Critical Analysis & Logical Thinking

This course cannot be used to satisfy the Quantitative Reasoning competency for transfer programs or pathways.

A survey course to develop the abilities to interpret and reason with information that involves mathematical ideas or numbers. This course will prepare students for the mathematics they will encounter in other college courses and in their career, as well as help develop critical thinking and problem solving skills needed in all areas of life. Topics include: principles of reasoning, problem solving techniques, basic statistics, every day mathematical models, and the mathematics involved in personal finance, the arts, careers, and society in general. NOTE: This course does NOT cover the algebra skills necessary for intermediate algebra through calculus and statistics.

Prerequisite: Eligible for either ENG*101E or ENG*101 and either MAT*085, MAT*095-I or MAT*095 with C or better **OR** Eligible either for ENG*101E or ENG*101 and Math placement.

MAT*137, Intermediate Algebra (3 credits)

This course cannot be used to satisfy the Quantitative Reasoning competency for transfer programs or pathways. This course is a further study of algebra and mathematical modeling of functions and relations represented by tables, graphs, words, and symbols. Polynomial functions and expressions with special attention to linear, quadratic, exponential, rational, and radical functions are studied. There is an emphasis on modeling and applications for all topics. A graphing calculator is required for this course. **Prerequisite:**

- Eligible for either ENG*101E or ENG*101, together with Math placement into MAT*137
- **OR** Eligible for either ENG*101E or ENG*101 **and** either MAT*085, MAT*095-I, or MAT*095 with a grade of "C+" or better

College-Level Courses (Graduation Credit for ALL Programs)

MAT*141, Number Systems (3 credits)

Gen Ed Competencies: Critical Analysis & Logical Thinking, Quantitative Reasoning

This course helps students with an intermediate algebra background to get acquainted with some fundamental ideas in mathematics such as set operations, logic, counting methods, numeration systems, and modular systems. **Prerequisite:** Eligible for either ENG*101E or ENG*101 and either MAT*137E or MAT*137 with "C" or better **OR** eligible for either ENG*101E or ENG*101 and Math placement.

MAT*146, Math for the Liberal Arts (3 credits)

Gen Ed Competencies: Critical Analysis & Logical Thinking, Quantitative Reasoning

This is a survey course designed to acquaint the student with mathematical ideas not normally encountered at the pre-college level. The course conveys something about the nature of mathematics- its methods, uses, and roles in society- through an elementary introduction to topics such as: Functions, Art in Mathematics, Logic, Number Theory, Computer Science, Statistics, Probability Theory, Graph Theory. **Prerequisite:** Eligible for either ENG*101E or ENG*101 and either MAT*137E or MAT*137 with "C" or better **OR** eligible for either ENG*101E or ENG*101 and Math placement.

MAT*158, Functions, Graphs, and Matrices (3 cr.)

Gen Ed Competency: Quantitative Reasoning

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 two or more variables with an emphasis on forming, solving and interpreting of matrices. A graphing calculator is required and used throughout. **This course is not recommended for mathematics, physics, chemistry, or engineering majors.**

Prerequisites: MAT*137 with a grade of "C" (or higher) and eligible for ENG*101 **OR** math placement and eligible for ENG*101.

MAT*167, Principles of Statistics (3 credits)

Gen Ed Competencies: Quantitative Reasoning, Scientific Reasoning

This course replaces MAT*168. Students may not get credit for both MAT*167 and MAT*168.

Graphs and charts, measures of central tendency and variation. Elementary probability theory, random variables, probability distributions, with emphasis on the binomial and normal. Sampling distributions, hypothesis testing, confidence intervals, correlation and linear regression. Use of technology included.

Prerequisites: Eligible for ENG*101 or ENG*101E and MAT*137 or MAT*137E (or higher) with a grade of "C" or better **OR** eligible for ENG*101 or ENG*101E and math placement.

MAT*168, Elementary Statistics and Probability I (4 credits)

This course was replaced by MAT*168. Students may not get credit for both MAT*167 and MAT*168.

MAT*173, College Algebra with Technology (4 credits)

Gen Ed Competency: Quantitative Reasoning

This course continues the algebra sequence. It is primarily intended for students who plan to continue on to Precalculus. Topics include operations with complex numbers; functions; numeric, algebraic, and graphic techniques as applied to the following functions: polynomial, rational, radical, piecewise, and absolute value; modeling and applications using the above functions; exponential expressions and equations; logarithmic expressions and equations; Optional: conic sections. A graphing calculator is required for this course. **Prerequisite:** Eligible for either ENG*101E or ENG*101 and either MAT*137E or MAT*137 with a grade of "C" or better **OR** eligible for either ENG*101E or ENG*101 and Math placement.

MAT*186, Precalculus (4 credits)

Gen Ed Competency: Quantitative Reasoning

Precalculus provides the mathematical preparation for the study of calculus. Topics include comparing and contrasting linear, quadratic, polynomial, rational, radical, exponential, and logarithmic function using numeric, algebraic and graphic techniques. Trigonometric functions will be studied extensively

also using numeric, algebraic, and graphic techniques as well as right triangle trigonometry, identities, and trigonometric equations; sequences and series; and polar coordinates. There will be an emphasis on modeling and applications for all topics. A graphing calculator is required for this course. **Prerequisite:** *Eligible for either ENG*101E or ENG*101 and MAT*173 with a "C" or better Or Eligible for ENG*101E or ENG*101 and math placement.*

MAT*254, Calculus I (4 credits)

Gen Ed Competency: Quantitative Reasoning

A course in differential calculus. Topics include limits, continuity, derivatives, anti-derivatives, and applications.

Prerequisite: *Eligible for either ENG*101E or ENG*101 and MAT*186 with a grade of "C" or better OR eligible for either ENG*101E or ENG*101 and Math placement.*

MAT*256, Calculus II (4 credits)

Gen Ed Competency: Quantitative Reasoning

The definite integral applied to algebraic and transcendental functions, techniques of integration, polar coordinates and applications, infinite series, and vectors. **Prerequisite:** *Either ENG*101E or ENG*101 and MAT*254 with a grade of "C" or better.*

MAT*268, Calculus III: Multivariable (4 credits)

Gen Ed Competency: Quantitative Reasoning

Two- and three-dimensional vector algebra, calculus of functions of several variables, vector differential calculus, line and surface integrals. **Prerequisite:** *Eligible for either ENG*101E or ENG*101 and MAT*256 with "C" or better.*

MAT*272, Linear Algebra (3 credits)

Gen Ed Competency: Quantitative Reasoning

A beginning course in Linear Algebra, intended 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 will be considered, with emphasis on numerical methods. Computers and/or graphing calculators will be integrated into the course, as deemed appropriate.

Prerequisites: *Eligible for either ENG*101E or ENG*101 and MAT*256 with a grade of "C" or better.*

MAT*285, Differential Equations (3 credits)

Gen Ed Competency: Quantitative Reasoning

An introductory course in differential equations, intended for students in mathematics, science, and engineering. Topics include: 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.

Prerequisites: *Eligible for ENG*101E or ENG*101 and MAT*256 with "C" or better.*

Music (MUS*)

School of Arts & Media, Humanities, and Social Sciences

MUS*101, Music History and Appreciation I (3 cr.)

Gen Ed Competency: Aesthetic Dimensions, Historical Knowledge

Understanding and appreciation of music literature. Classic, Romantic, and Modern styles studied through the works of composers of those periods.

MUS*104, World Music (3 credits)

Gen Ed Competency: Aesthetic Dimensions, Historical Knowledge

A survey course designed for non-musicians and musicians alike. The course will explore aspects of musical form, melody, rhythm, timbre, texture and instrumentation as rendered meaningful by the global music community. Content may include the music of Asia, Africa, India, and the Americas (including rock, jazz, blues and Native American music). Music in relation to art, ritual, theater, dance, and lifestyles will be considered, as well as aspects of musical instruments, including construction and playing techniques. *Fulfills a "D" course requirement for students who enrolled in a degree program prior to the Fall 2016 semester.*

MUS*111, Fundamentals of Music I (3 credits)

Gen Ed Competency: Aesthetic Dimensions

Development of basic skills in note reading, rhythm, meter, pitch symbols, scales, key signatures, interval, triads and ear training.

MUS*117, Electronic Music (3 credits)

Gen Ed Competency: Aesthetic Dimensions

Designed for the non-musician, this course focuses on the composition, creation, performing, and recording of music using modern production techniques. Students will learn the compositional elements of music including rhythm, music and chord theory, and song structure and then perform and record their compositions using MIDI keyboards and digital audio workstations.

MUS*137, History and Appreciation of Jazz (3 credits)

Gen Ed Competency: Aesthetic Dimensions, Historical Knowledge

A music appreciation course that uncovers the development of Jazz, from ragtime to contemporary practice.

MUS*138, Rock and Roll History and Appreciation (3 credits)

Gen Ed Competencies: Aesthetic Dimensions, Historical Knowledge

A survey of the evolution of rock music and the origins, characteristics, stylistic development, and cultural/social perspectives.

MUS*152, Drumming and Percussion Ensemble (3 Credits)

Gen Ed Competency: Aesthetic Dimensions

Through ensemble playing, students will learn a variety of traditional rhythms such as African, Latin, Indonesian (gamelan), Middle Eastern, etc. Various percussion instruments and playing techniques will be studied, including improvisation. Students will also learn how to use found objects as instruments. The course includes some study of the cultures associated with various instruments. Students should obtain a drum for use in the ensemble. *Prior to the Fall 2016 semester, this course was offered for 2 credits. Students who took this course prior to the Fall 2016 semester cannot retroactively receive 3 credits for this course. Fulfills a "D" course requirement for students who enrolled in a degree program prior to the Fall 2016 semester.*

MUS*238, Audio Mixing and Processing (3 credits)

This is advanced-level course in audio and music mixing and signal processing. Students will be expected to take pre-recorded multi-track audio and music production files and edit, mix, process, and master them at a professional level. Topics will include advanced-level sound design, multi-track digital mixing and signal processing, including audio compression, equalization, filtering, reverb, echo, delay, flanging, modulation, pitch shifting, chorus, and other digital effects. **Prerequisite:** MUS*219 (may be taken concurrently).

Ophthalmic Design & Dispensing (ODD*)

School of Allied Health, Business, and STEM

BIO*118, Anatomy and Physiology of the Eye (4 credits/6 contact hours)

Open only to students enrolled in the Ophthalmic Design & Dispensing program.

Designed to introduce the student to the basic anatomy and physiology of the eye, this course will include study of the eye and its associated structures. Students will conduct a detailed study of the eyelids and lashes, the orbit, extra ocular muscles, the crystalline lens, the retina, lacrimal apparatus, uveal tract, and the cornea. Included in the course is certification in Adult C.P.R., a segment on A.I.D.S. awareness, and a study of medical abbreviations and commonly used medical prefixes and suffixes. The laboratory component of the course includes dissection of cow's eye, as well as numerous slide and video presentations of ocular anatomy, physiology and surgery.

ODD*101, Introduction to Ophthalmic Dispensing (4 credits/6 contact hours)

Designed to introduce the student to the field of Ophthalmic Dispensing, this course will provide a general overview of optical theory and is intended to provide the student with a basis for more advanced study. The course will include segments of basic lens theory, normal and abnormal vision, the history of lenses and eyeglasses, an introduction to prism, and a determination of lens power at any point of a lens. The laboratory component will include introduction to the lensometer, marking and blocking devices, mechanical edging equipment and hand edgers, as well as an overview of the fabrication process. Lecture: 3 hours per week. Laboratory: 3 hours per week.

ODD*102, Ophthalmic Dispensing I (4 credits/6 contact hours)

This course will deal with the relationship between spectacles and the patient's visual needs. Topics shall include frame types and materials and the proper fitting and adjusting of spectacles, determination of lens thickness and weight, and vertical prism imbalance at the reading level. The laboratory segment shall include work in neutralization, fabrication of multifocal spectacles, pattern making, tinting, and lab equipment operation and maintenance. Lecture: 3 hours per week. Laboratory: 3 hours per week. **Prerequisite:** ODD*101 with a grade of "C" or better.

ODD*103, Ophthalmic Dispensing II (3 credits)

A continuation of Ophthalmic Dispensing I, discussion will include comprehensive spectacle verification, A.N.S.I. standards, lenses and frames for high powered prescriptions, managing presbyopia, occupational and lifestyle analysis and lens application, specialized absorptive lenses and sports and safety eyewear. The course will also include a review for the A.B.O. exam. **Prerequisite:** ODD*102 with a grade of "C" or better. *Fulfills an "L" course requirement for students who enrolled in a degree program prior to the Fall 2016 semester.*

ODD*104, Ophthalmic Dispensing III (3 credits)

A continuation of Ophthalmic Dispensing II, to include segments on Low Vision, prescription analysis, critical thinking and problem solving skills, marketing fashion eyewear, dispensing progressive addition lenses, record keeping, professional ethics and liability. Discussion of and preparation for the State Practical Exam will be included. **Prerequisite:** ODD*103 with a grade of "C" or better.

ODD*109, Optical Business Management (3 credits)

This course is designed to prepare the Ophthalmic Design and Dispensing student for the challenges of managing or operating an Optical business. Topics will include business organization, financial management, purchase, sale or merger of a business, marketing, advertising, accounting procedures, second party billing, inventory control, management skills, and patient/ client relations. **Prerequisite:** ODD*102 with a grade of "C" or better.

ODD*110, Ophthalmic Materials I (4 credits/6 contact hours)

Gen Ed Competency: Oral Communication in English

This course is designed to introduce the most commonly used ophthalmic devices and their use. It will explore single vision, bifocal, trifocal and progressive lenses commonly used in ophthalmic practice. Special emphasis will be placed on the physical properties of lens materials including index of refraction, absorptive ability, lens coatings and special applications of lens materials. It will include the discussion of the lens surfacing process and the surfacing laboratory. Frame materials, design, selection, and dispensing will be discussed. Lecture: 3 hours per week. Laboratory: 3 hours per week. **Prerequisite:** ODD*101 with a grade of "C" or better.

ODD*111, Ophthalmic Materials II (4 credits/6 contact hours)

A continuation of Ophthalmic Materials I with special emphasis on unique optical devices and their function. This course will increase hands on experience in optical finishing skills, including edging, hand edging, drilling, grooving and inserting lenses. Basic frame adjustment and bench alignment shall also be included. Lecture: 3 hours per week. Laboratory: 3 hours per week.

Included in this course will be a mandatory optical clinic rotation. **Prerequisite:** ODD*110 with a grade of "C" or better.

ODD*112, Ophthalmic Materials III (4 credits/6 contact hours)

A continuation of Ophthalmic Materials II, to include rimless, semi-rimless, specialty eyewear and more advanced spectacle fabrication. It will include the use of more advanced spectacle fabrication machinery and instruments. Fabrication of trifocals, and progressive addition lenses will be included. Additional didactic and practical application of frame adjusting techniques will be presented. Lecture: 3 hours per week. Laboratory: 3 hours per week. Included in this course will be a mandatory Optical Clinic rotation. **Prerequisite:** ODD*111 with a grade of "C" or better.

ODD*113, Clinical Refractometry (4 credits)

This course is designed to provide the student with a thorough understanding of the basic principles and techniques of objective and subjective refractometry. Material will include basic optical concepts, anatomy and physiology of the eye as a visual system, taking a comprehensive medical and visual history, retinoscopy, color vision testing, evaluating stereopsis, automated refractometry, and vision screening techniques.

ODD*120, Contact Lenses I (3 credits)

An introduction to the fitting of contact lenses; outlining the history of contact lenses and the development of new materials. Advantages and disadvantages of these materials will be outlined, as well as indications and contraindications to contact lens wear. Emphasis is placed on rigid lens fitting philosophies and acquisition of basic skills with related instrumentation. **Prerequisite:** BIO*118 with a grade of "C" or better.

ODD*121, Contact Lenses II (4 credits)

Continuation of Contact Lenses I, with increased attention to lens selection and design. Fitting philosophies of hydrophilic and oxygen permeable lenses are put into practice, and follow-up care is stressed. Diagnostic as well as insertion and removal skills are increased. Lecture: 3 hours per week. Laboratory: 3 hours per week. **Prerequisite:** ODD*120 with a grade of "C" or better.

ODD*122, Contact Lenses III (4 cr./6 contact hours)

Continuation of Contact Lenses II, dealing mainly with special fitting problems and special lens designs. Practice management techniques are included, as well as continued use of all needed instrumentation. Lecture: 3 hours per week. Laboratory: 3 hours per week. **Prerequisite:** ODD*121 with a grade of "C" or better.

ODD*130, Low Vision (1 Credit)

This course is designed to familiarize the student with a wide range of physiological disorders and diseases that lead to significant vision loss, and the optical and non-optical devices used to provide correction. Emphasis will be placed on the use of telescopic, magnifiers, illuminating devices, and a list of resources for the partially sighted patient.

ODD*299, Opticianry Practicum (2 Credits)

Students are placed in area optical firms licensed by the State of Connecticut, Department of Health Services, under the direct supervision of a licensed optician. This summer practicum is designed to provide more diverse practical experience to the student/apprentice optician. Supervision of this program will include job site visits by the college faculty member and both employer and faculty evaluation of students' performance. Students will be required to complete an on-campus orientation to the Optical and Contact Lens Clinics, and will be required to keep a log of their daily activities in the off-campus work place.

Ophthalmic Medical Assisting (OMA*)

School of Allied Health, Business, and STEM

Special Note: Students must enroll in OMA*101, OMA*102, OMA*103, and OMA*104 concurrently.

OMA*101, Introduction to Ophthalmic Medical Assisting (3 credits)

This course introduces the role, scope, and duties of the ophthalmic assistant, including medical history-taking, preliminary patient examination, assessing visual fields, ophthalmic equipment, and office efficiency. Topics included will be the comprehensive eye exam and supplemental tests, lensometry and basic opticianry skills. It also introduces theoretical, clinical, physical and geometric optics, and provides an introduction to the types of vision loss and corrective devices used in Low Vision care. **Prerequisite:** *Eligible for either ENG*101E or ENG*101.*

OMA*102, Ocular Anatomy, Physiology and Pathology (3 credits)

This course provides the learner with a detailed study of normal ocular anatomy, physiology and pathology. Topics to include; medical terminology and vocabulary commonly used in health care field, the origin of words with emphasis on suffixes, prefixes, roots, abbreviations and terminology pertinent to body systems. It includes the fundamentals of common external and internal diseases of eye and the orbital region, emphasizing the

ocular effects of systemic diseases, identification of ocular emergencies, triage and the appropriate response. Topics will also include common ocular surgical procedures, first aid treatment and physician referral procedures. **Prerequisite:** *Eligible for either ENG*101E or ENG*101.*

OMA*103, Ophthalmic Clinical Skills and Procedures (4 credits)

This course emphasizes basic skills in patient care and examination techniques to include medical history taking and the assessment of the pupils. Additional clinical training will include tonometry, first aid treatment, retinoscopy, biomicroscopy, objective and subjective refractometry, measuring vital signs, clinical equipment maintenance and visual field analysis. Other topics include an overview of ophthalmic pharmacology, comparing drug delivery systems and administering and recording topical and oral medications at a physician's direction. A safety component of the course covers office and clinic safety, microbiology, disinfection/sterilization and control of infections and prevention of contamination in a medical facility.

Prerequisite: *Eligible for either ENG*101E or ENG*101.*

OMA*104, Healthcare Policies and Procedures (3 credits)

This course is designed to serve as an introduction to the health care delivery system and health information management functions for allied health professionals. The students will be introduced to the types of health care delivery organizations and professionals, HIPAA, medical record content, reimbursement methodology and electronic health record use. Important topics of the course will include developing oral and written communication skills, patient education, patient services and relations, medical ethics, regulatory and legal issues, community health eyecare and ophthalmic assistant administrative duties.

Prerequisite: *Eligible for either ENG*101E or ENG*101.*

Philosophy (PHL*)

School of Arts & Media, Humanities, and Social Sciences

PHL*101, Introduction to Philosophy (3 credits)

Gen Ed Competency: Critical Analysis & Logical Thinking

Some of the major philosophical problems, theories of knowledge, reality, and value. The nature of philosophical thought. Readings in philosophical literature. **Prerequisite:** *Either ENG*101ALP, ENG*101E, or ENG*101. Fulfills an "L" course requirement for students who enrolled in a degree program prior to the Fall 2016 semester.*

PHL*111, Ethics (3 credits)

Gen Ed Competency: Critical Analysis & Logical Thinking

A study of the leading theories of morality and ethics concerning what is good, right, and just; the principles of good moral reasoning; and the examination of contemporary ethical issues and social problems. Readings in both classical and contemporary philosophical literature. Library research required.

Prerequisite: Either ENG*101ALP, ENG*101E, or ENG*101.

Fulfills an "L" course requirement for students who enrolled in a degree program prior to the Fall 2016 semester.

PHL*131, Logic (3 credits)

Gen Ed Competency: Critical Analysis & Logical Thinking

Logic is the study of reasoning. It promotes skill in evaluating persuasive language according to general standards of validity. Accordingly, this course introduces forms of deductive and inductive reasoning and methods of evaluation. Attention is given to argument recognition, fallacy identification, and the analysis of reasoning in ordinary language. **Prerequisite:** Either ENG*101ALP, ENG*101E, or ENG*101.

PHL*145, Sustainable Living (3 credits)

Gen Ed Competency: Critical Analysis & Logical Thinking

Sustainable living involves creating and maintaining conditions under which humans and nature can exist in productive harmony, fulfilling environmental, social, economic and other requirements of present and future generations. This course offers an introduction to, and survey of, ideas and issues surrounding sustainability. This includes examining current human practices and lifestyles to determine if they are sustainable or not. It also includes studying possible alternative approaches to living that may be more sustainable as well as considering strategies for change. Topics include eco-literacy, energy and food, technology and design, politics and society, economics and money, ethics and aesthetics, worldview and spirituality. **Prerequisite:** ENG*101E or ENG*101.

PHL*151, World Religions (3 credits)

Gen Ed Competency: Critical Analysis & Logical Thinking

An introduction to the beliefs and practices of major world religions such as Judaism, Christianity, Islam, Hinduism, Buddhism, Taoism, Shamanism, etc. Students will gain an appreciation for the similarities and differences between various religions. The course will also touch on philosophical religious questions such as the value of religion, God, faith, soul, immortality, evil, mystical experience, etc. Library research required. **Prerequisite:** Either ENG*101ALP, ENG*101E, or ENG*101. *Fulfills a "D" course requirement or an "L" course requirement for students who enrolled in a degree program prior to the Fall 2016 semester.*

PHL*199, Special Topics in Philosophy (3 credits)

Gen Ed Competency: Critical Analysis & Logical Thinking

An in-depth exploration of a specialized area in philosophy. The content of this course may vary every time it is offered.

Prerequisite: Either ENG*101ALP, ENG*101E, or ENG*101.

Recommended: PHL*101. *Fulfills a "D" course requirement for students who enrolled in a degree program prior to the Fall 2016 semester.*

Physics (PHY*)

School of Allied Health, Business, and STEM

\$\$ Supplemental Course Fee: Many science lab courses require a separate fee added at the time of registration in order to cover the cost of supplies and materials used by students.

PHY*110, Introductory Physics

(4 credits/6 contact hours) \$\$ Supplemental Course Fee

Gen Ed Competency: Scientific Reasoning

An introductory course in the physics of motion, heat, sound, electricity, magnetism, light, optics, and the theory of the atom. A process oriented laboratory approach emphasizing exploration and problem solving. This course is intended for non-science majors, or 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 meets 6 hours per week for integrated lecture and laboratory.

Prerequisites: Eligible for ENG*101 and eligible for MAT*137 or higher.

PHY*121, General Physics I

(4 credits/6 contact hours) \$\$ Supplemental Course Fee

Gen Ed Competency: Scientific Reasoning

Basic concepts of mechanics and heat, including motion, forces, work and energy, conservation laws, fluid and thermal phenomena, and the laws of thermodynamics. Scientific calculator required. Lecture: 3 hours per week. Laboratory: 3 hours per week. **Prerequisites:** Eligible for ENG*101, and MAT*173 with a grade of "C" or better.

PHY*122, General Physics II

(4 credits/6 contact hours) \$\$ Supplemental Course Fee

Gen Ed Competency: Scientific Reasoning

Basic concepts of electricity, magnetism, and wave motion, including electric and magnetic fields, electromagnetic radiation, wave properties of light, and optics. Scientific calculator required. Lecture: 3 hours per week. Laboratory: 3 hours per week. **Prerequisite:** PHY*121, which may be taken concurrently.

PHY*221, Calculus-Based Physics I

(4 credits/6 contact hours) \$\$ *Supplemental Course Fee*

Gen Ed Competency: Scientific Reasoning

Basic facts and principles of physics. Elementary concepts of calculus are used. Classical dynamics, rigid-body motion, harmonic motion, wave motion, acoustics, relativistic dynamics, thermodynamics. Lecture: 3 hours per week. Laboratory: 3 hours per week. **Prerequisite:** MAT*254, which may be taken concurrently.

PHY*222, Calculus-Based Physics II

(4 credits/6 contact hours) \$\$ *Supplemental Course Fee*

Gen Ed Competency: Scientific Reasoning

Electric and magnetic fields, electromagnetic waves, quantum effects, introduction to atomic physics. Lecture: 3 hours per week. Laboratory: 3 hours per week. **Prerequisite:** PHY*221.

Political Science (POL*)

School of Arts & Media, Humanities, and Social Sciences

POL* 102, Intro.to Comparative Politics (3 credits)

Gen Ed Competency: Social Phenomena

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.

Prerequisite: ENG*101E or ENG*101. *Fulfills either an "L" course requirement or a "D" course requirement for students who enrolled in a degree program prior to the Fall 2016 semester.*

POL* 103, Intro. to International Relations (3 credits)

Gen Ed Competency: Social Phenomena

This course examines international politics and has a focus on the United States in its superpower role. Relationships between nations which range from constructive engagement and peacemaking to war making will be examined. The Vietnam, Middle East, Balkan, Northern Ireland, and other conflicts will serve as case studies for understanding the forces shaping international politics. Present day topics concerning the United Nations, international terrorism, global capitalism, and others will be studied. *Fulfills a "D" course requirement for students who enrolled in a degree program prior to the Fall 2016 semester.*

POL*111, American Government (3 credits)

Gen Ed Competency: Social Phenomena

This course examines the patterns of politics in the nation, Constitution, Congress, and Presidency. Topics of study include

political ideologies, interest group pluralism, citizen alienation, institutional power, democracy's requirements, and others. Learning objectives include becoming politically informed, engaging in political discussions, and analyzing the government's responsiveness to citizens' needs.

POL*112, State and Local Government (3 credits)

Gen Ed Competency: Social Phenomena

The forms, functions, processes and problems of state and local government in the United States. Emphasis is on Connecticut, including the governorship and the General Assembly, state agencies, and localities with mayors, councils, and/or town meetings.

POL*120, Introduction to Law (3 credits)

The course serves as an introduction to the study of law with an overview of fundamental concepts and principles of the U.S. 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.

POL*293, Connecticut Legislative Internship (6 Credits)

Gen Ed Competency: Social Phenomena

This course is an active learning experience for the student as an intern in the state legislature. A student must apply directly to this college's faculty representative for selection. Learning involves becoming informed of the General Assembly's lawmaking processes, and developing skills to serve both the state legislator and his/ her constituents. The intern will have the opportunity for in-service orientation at the legislature prior to its January start.

Psychology (PSY*)

School of Arts & Media, Humanities, and Social Sciences

PSY*103, Introduction to Holistic Wellness (3 credits)

This course explores how cognition, emotion, stress, lifestyle, and the environment impact a person's health and sense of well-being. Students will review the psychological and behavioral factors which enhance wellness while preventing one risk for illness. Students will journey toward wellness by studying and experiencing alternative, preventive and stress reducing techniques. Modalities explored are: the mind/body connection, relaxation, nutrition, exercise and spirituality.

PSY*111, General Psychology I (3 credits)

Gen Ed Competencies: Scientific Reasoning, Social Phenomena

An exploration and review of the field of psychology, including major principals, theoretical perspectives and methodological approaches, with an emphasis on the biological basis of mind and behavior, healthy psychology, motivation and emotion, learning, memory, psychological disorders and treatment, and social psychology. **Prerequisite:** *Eligible for either ENG*101E or ENG 101. Fulfills a "D" course requirement for students who enrolled in a degree program prior to the Fall 2016 semester.*

PSY*201, Life Span Development (3 credits)

Gen Ed Competency: Social Phenomena

This course will examine human development from conception through death. Theories pertaining to physical, cognitive, and psychosocial development will be explored and applied to the developmental tasks which face the individual throughout the life span. Human Development, as a process of adaptation to the biological, psychological, sociological, and cognitive challenges which are continuously presented to the growing person, will be explored. **Prerequisite:** PSY 111. *Fulfills a "D" course requirement or an "L" course requirement for students who enrolled in a degree program prior to the Fall 2016 semester.*

PSY*204, Child & Adolescent Development (3 cr.)

Gen Ed Competency: Social Phenomena

This course will examine childhood from conception through adolescence, with emphasis on the areas of emotional, social, cognitive, language and physical development. **Prerequisite:** PSY*111.

PSY*208, Psychology of Adult Development and Aging (3 credits)

Examines adult development from young adulthood through old age and death. Emphasis is on current theories of each stage of adulthood and their implications for career choice and change, intimacy and marriage, parenthood, mid-life adjustment, retirement and death. **Prerequisite:** PSY*111 and either ENG*101E or ENG*101. *Fulfills an "L" course requirement for students who enrolled in a degree program prior to the Fall 2016 semester.*

PSY*240, Social Psychology (3 credits)

Gen Ed Competencies: Scientific Reasoning, Social Phenomena

Social psychology involves the study of the ways in which human behavior, thought, and emotion are affected by the presence or actions of other people, as well as by the social context. Topics to be covered include social cognition, attitudes, social influence, aggression, interpersonal relationships, group behavior, and cultural influences, with an emphasis on the fundamental psychological processes that underlie these

phenomena. In addition to examining theory and research in social psychology, the course will examine the methods that behavioral researchers use to study interpersonal processes.

Prerequisite: SOC*101 or PSY*111. *Fulfills a "D" course requirement for students who enrolled in a degree program prior to the Fall 2016 semester.*

PSY*243, Theories of Personality (3 credits)

Study of the human individual, with emphasis on self as related to others. Investigation of personal growth, defense mechanisms, and the mental health movement. **Prerequisite:** PSY*111 or permission of the instructor.

PSY*245, Abnormal Psychology (3 credits)

Gen Ed Competency: Social Phenomena

This course examines the major theories of psychopathology and explores the research, classification systems, and intervention strategies relative to each theoretical perspective. Diagnostic categories and processes will also be studied. **Prerequisite:** *Either ENG*101E or ENG*101 and PSY*111 with a "C" or better. Fulfills a "D" course requirement or an "L" course requirement for students who enrolled in a degree program prior to the Fall 2016 semester.*

PSY*247, Industrial & Organizational Psychology (3 credits)

Psychological principles are applied to business, industry, education, politics. Topics include job evaluation, motivation, management relations, individual and group relations. This course is appropriate as the psychology elective for the business and secretarial programs. Its transferability depends upon the policy of the receiving institution.

PSY*251, Behavior Disorders of Children and Youth (3 credits)

This course is an advanced level study of the behavioral, educational and psychological problems displayed by young people. The emphasis is on how these problems are impacted by biological, social, cultural, cognitive, family and situational factors. Evaluation and treatment perspectives will be explored.

Prerequisites: *Either ENG*101E or ENG*101 and PSY*111. Fulfills an "L" course requirement for students who enrolled in a degree program prior to the Fall 2016 semester.*

PSY*258, Behavior Modification (3 credits)

This course focuses on the basic current principles of learning with particular application to the area of cognitive and behavioral management. Behavioral intervention and treatment of diverse problems will be studied. **Prerequisite:** PSY*111.

PSY*298, Special Topics in Psychology (3 credits)

Selected contemporary issues in psychology-for example, personality, motivation, learning and drugs. This course is not

intended to be taken in lieu of PSY*111 or to transfer for that purpose.

Physical Science (PSC*)

School of Allied Health, Business, and STEM

PSC*101, Physical Science I (3 credits)

An introduction to physics and chemistry for students with no previous experience in science. Necessary mathematical concepts are taught as part of the course. Recommended for individuals planning a career in elementary education or as a general science elective. Credit not given to students who have already taken any of the following: CHE*111, CHE*112, CHE*121, CHE*122, or PHY*121, PHY*122. **Prerequisite:** *Eligible for either ENG*101E or ENG*101 and either MAT*085, MAT*095-I, or MAT*095 with a "C-" or better or taken concurrently.*

Radiologic Technology (RAD*)

School of Allied Health, Business, and STEM

RAD*105, Radiographic Anatomy Procedures I (3 credits)

This course emphasizes task objectives and competencies in general radiographic procedures and related anatomy, medical terminology, and image evaluation. **Prerequisites:** *Admission to Rad Tech, BIO*211 and BIO*212 with "C+" or better for both.*

RAD*109, Methods of Patient Care I (1 Credit)

Gen Ed Competency: Social Phenomena

This course is an introduction to patient care, including patient communication, interaction, history taking, and patient education. Students will be able to communicate and assess patients, evaluate and record patient history, and learn to correctly document. Students will also be able to differentiate between immobilization and restraints, recognize special needs of patients, and respect cultural and human diversity. Course content will also include: vital signs, medical emergencies, oxygen safety, patient consent, and ethical and legal issues in healthcare. Students will perform research and prepare a poster or presentation on an approved topic chosen from the course objectives. **Prerequisites:** *Admission to Rad Tech, BIO*211 and BIO*212 with a "C+" or better for both.*

RAD*171, Radiographic Clinical Practicum I (2 Cr.)

This course introduces the clinical setting and general radiographic areas of diagnostic imaging with supervised clinical practice. Students will refine patient care and positioning skills. **Prerequisites:** *Admission to Rad Tech, BIO*211 and BIO*212 with "C+" or better for both.*

RAD*172, Radiographic Clinical Practicum II (2 Cr.)

Students continue to practice clinical skills in the general radiographic areas of diagnostic imaging with supervised clinical practice. **Prerequisites:** *RAD*105, RAD*109 and RAD*171 with "C" or better for all.*

RAD*200, Radiologic Physics & Diagnostic Imaging Modalities (3 credits)

Gen Ed Competencies: Scientific Knowledge & Understanding, Scientific Reasoning

This course provides the student with advanced study of fluoroscopy, physics, computed radiography, digital radiography, digital fluoroscopy, and quality assurance/quality control techniques used to evaluate radiographic imaging equipment.

Prerequisites: *RAD*209, RAD*172, RAD*219 and RAD*204 with "C" or better for all.*

RAD*204, Radiographic Anatomy & Procedures II (3 credits)

The student will continue task objectives and competencies in general radiographic procedures and related anatomy, medical terminology, and image evaluation. **Prerequisites:** *RAD*105, RAD*109 and RAD*171 with "C" or better for all.*

RAD*206, Quality Assurance (3 credits)

Gen Ed Competencies: Scientific Knowledge & Understanding, Scientific Reasoning

This course is a continuation in the advanced study of fluoroscopy, physics, computed radiography, digital radiography, digital fluoroscopy, and the techniques and testing to evaluate and assess quality assurance. **Prerequisites:** *RAD*240 and RAD*200 with "C" or better for both.*

RAD*209, Methods of Patient Care II (3 credits)

Gen Ed Competency: Social Phenomena

This course is a continuation of the study of patient care procedures, techniques, and therapeutic practices in the radiology department, and is designed to prepare students to act quickly and effectively in case of medical emergency. Additional topics will include contrast media, pharmacology, venipuncture, ECG and CPR. **Prerequisites:** *RAD*105, RAD*109 and RAD*171 with "C" or better for all.*

RAD*215, Radiographic Pathology (3 credits)

This course provides an overview of pathological conditions that are demonstrated by diagnostic imaging. Lecture material will include the cause and treatment of the disease process. Pediatric radiology is also presented. A research paper and presentation is required. **Prerequisites:** *RAD*240 and RAD*200 with "C" or better for both.*

RAD*219, Radiographic Equipment and Image Production (3 credits)

Gen Ed Competencies: Scientific Knowledge & Understanding, Scientific Reasoning

This introductory course will cover radiographic equipment with emphasis on image formation, radiation protection and safety, and the production and interaction of x-rays with matter. Imaging accessories and their effect on radiographic quality will be discussed. **Prerequisites:** RAD*105, RAD*109 and RAD*171 with "C" or better for all.

RAD*222, Radiobiology and Protection (3 credits)

This course is designed to present a clear understanding of all sources and use of medical radiation and the various types of equipment in a radiology department. Includes the study of radioisotopes, the production of x-rays, imaging measurements of radiation and a basic understanding of the ways in which radiation interacts with the biological system. Emphasis is also placed on the various methods of protection for both technologists and patients. **Prerequisites:** RAD*240 and RAD*200 with "C" or better for both.

RAD*240, Radiographic Clinical Practicum III (4 credits)

Students continue to practice clinical skills in the general radiographic areas of diagnostic imaging with supervised clinical practice. **Prerequisites:** RAD*209, RAD*172, RAD*219 and RAD*204 with "C" or better for all.

RAD*241, Radiographic Clinical Practicum IV (3 credits)

Students continue to practice clinical skills in the general radiographic areas of diagnostic imaging with supervised clinical practice. **Prerequisites:** RAD*240 and RAD*200 with "C" or better for both.

RAD*271, Advanced Clinical Internship (6 Credits)

Gen Ed Competency: Social Phenomena

The student will have the opportunity to refine skills learned earlier in the program with indirect supervision. Students will perform a comprehensive final clinical competency in preparation to apply for the national registry examination. **Prerequisites:** RAD*222, RAD*215, RAD*206 and RAD*241 with "C" or better for all.

Science (SCI*)

School of Allied Health, Business, and STEM

\$\$ Supplemental Course Fee: Many science lab courses require a separate fee added at the time of registration in order to cover the cost of supplies and materials used by students.

SCI*103, Recent Discoveries in Science I (3 credits)

Gen Ed Competency: Scientific Knowledge & Understanding

This course teaches science by studying recent developments and progress in the discipline. Course content will be topical and dependent upon both current scientific issues and the areas of interest of course participants. **Prerequisite:** Eligible for either ENG*101E or ENG*101.

SCI*285, Forensic Science with Laboratory (4 credits/6 contact hours) \$\$ Supplemental Course Fee

Gen Ed Competencies: Scientific Knowledge & Understanding, Scientific Reasoning

A study of how the disciplines of Biology, Chemistry, Earth Science, Physical Science, and Physics meld to form the field of Forensic Science. The course will focus on developing the scientific vocabulary necessary for investigators to communicate with scientists. This course is meant to assist students who are pursuing a career in criminal justice. Emphasis of the course is placed on scientific analysis of data rather than detective work. Students will learn to appreciate how the major fields of science are utilized in solving crimes. The laboratory component will provide hands-on opportunities to integrate scientific methodology as it relates to criminal justice and the limitations of scientific testing. **Prerequisite:** CJS*101 with a grade of "C-" or better, AND ENG*101-ALP, ENG*101E, or ENG*101 with a grade of "C-" or better. This course replaces CJS*225 Forensic Science. Students cannot get academic credit for taking both CJS*225 and CJS*285/SCI*285.

Sociology (SOC*, SSC*)

School of Arts & Media, Humanities, and Social Sciences

SOC*101, Principles of Sociology (3 credits)

Gen Ed Competency: Social Phenomena

A study of modern society and its social organization, institutions, groups and social roles. Topics of study will include patterns of social interaction, the organization and stratification of groups ranging from families to corporations, and others. Learning objectives include applying scientific methods of analysis and examining social issues from a humanistic

perspective. **Prerequisite:** Eligible for either ENG*101E or ENG*101. Fulfills a "D" course requirement for students who enrolled in a degree program prior to the Fall 2016 semester.

SOC*103, Social Problems (3 credits)

Gen Ed Competency: Social Phenomena

A systematic analysis of major contemporary social problems, such as mental illness, crime, poverty, and racial and ethnic conflicts, with emphasis on their origins. Recommended as the introductory course for students having a general interest in sociology. Majors in the field should also take SOC*101.

Prerequisite: Eligible for either ENG*101E or ENG*101.

SOC*114, Sociology of Aging (3 credits)

This course will explore the impact of social and sociocultural conditions on the psychological, physiological, and psychosocial processes of aging. This course will explore the demographics of aging, and how the diversity of the aging population impacts societal, clinical, therapeutic, and institutional responses.

Prerequisite: Eligible for either ENG*101E or ENG*101.

SOC*117, Minorities in the U.S. (3 credits)

Gen Ed Competency: Social Phenomena

This course examines ethnicity in the transformation of America. The course focuses on cultures of diverse ethnic groupings, patterns of identity, discrimination due to economic forces, issues of assimilation, ethnic contributions to a multicultural democracy and other democracies. **Prerequisite:** Eligible for either ENG*101E or ENG*101.

SOC*120, Group Dynamics (3 credits)

Gen Ed Competencies: Oral Communication in English, Social Phenomena

An overview of the interactions generated by group experience and group leadership. Emphasis on the principle dynamics of group interaction, group decision-making, and how these may be applied both in the therapeutic milieu and within organizations.

Prerequisite: Eligible for either ENG*101E or ENG*101.

SOC*160, Intro. to Public Health (3 credits) – See HLT*160

SOC*190, Self and Others: Dynamics of Diversity (3 credits)

Gen Ed Competency: Social Phenomena

An examination of how the United States is growing increasingly diverse. The goal of the course is to have students understand the sociocultural nature of human identity and diversity. Topics include race, ethnicity, class, gender, religion, physical disability, sexual orientation, pluralism and its implications. **Prerequisites:** SOC*101 or SOC*117.

SOC*210, Sociology of the Family (3 credits)

Gen Ed Competency: Social Phenomena

An examination of the evolution of contemporary relationships such as dating, cohabitation and marriage. The implications of changes in relationships and their effect on the individual, family and society will be analyzed. **Prerequisite:** Eligible for either ENG*101E or ENG*101. Fulfills a "D" course requirement for students who enrolled in a degree program prior to the Fall 2016 semester.

SOC*212, Sociology of Women (3 credits)

A study of a "Woman's Place" from a sociological and multidisciplinary perspective. The origins of women's position in society and the historical transformations that have occurred in the Western World and, particularly, in the United States, will be discussed along with contemporary issues. **Prerequisite:** Eligible for either ENG*101E or ENG*101. Fulfills a "D" course requirement for students who enrolled in a degree program prior to the Fall 2016 semester.

SOC*213, Human Sexuality (3 credits)

Gen Ed Competency: Social Phenomena

A study of contemporary human sexuality in Western society from both sociological and multidisciplinary perspectives. History and patterns of sexual behavior are discussed including such topics as contraception, sexual response, gender roles, orientation, sexual coercion, and sexually transmitted diseases.

Prerequisite: Eligible for either ENG*101E or ENG*101. Fulfills a "D" course requirement for students who enrolled in a degree program prior to the Fall 2016 semester.

SOC*221, Social Inequality (3 credits)

Gen Ed Competency: Social Phenomena

The study of structured social inequality in the United States and globally; the existence of class and power structures and their effects on the lives of Americans; the relation of different forms of inequality based on class, ethnicity, religion, age, and gender. The various strategies people employ to respond to inequality.

Prerequisites: SOC*101 or SOC*117 or ANT*205 or SOC*190.

SOC*225, Death and Dying (3 credits)

A sociological and psychological study of death and dying. Topics include cultural attitudes toward death, self-confrontation and value identification, dealing with dying, survivors and grieving, children and death, suicide, euthanasia. **Prerequisite:** Eligible for either ENG*101E or ENG*101.

SOC*240, Criminology (3 credits)

Gen Ed Competencies: Scientific Reasoning, Social Phenomena

The course examines the nature and cause of crime, approaches to the study of crime, and its treatment and prevention. The sociology of criminal law and the nature of criminal behavior are

also examined. **Prerequisite:** *Eligible for ENG*101-ALP, ENG*101E or ENG*101.*

SOC*241, Juvenile Delinquency (3 credits)

Gen Ed Competency: Social Phenomena

This course examines the meaning of the concept of juvenile delinquency. Considered are the relationships between social attitudes and definitions of youthful law violations, along with studies on various forms of delinquency. Also analyzed are the diverse theoretical interpretations of delinquency including sub cultural theories, bodily related factors, emotional pressures and environmental pressures. **Prerequisite:** *Eligible for either ENG*101E or ENG*101. Fulfills a "D" course requirement for students who enrolled in a degree program prior to the Fall 2016 semester.*

SOC*277, Social Survey Research (3 credits)

Gen Ed Competency: Social Phenomena

This course will provide students with a hands-on learning experience in social science research. Its main purpose is to survey the major research designs and research techniques that are at the core of contemporary approaches used to study social phenomena. Students will be directly involved in designing and conducting survey research on a social issue. Topics will include interview and questionnaire design, computerized data collection, management and analysis, and writing a research report. **Prerequisites:** *MAT*167 or MAT*168 taken concurrently.*

SSC*153, Women and Work (3 credits)

A multidisciplinary study of women and work. This course provides a historical overview as well as an examination of contemporary issues such as the family and work gender socialization, sex discrimination and the emotional work in which women engage. It includes a discussion of the individual and collective strategies that women employ to meet various challenges. Topics of discussion are conditioned by the diverse backgrounds, interests and needs of students in each particular class. **Prerequisite:** *Eligible for either ENG*101E or ENG*101. Fulfills a "D" course requirement for students who enrolled in a degree program prior to the Fall 2016 semester.*

Spanish (SPA*)

School of Arts & Media, Humanities, and Social Sciences

SPA*101, Elementary Spanish I (3 credits)

Fundamentals of grammar with emphasis on the development of speaking, listening, and writing skills. **Fulfills a "D" course requirement for students who enrolled in a degree program prior to the Fall 2016 semester.**

SPA*102, Elementary Spanish II (3 credits)

Continued development of speaking, listening, and writing skills as well as fundamentals of grammar. **Prerequisite:** *SPA*101 or permission of the instructor. Fulfills a "D" course requirement for students who enrolled in a degree program prior to the Fall 2016 semester.*

SPA*201, Intermediate Spanish I (3 credits)

Further study of grammar with continued emphasis on the development of conversational fluency and writing proficiency. Compositions. Introduction to literature. **Prerequisite:** *SPA*102 or permission of the instructor. Fulfills a "D" course requirement for students who enrolled in a degree program prior to the Fall 2016 semester.*

SPA*202, Intermediate Spanish II (3 credits)

Continuation of the study of grammar with further emphasis on the development of conversational fluency and writing proficiency. Compositions. Literature. **Prerequisite:** *SPA*201 or permission of the instructor. Fulfills a "D" course requirement for students who enrolled in a degree program prior to the Fall 2016 semester.*

Therapeutic Recreation (RLS*)

School of Arts & Media, Humanities, and Social Sciences

RLS*121, Introduction to Therapeutic Recreation Services (3 credits)

Methods and activities that can aid in establishing better rapport with persons. Emphasis on therapeutic value of such experiences.

RLS*122, Processes and Techniques in Therapeutic Recreation (3 credits)

This course provides an exploration of methods and materials utilized to lead people in creative/arts activities, physical/body movement activities, mental/stimulation activities, and social/interaction activities. The analysis of activities and the specific techniques for adapting activities in therapeutic recreation will be examined.

RLS*221, Therapeutic Recreation (3 credits)

Emphasis is on meeting the varied needs and ability levels of clients through an in-depth study of sensory integration, one to one programs for room bound, games, special events and parties, discussion groups, and creative expressions.

Prerequisites: RLS*121, PSY*111, or permission of instructor.

Theater (THR*)

School of Arts & Media, Humanities, and Social Sciences

THR*101, Introduction to Theatre (3 credits)

Gen Ed Competencies: Aesthetic Dimensions, Historical Knowledge

This course is designed to introduce students to the world of theater as an expressive and collaborative art form. Students will have the opportunity to develop an appreciation and understanding of theater from its origin to the present day. Areas of study will include: theater history, genres and styles, the study of plays, stage terminology, acting, theater production, and theater as a profession. While not designed as an “acting” course, some in-class performance work may be included. Students will view recorded versions of plays during class. Attending at least one live theater performance will be required.

Prerequisite: Either ENG*101ALP, ENG*101E, or ENG*101.

THR*110, Acting I (3 credits)

Gen Ed Competency: Aesthetic Dimensions

An introduction to the art of acting. This experiential course emphasizes the fundamental tools of the actor including use of voice and body, development of the imagination, creative interpretation, characterization, improvisation, and script analysis. Through both individual and group exercises, students will gain knowledge of different acting styles as well as study and perform scripts.

THR*113, Performance for Film and Television (3 credits) – See COM*179

THR*121, Plays in Production I (3 credits)

Gen Ed Competency: Aesthetic Dimensions

Practicum emphasizing acting techniques and theatre production. This course prepares students for acting in more developed roles and incorporates practical aspects of theatre production concluding with the performance of a play in front of an audience. Acting roles are determined by audition.

Prerequisite: THR*110 or previous acting experience with permission of the instructor.

THR*210, Acting II (3 credits)

Gen Ed Competency: Aesthetic Dimensions

Acting II emphasizes advanced acting techniques and theatre production. This course prepares students for acting in more developed roles and incorporates practical aspects of theatre production concluding with the performance of a play in front of an audience. Acting roles are determined by audition, and each student will create, rehearse, and develop and acting role as well as take on other production responsibilities. **Prerequisite:** THR*110 or previous acting experience with permission of instructor.

Veterinary Technology (VET*)

School of Allied Health, Business, and STEM

VET*101, Intro. Veterinary Technology (3 credits)

Gen Ed Competency: Scientific Knowledge & Understanding

This course introduces the role of the Veterinary Technician to employment opportunities and professional development opportunities in the field. Covered topics include breed differentiation, nutrition, reproduction, and animal behavior. Ethics, animal welfare regulations, state and federal laws are reviewed, including controlled substance laws, occupational safety and health regulations and veterinary practice responsibilities. **Prerequisite:** Eligible for either ENG*101E or ENG*101.

VET*100, Introduction to Animal Care (2 credits)

Gen Ed Competency: Scientific Knowledge & Understanding

This course is an introduction to practical experience with various species. Basic biological concepts and normative data of the various species including common husbandry practices and diseases are discussed. Restraint and handling methodologies are discussed and practiced. **Prerequisite:** Admission to Veterinary Technology Program.

VET*102, Veterinary Office Management & Communication (3 credits)

Gen Ed Competencies: Oral Communication in English, Scientific Knowledge & Understanding

This is a business management course for Veterinary Technology students. Topics include office procedures and practices, staff management, triaging phone calls, recordkeeping, the human- animal bond, stress management, and client relations, including working with members of the public from diverse cultural, ethnic, religious, and socioeconomic backgrounds. Personnel administration and other administrative procedures common to veterinary medical practices including databases are reviewed. **Prerequisite:** Admission to Veterinary

Technology Program. Fulfills a "D" course requirement for students who enrolled in a degree program prior to the Fall 2016 semester.

VET*151, Small Animal Veterinary Technology with Lab (4 credits/6 contact hours)

Gen Ed Competency: Scientific Knowledge & Understanding

Nursing procedures in small animals and laboratory species are discussed. Topics include physical examinations, common medical nursing techniques and emergency care. Long term nursing care of common animal conditions will be discussed including client education. The course includes vaccination protocols, nutritional support and specialized problems encountered in companion animals as well as hands-on work with lab animals. Relevant clinical cases will be utilized in lecture discussions. *Prerequisites: VET*100 and VET*101 with a grade of "C" or better for both, and proof of Rabies Vaccination.*

VET*152, Large Animal Veterinary Technology with Lab (4 credits/6 contact hours)

Gen Ed Competency: Scientific Knowledge & Understanding

The course focuses on the specifics related to large animal medicine and nursing practices including techniques. Lectures include anatomy and physiology, nutrition and breeding of agricultural species. The etiology of disease, transmission, prevention and disease control are discussed. Topics include nursing care, diagnostic techniques, reproduction, husbandry, and common diseases. Laboratory sessions include restraint, physical exams, specimen collection, drug administration, and principles of husbandry. Supervised field trips are required. *Prerequisites: VET*100 and VET*101, with a grade of "C" or better for both, and proof of Rabies Vaccination.*

VET*201, Veterinary Anatomy and Physiology I with Lab (4 credits/6 contact hours)

Gen Ed Competency: Scientific Knowledge & Understanding

Veterinary anatomy and physiology of domestic species presented as a two-course series. The anatomic structures and physiologic functions of domestic animals including companion species are discussed. The first semester reviews the basic foundations of structure and function of the most common species including the integumentary, skeletal, muscular, nervous, endocrine and digestive systems in addition to cellular aspects of metabolism. Comparative aspects of canine, feline, and farm species are provided. Lecture and laboratory exercises emphasize the understanding of the organized body state and the relationship of various components including cells, tissues, organs and body systems. *Prerequisite: Admission to Veterinary Technology Program.*

VET*202, Veterinary Anatomy and Physiology II with Lab (4 credits/6 contact hours)

Gen Ed Competency: Scientific Knowledge & Understanding

This course is a continuation of Veterinary Anatomy and Physiology I, with discussion of the respiratory, circulatory, urinary and reproductive systems. Comparative aspects of canine, feline, avian, reptilian, laboratory, and farm species are provided. Relevant clinical topics are utilized during this course. *Prerequisite: VET*201 with a grade of "C" or better.*

VET*205, Veterinary Laboratory Procedures (3 credits/5 contact hours)

Gen Ed Competency: Scientific Knowledge & Understanding

The theory behind clinical sample analysis utilizing clinical laboratory procedures including specimen collection, hematology, cytology, blood chemistry, urinalysis, necropsy technique, and serology. Emphasis is on manual performance of basic laboratory diagnostic procedures and discussion of the relevance of laboratory findings to the veterinary practitioner. *Prerequisites: MED*125, VET*151, VET*152, and VET*202, with a grade of "C" or better for all. VET*205 must be taken concurrently with VET*212 and VET*230.*

VET*212, Principles of Imaging with Lab (1 credit/2 contact hours)

Gen Ed Competency: Scientific Knowledge & Understanding

The theory and principles of radiology and radiation safety are presented. Topics include radiologic and imaging principles and practices and their uses in patient diagnosis. Animal restraint, positioning, special diagnostic techniques and imaging are reviewed. Ultrasonography, Computerized Axial Tomography, Magnetic Resonance Imaging and Positron Emission Tomography will be discussed. *Prerequisites: MED*125, VET*151, VET*152, and VET*202, with a grade of "C" or better for all. VET*212 must be taken concurrently with VET*205 and VET*230.*

VET*220, Animal Pathology (3 credits)

Gen Ed Competency: Scientific Knowledge & Understanding

This course is designed for students in the veterinary technology program. The main focus is to discuss select diseases in small and large animals as well as research animals. Diseases will be discussed in a categorized systematic format to include: infectious diseases, hematologic diseases, and diseases affecting various systems including cardiovascular, respiratory, gastrointestinal, integumentary, endocrine, reproductive and nervous. Clinical signs of organ dysfunction, pathophysiology, diagnostic tests, treatment and prevention are reviewed. Students

will learn tissue sampling and preparation. Laboratory animal and “pocket pets” (rats, mice, hamsters, guinea pigs, rabbits, and ferrets) husbandry and techniques, including proper restraint, blood drawing and gavaging will be taught through lectures and hands-on activities. These lectures will be in conjunction with the student’s hands-on experiences at the Yale Animal Resource Center. This course will also require each student to perform a complete necropsy of a rat and an offsite field trip to a packing plant facility if time allows. **Prerequisite:** VET*205 with a grade of “C” or better.

VET*230, Veterinary Anesthesia and Surgical Nursing with Lab (4 credits/6 contact hours)

Gen Ed Competency: Scientific Knowledge & Understanding

Lectures and demonstrations in general anesthetic technique, standard surgical procedure, and operating room conduct. The emphasis is on surgical technology including equipment and supply nomenclature, patient monitoring, aseptic, sterile technique, preoperative care of the patient and emergency medicine. Classifications and mechanisms of action for commonly used anesthetics, and analgesics are discussed. Topics include intravenous catheterization techniques, CPR, and oncology therapeutics. **Prerequisites:** MED*125, VET*151, VET*152, and VET*202, with a grade of “C” or better for all. VET*230 must be taken concurrently with VET*205 and VET*212.

VET*238, Parasitology (3 credits)

Gen Ed Competency: Scientific Knowledge & Understanding

*Formerly listed as BIO*238.* This course is intended to familiarize students with the parasites of importance in the veterinary field with an emphasis on the diagnosis and treatment of parasitic diseases of domestic animals. A laboratory component focuses on clinical diagnostic procedures including immunodiagnostic techniques using both living and preserved specimens. Topics include prevention of infection and transmission, and zoonotic disease transmission, control and epidemiological concerns. **Prerequisite:** VET* 205 with a grade of “C” or better.

VET*240, Periodontology and Oral Radiology (2 credits)

Gen Ed Competency: Scientific Knowledge & Understanding

This course is an introduction to veterinary dentistry which has become a significant part of veterinary practices. Topics include oral anatomy, terminology periodontology oral radiography endodontics, orthodontics and restorative dentistry. Tasks performed by veterinary technicians, including oral radiography will be discussed. **Prerequisites:** VET*205 and VET*212, with a grade of “C” or better for both.

VET*250, Principles of Pharmacology for Vet Tech (3 credits)

Gen Ed Competency: Scientific Knowledge & Understanding

The study of dose and dosage in applied pharmacology is presented. Topics include basic mathematics, conversions, measurements, drug calculations, drug orders and fluid rate calculations. The major classes of drugs used in therapeutics, dose response characteristics, mechanisms of action, major physiological effects, toxicity and drug interactions are discussed. A review of laws applying to licensure and use of controlled substances in veterinary medicine is included. **Prerequisite:** VET*201 with a grade of “C” or better.

VET*280, Veterinary Technology Externship I (1 credit)

Gen Ed Competencies: Oral Communication in English, Scientific Knowledge & Understanding

This externship is a student’s first externship experience. Students must demonstrate competency in the defined learning objectives in order to progress to VET *286, Veterinary Technology Externship II. Students will be responsible for documenting completion of a checklist of activities reflecting these objectives. For further information on Externship requirements students should consult both the MxCC Vet Tech Program Handbook and the MxCC Vet Tech Externship Manual.

The externship will offer a supervised experience under the direction of a licensed veterinarian, certified technician, or animal research technician through placement at an off-site veterinary hospital, private practice, or laboratory facility. Students will refine skills learned in all previous veterinary technology courses. A minimum of 40 hours of participation in a position relating to the veterinary technology field in a faculty-approved facility is required. **Prerequisites:** VET*202, VET*151, and VET*152, each with a grade of “C” or better, and approval of the Vet Tech Program Coordinator.

VET*285, Veterinary Technology Externship (2 credits)

*This course was replaced by the two-semester sequence of VET*280 and VET*286.*

VET*286, Veterinary Technology Externship II (1 credit)

Gen Ed Competencies: Oral Communication in English, Scientific Knowledge & Understanding

This externship is a student’s final course within the Veterinary Technology Program. Students must demonstrate competency in the defined learning objectives in order to meet program completion expectations. Students will be responsible for

documenting completion of a checklist of activities reflecting these objectives. For further information on Externship requirements students should consult the MxCC Vet Tech Program Handbook.

The externship will offer a supervised experience under the direction of a licensed veterinarian, certified technician, or animal research technician through placement at an off-site veterinary hospital, private practice, or laboratory facility.

Students will refine skills learned in all previous veterinary technology courses. A minimum of 200 hours of participation in a position relating to the veterinary technology field in a faculty-approved facility is required. **Prerequisites:** VET*205, VET*212, VET*230, and VET*280, each with a grade of "C" or better, and approval of the Vet Tech Program Coordinator.