Middlesex Community College
COLLEGE CATALOG
2016-2017

"ADVISING ESSENTIALS" EDITION
Information about Credit-Bearing Programs:
General Education
Degrees & Certificates
Course Descriptions

MAIN CAMPUS
100 Training Hill Road
Middletown, Connecticut
(860) 343-5800

MERIDEN CENTER
55 West Main Street
Meriden Connecticut
(203) 608-3012

ONLINE: mxcc.edu

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WELCOME FROM THE PRESIDENT

Our World is Full of Possibilities

So much depends on being prepared to seize them.

At Middlesex Community College, you can take the courses you need to transfer into a baccalaureate program with advanced standing. You can also earn the credentials required to start a career or change to a new one. And you can explore areas of study that have always fascinated you or follow your curiosity into fields of study you have never experienced before.

But college is so much more than taking courses and earning degrees or certificates. At Middlesex Community College, we know that it is the experience of college that makes the difference. That is why we work so hard to encourage our students to be fully engaged. We want you to form meaningful, lasting relationships with our faculty and students. And we want you to acquire the knowledge and skills you will need to make the most of all the opportunities that lie ahead for you.

Our courses are academically challenging and offered in a variety of formats, from lecture to discussion, seminar to laboratory, from field-based to online. Our transfer curriculum is constantly being updated and improved, linking it to upper division programs at bachelor degree granting colleges and universities. Every one of our occupational programs has an advisory board made up of employers in the field, ensuring that our programs are the right preparation for a successful career.

Outside the classroom, at both our Middletown campus and Meriden Center, all students have the chance to contribute, participate, and become involved in student organizations and activities. This is how we nurture students to become leaders, creators, thinkers, and explorers.

Faculty advisors, student affairs staff, tutors, librarians, and fellow students can all help you succeed in college. Years after you leave Middlesex, we want you to recall that this is the place where you developed a passion for learning, and where you found a warm and supportive community that prepared you to steer your own path into our complex and changing world.

Welcome to Middlesex Community College!

Anna Wasescha, Ph.D.
President

COLLEGE VISION AND MISSION

Vision & Mission

In all it does, Middlesex Community College strives to be the college of its community. By providing high quality, affordable, and accessible education to a diverse population, the college enhances the strengths of individuals through degree, certificate, and lifelong learning programs that lead to university transfer, employment, and an enriched awareness of our shared responsibilities as global citizens.

Sustainability Statement

MxCC is committed to environmental stewardship and to the principles of sustainable development first articulated in the Brundtland Commission Report of 1987. Simply stated, sustainable development means meeting the needs of the current generation without compromising the ability of future generations to meet their needs. At MxCC, we will practice sustainability in the operation of our buildings and grounds, we will infuse sustainability across our curriculum, and we will provide opportunities for our college community to engage in sustainable activities outside the classroom and in the community.

Statement of Nondiscrimination

Middlesex Community College does not discriminate on the basis of race, color, religious creed, age, sex, national origin, marital status, ancestry, present or past history of mental disorder, learning disability or physical disability, sexual orientation, gender identity and expression or genetic information in its programs and activities. In addition, the College does not discriminate in employment on the additional basis of veteran status or criminal record.

The following people have been designated to handle inquiries or complaints regarding non-discrimination policies and practices:

Primary Title IX Coordinator:
Dr. Adrienne Maslin; Dean of Students/Title IX and Section 504/ADA Coordinator
Middlesex Community College
100 Training Hill Road
Middletown, CT 06457
amaslin@mxcc.edu

Secondary Title IX Coordinator:
Ms. Anastasia Pych, Director of Human Resources
Middlesex Community College
100 Training Hill Road
Middletown, CT 06457
apych@mxcc.edu.

LICENSE AND ACCREDIATION

Middlesex Community College is accredited by the New England Association of Schools and Colleges, Inc., through its Commission on Institutions of Higher Education.

Accreditation of an institution of higher education by the New England Association indicates that it meets or exceeds criteria for the assessment of institutional quality periodically applied through a peer review process. An accredited college or university is one which has available the necessary resources to achieve its stated purposes through appropriate education programs, is substantially doing so, and gives reasonable evidence that it will continue to do so in the foreseeable future. Institutional integrity is also addressed through accreditation.

Accreditation by the New England Association is not partial but applies to the institution as a whole. As such, it is not a guarantee of every course or program offered, or the competence of individual graduates. Rather, it provides reasonable assurance about the quality of opportunities available to students who attend the institution.

Inquiries regarding the accreditation status by the New England Association should be directed to the administrative staff of the institution. Individuals may also contact:

Commission on Institutions of Higher Education
New England Association of Schools and Colleges
3 Burlington Woods Drive, Suite 100, Burlington, MA 01803-4514
781-425-7785
E-mail: cihe@neasc.org

ACADEMIC CALENDAR

CONNECTICUT STATE COLLEGES & UNIVERSITIES
MIDDLESEX COMMUNITY COLLEGE
Common Academic Calendar, 2016-17

FALL SEMESTER 2016		
Mon-Fri	Aug. 22-26	Last-Minute Registration, Orientation Sessions
Thursday	August 25	Faculty Semester Begins
Thursday	August 25	Orientation for New Adjunct Faculty
Monday	**August 29**	**CLASSES BEGIN**
Saturday	September 3	Saturday Classes Begin – CLASSES HELD
Monday	September 5	Labor Day – COLLEGE CLOSED
Friday	September 9	• Last Day to Add/Drop Courses • Last Day for 50% Tuition Refund
Monday	September 19	Constitution Day Observed – CLASSES HELD
Monday	September 19	"LATE START" CLASSES BEGIN
Saturday	September 24	Adjunct Faculty Professional Development Day
Monday	September 26	Last Day to Change from Credit to Audit Status
Monday	October 10	Columbus Day – CLASSES HELD
Mon-Fri	Oct 31-Nov 22	Priority Advising & Registration for Continuing Students
Friday	November 4	Last Day to Make Up "Incompletes" from Spring/Summer 2016
Friday	November 11	Veterans' Day – CLASSES HELD
Friday	November 11	Last Day to Withdraw from Classes
Friday	November 11	Graduation Applications Due for December Completers
Wed-Sun	Nov. 23-27	Thanksgiving Recess – NO CLASSES Wed., 11/23 – Veterans' Day Observed (College Open, Faculty Holiday) Thur., 11/24 – Thanksgiving Day (College Closed) Fri., 11/25 – Day After Thanksgiving (College Open, Faculty Holiday) Sat., 11/26 and 11/27 – No Classes (College Closed)
Tuesday	December 6	Reading/Make-Up Day – COLLEGE OPEN, NO REGULARLY SCHEDULED CLASSES
Thursday	**December 8**	**Last Day of Classes**
Friday	December 9	Reading/Make-Up Day – COLLEGE OPEN, NO REGULARLY SCHEDULED CLASSES
Sat-Fri	**December 10-16**	**Final Exams**
Saturday	**December 17**	**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	December 20	Grades due by 9:00am; Faculty Semester Ends

MIDDLESEX COMMUNITY COLLEGE
Academic Calendar, 2016-17

WINTER SESSION 2016-17

Tuesday	December 27	WINTER CLASSES BEGIN
Monday	January 2	New Year's Day Observed – COLLEGE CLOSED
Sunday	January 15	Classes End at 12:00 noon Eastern Time
Tuesday	January 17	Grades Due by 9:00AM

ALL WINTER SESSION CLASSES ARE ONLINE

CONNECTICUT STATE COLLEGES & UNIVERSITIES
MIDDLESEX COMMUNITY COLLEGE
Common Academic Calendar, 2016-17

SPRING SEMESTER 2017

Monday	January 16	Martin Luther King Day – COLLEGE CLOSED
Tuesday	January 17	Faculty Semester Begins
Tue-Wed	Jan. 17-18	Last-Minute Registration, Orientation Sessions
Wednesday	January 18	Adjunct Faculty "Back to School Night"
Thursday	**January 19**	**CLASSES BEGIN**
Wednesday	February 1	• Last Day to Add/Drop Courses • Last Day for 50%Tuition Refund
Friday	February 17	Lincoln's Birthday Observed – NO CLASSES, COLLEGE OPEN
Monday	February 20	Washington's Birthday Observed – COLLEGE CLOSED
Tuesday	February 21	"LATE START" CLASSES BEGIN
Wednesday	February 22	Last Day to Change from Credit to Audit Status
Mon-Sun	March 13-19	Spring Break – NO CLASSES, COLLEGE OPEN
Mon-Fri	April 4-29	Priority Advising & Registration for Continuing Students
Wednesday	April 5	Last Day to Make Up "Incompletes" from Fall 2015
Fri-Sun	April 14-16	Days of Reflection – COLLEGE CLOSED
Monday	April 17	Last Day to Withdraw from Classes
Monday	April 17	GRADUATION APPLICATIONS DUE
Friday	April 28	3rd Annual Academic Convivium
Thursday	May 4	Reading/Make-Up Day – COLLEGE OPEN, NO REGULARLY SCHEDULED CLASSES
Friday	May 5	Academic Awards Night
Monday	**May 8**	**Last Day of Classes**
Tue-Mon	**May 9-15**	**Final Exams**
Tuesday	**May 16**	**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)**
Thursday	May 18	Grades Due by 9:00AM
Thursday	May 25	MxCC COMMENCEMENT, 6:00pm

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 in the Fall 2016 semester and later. As of the Fall 2016 semester, the General Education Requirements will align 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 *MUST be a course with a prerequisite of MAT*137/MAT*137E, or placement above MAT*137*
3 credits	Historical Knowledge
6 credits (2 courses)	Social Phenomena
6-8 credits (2 courses)	Scientific Reasoning Scientific Knowledge & Understanding *One course MUST be a laboratory science course*
30-33 credits	**Total**

Note: Students matriculating in the Fall 2016 semester and beyond 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 (for students matriculating in the Fall 2016 semester). 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 beyond 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. Therefore, 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

Gen Ed Competency

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
ART*101	Art History I
ART*102	Art History II
ART*109	Color Theory
ART*111	Drawing I
ART*112	Drawing II
ART*116	Perspective Drawing
ART*121	Two-Dimensional Design
ART*122	Three-Dimensional Design
ART*131	Sculpture I
ART*147	Digital Cinematography
ART*155	Watercolor I
ART*163	Ceramic Handbuilding
ART*165	Metal and Jewelry Design I
ART*166	Metal and Jewelry Design II
ART*215	Illustration
ART*250	Digital Photography
ART*253	Oil Painting I
ART*254	Oil Painting II
ART*280	Advanced Digital Photography
COM*142	Television Production
COM*147	Digital Cinematography
COM*203	Media Literacy
COM*264	Advanced Editing Workshop
DGA*101	Introduction to Digital Arts
DGA*110	Computer Graphics
DGA*120	Digital Imaging I
DGA*182	Digital Video Technology
DGA*223	Digital Illustration
DGA*231	Digital Page Design I
DGA*241	Internet Web Design I
DGA*242	Internet Web Design II
DGA*250	Interactive Multimedia Production
DGA*257	Motion Graphics and Effects
DGA*260	Animation
ECE*103	Creative Art Experiences for Children
ECE*106	Music and Movement for Children
ECE*131	Children's Literature
GRA*150	Introduction to Graphic Design
GRA*251	Advanced Graphic Design
GRA*296	Graphic Design Internship
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 & Appreciation
MUS*152	Drumming and Percussion Ensemble
THR*101	Introduction to Theatre
THR*110	Acting I
THR*113	Performance for Film and Television
THR*121	Plays in Production I
THR*210	Acting II

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
ACC*118	Managerial Accounting
ACC*271	Intermediate Accounting I
ACC*272	Intermediate Accounting II
ART*250	Digital Photography
BBG*101	Introduction to Business
BBG*115	Business Software Applications
BBG*125	The Future and Business Organizations
BBG*135	Exploring Business & Technology Careers
BBG*294	Business Internship
BBG*295	Cooperative Work Experience
BES*118	Small Business Management
BFN*110	Personal Finance
BFN*201	Principles of Finance
BMG*202	Principles of Management
BMG*204	Managerial Communications
BMG*210	Principles of Organizational Behavior
BMG*220	Human Resource Management
BMK*103	Principles of Retailing
BMK*106	Principles of Selling
BMK*201	Principles of Marketing
BMK*216	Internet Marketing
BMK*230	Advertising and Promotion
CAD*110	Introduction to CAD
CJS*211	Criminal Law I
CJS*212	Criminal Law II
CJS*213	Evidence and Criminal Procedure
CSA*135	Spreadsheet Applications
CSA*140	Database Applications
CSA*205	Advanced Applications
CSC*101	Introduction to Computers
CSC*105	Programming Logic
CSC*115	Introduction to Programming with Alice
CSC*205	Visual Basic I
CSC*220	Object Oriented Programming Using JAVA
CSC*231	Database Design I
CSC*262	Programming Mobile Devices I
CSC*295	Coop Ed/Work Experience
CST*120	Introduction to Operating Systems
CST*141	Computer Hardware
CST*163	Windows Server Administration
CST*201	Intro. to Management Information Systems
CST*228	Voice and Data Interworking
CST*231	Data Communication and Networking
CST*270	Network Security Fundamentals
ECE*101	Introduction to Early Childhood Education
ECE*131	Children's Literature
ENG*101	Composition
ENG*101E	Composition (Embedded)
ENG*102	Literature and Composition
ENG*110	Introduction to Literature
ENG*200	Advanced Composition
ENG*202	Technical Writing
ENG*210	Fiction
ENG*211	Short Story
ENG*213	Poetry
ENG*214	Drama
ENG*218	Autobiography
ENG*220	Studies in American Literature
ENG*221	American Literature I
ENG*222	American Literature II
ENG*231	British Literature I
ENG*232	British Literature II
ENG*233	Shakespeare
ENG*234	Shakespeare II
ENG*262	Women in Literature
ENG*291	Mythology
ENG*298	Special Topics in English
HIM*156	Electronic Health Records
HIM*205	Medical Coding 1
HIM*206	Medical Coding 2
HLT*160	Introduction to Public Health
HON 101	Honors Seminar
HON 102	Honors Seminar II
HON 202	Honors Capstone Project
PSY*103	Introduction to Holistic Wellness
PSY*201	Life Span Development
PSY*204	Child and Adolescent Development
PSY*240	Social Psychology
SOC*160	Introduction to Public Health

Critical Analysis & Logical Thinking — Gen Ed Competency

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
ACC*115 Financial Accounting
ACC*118 Managerial Accounting
ACC*271 Intermediate Accounting I
ACC*272 Intermediate Accounting II
BBG*101 Introduction to Business
BBG*115 Business Software Applications
BBG*125 The Future and Business Organizations
BBG*135 Exploring Business & Technology Careers
BBG*215 Global Business
BBG*294 Business Internship
BBG*295 Cooperative Work Experience
BES*118 Small Business Management
BMG*202 Principles of Management
BMG*204 Managerial Communications
BMG*210 Principles of Organizational Behavior
BMG*220 Human Resource Management
BMK*106 Principles of Selling
BMK*201 Principles of Marketing
BMK*216 Internet Marketing
BMK*230 Advertising and Promotion
CJS*211 Criminal Law I
CJS*212 Criminal Law II
CJS*213 Evidence and Criminal Procedure
CJS*294 Contemporary Issues in Criminal Justice
CSA*135 Spreadsheet Applications
CSA*140 Database Applications
CSA*205 Advanced Applications
CSC*105 Programming Logic
CSC*115 Introduction to Programming with Alice
CSC*205 Visual Basic I
CSC*220 Object Oriented Programming Using JAVA
CSC*231 Database Design I
CSC*262 Program'g Mobile Devices I
CSC*295 Coop Ed/Work Experience
CST*120 Intro. to Operating Systems
CST*141 Computer Hardware
CST*163 Windows Server Administration
CST*201 Introduction to Management Information Systems
CST*228 Voice and Data Interworking
CST*231 Data Communication and Networking
CST*270 Network Security Fundamentals
EAS*106 Natural Disasters
ECE*101 Introduction to Early Childhood Education
ECE*103 Creative Art Experiences for Children
ECE*131 Children's Literature
ECE*141 Infant/Toddler Growth & Development
ECE*176 Health, Safety, and Nutrition
ECE*180 CDA Preparation Course
ECE*182 Child Development
ECN*101 Principles of Macroeconomics
ECN*102 Principles of Microeconomics
ECN*220 International Economics
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
ENG*101 Composition
ENG*101E Composition (Embedded)
ENG*102 Literature and Composition
ENG*110 Introduction to Literature
ENG*200 Advanced Composition
ENG*202 Technical Writing
ENG*210 Fiction
ENG*211 Short Story
ENG*213 Poetry
ENG*214 Drama
ENG*218 Autobiography
ENG*220 Studies in American Literature
ENG*221 American Literature I
ENG*222 American Literature II
ENG*231 British Literature I
ENG*232 British Literature II
ENG*233 Shakespeare
ENG*234 Shakespeare II
ENG*262 Women in Literature
ENG*291 Mythology
ENG*298 Special Topics in English
EVS*100 Introduction to Environmental Science
EVS*111 Environmental Science Laboratory
GLG*120 Dynamic Earth
HIM*205 Medical Coding 1
HIM*206 Medical Coding 2
HIM*295 Health Information Management Internship
HLT*160 Introduction to Public Health
HON 101 Honors Seminar
HON 102 Honors Seminar II
HON 202 Honors Capstone Project
MAT*104 Quantitative Reasoning
MAT*141 Number Systems
MAT*146 Math for the Liberal Arts
PHL*101 Introduction to Philosophy
PHL*111 Ethics
PHL*131 Logic
PHL*145 Sustainable Living
PHL*151 World Religions
PHL*199 Special Topics in Philosophy
SOC*160 Introduction to Public Health

Ethical Dimensions of Humankind — Gen Ed Competency

Ethical Dimensions courses are 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.

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

ART*250	Digital Photography
BBG*101	Introduction to Business
BBG*115	Business Software Applications
BBG*125	The Future and Business Organizations
BBG*135	Exploring Business & Technology Careers
BBG*294	Business Internship
BBG*295	Cooperative Work Experience
BES*118	Small Business Management
BIO*109	Principles of Biotechnology
BMG*202	Principles of Management
BMG*204	Managerial Communications
BMG*210	Principles of Organizational Behavior
BMG*220	Human Resource Management
BMK*103	Principles of Retailing
BMK*106	Principles of Selling
BMK*123	Principles of Customer Service
BMK*201	Principles of Marketing
BMK*216	Internet Marketing
BMK*230	Advertising and Promotion
CJS*101	Introduction to Criminal Justice
CJS*102	Introduction to Corrections
CJS*105	Introduction to Law Enforcement
CJS*250	Police Organization and Management
CJS*255	Ethical Issues in Criminal Justice Leadership
CJS*288	Careers in Criminal Justice
CJS*290	Practicum in Criminal Justice
CJS*294	Contemporary Issues in Criminal Justice
CSC*295	Coop Ed/Work Experience
ECE*101	Introduction to Early Childhood Education
ECE*106	Music and Movement for Children
ECE*131	Children's Literature
ENG*101	Composition
ENG*101E	Composition (Embedded)
ENG*102	Literature and Composition
ENG*110	Introduction to Literature
ENG*200	Advanced Composition
ENG*202	Technical Writing
ENG*210	Fiction
ENG*211	Short Story
ENG*213	Poetry
ENG*214	Drama
ENG*218	Autobiography
ENG*220	Studies in American Literature
ENG*221	American Literature I
ENG*222	American Literature II
ENG*231	British Literature I
ENG*232	British Literature II
ENG*233	Shakespeare
ENG*234	Shakespeare II
ENG*262	Women in Literature
ENG*291	Mythology
ENG*298	Special Topics in English
HIM*102	Introduction to Healthcare Systems
HIM*220	Supervision/Quality Management
HIM*256	Legal and Ethical Issues of HIM
HIM*295	Health Information Management Internship
HLT*160	Introduction to Public Health
HON 101	Honors Seminar
HON 102	Honors Seminar II
HON 202	Honors Capstone Project
HSE*116	Youth Advocacy and Community Organization
HSE*202	Introduction to Counseling/ Interviewing
HSE*288	Developmental Practicum
HSE*289	Psychiatric Practicum
PHL*101	Introduction to Philosophy
PHL*111	Ethics
PHL*131	Logic
PHL*145	Sustainable Living
PHL*151	World Religions
PHL*199	Special Topics in Philosophy
PSY*103	Introduction to Holistic Wellness
PSY*111	General Psychology I
PSY*201	Life Span Development
PSY*240	Social Psychology
SOC*120	Group Dynamics
SOC*160	Introduction to Public Health

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
ECE*101	Introduction to Early Childhood Education
ECE*131	Children's Literature
ECE*141	Infant/Toddler Growth & Development
ECE*176	Health, Safety, and Nutrition
ECE*182	Child Development
ENG*102	Literature and Composition
ENG*110	Introduction to Literature
ENG*210	Fiction
ENG*211	Short Story
ENG*213	Poetry
ENG*214	Drama
ENG*218	Autobiography
ENG*220	Studies in American Literature
ENG*221	American Literature I
ENG*222	American Literature II
ENG*231	British Literature I
ENG*232	British Literature II
ENG*233	Shakespeare
ENG*234	Shakespeare II
ENG*262	Women in Literature
ENG*291	Mythology
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
HSE*224	Social Problems of Youth
MUS*101	Music History and Appreciation I
MUS*104	World Music
MUS*117	Electronic Music
MUS*137	History and Appreciation of Jazz
MUS*138	Rock and Roll History and Appreciation
PSY*204	Child and Adolescent Development
THR*101	Introduction to Theatre

Oral Communication in English — Gen Ed Competency

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*101	Introduction to Business
BBG*115	Business Software Applications
BES*118	Small Business Management
BMG*202	Principles of Management
BMG*204	Managerial Communications
BMG*210	Principles of Organizational Behavior
BMG*220	Human Resource Management
BMK*103	Principles of Retailing
BMK*106	Principles of Selling
BMK*123	Principles of Customer Service
BMK*201	Principles of Marketing
CJS*290	Practicum in Criminal Justice
COM*173	Public Speaking
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
ECE*182	Child Development
HLT*160	Introduction to Public Health
HSE*202	Introduction to Counseling/ Interviewing
HSE*224	Social Problems of Youth
ODD*110	Ophthalmic Materials I
PSY*103	Introduction to Holistic Wellness
PSY*111	General Psychology I
PSY*201	Life Span Development
PSY*204	Child and Adolescent Development
PSY*240	Social Psychology
SOC*120	Group Dynamics
SOC*160	Introduction to Public Health
VET*102	Veterinary Office Management & Communication
VET*280	Veterinary Technician Externship I
VET*286	Veterinary Technician Externship II

Quantitative Reasoning — Gen Ed Competency

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 CSCU Transfer Tickets**. (Full course descriptions may be found elsewhere in this Catalog.)

CHE*121	General Chemistry I
CHE*122	General Chemistry II
CHE*250	Instrumental Analysis
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
MAT*141	Number Systems
MAT*146	Math for the Liberal Arts
MAT*158	Graphs, Functions, and Matrices
MAT*168	Elementary Statistics and Probability 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
ACC*118	Managerial Accounting
ACC*271	Intermediate Accounting I
ACC*272	Intermediate Accounting II
BFN*201	Principles of Finance
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 Gen Ed Competency

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
BIO*105	Introduction to Biology
BIO*110	Principles of the Human Body
BIO*115	Human Biology
BIO*121	General Biology I
BIO*122	General Biology II
BIO*173	Introduction to Ecology
BIO*211	Human Anatomy and Physiology I
BIO*212	Human Anatomy and Physiology II
BIO*235	Microbiology
BIO*238	Parasitology
BIO*263	Molecular Genetics
CHE*111	Concepts of Chemistry
CHE*112	Principles of Organic and Biochemistry
CHE*121	General Chemistry I
CHE*122	General Chemistry II
CHE*220	Biochemistry
CHE*250	Instrumental Analysis
CJS*225	Forensic Science
CJS*285	Forensic Science with Lab
EAS*102	Earth Science
EAS*107	Earth Resources
ECE*182	Child Development
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*111	Environmental Science Laboratory
GLG*120	Dynamic Earth
PSY*204	Child and Adolescent Development
PSY*208	Psychology of Adult Development and Aging
PSY*245	Abnormal Psychology
PSY*251	Behavior Disorders of Children and Youth
RAD*200	Radiologic Physics & Diagnostic Imaging Modalities
RAD*206	Quality Assurance
RAD*219	Radiographic Equipment and Image Production
SCI*285	Forensic Science with Lab
SOC*114	Sociology of Aging
SOC*120	Group Dynamics
VET*100	Introduction to Animal Care
VET*101	Introduction to Veterinary Technology
VET*102	Veterinary Office Management and Communication
VET*151	Small Animal Veterinary Technology w/Lab
VET*152	Large Animal Veterinary Technology w/Lab
VET*201	Veterinary Anatomy & Physiology I w/Lab
VET*202	Veterinary Anatomy & Physiology II w/Lab
VET*205	Veterinary Laboratory Procedures
VET*212	Principles of Imaging with Lab
VET*220	Animal Pathology
VET*230	Veterinary Anesthesia and Surgical Nursing with Lab
VET*238	Parasitology
VET*240	Periodontology and Oral Radiology
VET*250	Principles of Pharmacology for Vet Tech
VET*280	Veterinary Technician Externship I
VET*286	Veterinary Technician Externship II

Scientific Reasoning

Gen Ed Competency

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
BIO*109	Principles of Biotechnology
BIO*115	Human Biology
BIO*121	General Biology I
BIO*122	General Biology II
BIO*173	Introduction to Ecology
BIO*211	Human Anatomy and Physiology I
BIO*212	Human Anatomy and Physiology II
BIO*235	Microbiology
BIO*263	Molecular Genetics
CAT*201	Cross Sectional Anatomy I
CHE*111	Concepts of Chemistry
CHE*112	Principles of Organic and Biochemistry
CHE*121	General Chemistry I
CHE*122	General Chemistry II
CHE*220	Biochemistry
CHE*250	Instrumental Analysis
CJS*225	Forensic Science
CJS*285	Forensic Science with Lab
CSC*105	Programming Logic
CSC*220	Object Oriented Programming Using JAVA
CST*141	Computer Hardware
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
GLG*120	Dynamic Earth
HIM*156	Electronic Health Records
HIM*205	Medical Coding 1
HIM*206	Medical Coding 2
HLT*160	Introduction to Public Health
MAM*202	Mammography Clinical Experience
MAT*168	Elementary Statistics and Probability I
PHY*110	Introductory Physics
PHY*121	General Physics I
PHY*122	General Physics II
PHY*221	Calculus-Based Physics I
PHY*222	Calculus-Based Physics II
PSY*111	General Psychology I
PSY*240	Social Psychology
RAD*200	Radiologic Physics & Diagnostic Imaging Modalities
RAD*206	Quality Assurance
RAD*219	Radiographic Equipment and Image Production
SCI*285	Forensic Science with Lab
SOC*160	Introduction to Public Health
SOC*240	Criminology

Social Phenomena

Gen Ed Competency

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
ANT*205	Cultural Anthropology
BBG*101	Introduction to Business
BBG*125	The Future and Business Organizations
BBG*135	Exploring Business & Technology Careers
BBG*215	Global Business
BBG*294	Business Internship
BBG*295	Cooperative Work Experience
BES*118	Small Business Management
BMG*202	Principles of Management
BMG*204	Managerial Communications
BMG*210	Principles of Organizational Behavior
BMG*220	Human Resource Management
BMK*103	Principles of Retailing
BMK*106	Principles of Selling
BMK*123	Principles of Customer Service
BMK*201	Principles of Marketing
BMK*216	Internet Marketing
BMK*230	Advertising and Promotion
CJS*101	Introduction to Criminal Justice
CJS*102	Introduction to Corrections
CJS*105	Introduction to Law Enforcement
CJS*106	Introduction to Homeland Security
CJS*220	Criminal Investigation
CJS*250	Police Organization and Management
CJS*255	Ethical Issues in Criminal Justice Leadership
CJS*288	Careers in Criminal Justice
CJS*290	Practicum in Criminal Justice
CJS*294	Contemporary Issues in Criminal Justice
COM*120	Social Media
COM*125	New Media Production
DAR*101	Public Health Issues: Abuse & Addiction
DAR*114	Introduction to Family Systems
DGA*125	New Media Production
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
ECE*182	Child Development
ECN*101	Principles of Macroeconomics
ECN*102	Principles of Microeconomics
ECN*220	International Economics
GEO*101	Introduction to Geography
HLT*160	Introduction to Public Health
HON 101	Honors Seminar
HON 102	Honors Seminar II
HON 202	Honors Capstone Project
HSE*101	Introduction to Human Services
POL*102	Introduction to Comparative Politics
POL*103	Introduction to International Relations
POL*111	American Government
POL*112	State and Local Government
POL*293	Connecticut Legislative Internship
PSY*201	Life Span Development
PSY*204	Child and Adolescent Development
PSY*240	Social Psychology
PSY*245	Abnormal Psychology
RAD*109	Methods of Patient Care I
RAD*209	Methods of Patient Care II
RAD*271	Advanced Clinical Internship
SOC*101	Principles of Sociology
SOC*103	Social Problems
SOC*117	Minorities in the U.S.
SOC*120	Group Dynamics
SOC*160	Introduction to Public Health
SOC*190	Self and Others: Dynamics of Diversity
SOC*210	Sociology of the Family
SOC*213	Human Sexuality
SOC*221	Social Inequality
SOC*240	Criminology
SOC*241	Juvenile Delinquency
SOC*277	Social Survey Research

Written Communication in English — Gen Ed Competency

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.)

BBG*294 Business Internship
BBG*295 Cooperative Work Experience
CJS*290 Practicum in Criminal Justice
ENG*101 Composition
ENG*101E Composition (Embedded)
ENG*102 Literature and Composition
ENG*200 Advanced Composition
ENG*202 Technical Writing
ENG*210 Fiction
ENG*211 Short Story
ENG*213 Poetry
ENG*214 Drama
ENG*218 Autobiography
ENG*220 Studies in American Literature
ENG*221 American Literature I
ENG*222 American Literature II
ENG*231 British Literature I
ENG*232 British Literature II
ENG*233 Shakespeare
ENG*234 Shakespeare II
ENG*262 Women in Literature
ENG*291 Mythology
ENG*298 Special Topics in English

PROGRAMS OF STUDY

Associate Degree Programs

Accounting
Biology Studies (CSCU Transfer Ticket)
Biotechnology
Broadcast Cinema
Business Administration
Chemistry Studies (CSCU Transfer Ticket)
Communication Studies (CSCU Transfer Ticket)
Computer Engineering Technology Option (Technology Studies)
Computer Information Technology
Criminal Justice
Criminology Studies (CSCU Transfer Ticket)
Early Childhood Education
Engineering Science
Engineering Technology Option (Technology Studies)
English Studies (CSCU Transfer Ticket)
Environmental Science
Fine Arts/Fine Arts: Graphic Design Track
General Studies
Health Information Management
History Studies (CSCU Transfer Ticket)
Human Services
Liberal Arts & Sciences
Management Information Systems
Manufacturing Machine Technology Option (Technology Studies)
Marketing
Mathematics Studies (CSCU Transfer Ticket)
Multimedia (Digital Arts)
Ophthalmic Design and Dispensing
Political Science Studies (CSCU Transfer Ticket)
Psychology Studies (CSCU Transfer Ticket)
Radiologic Technology
Social Work Studies (CSCU Transfer Ticket)
Sociology Studies (CSCU Transfer Ticket)
Technology Studies
Veterinary Technology

CSCU "Transfer Ticket" Degree Programs:
For more information, see http://www.ct.ed/transfer

Post Primary Certifications

Computed Tomography
Mammography

Certificate Programs

Accounting Assistant
Accounting Technician
Advertising & Sales Promotion
Biotechnology
Broadcast Communications
Business Skills
Child Development Assoc. (CDA) Credential
Corporate Media Production
Communications Networking
Customer Service Management
Early Childhood Education
Entrepreneurship
Health Career Pathway
Health Information Management
Help Desk Technician
Juvenile Justice
Manufacturing Machine Technology
Multimedia
Multimedia Web Design & Development
News and Sports Production
Ophthalmic Medical Assistant
Software Developer
Substance Abuse Education
Therapeutic Recreation
Pre-Allied Health/Transfer Requirements

Continuing Education Programs

Basic Life Support (BLS) for Healthcare Providers
Certified Nurse Aide
Certified Phlebotomy Technician
Emergency Medical Technician
Equine Husbandry
Heartsaver Adult/Child CPR Certification
Human Services Assistant
Medical Billing and Coding
Patient Care Technician (PCT)
Personal Trainer Certificate
Pharmacy Technician Certificate
Student Success Series
Veterinary Assistant Certificate

Contact Information
Schools, Programs & Departments

College-Wide Programs				
Program Name	**Contact**	**Phone**	**Office**	**E-mail Address**
Early College Academy (ECA) *College courses in the high schools*	Dr. Steve Minkler	860-343-5706	F-107	sminkler@mxcc.edu
General Studies Liberal Arts & Sciences	Mr. Jaime Flores & Dr. Lin Lin	860-343-5757 860-343-5763	S-508 W-209	jflores@mxcc.edu llin@mxcc.edu
Honors Program	Dr. Eva Jones	860-343-5854	S-520	ejones2@mxcc.edu
Transitional Year Program	Prof. Terence McNulty	860-343-5889	S-520	tmcnulty@mxcc.edu
School of Allied Health, Business, and STEM (Science, Technology, Engineering & Math) Dr. Lin Lin, Division Director • 860-343-5763 • Wheaton Hall, Room 209 • llin@mxcc.edu				
Accounting Accounting Assistant Accounting Technician	Prof. Nancy Kelly	860-343-5761	W-313	nkelly@mxcc.edu
Biology Studies	Dr. Patrick Bryan	860-343-5880	W-209	pbryan@mxcc.edu
Biotechnology	Dr. Frank Stellabotte	860-343-	W-217	fstellabotte@mxcc.edu
Business Administration Advertising & Sales Promotion Business Skills Customer Service Management Entrepreneurship	Asst. Prof. Susan Lugli	860-343-5840	W-313	slugli@mxcc.edu
Chemistry Studies	Asst. Prof. James Quinlan	860-343-5773	W-217	jquinlan@mxcc.edu
Computer Engineering Technology (Tech. Studies)	Dr. Lin Lin	860-343-5763	W-209	llin@mxcc.edu

Computer Information Technology Communications Networking Help Desk Technician Software Developer	Prof. Donna Hylton	860-343-5774	S-512	dhylton@mxcc.edu
Engineering Science Engineering Tech. Option (Tech. Studies)	Dr. Lin Lin	860-343-5763	W-209	llin@mxcc.edu
Environmental Science	Assoc. Prof. Christine Witkowski	860-343-5781	W-217	cwitkowski@mxcc.edu
Health Career Pathway	Dr. Judy Wallace	860-343-5780	W-209	jwallace@mxcc.edu
Health Information Management	Asst. Prof. Jill Flanigan	860-343-	W-313	jflanigan@mxcc.edu
Management Information Systems	Prof. Donna Hylton	860-343-5774	S-512	dhylton@mxcc.edu
Manufacturing Machine Technology (Tech. Studies)	Ms. Carolyn Sommer	860-343-5841	F-131A	csommer@mxcc.edu
Marketing	Asst. Prof. Susan Lugli	860-343-5840	W-313	slugli@mxcc.edu
Mathematics Studies	Prof. Steve Krevisky	860-343-5792	W-310	skrevisky@mxcc.edu
Ophthalmic Design & Dispensing* Ophthalmic Medical Assistant	Prof. Raymond Dennis	860-343-5845	C-625	rdennis@mxcc.edu
Pre-Allied Health/Transfer	Dr. Judy Wallace	860-343-5780	W-209	jwallace@mxcc.edu
Radiologic Technology** Computed Tomography Mammography	Dr. Judy Wallace	860-343-5780	W-209	jwallace@mxcc.edu
Technology Studies	Dr. Lin Lin	860-343-5763	W-209	llin@mxcc.edu
Veterinary Technology***	Dr. Chris Gargamelli	860-343-5842	S-407	cgargamelli@mxcc.edu

** Accredited by the Commission on Opticianry Accreditation*
***Accredited by the Joint Review Committee on Education in Radiologic Technology*
****Accredited by the American Veterinary Medical Association – Committee on Veterinary Technician Education and Activities*

School of Arts & Media, Humanities, and Social Sciences
Mr. Jaime Flores, Division Director • 860-343-5757 • Snow Hall, Room 508 • jflores@mxcc.edu

Program Name	Contact	Phone	Office	E-mail Address
Broadcast Cinema Communication Communication Studies Broadcast Communications Corporate Media Production News & Sports Production	Prof. Rich Lenoce	860-343-5796	C-606	rlenoce@mxcc.edu
Criminal Justice Criminology Studies	Assoc. Prof. Rebecca Rist-Brown	860-343-5849	S-508	RRistBrown@mxcc.edu
Early Childhood Education* Child Dev. Assoc. (CDA) Credential	Asst. Prof. Norma Rosado-Javier	860-343-5856	S-508	NRosado-Javier@mxcc.edu
English Studies	Dr. Donna Bontatibus	860-343-5802	S-520	dbontatibus@mxcc.edu
Fine Arts Fine Arts: Graphic Design Track	Prof. Judith DeGraffenried	860-343-5871	S-407	jdegraffenried@mxcc.edu
History Studies	Dr. Victor Triay	860-343-5746	S-508	vtriay@mxcc.edu
Human Services Social Work Studies Juvenile Justice Substance Abuse Education Therapeutic Recreation	Prof. Judith Felton	860-343-5816	S-508	jfelton@mxcc.edu
Multimedia & Mult. Web Design & Dev.	Prof. Richard Eriksen	860-343-5795	C-606	reriksen@mxcc.edu
Political Science Studies	Mr. Jaime Flores	860-343-5757	S-508	jflores@mxcc.edu
Psychology Studies	Dr. Andrea Levy	860-343-5815	S-508	alevy@mxcc.edu
Sociology Studies	Dr. John Ambenge	860-343-5810	S-508	jambenge@mxcc.edu

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Continuing Education Non-Degree Programs

Ms. Diane Bordonaro, MSN, RN, Coordinator • 860-343-5716
Snow Hall, Room 514 • dbordonaro@mxcc.edu

Basic Life Support (BLS) for Healthcare Providers
Certified Nurse Aide
Certified Phlebotomy Technician
Emergency Medical Technician
Equine Husbandry
Heartsaver Adult/Child CPR Certification
Human Services Assistant
Medical Billing and Coding
Patient Care Technician (PCT)
Personal Trainer Certificate
Pharmacy Technician Certificate
Student Success Series
Veterinary Assistant Certificate

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 work 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 2016 or Spring 2017. 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/.

Accounting

Associate in Science Degree

GRADUATION CHECKLIST – CATALOG YEAR 2016-17

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 credits)				
Aesthetic Dimensions Elective		3		
Historical Knowledge Elective		3		
Oral Communication	BMG* 204: Managerial Communications	3		
Quantitative Reasoning	MAT* 168: Elementary Statistics and Probability	4		
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 (32 credits)				
Program Requirement	ACC* 115: Financial Accounting	4		
Program Requirement	ACC* 118: Managerial Accounting	4		
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		
Open Elective		3		
TOTAL CREDITS		**64**		

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

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 nine-course, 29-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.

A Note about Program Requirements

The program requirements listed in this Catalog are for students entering into this program in Fall 2016 or Spring 2017. 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/.

Accounting Assistant Certificate

GRADUATION CHECKLIST – CATALOG YEAR 2016-17

Requirements	Cr	Semester Taken	Grade
ACC* 115: Financial Accounting	4		
ACC* 118: Managerial Accounting	4		
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* 135, CSA* 140 or CST* 201	3		
ENG* 101: Composition	3		
TOTAL CREDITS	**29**		

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, 22-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.

A Note about Program Requirements

The program requirements listed in this Catalog are for students entering into this program in Fall 2016 or Spring 2017. 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/.

Accounting Technician Certificate

GRADUATION CHECKLIST – CATALOG YEAR 2016-17

Requirements	Cr	Semester Taken	Grade
ACC* 110: Basic Accounting	3		
ACC* 115: Financial Accounting	4		
BBG* 231: Business Law I OR BBG* 234: Legal Environment of Business	3		
BBG* 295: Co-op Work Experience 1	3		
BMG* 202: Principles of Management	3		
CSA* 135: Spreadsheet Applications	3		
Computer Course Elective: CSC* 101, CSA* 135, CSA* 140 or CST* 201	3		
TOTAL CREDITS	**22**		

ADVERTISING & SALES PROMOTION Certificate

School of Allied Health, Business, and STEM

Program Coordinator: Assistant 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.

A Note about Program Requirements

The program requirements listed in this Catalog are for students entering into this program in Fall 2016 or Spring 2017. 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/.

Advertising & Sales Promotion Certificate

GRADUATION CHECKLIST – CATALOG YEAR 2016-17

Requirements	Cr	Semester Taken	Grade
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**		

BIOLOGY STUDIES

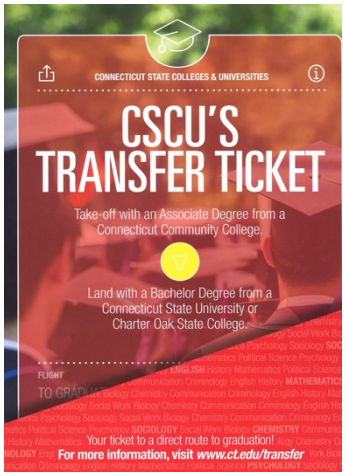
Associate Degree

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

NEW! 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.



Biology Studies

Associate in Arts Degree
GRADUATION CHECKLIST – CATALOG YEAR 2016-17

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 (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: Anatomy and Physiology I, BIO* 212: Anatomy and 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* 121 General Physics II	4		
Program Requirement	MAT* 254: Calculus I	4		
	TOTAL CREDITS	60-61		

BIOTECHNOLOGY

Associate Degree

School of Allied Health, Business, and STEM

Program Coordinator: **Interim Assistant Professor Dr. Frank Stellabotte**
Office Location: **Wheaton Hall 217**
Telephone: **(860) 343-5xxx**
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 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 2016 or Spring 2017. 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/.

Biotechnology

Associate in Science Degree

GRADUATION CHECKLIST – CATALOG YEAR 2016-17

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 (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 **OR** ENG* 202: Technical Writing	3		
	BIO* 109: Principles of Biotechnology	3		
Quantitative Reasoning (Career)	MAT*168: Elementary Statistics & Probability	4		
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	**61**		

BIOTECHNOLOGY

Certificate

School of Allied Health, Business, and STEM

Program Coordinator: **Interim Assistant Professor Dr. Frank Stellabotte**
Office Location: **Wheaton Hall 217**
Telephone: **(860) 343-5xxx**
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.

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.

A Note about Program Requirements

The program requirements listed in this Catalog are for students entering into this program in Fall 2016 or Spring 2017. 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/.

Biotechnology Certificate

GRADUATION CHECKLIST – CATALOG YEAR 2016-17

Requirements	Cr	Semester Taken	Grade
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**		

BROADCAST-CINEMA Associate Degree

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 Broadcast-Cinema program prepares students for careers in broadcasting, film and emerging media industries. Students will learn the production techniques necessary to succeed in media production while applying innovative approaches to content creation and visual aesthetics. The program provides a balance between journalism, documentary and narrative storytelling. In their first year, students learn the foundations of media production through courses in writing, media studies, aesthetics and production. The second year is devoted to the selection of a series of specialized classes in preparation for a senior thesis project and internship. Most courses in the major require placement in ENG*101.

Learning Outcomes

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

1. Express ideas using the aesthetic elements used in film and broadcast media including photography, mise en scene, editing, audio, scriptwriting, acting, etc.
2. Develop narratives including fiction, documentary, news and prepare scripts for production through the pre-production process
3. Compose, light and record images as part of the production process.
4. Produce programming using the industry-standard professional production and post production tools including cameras, lighting, studio equipment, editing software, digital effects and graphics, and duplication and distribution methods.
5. Through internships, practicums and service learning experiences, students will know proper set etiquette and work ethics unique to the broadcast industry.
6. Demonstrate critical thinking skills to analyze and evaluate program content and quality to improve their writing and production skills.
7. Record audio using proper microphone and mixing techniques.
8. Apply field and studio production techniques to various applications including news, talk, sports, short films, long form video, documentary, corporate media, advertising and marketing.
9. Demonstrate an understanding of how varying production conditions and specific techniques such as lighting, audio, varying editing, adding effects, can develop a unique visual and personal style while enhancing communication effectiveness.

A Note about Program Requirements

The program requirements listed in this Catalog are for students entering into this program in Fall 2016 or Spring 2017. 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/.

Broadcast Cinema

Associate in Science Degree

GRADUATION CHECKLIST – CATALOG YEAR 2016-17

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*/COM* 147: Digital Cinematography **OR** ART* 250 Digital Photography	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		3-4		
Scientific Knowledge OR Scientific Reasoning Elective		3-4		
Social Phenomena Elective		3		
Written Communication	ENG* 101: Composition	3		

Program Requirements (40 credits)				
Program Requirement	COM* 101: Intro to Mass Communication	3		
Program Requirement	COM* 104 Careers in Media **OR** COM*125/DGA* 125 New Media Production	3		
Program Requirement	COM* 111: Scriptwriting	3		
Program Requirement	COM* 142: TV Production	4		
Program Requirement	COM* 228: Broadcast Journalism	3		
Program Requirement	COM* 287: Advanced Media Production	3		
Program Requirement	COM* 295: Internship I	3		
Open Elective		3		
Open Elective		3		
COM*/DGA* Elective		3		
COM*/DGA* Elective		3		
COM*/DGA* Elective		3		
COM*/DGA* Elective		3		
TOTAL CREDITS		**60-62**		

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 from the courses listed below. This program 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 as well as professional certification. Each student's program must be approved by the Broadcast Communications program coordinator.

A Note about Program Requirements

The program requirements listed in this Catalog are for students entering into this program in Fall 2016 or Spring 2017. 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/.

BROADCAST COMMUNICATIONS CERTIFICATE

GRADUATION CHECKLIST – CATALOG YEAR 2016-17

Requirements	Cr	Semester Taken	Grade
Select 24-25 credits from the following:			
ART*147 Digital Cinematography OR ART*250 Digital Photography	3		
COM*101 Introduction to Mass Communications	3		
COM*104 Careers in Media	3		
COM*111 Scriptwriting	3		
COM*116 Publication Workshop OR COM*226 Journalism I	3		
COM*125 New Media Production	3		
COM*130 Intro. to Broadcast Communications	3		
COM*131 Audio Production	3		
COM*142 Television Production	4		
COM*179 Performance for Film and Television	3		
COM*203 Media Aesthetics	3		
COM*228 Broadcast Journalism Workshop	3		
COM*231 Radio Production	3		
COM*264 Advanced Editing Workshop	3		
COM*287 Advanced Media Production	3		
COM*293 Corporate Media Production Practicum	3		
COM*294 Media Arts Workshop- Honors	3		
COM*295 Internship I	3		
COM*296 Internship II	3		
DGA*110 Computer Graphics	3		
DGA*182 Digital Video	3		
MUS*117 Electronic Music	3		
MAT* Elective	4		
ENG* 101: Composition	3		
TOTAL CREDITS	**30-31**		

BUSINESS ADMINISTRATION Associate Degree

School of Allied Health, Business, and STEM

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

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 2016 or Spring 2017. 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/.

Business Administration

Associate in Science Degree

GRADUATION CHECKLIST – CATALOG YEAR 2016-17

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.

General Education Requirements for Transfer Programs (32 credits)				
Aesthetic Dimensions Elective		3		
Historical Knowledge Elective		3		
Oral Communication	BBG* 115: Business Software Applications	3		
Quantitative Reasoning Elective	MAT* 168: Elementary Statistics and Probability	4		
Scientific Knowledge Elective		3		
Scientific Reasoning Elective with Lab		4		
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)	BBG*294 Business Internship or BBG*295 Coop Work Experience I or ENG*102 Literature Composition	3		

Program Requirements (31-32 credits)				
Program Requirement	ACC* 115: Financial Accounting	4		
Program Requirement	BBG* 231: Business Law I **OR** BBG* 234: Legal Environment of Business	3		
Program Requirement	ACC* 118: Managerial Accounting	4		
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		
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	3		
Program Requirement	Directed BUS* Elective (Circle One) BES*118, BMG*210, BMG*220, BFN*201, BBG*234, BBG*294 **OR** BBG*295	3		

BBG* 234: Legal Environment of Business BBG* 294: Business Internship
BBG* 295: Cooperative Work Experience BES* 118: Small Business Management
BFN* 201: Principles of Finance BMG* 210: Principles of Organizational Behavior
BMG* 220: Human Resource Management

BUSINESS SKILLS

Certificate

School of Allied Health, Business, and STEM

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

Description

This eight-course, 25-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.

A Note about Program Requirements

The program requirements listed in this Catalog are for students entering into this program in Fall 2016 or Spring 2017. 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/.

Business Skills Certificate

GRADUATION CHECKLIST – CATALOG YEAR 2016-17

Requirements	Cr	Semester Taken	Grade
ACC* 115: Financial Accounting	4		
BBG* 115: Business Software Applications **OR** CST* 201: Intro to Management Information Systems	3		
BFN* 110: Personal Finance	3		
BMG* 202: Principles of Management	3		
BMG* 204: Managerial Communications **OR** COM* 173: Public Speaking	3		
ECN* 101: Principles of Macroeconomics **OR** ECN* 102: Principles of Microeconomics	3		
ENG* 101: Composition	3		
Business Elective	3		
TOTAL CREDITS	**25**		

CHEMISTRY STUDIES

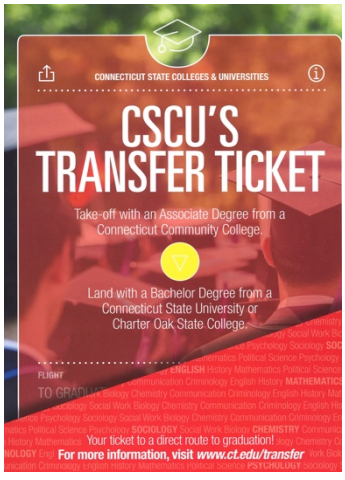
Associate Degree

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

NEW! 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.



Chemistry Studies

Associate in Arts Degree
GRADUATION CHECKLIST – CATALOG YEAR 2016-17

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.

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.

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 2016 or Spring 2017. 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	_____

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.

A Note about Program Requirements

The program requirements listed in this Catalog are for students entering into this program in Fall 2016 or Spring 2017. 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/.

Communications Networking Certificate

GRADUATION CHECKLIST – CATALOG YEAR 2016-17

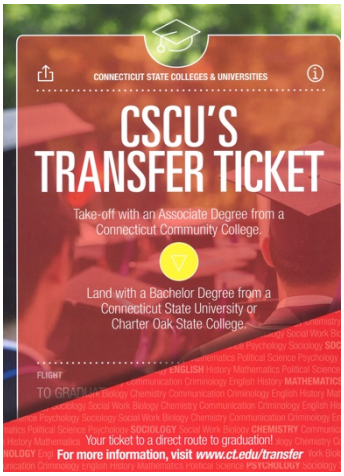
Requirements	Cr	Semester Taken	Grade
CSC* 295: Coop Ed/Work Experience	3		
CST* 120: Introduction to Operating Systems	3		
CST* 141: Computer Hardware	3		
CST* 163: Window Server Administration	3		
CST* 228: Voice and Data Interworking	3		
CST* 231: Data Communication & Networking	3		
CST* 270: Network Security Fundamentals	3		
TOTAL CREDITS	**21**		

COMMUNICATION STUDIES Associate Degree

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**

NEW! 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 2016 or Spring 2017. 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/.

Communication Studies

Associate in Arts Degree

GRADUATION CHECKLIST – CATALOG YEAR 2016-17

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 (Career) Elective		3		
Scientific Knowledge Elective		3-4		
Scientific Reasoning Elective with Lab		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) (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**		

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.

Computed Tomography Certificate

GRADUATION CHECKLIST – CATALOG YEAR 2016-17

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**		

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 Production certificate program prepares students for entry-level media production positions in business, industry and education. Emphasis is on hands-on production skills. Corporate media professionals tend to be generalists; therefore, this program provides students with a variety of production experiences including writing scripts, camera operation, video editing, web production and video streaming as they apply to business. An internal practicum in the college's nationally recognized Corporate Media Center or an external internship at a company or non-profit organization is required.

CORPORATE MEDIA PRODUCTION CERTIFICATE

GRADUATION CHECKLIST – CATALOG YEAR 2016-17

Requirements	Cr	Semester Taken	Grade
BBG*101 Intro to Business	3		
BMK*106 Principles of Selling OR + BMK* 201 Principles of Marketing	3		
COM*111 Scriptwriting	3		
COM*125 New Media Production	3		
COM*142 Television Production	4		
COM*264 Advanced Editing Workshop	3		
COM*287 Advanced Media Production OR + COM*294 Media Arts Workshop	3		
COM*293 Corporate Media Production Practicum	3		
DGA*182 Digital Video Technology OR COM*147 Digital Cinematography	3		
ENG* 101: Composition	3		
TOTAL CREDITS	**31**		

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.

A Note about Program Requirements

The program requirements listed in this Catalog are for students entering into this program in Fall 2016 or Spring 2017. 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/.

COMPUTER ENGINEERING TECHNOLOGY

Technology Studies Associate Degree Option

School of Allied Health, Business, and STEM

Program Coordinator: **Interim Division Director Dr. Lin Lin**
Office Location: **Wheaton Hall 209**
Telephone: **(860) 343-5763**
Email: **llin@mxcc.edu**

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 2016 or Spring 2017. 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/.

Technology Studies: Computer Engineering Technology

Associate in Science Degree

GRADUATION CHECKLIST – CATALOG YEAR 2016-17

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 (32 credits)				
Aesthetic Dimensions Elective		3		
Historical Knowledge Elective		3		
Oral Communication	COM* 173: Public Speaking	3		
Quantitative Reasoning	MAT* 168: Elementary Statistics and Probability I	4		
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		**63**		

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, 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 the 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 setting and exercise judgment based on facts.
4. Develop communication through development of proficiency in oral/written/electronic communication skills and the development of the ability to explain programming concepts and code and related technical issues to others.
5. Develop 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. 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 2016 or Spring 2017. 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/.

Computer Information Technology

Associate in Science Degree

GRADUATION CHECKLIST – CATALOG YEAR 2016-17

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.

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		
Open Elective		3		
CHOOSE ONE OF THE FOLLOWING DIRECTED ELECTIVE TRACKS:				
NETWORKING TRACK REQUIREMENTS	**PROGRAMMING TRACK REQUIREMENTS**			
CST* 163: Window Server Administration	CSC* 205: Visual Basic I	3		
CST* 228: Voice and Data Interworking	CSC* 220: Object-Oriented Programming Using JAVA	3		
CST* 231: Data Communication and Networking	CSC* 262: Programming Mobile Devices I	3		
		60-63		

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: rristbrown@mxcc.edu

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 2016 or Spring 2017. 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/.

Criminal Justice

Associate in Science Degree

GRADUATION CHECKLIST – CATALOG YEAR 2016-17

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	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

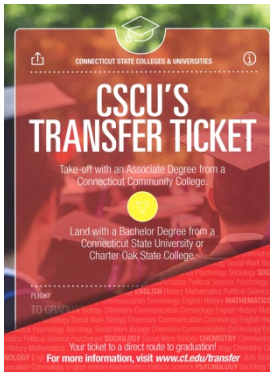
Associate Degree

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

NEW! 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.



Criminology Studies

Associate in Arts Degree
GRADUATION CHECKLIST – CATALOG YEAR 2016-17

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.

General Education Requirements for Transfer Programs (31-32 credits)				
Aesthetic Dimensions Elective		3		
Historical Knowledge Elective		3		
Oral Communication		3		
Quantitative Reasoning (Career) Elective	MAT* 168: Elementary Statistics and Probability	3		
Scientific Knowledge Elective		3-4		
Scientific Reasoning Elective with Lab		4		
Social Phenomena (1 of 2) Elective	SOC* 101: Principles of Sociology	3		
Social Phenomena (2 of 2) Elective	PSY* 111: General Psychology	3		
Written Communication (1 of 2)	ENG* 101: Composition	3		
Written Communication (2 of 2) (Circle One)		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 Justice 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 61-62		

CUSTOMER SERVICE MANAGEMENT Certificate

School of Allied Health, Business, and STEM

Program Coordinator: **Assistant 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.

A Note about Program Requirements

The program requirements listed in this Catalog are for students entering into this program in Fall 2016 or Spring 2017. 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/.

Customer Service Management Certificate

GRADUATION CHECKLIST – CATALOG YEAR 2016-17

Requirements	Cr	Semester Taken	Grade
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**		

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.

A Note about Program Requirements

The program requirements listed in this Catalog are for students entering into this program in Fall 2016 or Spring 2017. 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/.

Early Childhood Education

Associate in Arts Degree

GRADUATION CHECKLIST – CATALOG YEAR 2016-17

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*	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	3		
Quantitative Reasoning (Career) Elective		3-4		
Scientific Knowledge OR Scientific Reasoning Elective		3-4		
Social Phenomena	SOC* 210: Sociology of the Family	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* 141: Infant/Toddler Growth and Development	3		
Program Requirement	ECE* 176: Health, Safety, and Nutrition	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	PSY* 204: Child and Adolescent Development	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.**

A Note about Program Requirements

The program requirements listed in this Catalog are for students entering into this program in Fall 2016 or Spring 2017. 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/.

EARLY CHILDHOOD CERTIFICATE

GRADUATION CHECKLIST – CATALOG YEAR 2016-17

Requirements	Cr	Semester Taken	Grade
ECE*101 Intro. to Early Childhood Education	3		
ENG*101 Composition	3		
One of the following courses: PSY*111 General Psychology **OR** ECE*103 Creative Art Experiences for Children	3		
ECE*210 Observation and Participation	3		
ECE*176 Health, Safety, and Nutrition	4		
PSY*204 Child and Adolescent Psychology (ECE*182)	3		
ECE*106 Music and Movement for Children	3		
ECE*295 Student Teaching	6		
Directed Elective (select one from the list below) ECE*141 Infant/Toddler Development ECE*275 Child, Family, and School Relations ECE*215 The Exceptional Learner ECE*231 Early Literacy Development	3		
TOTAL CREDITS	**30**		

ENTREPRENEURSHIP

Certificate

School of Allied Health, Business, and STEM

Program Coordinator: **Assistant 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.

A Note about Program Requirements

The program requirements listed in this Catalog are for students entering into this program in Fall 2016 or Spring 2017. 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/.

Entrepreneurship Certificate

GRADUATION CHECKLIST – CATALOG YEAR 2016-17

Requirements	Cr	Semester Taken	Grade
ACC*115: Financial Accounting	4		
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	**31**		

ENGINEERING SCIENCE

Associate Degree

School of Allied Health, Business, and STEM

Program Coordinator: **Interim Division Director Dr. Lin Lin**
Office Location: **Wheaton Hall 209**
Telephone: **(860) 343-5763**
Email: **llin@mxcc.edu**

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:

- Identify and formulate engineering problems by applying engineering, mathematical, scientific and technological principles and concepts.
- Solve engineering problems using critical thinking and problem-solving skills.
- Work as a member of a team.
- 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 2016 or Spring 2017. 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/.

Engineering Science

Associate in Science Degree

GRADUATION CHECKLIST – CATALOG YEAR 2016-17

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**		

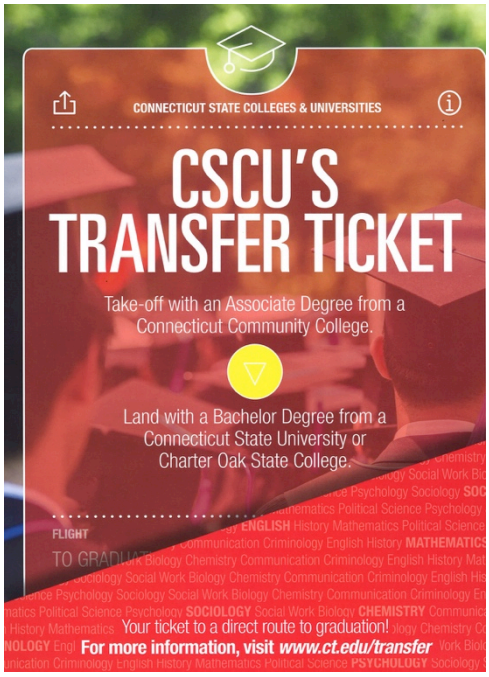
ENGLISH STUDIES

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**

NEW! 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.



English Studies

Associate in Arts Degree

GRADUATION CHECKLIST – CATALOG YEAR 2016-17

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.

General Education Requirements for Transfer Programs (31-32 credits)				
Aesthetic Dimensions Elective		3		
Historical Knowledge Elective		3		
Oral Communication		3		
Quantitative Reasoning (Career) Elective		3		
Scientific Knowledge Elective		3-4		
Scientific Reasoning Elective with Lab		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)	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		

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.

ENVIRONMENTAL SCIENCE Associate Degree

School of Allied Health, Business, and STEM

Program Coordinator: **Associate 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 2016 or Spring 2017. 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/.

Environmental Science

Associate in Science Degree

GRADUATION CHECKLIST – CATALOG YEAR 2016-17

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 (33 credits)				
Aesthetic Dimensions Elective		3		
Historical Knowledge Elective		3		
Oral Communication	COM* 173: Public Speaking	3		
Quantitative Reasoning Elective		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 (1 of 2)	ENG* 101: Composition	3		
Written Communication (2 of 2) Elective		3		
Program Requirements (27 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	(Circle One) MAT* 168: Elementary Statistics and Probability I, MAT* 186: Precalculus, MAT* 254: Calculus I **OR** MAT* 256: Calculus II	4		
Scientific Knowledge/Reasoning **OR** EGR* Elective [+]		3		
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**		

[+] 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.

FINE ARTS

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 2016 or Spring 2017. 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/.

Fine Arts

Associate in Arts Degree

GRADUATION CHECKLIST – CATALOG YEAR 2016-17

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*111: Drawing I	3		
Two courses chosen from any of these competencies: Aesthetic Dimensions, Historical Knowledge, Oral Communication, Social Phenomena, and/or Written	ART*101: Art History I	3		
	ART* 102: Art History II	3		
Quantitative Reasoning (Career) Elective		3-4		
Scientific Knowledge OR Scientific Reasoning Elective		3-4		
Social Phenomena Elective		3		
Written Communication	ENG* 101: Composition	3		

Program Requirements (39 credits)				
Program Requirement	ART*109: Color Theory	3		
Program Requirement	ART*112 Drawing II	3		
Program Requirement	ART*122: 3-Dimensional Design	3		
Program Requirement	ART*131: Sculpture	3		
Program Requirement	ART*155: Watercolors	3		
Program Requirement	ART*215: Illustration	3		
Program Requirement	ART*253: Oil Painting I	3		
Program Requirement	ART*254: Oil Painting II	3		
ART* **OR** DGA* Elective		3		
ART* **OR** DGA* Elective		3		
ART* Elective		3		
ART* Elective		3		
ART* Elective		3		
TOTAL CREDITS		**60-62**		

Fine Arts-Graphic Design Option

Associate in Arts Degree

GRADUATION CHECKLIST – CATALOG YEAR 2016-17

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* 121: Two-Dimensional Design	3		
Two courses chosen from any of these competencies: Aesthetic Dimensions, Historical Knowledge, Oral Communication, Social Phenomena, and/or Written	ART* 101: Art History I	3		
	ART* 102: Art History II	3		
Quantitative Reasoning (Career) Elective		3-4		
Scientific Knowledge OR Scientific Reasoning Elective		3-4		
Social Phenomena Elective		3		
Written Communication	ENG* 101: Composition	3		

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

Aerial photo of MxCC Main Campus
100 Training Hill Road, Middletown, CT

GENERAL STUDIES

Associate Degree

College-Wide Program

Program Advisor: **Academic Division Director Mr. Jaime Flores**
Office Location: **Snow Hall 508**
Telephone: **(860) 343-5757**
Email: **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 2016 or Spring 2017. 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/.

General Studies

Associate in Science Degree

GRADUATION CHECKLIST – CATALOG YEAR 2016-17

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) ***Any credit courses offered by the college to meet a student's interests and goals. Courses must be numbered 100 and above.***				
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.

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: **jwallace@mxcc.edu**

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 2016 or Spring 2017. 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/.

Health Career Pathways Certificate

GRADUATION CHECKLIST – CATALOG YEAR 2016-17

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	4		
BIO*211: Anatomy & Physiology I	4		
BIO*212: General Biology II	4		
CHE*111: Concepts of Chemistry	4		
HLT*103: Investigations in Health Care	3		
TOTAL CREDITS	**28**		

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

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 the programming development steps to solve problems, work within a business environment using oral and written communication skills effectively, use an office application product to assist in troubleshooting problems, test and debug software and hardware products, work in an Information Technology department applying software and hardware service and technical skills. Students completing this certificate will be able to transfer to the Associate Degree program in Information Systems.

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

A Note about Program Requirements

The program requirements listed in this Catalog are for students entering into this program in Fall 2016 or Spring 2017. 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/.

Help Desk Technician Certificate

GRADUATION CHECKLIST – CATALOG YEAR 2016-17

Requirements	Cr	Semester Taken	Grade
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	3		
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	**24**		

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-**
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 principles as they relate to healthcare privacy, confidentiality, legal and ethical issues.
2. Interpret and apply health information policies and procedures to ensure compliance with federal, state and accreditation agency requirements.
3. Employ computer-based health information systems while managing existing paper-based health information systems utilizing EMR software.
4. Compare and contrast reimbursement methodologies and procedure-based payment systems such as Resource based Relative Value (RBRV) and Evaluation and Management and Ambulatory Payment Classification (APC).
5. Evaluate and audit patient records and assign numeric codes for each diagnosis and procedure.
6. Apply coding knowledge utilizing coding guidelines from ICD-9-CM, ICD-10, CPT-4 and HCPCS.
7. Interpret diagnostic based perspective payment groups such as DRG; recognize the Systematized Nomenclature of Medicine (SNOMED).
8. Utilize medical coding software and clinical classification systems as they relate to the human body and disease processes.
9. Identify and discuss healthcare delivery fundamentals and the technology used to gather healthcare information in a variety of settings.
10. Utilize appropriate terminology including abbreviations related to pathological conditions, diagnostic procedures, surgical interventions, and therapeutic procedures.

A Note about Program Requirements

The program requirements listed in this Catalog are for students entering into this program in Fall 2016 or Spring 2017. 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/.

Health Information Management

Associate in Science Degree

GRADUATION CHECKLIST – CATALOG YEAR 2016-17

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 (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	ENG* 102: Literature and Composition	3		
	COM* 173: Public Speaking	3		
Quantitative Reasoning (Career)	MAT* 168: Elementary Statistics & Probability	4		
Scientific Knowledge OR Scientific Reasoning	BIO* 115: Human Biology	4		
Social Phenomena Elective		3		
Written Communication	ENG* 101: Composition	3		

Program Requirements (42 credits)				
Social Phenomena Elective		3		
Program Requirement	CSA* 140: Database Applications	3		
Program Requirement	CSC* 101: Intro to Computers	3		
Program Requirement	HIM* 102: Introduction to Healthcare Systems	3		
Program Requirement	HIM* 112: Medical Insurance and Reimbursement	3		
Program Requirement	HIM* 156: Electronic Health Records	3		
Program Requirement	HIM* 201: Health Information Management Principles	3		
Program Requirement	HIM* 203: Pathophysiology	3		
Program Requirement	HIM* 205: Medical Coding I	3		
Program Requirement	HIM* 206: Medical Coding II	3		
Program Requirement	HIM* 220: Supervision/Quality Management	3		
Program Requirement	HIM* 256: Legal and Ethical Issues of HIM	3		
Program Requirement	HIM* 295: Health Information Management Internship	3		
Program Requirement	MED* 125: Medical Terminology	3		
	TOTAL CREDITS	**65**		

HEALTH INFORMATION MANAGEMENT Certificate

School of Allied Health, Business, and STEM

Program Coordinator: **Assistant Professor Jill Flanigan**
Office Location: **Wheaton Hall 311**
Telephone: **(860) 343-5**
Email: **jflanigan@mxcc.edu**

Description

The Health Information Management (HIM) certificate program represents the 27 credits of specialty coursework found within the HIM Associate Degree program. Many students who pursue the HIM Certificate may already have degrees in other disciplines and therefore are not looking to gain, or need, that level of training. Instead, they simply want to have credentials that will validate for a prospective employer that they possess the requisite skills in HIM sufficient to enter the field at an entry level. Having a certificate option offers our students a choice and thus allows them to choose the path that best meets their career and educational goals. Having said that, for students who do wish to continue their education beyond the Certificate, all of the courses are also required in the HIM Associate Degree program, which itself is articulated with the Bachelor's Degree program in HIM at Charter Oak State College.

The HIM Certificate offers students a diverse curriculum that provides an understanding of the many aspects of the emerging field of healthcare technology and information management. 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. Employ computer-based health information systems while managing existing paper-based health information systems utilizing EHR software. Utilize ONC-Certified computer-based EHR industry-standard software (SpringCharts) – Course: HIM*156 – Electronic Health Records
2. Compare and contrast reimbursement methodologies, procedure based payment systems such as Resource based Relative Value (RBRV) and Evaluation and Management and Ambulatory Payment Classification (APC). Examination that requires definition of key terms such as APC, RBRV. Course: HIM*201 – Health Information Management Principles
3. Apply coding knowledge utilizing coding guidelines from ICD-9-CM, ICD-10, CPT-4 and HCPCS. Comprehensive coding exam administered in two courses: HIM*205 – Medical Coding 1 and HIM*206 – Medical Coding 2
4. Interpret diagnostic based perspective payment groups such as DRG; recognize the Systematized Nomenclature of Medicine (SNOMED) – Research paper. Course: HIM*201 – Health Information Management Principles
5. Utilize medical coding software and clinical classification systems as they relate to the human body and disease processes Comprehensive coding exam administered in two courses: HIM*205 – Medical Coding 1 and HIM*206 – Medical Coding 2

6. Identify and discuss healthcare delivery fundamentals and the technology used to gather healthcare information in a variety of settings.-Research paper on healthcare delivery systems HIM*102 – Introduction to Healthcare Systems
7. Utilize appropriate terminology including abbreviations related to pathological conditions, diagnostic procedures, surgical interventions, and therapeutic procedures. Terminology review exam. Course: MED*125 – Medical Terminology

A Note about Program Requirements

The program requirements listed in this Catalog are for students entering into this program in Fall 2016 or Spring 2017. 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/.

Health Information Management Certificate

GRADUATION CHECKLIST – CATALOG YEAR 2016-17

Requirements	Cr	Semester Taken	Grade
HIM*102: Introduction to Healthcare Systems	3		
HIM*112: Medical Insurance and Reimbursement	3		
HIM*156: Electronic Health Records	3		
HIM*201: Health Info Management Principles	3		
HIM*205: Medical Coding I	3		
HIM*206: Medical Coding II	3		
HIM* 256: Legal and Ethical Issues of HIM	3		
HIM*295: Health Info Management Internship	3		
MED*125: Medical Terminology	3		
TOTAL CREDITS	**27**		

HISTORY STUDIES

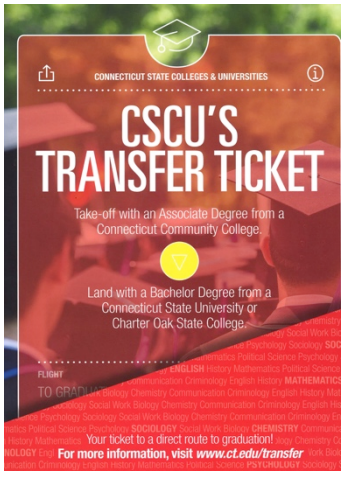
Associate Degree

School of Arts & Media, Humanities, and Social Sciences

Pathway Advisor: Professor Dr. Victor Triay
Office Location: Snow Hall 508
Telephone: (860) 343-5746
Email: vtriay@mxcc.edu

NEW! 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.



History Studies

Associate in Arts Degree
GRADUATION CHECKLIST – CATALOG YEAR 2016-17

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	Cannot use United States History I or United States History II to meet this requirement	3		
Oral Communication		3		
Quantitative Reasoning (Career) Elective		3		
Scientific Knowledge Elective		3-4		
Scientific Reasoning Elective with Lab		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) (Circle One)		3		
Program Requirements (30 credits)				
Program Requirement	HIS* 201: United History I	3		
Program Requirement	HIS* 202: United History II	3		
Open 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**		

JUVENILE JUSTICE

Certificate

School of Arts & Media, Humanities, and Social Sciences

Program Coordinator: **Professor Judith Felton**
Office Location: **Snow Hall 508**
Telephone: **(860) 343-5816**
Email: **jfelton@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

JUVENILE JUSTICE CERTIFICATE

GRADUATION CHECKLIST – CATALOG YEAR 2016-17

Requirements	Cr	Semester Taken	Grade
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			
HSE*289 Psychiatric Practicum	3		
SOC*120 Group Dynamics	3		
TOTAL CREDITS	**36**		

Students who enroll in this certificate program will be able to continue their studies, if desired, in the college's Human Services Associate in Science Degree program. All of the courses in the certificate are found in, or transferable to, that degree program. The certificate consists of twenty-four (24) credits, and employment and development opportunities should be enhanced in the systems serving youth and families, juvenile justice, mental health, and community outreach and education.

A Note about Program Requirements

The program requirements listed in this Catalog are for students entering into this program in Fall 2016 or Spring 2017. 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/.

HUMAN SERVICES

Associate Degree

School of Arts & Media, Humanities, and Social Sciences

Program Coordinator: **Professor Judith Felton**
Office Location: **Snow Hall 508**
Telephone: **(860) 343-5816**
Email: **jfelton@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.

Admission to the program requires placement in ENG*101, a written application, and a personal interview. 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 2016 or Spring 2017. 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/.

Human Services

Associate in Science Degree

GRADUATION CHECKLIST – CATALOG YEAR 2016-17

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
DESIGNATED 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	MAT* 168: Elementary Statistics and Probability I **OR** MAT* 146: Math for the Liberal Arts	3-4		
Scientific Knowledge Elective with Lab		4		
Scientific Reasoning	PSY* 111: General Psychology	4		
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 (2 of 2)		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* **OR** PSY* 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	**62-63**		

LIBERAL ARTS & SCIENCES Associate Degree

College-Wide Program

Division Directors:	**Dr. Lin Lin** **Allied Health, Business, STEM**	**Mr. Jaime Flores** **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 2016 or Spring 2017. 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/.

Liberal Arts & Sciences

Associate in Arts Degree

GRADUATION CHECKLIST – CATALOG YEAR 2016-17

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	COM*173: Public Speaking	3		
Quantitative Reasoning Elective		3		
Scientific Knowledge Elective		3-4		
Scientific Reasoning Elective with Lab		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)	ENG* 102: Literature & Composition	3		
Program Requirements (29 credits)				
Continuing Learning/ Information Literacy Elective		3		
* Foreign Language Elective (1 of 2)		4		
* Foreign Language Elective (2 of 2)		4		
Three courses chosen from any of these competencies: Aesthetic Dimensions, Historical Knowledge, Oral Communication, Social Phenomena, and/or Written Communication		3		
		3		
		3		
Open Elective (1 of 3)		3		
Open Elective (2 of 3)		3		
Open Elective (3 of 3)		3		
TOTAL CREDITS		**61-62**		

* Foreign language requirements may be waived for previous coursework or native fluency. In such cases, students will need to substitute 8-9 credits of open electives chosen with their academic advisor.

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 Systems 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.

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.
8. 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 2016 or Spring 2017. 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/.

Management Information Systems

Associate in Science Degree

GRADUATION CHECKLIST – CATALOG YEAR 2016-17

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 credits)				
Aesthetic Dimensions Elective		3		
Historical Knowledge: HIS* Department Elective	HIS*	3		
Oral Communication	COM* 173: Public Speaking	3		
Quantitative Reasoning	MAT* 168: Elementary Statistics and Probability I	4		
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 (30-31) credits)				
Program Requirement	ACC* 115: Financial Accounting	4		
Program Requirement	ACC* 118: Managerial Accounting **OR** BFN* 201: Principles of Finance	3-4		
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		**62-63**		

MANUFACTURING MACHINE TECHNOLOGY

Technology Studies Associate Degree Option

School of Allied Health, Business, and STEM

Program Advisors: **Associate Professor Hubert Godin**
Ms. Carolyn Sommer
Program Office: **Founders Hall 131A**
Telephone: **(860) 343-5841**
Email: **hgodin@mxcc.edu, csommer@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 2016 or Spring 2017. 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/.

Technology Studies: Manufacturing Machine Technology

Associate in Science Degree

GRADUATION CHECKLIST – CATALOG YEAR 2016-17

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* 186: Precalculus	4		
Scientific Knowledge	CHE* 111: Concepts Chemistry **OR** CHE* 121: General Chemistry	4		
Scientific Reasoning	PHY* 110 Introductory Physics **OR** PHY* 121 General 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 (35 credits)				
Program Requirement	CAD* 110: Introduction to CAD **OR** CAD* 220: Parametric Design (Solidworks)	3		
Program Requirement	MFG* 102: Manufacturing Process	3		
Program Requirement	MFG* 103: Manufacturing Process Lab	1		
Program Requirement	MFG* 105: Manufacturing Math II	3		
Program Requirement	MFG* 125: Blueprint Reading II	3		
Program Requirement	MFG* 156: Manufacturing Machinery CNC I	2		
Program Requirement	MFG* 171: Introduction to Lean Manufacturing	3		
Program Requirement	MFG* 202: Precision Machining	3		
Program Requirement	MFG* 203: Precision Machining Lab	1		
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		**68**		

MANUFACTURING MACHINE TECHNOLOGY Certificate

School of Allied Health, Business, and STEM

Program Advisors: Associate Professor Hubert Godin
Ms. Carolyn Sommer
Program Office: Founders Hall 131A
Telephone: (860) 343-5841
Email: hgodin@mxcc.edu, csommer@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 2016 or Spring 2017. 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/.

Manufacturing Machine Technology Certificate

GRADUATION CHECKLIST – CATALOG YEAR 2016-17

Requirements	Cr	Semester Taken	Grade
CAD*110: Introduction to CAD	3		
MFG*102: Manufacturing Process	3		
MFG*103: Manufacturing Process Lab	1		
MFG*105: Manufacturing Math II	3		
MFG*124: Blueprint Reading I	2		
MFG*125: Blueprint Reading II	3		
MFG*156: Manufacturing Machinery CNC I	2		
MFG*171: Introduction to Lean Manufacturing	3		
MFG*202: Precision Machining	3		
MFG*203: Precision Machining Lab	1		
MFG*258: CNC Operations	3		
QUA*114: Principles of Quality Control	3		
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.

Mammography Certificate

GRADUATION CHECKLIST – CATALOG YEAR 2016-17

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

MARKETING

Associate Degree

School of Allied Health, Business, and STEM

Program Coordinator: **Assistant 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 2016 or Spring 2017. 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/.

Marketing

Associate in Science Degree

GRADUATION CHECKLIST – CATALOG YEAR 2016-17

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 (22-23 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, COM*120 **OR** COM*125		3		
			3		
Quantitative Reasoning (Career)	MAT*168: Elementary Statistics and Probability I		4		
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 (39-41 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*115: Financial Accounting **OR** ACC*100: Basic Accounting			3-4		
BMG*204: Managerial Communications			3		
Choose one from: (Circle One) ACC*118: Managerial Accounting, BBG* 234: Legal Environment of Business, BBG*295: Cooperative Work Experience, BES* 118: Small Business Management **OR** BFN*201: Principles of Finance			3-4		
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			3		
			3		
			3		
			3		
Choose two from: ART*121, CSA*135, CSA*140, DGA*101, DGA*110, DGA*120, DGA* 231 **OR** DGA* 241			3		
			3		
TOTAL CREDITS			61-64		

ART*121: Two-Dimensional Design COM*120: Social Media COM*125: New Media Production
CSA*135: Spreadsheet Applications CSA*140: Database Applications DGA*101: Introduction to Digital Arts
DGA*110: Computer Graphics DGA*120: Digital Imaging I DGA*231: Digital Page Design I
DGA*241: Internet Web Design I PSY*111: General Psychology I SOC*101: Principles of Sociology

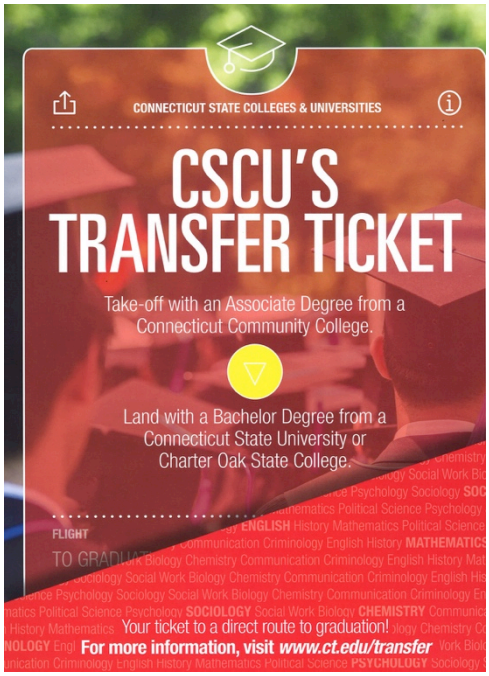
MATHEMATICS STUDIES

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**

NEW! 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.



Mathematics Studies

Associate in Arts Degree

GRADUATION CHECKLIST – CATALOG YEAR 2016-17

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 (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.

MULTIMEDIA (Digital Arts) Associate Degree

School of Arts & Media, Humanities, and Social Sciences

Program Coordinator: Professor Richard Eriksen
Office Location: Chapman Hall 606
Telephone: (860) 343-5795
Email: reriksen@mxcc.edu

Description

The Multimedia degree program prepares students for careers in the field of interactive multimedia production 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 internship experience that prepares them for careers as multimedia producers, web designers, project managers or media production specialists. The following sequence of courses is strongly recommended. Both full-time and part-time students should contact a multimedia faculty member before registering. Students should take foundation courses first then choose other courses as desired or necessary.

Learning Outcomes

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

1. Integrate text, graphics, images, audio, video and animation within interactive multimedia production environment based on sound fundamental design principles. This includes common technology, terminology, production techniques, and software applications as they relate to the digital arts and multimedia fields.
2. Apply technical and aesthetic techniques involved with digital image editing for the commercial graphics, video production and multimedia industries. This includes scanning, masking, retouching, digital color theory, common file formats, typographic effects, image processing adjustment and filtering, and performance options.
3. Apply technical and aesthetic techniques involved with the production of digital illustrations for the commercial graphics, video production, and multimedia industries. This includes the exploration of spline-based drawing tools and the various techniques used to create vector-based artwork; path construction and editing; color theory; gradient and pattern construction; typographic and filter techniques; and various output options.
4. Apply technical skills involved with the successful acquisition, editing, manipulation and distribution of digital video as it relates to the multimedia production field. In addition, digital video theory and standards coupled with its use within interactive media, web streaming, conferencing, DVD and digital devices.
5. Demonstrate an understanding of the techniques and technologies used in creative sound production within the digital environment. This includes acquisition methods, mixing, editing and the fundamental operations of various software applications.
6. Apply production techniques and technologies involved with the fundamentals of effective web site publishing. Using industry standard applications, the process of planning, mapping, interface design, programming, graphic production, and multimedia integration involved with common web page construction.
7. Demonstrate an understanding of the fundamental technical and aesthetic techniques involved with the authoring of interactive multimedia productions.
8. Apply creative and technical processes behind the production of animated image sequences. This includes 2-dimensional digital techniques; motion graphics; rotoscope techniques; compositing; basic sound production, sound synchronization; basic editing asethetics; and DVD portfolio production.

A Note about Program Requirements

The program requirements listed in this Catalog are for students entering into this program in Fall 2016 or Spring 2017. 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/.

Multimedia

Associate in Science Degree

GRADUATION CHECKLIST – CATALOG YEAR 2016-17

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* 121: Two Dimensional Design	3		
Two courses chosen from any of these competencies: Aesthetic Dimensions, Historical Knowledge, Oral Communication, Social Phenomena, and/or Written		3		
		3		
Quantitative Reasoning (Career) Elective		3-4		
Scientific Knowledge OR Scientific Reasoning Elective		3-4		
Social Phenomena Elective		3		
Written Communication	ENG* 101: Composition	3		

Program Requirements (39 credits)				
Program Requirement	COM* 287: Advanced Media Production	3		
Program Requirement	COM* 295: Internship I	3		
Program Requirement	DGA* 101: Introduction to Digital Arts	3		
Program Requirement	DGA* 110: Computer Graphics	3		
Program Requirement	DGA* 120: Digital Image Editing I	3		
Program Requirement	DGA* 250: Interactive Multimedia Production	3		
Program Requirement	GRA* 150: Introduction to Graphic Design	3		
DGA* Elective		3		
Multimedia Elective 1 of 4 (ART/COM/DGA/GRA)*		3		
Multimedia Elective 2 of 4 (ART/COM/DGA/GRA)*		3		
Multimedia Elective 3 of 4 (ART/COM/DGA/GRA)*		3		
Multimedia Elective 4 of 4 (ART/COM/DGA/GRA)*		3		
Open Elective		3		
	TOTAL CREDITS	**60-62**		

MULTIMEDIA/NEW MEDIA DESIGN Certificate

School of Arts & Media, Humanities, and Social Sciences

Program Coordinator: Professor Richard Eriksen
Office Location: Chapman Hall 606
Telephone: (860) 343-5795
Email: reriksen@mxcc.edu

Description

The Multimedia (New Media Design) certificate program prepares students for careers in the field of interactive multimedia production 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. Both full-time and part-time students should contact a multimedia faculty member before registering.

A Note about Program Requirements

The program requirements listed in this Catalog are for students entering into this program in Fall 2016 or Spring 2017. 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/.

MULTIMEDIA/NEW MEDIA DESIGN CERTIFICATE

GRADUATION CHECKLIST – CATALOG YEAR 2016-17

Requirements	Cr	Semester Taken	Grade
ENG*101 Composition	3		
DGA*110 Computer Graphics	3		
DGA*101 Introduction to Digital Arts	6		
DGA*120 Digital Imaging I	3		
Multimedia Software Applications (see specific offerings below)	3		
DGA*250 Interactive Multimedia Production	3		
COM*287 Advanced Media Production	3		
Program Electives: Choose 12 credits from among the following:			
COM*131 Audio Production	3		
COM*142 Television Production	4		
COM*264 Advanced Editing Workshop	3		
GRA*246 Digital Pre-Press	3		
GRA*251 Advanced Graphic Design	3		
Multimedia Software Applications			
DGA*223 Digital Illustration	3		
DGA*260 Animation	3		
DGA*231 Digital Page Design I	3		
DGA*182 Digital Video Technology	3		
Web Design and Related Courses	3		
DGA*241 Internet Web Design I	3		
DGA*242 Web Design II	3		
CSC*220 Object Orientation Programming using Java	3		
TOTAL CREDITS	**30**		

MULTIMEDIA WEB DESIGN & DEVELOPMENT

Certificate

School of Arts & Media, Humanities, and Social Sciences

Program Coordinator: **Professor Richard Eriksen**
Office Location: **Chapman Hall 606**
Telephone: **(860) 343-5795**
Email: **reriksen@mxcc.edu**

Description

This program 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.

A Note about Program Requirements

The program requirements listed in this Catalog are for students entering into this program in Fall 2016 or Spring 2017. 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/.

MULTIMEDIA WEB DESIGN & DEVELOPMENT CERTIFICATE

GRADUATION CHECKLIST – CATALOG YEAR 2016-17

Requirements	Cr	Semester Taken	Grade
ART*121 Two-dimensional Design	3		
DGA*101 Introduction to Digital Arts	3		
DGA*110 Computer Graphics	3		
DGA*241 Internet Web Design I	3		
DGA*120 Digital Imaging	3		
DGA*182 Digital Video Technology	3		
Digital Arts Elective	3		
DGA*242 Web Design II	3		
DGA*250 Interactive Multimedia Production	3		
TOTAL CREDITS	**27**		

NEWS & SPORTS 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 News and Sports Production certificate program prepares students for entry-level positions in television news and sports production. Emphasis is on hands-on production skills used at broadcast television stations, media production companies and new media organizations. Graduates are prepared for positions such as associate producer, assignment editor, teleprompter operator, floor/studio manager, news photographer, video editor, and new media producer.

NEWS AND SPORTS PRODUCTION CERTIFICATE

GRADUATION CHECKLIST – CATALOG YEAR 2016-17

Requirements	Cr	Semester Taken	Grade
ENG*101 Composition	3		
COM*125 New Media Production	3		
COM*142 Television Production	4		
COM*147 Digital Cinematography	3		
COM*179 Performance for Film & Television	3		
COM*228 Broadcast Journalism Workshop	3		
COM*295 Internship I or COM*296 Internship II	3		
DGA*101 Introduction to Digital Arts **OR** DGA*110 Introduction to Computer Graphics	3		
DGA*182 Digital Video Technology	3		
Elective from COM* or DGA* as selected with Advisor	3		
TOTAL CREDITS	**31**		

Learning Outcomes

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

1. Demonstrate competency in the production of various media used in broadcast television news and sports.
2. Demonstrate competency in developing and writing scripts and stories in preparation of media production.
3. Demonstrate competency in using the technology of media production including cameras, editing, lights, graphics and sound in news and sports production.
4. Demonstrate the ability to apply style to news and sports productions including the various aesthetic elements that compose a media production (photography, staging, sound, editing, etc.).
5. Demonstrate the ability to produce media quickly and efficiently, meeting deadlines and working with a production crew.
6. Demonstrate competency in solving problems "on the set" with technology and other unknown contingencies (actors, administration, etc.).
7. Demonstrate the ability to use the computer as a productivity tool.
8. Demonstrate ability to work effectively a professional environment with a diverse production crew.

A Note about Program Requirements

The program requirements listed in this Catalog are for students entering into this program in Fall 2016 or Spring 2017. 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/.

OPHTHALMIC MEDICAL ASSISTING Certificate

School of Allied Health, Business, and STEM

Program Coordinator: **Professor Raymond Dennis**
Office Location: **Chapman Hall 625**
Telephone: **(860) 343-5845**
Email: **rdennis@mxcc.edu**

Description

This program is designed for individuals who are interested in becoming ophthalmic or optometric assistants. Successful completion of this program will be 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.

Ophthalmic Medical Assisting Certificate

GRADUATION CHECKLIST – CATALOG YEAR 2016-17

Requirements	Cr	Semester Taken	Grade
CSC*101: Intro to Computers	3		
OMA*101: Intro to Ophthalmic Dispensing	4		
OMA*102: Ophthalmic Dispensing I	4		
OMA*103: Ophthalmic Dispensing II	3		
OMA*104: Ophthalmic Dispensing III	3		
TOTAL CREDITS	**17**		

OPHTHALMIC DESIGN & DISPENSING

Associate Degree

School of Allied Health, Business, and STEM

Program Coordinator: **Professor Raymond Dennis**
Office Location: **Chapman Hall 625**
Telephone: **(860) 343-5845**
Email: **rdennis@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 2016 or Spring 2017. 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/.

Ophthalmic Design & Dispensing

Associate in Science Degree

GRADUATION CHECKLIST – CATALOG YEAR 2016-17

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 (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**		

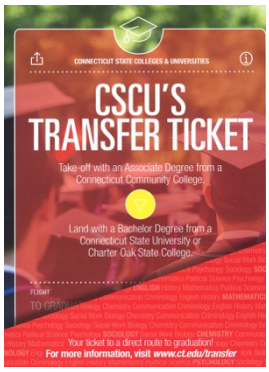
POLITICAL SCIENCE STUDIES Associate Degree

School of Arts & Media, Humanities, and Social Sciences

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

NEW! 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.



Political Science Studies

Associate in Arts Degree
GRADUATION CHECKLIST – CATALOG YEAR 2016-17

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		3		
Quantitative Reasoning (Career) Elective		3		
Scientific Knowledge Elective		3-4		
Scientific Reasoning Elective with Lab		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) (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: Assistant Professor Dr. Andrea Levy
Office Location: Snow Hall 508
Telephone: (860) 343-5815
Email: alevy@mxcc.edu

NEW! 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.

Psychology Studies

Associate in Arts Degree
GRADUATION CHECKLIST – CATALOG YEAR 2016-17

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		3		
Quantitative Reasoning (Career) Elective		3		
Scientific Knowledge Elective		3-4		
Scientific Reasoning Elective with Lab		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)		3		
Program Requirements (30 credits)				
Program Requirement	PSY* 111: General Psychology I	3		
Program Requirement	PSY* 201: Life Span Development **OR** PSY 204: Child and Adolescent Development **OR** PSY 208: Psychology of Adult Development and Aging	3		
Program Requirement	PSY* 245: Abnormal Psychology	3		
Program Requirement	Additional one or two courses Select from the following: PSY* 240: Social Psychology PSY* 243: Theories of Personality PSY* 247: Industrial and Organizational Psychology	3-6		
Open Elective		3		
Open Elective		3		
Open Elective		3		
Open Elective		3		
Open Elective		3		
		TOTAL	**61-62**	

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/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 2016 or Spring 2017. 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/.

Radiologic Technology

Associate in Science Degree

GRADUATION CHECKLIST – CATALOG YEAR 2016-17

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	3		
Program Requirement	RAD* 219: Radiographic Equipment & 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		**69**		

SOCIAL WORK STUDIES

Associate Degree

School of Arts & Media, Humanities, and Social Sciences

Program Coordinator: Professor Judith Felton
Office Location: Snow Hall 508
Telephone: (860) 343-5816
Email: jfelton@mxcc.edu

NEW! 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.

Social Work Studies

Associate in Arts Degree
GRADUATION CHECKLIST – CATALOG YEAR 2016-17

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		3		
Quantitative Reasoning (Career) Elective	MAT* 168: Elementary Statistics and Probability	3		
Scientific Knowledge Elective with Lab	BIO* 115: Human Biology, with Lab	4		
Scientific Reasoning		3		
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		
Open Elective	Choose one or two: HSE* 202: Introduction to Counseling and Interviewing HSE* 288: Developmental Practicum HSE* 289: Psychiatric Practicum	3-6		
Open Elective		3		
Open Elective		3		
Open Elective		3		
		TOTAL	**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**

NEW! 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.

MxCC

Sociology Studies

Associate in Arts Degree
GRADUATION CHECKLIST – CATALOG YEAR 2016-17

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		3		
Quantitative Reasoning (Career) Elective	Central recommends MAT* 168: Elementary Statistics and Probability	3		
Scientific Knowledge Elective		3-4		
Scientific Reasoning Elective with Lab		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)		3		

Program Requirements (30 credits)				
Program Requirement	SOC* 101: Principles of Sociology	3		
SOC* Elective		3		
SOC* Elective (at 200 level)		3		
SOC* Elective (at 200 level)		3		
Open Elective		3		
Open Elective		3		
Open Elective		3		
Open Elective		3		
Open Elective		3		
Open Elective		3		
	TOTAL 61-62			

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, flowchart design, writing programs in Java and Visual Basic, 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 2016 or Spring 2017. 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/.

Software Developer Certificate

GRADUATION CHECKLIST – CATALOG YEAR 2016-17

Requirements	Cr	Semester Taken	Grade
CSA*140: Database Applications	3		
CST*105: Programming Logic	3		
CSC*205: Visual Basic I	3		
CSC*220: Object-Orient Programming Using Java	3		
CSC*231: Database Design 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**		

TECHNOLOGY STUDIES

Associate Degree

School of Allied Health, Business, and STEM

Program Coordinator: Interim Division Director Dr. Lin Lin
Office Location: Wheaton Hall 209
Telephone: (860) 343-5763
Email: llin@mxcc.edu

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.

Technology Studies
Associate in Science Degree
GRADUATION CHECKLIST – CATALOG YEAR 2016-17

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 (28 credits)				
Aesthetic Dimensions Elective	Fine Arts Elective	3		
Oral Communication	COM* 173: Public Speaking	3		
Quantitative Reasoning	MAT* 168: Elementary Statistics and Probability I	4		
Scientific Knowledge	CHE* 111: Concepts Chemistry **OR** CHE* 121: General Chemistry	4		
Scientific Reasoning	PHY* 110 Introductory Physics **OR** PHY* 121 General Physics	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 (35 credits)				
Program Requirement	MAT* 186: Precalculus	4		
Program Requirement	CAD* 110: Introduction to CAD **OR** CAD* 219: Drafting 3	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	63		

++ Please consult Advisor.

THERAPEUTIC RECREATION

Certificate

School of Arts & Media, Humanities, and Social Sciences

Program Coordinator: Professor Judith Felton
Office Location: Snow Hall 508
Telephone: (860) 343-5816
Email: jfelton@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.

http://www.mxcc.commnet.edu/Content/Therapeutic_Recreation.asp

A Note about Program Requirements

The program requirements listed in this Catalog are for students entering into this program in Fall 2016 or Spring 2017. 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/.

THERAPEUTIC RECREATION CERTIFICATE

GRADUATION CHECKLIST – CATALOG YEAR 2016-17

Requirements	Cr	Semester Taken	Grade
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		

VETERINARY TECHNOLOGY Associate Degree

School of Allied Health, Business, and STEM

Program Coordinator: **Interim Assistant Professor Dr. Chris Gargamelli**
Office Location: **Wheaton Hall 209**
Telephone: **(860) 343-5763**
Email: **llin@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

a. Participate in facility management utilizing traditional and electronic media and appropriate veterinary medical terminology and abbreviations.

b. Communicate in a professional manner in all formats – written, oral, non-verbal, and electronic.

c. Follow and uphold applicable laws and the veterinary technology profession's ethical codes to provide high quality care to patients.

2. Pharmacy and pharmacology

a. Safely and effectively administer prescribed drugs to patients.

b. Accurately dispense and explain prescribed drugs to clients.

3. Animal care and nursing

a. Demonstrate and perform patient assessment techniques in a variety of animal species.

b. Understand and demonstrate husbandry, nutrition, therapeutic and dentistry techniques appropriate to various animal species.

c. 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

A Note about Program Requirements

The program requirements listed in this Catalog are for students entering into this program in Fall 2016 or Spring 2017. 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/.

Veterinary Technology

Associate in Science Degree

GRADUATION CHECKLIST – CATALOG YEAR 2016-17

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 (43 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	3		
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		**69**		

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 compete 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.

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. **$$ - Additional Studio/Lab 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*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

Chinese (CHI*)

CHI*101, Elementary Chinese I
CHI*105, Elementary Conversational Chinese I (1 credit)

Communications (COM*)

COM*104, Careers in Media
COM*125/DGA*125, New Media Production
COM*130, Introduction to Broadcast Communications
COM*131, Audio Production
COM*147/ART*147, Digital Cinematography
THR*113/COM*179, Performance for Film and Television
COM*294, Media Arts Workshop

Computer Science (CS_*)

CSC*095, Basic Computer Skills (1 Credit)
CSC*115, Introduction to Programming with Alice

Criminal Justice (CJS*)

CJS*151, Criminal Justice Supervision and Administration

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

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)
ENG*096, Introduction to College English (6 credits)

French (FRE*)

FRE*101, Elementary French I
FRE*105, Elementary Conversational French I (1 Credit)

Freshman Seminar (FS)

FS100, Freshman Seminar

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 (HSE*)

HSE*101, Introduction to Human Services

Italian (ITA*)

ITA*101, Elementary Italian I
ITA*105, Elementary Conversational Italian I (1 Credit)

Mathematics (MAT*)

EDUC 1002, Fast-Track Math Workshop (0 credits, 30 classroom hours)
MAT*085, Pre-Algebra & Elementary Algebra Foundations (6 Credits)

Manufacturing (MFG*)

MFG*051, Manufacturing Math I (3 developmental credits; does not count toward graduation)
MFG*123, Measurement for Manufacturing (X 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*111, Elementary Spanish I (4 credits)

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*115 Financial Accounting. It will satisfy a business or open elective requirement. *May not be taken after ACC*115 unless student received a D or F grade.* (Updated October 2014)

ACC*115, Financial Accounting (4 Credits)

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

An introduction to financial accounting fundamentals. The basic accounting equation, recording procedures, and analysis of corporate statements and specific business accounts are studied. A computerized commercial practice problem is incorporated into the course. Transferability may be limited to 3 credits. ***Prerequisites:*** *Eligible for ENG*101 E or ENG*101, and eligible for MAT*137 OR permission of instructor.* (Updated October 2014)

ACC*118, Managerial Accounting (4 credits)

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

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. Transferability may be limited to 3 credits. ***Prerequisite:*** *ACC*115.* (Updated October 2014)

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*118.* (Updated October 2014)

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, Intro. 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.* (Updated Nov. 2014) *(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.* (Updated Nov. 2014) *(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.* (Updated Nov. 2014)

Art (ART*)

School of Arts & Media, Humanities, and Social Sciences

***$$ Studio Course Fee*: Many studio art courses require a separate fee added at the time of registration in order to cover the cost of 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.* (Updated Nov. 2014) *(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.* (Updated Nov. 2014) *(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.* (Updated Nov. 2014) *(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. (Updated Nov. 2014)

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

$$ Studio 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. (Updated Nov. 2014)

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

$$ Studio 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. (Updated Nov. 2014)

ART*116, Perspective Drawing (3 credits/4 contact hours) *$$ Studio 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. (Updated Nov. 2014)

ART*121, Two-Dimensional Design (3 credits/4 contact hours) *$$ Studio 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. (Updated Nov. 2014)

ART*122, Three-Dimensional Design (3 credits/4 contact hours) *$$ Studio Course Fee*

Gen Ed Competency: Aesthetic Dimensions

Use of a variety of materials to investigate the interrelationships of spaces, planes, and volumes. (Updated Nov. 2014)

ART*131, Sculpture I (3 credits/4 contact hours) *$$ Studio 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.* (Updated Nov. 2014)

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. (Updated Nov. 2014)

ART*155, Watercolor I (3 credits/4 contact hours) *$$ Studio 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. (Updated Nov. 2014)

ART*163, Ceramic Handbuilding (3 credits/4 contact hours) *$$ Studio 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. (Updated Nov. 2014)

ART*165, Metal and Jewelry Design I (3 credits/4 contact hours) *$$ Studio 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. (Updated Nov. 2014)

ART*166, Metal and Jewelry Design II (3 credits/4 contact hours) *$$ Studio 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. (Updated Nov. 2014)

ART*167, Printmaking I (3 credits/4 contact hours) *$$ Studio 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.* (Updated Nov. 2014)

ART*168, Printmaking II (3 credits/4 contact hours) *$$ Studio Course Fee*

The basic intaglio processes of printmaking as an art medium. Techniques of etching, aquatint, engraving, and dry point. ***Prerequisite:*** *ART*167.* (Updated Nov. 2014)

ART*215, Illustration (3 credits/4 contact hours) *$$ Studio 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.* (Updated Nov. 2014)

ART*250, Digital Photography (3 credits)

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

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. (Updated Nov. 2014)

ART*253, Oil Painting I (3 credits/4 contact hours) *$$ Studio 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. (Updated Nov. 2014)

ART*254, Oil Painting II (3 credits/4 contact hours) *$$ Studio 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.* (Updated Nov. 2014)

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.* (Updated Nov. 2014)

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.* (Updated Nov. 2014)

Art-Graphic Design (GRA*)

School of Arts & Media, Humanities, and Social Sciences

GRA*150, Intro. 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.* (Updated Nov. 2014)

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.* (Updated Nov. 2014)

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.* (Updated Nov. 2014)

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.* (Updated Nov. 2014)

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 or MAT*095 with a "C-" or better or taken concurrently.* (Updated Nov. 2014)

Biology (BIO*)

School of Allied Health, Business, and STEM

***$$ Laboratory 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.**

BIO*105, Introduction to Biology (4 credits/6 contact hours) *$$ Laboratory 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).* (Updated October 2014)

BIO*109, Principles of Biotechnology (3 cr.)

Gen Ed Competencies: Ethical Dimensions, 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.* (Updated October 2014)

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.* (Updated October 2014)

BIO*111, Introduction to Nutrition (3 credits)

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.* (Updated October 2014)

BIO*115, Human Biology (4 credits/6 contact hours) *$$ Laboratory 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.* (Updated October 2014)

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. (Updated October 2014)

BIO*121, General Biology I (4 credits/6 contact hours) *$$ Laboratory 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.* (Updated October 2014)

BIO*122, General Biology II (4 credits/6 contact hours) *$$ Laboratory 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.* (Updated October 2014)

BIO*145, General Zoology (4 credits/6 contact hours) *$$ Laboratory 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.* (Updated October 2014)

BIO*173, Introduction to Ecology (4 cr./6 contact hours) *$$ Laboratory 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.* (Updated October 2014)

BIO*211, Human Anatomy & Physiology I (4 cr./6 contact hours) *$$ Laboratory 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 anin-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).* (Updated October 2014) *(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 cr./6 contact hours) *$$ Laboratory 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 anin-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.* (Updated October 2014) *(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 cr./6 contact hours) *$$ Laboratory Course Fee*

A laboratory course designed to introduce molecular biology techniques such asplasmid and chromosomal DNA isolation, restriction enzyme mapping, agarose gelelectrophoresis, 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.* (Updated October 2014)

BIO*235, Microbiology (4 credits/6 contact hours) *$$ Laboratory 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.* (Updated October 2014) *(Fulfills an "L" course requirement for students who enrolled in a degree program prior to the Fall 2016 semester.)*

BIO*238 Parasitology – See VET*238

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.* (Updated October 2014) *(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) *$$ Laboratory 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.* (Updated October 2014)

BIO*270, Ecology (4 credits/6 contact hours) *$$ Laboratory 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.* (Updated October 2014)

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.* (Updated October 2014)

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 Competencies: Continuing Learning/ Information Literacy, Critical Analysis & Logical Thinking, Ethical Dimensions, Oral Communication in English, Social Phenomena

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. Not open to students who have completed BMG*202. ***Prerequisite:*** *Eligible for either ENG*101E or ENG*101.* (Updated October 2014)

BBG*115, Business Software Applications (3 credits)

FOR STUDENTS TAKING THIS COURSE BEGINNING WITH THE FALL 2016 SEMESTER: *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, Critical Analysis & Logical Thinking, Ethical Dimensions, 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.* (Updated for Fall 2016)

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

Gen Ed Competencies: Continuing Learning/ Information Literacy, Critical Analysis & Logical Thinking, Ethical Dimensions, Social Phenomena

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.* (Updated October 2014)

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

Gen Ed Competencies: Continuing Learning/ Information Literacy, Critical Analysis & Logical Thinking, Ethical Dimensions, Social Phenomena

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.* (Updated October 2014)

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.* (New Course, Spring 2017)

BBG*231, Business Law I (3 credits)

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.* (Updated October 2014)

BBG*232, Business Law II (3 credits)

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.* (New Course, Spring 2016)

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

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.* (Updated October 2014)

BBG*294, Business Internship (3 credits)

Gen Ed Competencies: Continuing Learning/ Information Literacy, Critical Analysis & Logical Thinking, Ethical Dimensions, Social Phenomena, Written Communication in English

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.* (Updated October 2014)

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

Gen Ed Competencies: Continuing Learning/ Information Literacy, Critical Analysis & Logical Thinking, Ethical Dimensions, Social Phenomena, Written Communication in English

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.* (Updated October 2014)

Business – Entrepreneurship (BES*)

BES*118, Small Business Management (3 credits)

Gen Ed Competencies: Continuing Learning/ Information Literacy, Critical Analysis & Logical Thinking, Ethical Dimensions, Oral Communication in English, Social Phenomena

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.* (Updated October 2014)

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 MAT*095 or higher.* (Updated October 2014)

BFN* 201, Principles of Finance (3 credits)

Gen Ed Competency: Continuing Learning/ Information Literacy

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. ***Prerequisite:*** *ACC*115* . ***Recommended:*** *ENG*101 and MAT*137. (Updated October 2014)*

Business – Management (BMG*)

BMG*202, Principles of Management (3 credits)

Gen Ed Competencies: Continuing Learning/ Information Literacy, Critical Analysis & Logical Thinking, Ethical Dimensions, Oral Communication in English, Social Phenomena

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.* (Updated Nov. 2014) *(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: Continuing Learning/ Information Literacy, Critical Analysis & Logical Thinking, Ethical Dimensions, Oral Communication in English, Social Phenomena

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.* (Updated October 2014) *(Fulfills an "L" course requirement for students who enrolled in a degree program prior to the Fall 2016 semester.)*

BMG*210, Principles of Organizational Behavior (3 credits)

Gen Ed Competencies: Continuing Learning/ Information Literacy, Critical Analysis & Logical Thinking, Ethical Dimensions, Oral Communication in English, Social Phenomena

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.* (Updated October 2014)

BMG*220, Human Resource Management (3 credits)

Gen Ed Competencies: Continuing Learning/ Information Literacy, Critical Analysis & Logical Thinking, Ethical Dimensions, Oral Communication in English, Social Phenomena

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.* (Updated October 2014*)*

Business – Marketing (BMK*)

BMK*103, Principles of Retailing (3 credits)

Gen Ed Competencies: Continuing Learning/ Information Literacy, Ethical Dimensions, Oral Communication in English, Social Phenomena

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.* (Updated Spring 2016)

BMK*106, Principles of Selling (3 credits)

Gen Ed Competencies: Continuing Learning/ Information Literacy, Critical Analysis & Logical Thinking, Ethical Dimensions, Oral Communication in English, Social Phenomena

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. (Updated Spring 2016)

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

Gen Ed Competencies: Ethical Dimensions, Oral Communication in English, Social Phenomena

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.* (Updated October 2014)

BMK*201, Principles of Marketing (3 cr.)

Gen Ed Competencies: Continuing Learning/ Information Literacy, Critical Analysis & Logical Thinking, Ethical Dimensions, Oral Communication in English, Social Phenomena

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.* (Updated October 2014*)*

BMK*216, Internet Marketing (3 credits)

Gen Ed Competencies: Continuing Learning/ Information Literacy, Critical Analysis & Logical Thinking, Ethical Dimensions, Social Phenomena

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.* (Updated October 2014)

BMK*230, Advertising & Promotion (3 credits)

Gen Ed Competencies: Continuing Learning/ Information Literacy, Critical Analysis & Logical Thinking, Ethical Dimensions, Social Phenomena

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.* (Updated October 2014)

Chemistry (CHE*)

School of Allied Health, Business, and STEM

***$$ Laboratory 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.**

CHE*101, Introductory Chemistry (3 cr.)

This course is intended for non-science majors. It fulfills the science requirement in the General Studies program. 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.* (Updated October 2014)

CHE*111, Concepts of Chemistry (4 credits/6 contact hours) *$$ Laboratory 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.* (Updated October 2014)

CHE*112, Principles of Organic and Biochemistry (4 credits/6 contact hours) *$$ Laboratory 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.* (Updated October 2014)

CHE*121, General Chemistry I (4 credits/6 contact hours) *$$ Laboratory Course Fee*

Gen Ed Competencies: Quantitative Reasoning, 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 either High School Chemistry or CHE*111.* (Updated October 2014) ***New Prerequisites, Effective Spring 2017:*** *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.* (Approved April 2016)

CHE*122, General Chemistry II (4 credits/6 contact hours) *$$ Laboratory Course Fee*

Gen Ed Competencies: Quantitative Reasoning, 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.* (Updated October 2014)

CHE*220, Biochemistry (4 credits/6 contact hours) *$$ Laboratory 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 "C" or better in both.* (Updated October 2014)

CHE*250, Instrumental Analysis (4 cr./6 contact hours) *$$ Laboratory Course Fee*

Gen Ed Competencies: Quantitative Reasoning, 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. Laboratory: 3 hours per week. ***Prerequisite:*** *CHE*121 with a grade of "C-" or better, OR permission of the instructor.* (Updated October 2014)

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. Students must concurrently enroll in CHI*105. Updated Nov. 2014)

CHI*105, Elementary Conversational Chinese I (1 credit)

Development of conversational proficiency with emphasis on dialogues including a wide range of vocabulary necessary for general conversation. Dialogues and oral practice are correlated with grammar covered in the three credit CHI*101 course. Students must concurrently enroll in CHI*101. (Updated Nov. 2014)

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. Students must concurrently enroll in CHI*106. ***Prerequisite:*** *CHI*101*. (Updated Nov. 2014)

CHI*106, Elementary Conversational Chinese II (1 credit)

Development of conversational proficiency with emphasis on dialogues including a wide range of vocabulary necessary for general conversation. Dialogues and oral practice are correlated with grammar covered in the three-credit CHI*102 course. Students work with learning media at home for further intensive practice in speaking and listening. Students must concurrently enroll in CHI*102. ***Prerequisite:*** *CHI*105*. (Updated Nov. 2014)

Communication (COM*)

School of Arts & Media, Humanities, and Social Sciences

COM*101, Introduction to Mass Communication (3 credits)

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.* (Updated Nov. 2014)

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. (Updated Nov. 2014)

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.* (Updated February 2016)

COM*116, Publications Workshop (3 cr.)

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. (Updated Nov. 2014)*

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.* (Updated Nov. 2014)

COM*125, New Media Production (3 cr.)

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. (Updated Nov. 2014)

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. (Updated Nov. 2014)

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. (Updated Nov. 2014)

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.* (Updated Nov. 2014)

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* (Updated Nov. 2014)

COM*154, Film Study and Appreciation (3 cr.)

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.* (Updated Nov. 2014) *(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.* (Updated Nov. 2014) *(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.* (Updated Nov. 2014) *(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 cr.)

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.* (Updated Nov. 2014)

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.* (Updated Nov. 2014) *(Fulfills an "L" course requirement for students who enrolled in a degree program prior to the Fall 2016 semester.)*

COM*179, 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. (Updated Nov. 2014)

COM*201, Intro. to Public Relations (3 Cr.)

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*. (Updated Nov. 2014)

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.* (Updated Nov. 2014)

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.* (Updated Nov. 2014) *(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 credits)

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.* (Updated Nov. 2014)

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* (Updated Nov. 2014)

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.* (Updated Nov. 2014)

COM*264, Advanced Editing Workshop (3 cr.)

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.* (Updated Nov. 2014)

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. (Updated Nov. 2014)

COM*287, Advanced Media Production (3 cr.)

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.* (Updated Nov. 2014)

COM*293, Corporate Media Production 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.* (Updated Nov. 2014)

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.* (Updated Nov. 2014)

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 a 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.* (Updated Nov. 2014)

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.* (Updated Nov. 2014)

Computers (CSA*, CSC*, CST*)

School of Allied Health, Business, and STEM

Computer Applications (CSA*)

CSA*135, Spreadsheet Applications (3 cr.)

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.* (Updated October 2014)

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.* (Updated October 2014)

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* (Updated October 2014).

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.** (Updated October 2014)

CSC*101, Introduction to Computers (3 cr.)

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.* (Course description updated February 2016)

CSC*105, Programming Logic (3 credits)

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

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.* (Updated October 2014)

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. (Updated October 2014)

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.* (Updated October 2014)

CSC*220, Object-Oriented Programming Using JAVA (3 credits)

Gen Ed Competencies: Continuing Learning/ Information Literacy, Critical Analysis & Logical Thinking, 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.* (Updated October 2014)

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: CSA*140.* (Updated October 2014)

CSC*262, Programming Mobile Devices I (3 credits)

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. *Prerequisites: CSC*205 or CSC*220.* (Updated October 2014)

CSC*295, Coop Ed/Work Experience (3 cr.)

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

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.* (Updated Nov. 2014)

Computer Technology (CST*)

CST*120, Intro. to Operating Systems (3 cr.)

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.* (Updated October 2014).

CST*141, Computer Hardware (4 credits)

Gen Ed Competencies: Continuing Learning/ Information Literacy, Critical Analysis & Logical Thinking, 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.* (Updated October 2014)

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, administrating, 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, DHCCP, DNS, backup, recovery and disaster planning will be covered. *Prerequisite: CST*120* (Updated October 2014)

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.* (Updated October 2014)

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.* (Updated October 2014)

CST*231, Data Communication and Networking (3 credits)

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.* (Updated October 2014)

CST*270, Network Security Fundamentals (3 credits)

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.* (Updated October 2014)

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.* (New course, Fall 2015)

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.* (New course, Fall 2015)

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.* (New course, Fall 2015)

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.* (New course, Fall 2015)

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. (*New course, Fall 2015)

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.* (New course, Fall 2015)

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.* (New course, Fall 2015)

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.* (New course, Fall 2015)

Criminal Justice (CJS*)

School of Arts & Media, Humanities, and Social Sciences

CJS*101, Intro. to Criminal Justice (3 credits)

Gen Ed Competencies: Ethical Dimensions, 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.* (Updated January 2016) *(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 cr.)

Gen Ed Competencies: Ethical Dimensions, 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.* (Updated October 2015)

CJS*105, Intro. to Law Enforcement (3 cr.)

Gen Ed Competencies: Ethical Dimensions, 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.* (New course, effective Spring 2016)

CJS*106, Intro. to Homeland Security (3 cr.)

Gen Ed Competency: Social Phenomena

New Course, Fall 2016: 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.* (New course, effective Fall 2016)

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. (Updated Nov. 2014) *(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.* (Updated October 2015)

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.* (New course, effective Spring 2016)

CJS*213, Evidence and Criminal Procedure (3 credits)

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.* (Updated October 2015)

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, ANDENG*101-ALP, ENG*101E, or ENG*101 with a "C-" or better.* (Updated October 2015) *(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)

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. ***Prerequisites:*** *CJS*101 with a "C-" or better, AND ENG*101-ALP, ENG*101E, or ENG*101 with a "C-" or better.* (Updated October 2015) *(Fulfills a "D" course requirement for students who enrolled in a degree program prior to the Fall 2016 semester.)*

CJS*250, Police Organization and Management (3 credits)

Gen Ed Competencies: Ethical Dimensions, 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.* (Updated October 2015) *(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 credits)

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* (Updated Nov. 2014)

CJS*255, Ethical Issues in Criminal Justice Leadership (3 credits)

Gen Ed Competencies: Ethical Dimensions, 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.* (Updated October 2015)

CJS*285, Forensic Science with Laboratory (4 credits/6 contact hours) *$$ Laboratory 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.* (New course, effective Fall 2016) **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 cr.)

Gen Ed Competencies: Ethical Dimensions, 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.* (New course, effective Spring 2016)

CJS*290, Practicum in Criminal Justice (3 cr.)

Gen Ed Competencies: Ethical Dimensions, Oral Communication in English, 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.* (Updated January 2016)

CJS*294, Contemporary Issues in Criminal Justice (3 credits)

Gen Ed Competencies: Critical Analysis & Logical Thinking, Ethical Dimensions, 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:*** *Instructor approval AND ENG*101-ALP, ENG*101E, or ENG*101 with a "C-" or better.* (Updated January 2016)

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. ***Prerequisites:*** *CJS*101 with a "C-" or better, AND ENG*101-ALP, ENG*101E, or ENG*101with a "C-" or better.* (Updated October 2015)

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.* (Updated October 2015)

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. (Updated Nov. 2014)

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. (Updated Nov. 2014)

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.* (Updated Nov. 2014)

DGA*125, New Media Production (3 credits)

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. (Updated Nov. 2014)

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.* (Updated Nov. 2014)

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.* (Updated Nov. 2014)

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.* (Updated Nov. 2014)

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.* (Updated Nov. 2014)

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.* (Updated Nov. 2014)

DGA*250, Interactive Multimedia Production (3 credits)

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.* (Updated Nov. 2014)

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.* (Updated Nov. 2014)

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.* (Updated Nov. 2014)

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.* (Updated Nov. 2014)

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.* (Updated Nov. 2014)

DAR*114, Intro. to Family Systems (3 credits)

Gen Ed Competencies: Ethical Dimensions, 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.* (Updated Nov. 2014)

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.* (Updated Nov. 2014)

Early Childhood Education (ECE*)

School of Arts & Media, Humanities, and Social Sciences

ECE*101, Introduction to Early Childhood Education (3 credits)

Gen Ed Competencies: Continuing Learning/ Information Literacy, Critical Analysis & Logical Thinking, Ethical Dimensions, Historical Knowledge

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.* (Updated Nov. 2014) *(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)

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

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. (Updated Nov. 2014)

ECE*106, Music and Movement for Children (3 credits)

Gen Ed Competencies: Aesthetic Dimensions, Ethical Dimensions, Oral Communication in English, Social Phenomena

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. (Updated Nov. 2014)

ECE*131, Children's Literature (3 credits)

Gen Ed Competencies: Aesthetic Dimensions, Continuing Learning/ Information Literacy, Critical Analysis & Logical Thinking, Ethical Dimensions, Historical Knowledge

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.* (Updated Nov. 2014)

ECE*141, Infant/Toddler Growth & Development (3 credits)

Gen Ed Competencies: Critical Analysis & Logical Thinking, Historical Knowledge, Oral Communication in English, Social Phenomena

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. (Updated Nov. 2014)

ECE*176, Health, Safety, and Nutrition (3 cr.)

Gen Ed Competencies: Critical Analysis & Logical Thinking, Historical Knowledge, Oral Communication in English, Social Phenomena

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. (Updated Nov. 2014)

ECE*180, CDA Preparation Course (3 credits)

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

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. (Updated Nov. 2014)

ECE*182, Child Development (3 credits)

Gen Ed Competencies: Critical Analysis & Logical Thinking, Historical Knowledge, Oral Communication in English, Scientific Knowledge & Understanding, Social Phenomena

This course is concerned with human development from prenatal through the elementary education years. The physical, emotional, social and cognitive benchmarks through successive stages of development will be studied in depth. Investigation of the familial and societal influences that impinge upon the child during the course of development. This course includes 20 hours of field observation and participation in an early childhood program. (Updated Nov. 2014)

ECE*210, Observation & Participation Seminar (3 credits)

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.* (Updated Nov. 2014)

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.* (Updated Nov. 2014) *(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.* (Updated Nov. 2014)

ECE*275, Child, Family and School Relation (3 credits)

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.* (Updated Nov. 2014) *(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.* (Updated Nov. 2014)

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 or MAT*095 with a "C-" or better or taken concurrently.* (Updated Nov. 2014)

EAS*106, Natural Disasters (3 credits)

Gen Ed Competency: Critical Analysis & Logical Thinking

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.* (Updated October 2014)

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.* (Updated October 2014)

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.** (Updated Nov. 2014)

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.* (Updated Nov. 2014)

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.* (Updated Nov. 2014)

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.* (Updated Nov. 2014)

Engineering (EGR*)

School of Allied Health, Business, and STEM

EGR*111, Intro. to Engineering (3 Credits)

Gen Ed Competencies: Critical Analysis & Logical Thinking, Quantitative Reasoning, 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.* (Updated October 2014)

EGR*211, Applied Mechanics I (Statics) (3 Credits)

Gen Ed Competencies: Critical Analysis & Logical Thinking, Quantitative Reasoning, 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.* (Updated Nov. 2014)

EGR*212, Applied Mechanics II (Dynamics) (3 Credits)

Gen Ed Competencies: Critical Analysis & Logical Thinking, Quantitative Reasoning, 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.* (Updated October 2014)

EGR*214, Engineering Thermodynamics (3 Credits)

Gen Ed Competencies: Critical Analysis & Logical Thinking, Quantitative Reasoning, 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.* (New course, Fall 2016)

EGR*221, Introduction to Electric Circuit Analysis (4 credits)

Gen Ed Competencies: Critical Analysis & Logical Thinking, Quantitative Reasoning, 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. *Prerequisites: MAT*254.* (Updated October 2014)

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. (Updated Nov. 2014)

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. (New course, Spring 2015)

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. (New course, Spring 2015)

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. (New course, Spring 2015)

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. (Updated Nov. 2014)

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*063-ALP, Writing: Introduction to the Essay (3 developmental education credits)

Leads students from the paragraph to the essay. Focus on how to develop a thesis, maintain coherence, develop evidence. Instruction in grammar and punctuation; exercises in spelling and vocabulary. Readings included. **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. Students must also register for ENG*101-ALP during the same semester.* (Updated Nov. 2014)

ENG*101-ALP, Composition (3 credits)

Gen Ed Competencies: Continuing Learning/ Information Literacy, Critical Analysis & Logical Thinking, Ethical Dimensions, 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.* (Updated Nov. 2014) *(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) *$$ Laboratory Course Fee*

Gen Ed Competencies: Continuing Learning/ Information Literacy, Critical Analysis & Logical Thinking, Ethical Dimensions, 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.* (Updated Nov. 2014) *(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 Competencies: Continuing Learning/ Information Literacy, Critical Analysis & Logical Thinking, Ethical Dimensions, 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.* (Updated Nov. 2014) *(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: Continuing Learning/ Information Literacy, Critical Analysis & Logical Thinking, Ethical Dimensions, Historical Knowledge, 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 .* (Updated Nov. 2014) *(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 Competencies: Continuing Learning/ Information Literacy, Critical Analysis & Logical Thinking, Ethical Dimensions, Historical Knowledge

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.* (Updated Nov. 2014)

ENG*200, Advanced Composition (3 credits)

Gen Ed Competencies: Continuing Learning/ Information Literacy, Critical Analysis & Logical Thinking, Ethical Dimensions, 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.* (Updated Nov. 2014) *(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: Continuing Learning/ Information Literacy, Critical Analysis & Logical Thinking, Ethical Dimensions, 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 . (Updated Nov. 2014) *(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: Continuing Learning/ Information Literacy, Critical Analysis & Logical Thinking, Ethical Dimensions, Historical Knowledge, 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. (Updated Nov. 2014) *(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: Continuing Learning/ Information Literacy, Critical Analysis & Logical Thinking, Ethical Dimensions, Historical Knowledge, 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. (Updated Nov. 2014) *(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: Continuing Learning/ Information Literacy, Critical Analysis & Logical Thinking, Ethical Dimensions, Historical Knowledge, 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. (Updated Nov. 2014) *(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: Continuing Learning/ Information Literacy, Critical Analysis & Logical Thinking, Ethical Dimensions, Historical Knowledge, 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. (Updated Nov. 2014) *(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: Continuing Learning/ Information Literacy, Critical Analysis & Logical Thinking, Ethical Dimensions, Historical Knowledge, 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. (Updated Nov. 2014) *(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: Continuing Learning/ Information Literacy, Critical Analysis & Logical Thinking, Ethical Dimensions, Historical Knowledge, 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. (Updated Nov. 2014) *(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: Continuing Learning/ Information Literacy, Critical Analysis & Logical Thinking, Ethical Dimensions, Historical Knowledge, 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. (Updated Nov. 2014) *(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: Continuing Learning/ Information Literacy, Critical Analysis & Logical Thinking, Ethical Dimensions, Historical Knowledge, 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. (Updated Nov. 2014) *(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: Continuing Learning/ Information Literacy, Critical Analysis & Logical Thinking, Ethical Dimensions, Historical Knowledge, 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.* (Updated Nov. 2014) *(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: Continuing Learning/ Information Literacy, Critical Analysis & Logical Thinking, Ethical Dimensions, Historical Knowledge, 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. (Updated Nov. 2014) *(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: Continuing Learning/ Information Literacy, Critical Analysis & Logical Thinking, Ethical Dimensions, Historical Knowledge, 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. (Updated Nov. 2014) *(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: Continuing Learning/ Information Literacy, Critical Analysis & Logical Thinking, Ethical Dimensions, Historical Knowledge, 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. (Updated Nov. 2014) *(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: Continuing Learning/ Information Literacy, Critical Analysis & Logical Thinking, Ethical Dimensions, Historical Knowledge, 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. (Updated Nov. 2014) *(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)

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.* (Updated Nov. 2014)

ENG*282, Creative Writing – Poetry (3 cr.)

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.* (Updated Nov. 2014)

ENG*283, Creative Writing – Fiction (3 cr.)

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.* (Updated Nov. 2014)

ENG*285, Memoir Writing (3 credits)

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.* (Updated Nov. 2014)

ENG*291, Mythology (3 credits)

Gen Ed Competencies: Continuing Learning/ Information Literacy, Critical Analysis & Logical Thinking, Ethical Dimensions, Historical Knowledge, 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.* (Updated Nov. 2014) *(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, Ethical Dimensions, 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.* (Updated Nov. 2014) *(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. (Updated October 2014)

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. (Updated October 2014)

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.* (Updated October 2014)

ENV*292, Environmental Internship (3 cr.)

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.* (Updated Nov. 2014)

Environmental Science (EVS*)

School of Allied Health, Business, and STEM

EVS*100, Introduction to Environmental Science (3 credits)

Gen Ed Competency: Critical Analysis & Logical Thinking

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.* (Updated October 2014)

EVS*111, Environmental Science Laboratory (1 Credit/3 contact hours)

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.* (Updated October 2014)

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. (Updated October 2014)

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. Students must concurrently enroll in FRE*105. (Updated Nov. 2014) *(FRE*101 & FRE*105 fulfill a "D" course requirement for students who enrolled in a degree program prior to the Fall 2016 semester.)*

FRE*105, Elementary Conversational French I (1 Credit)

Development of conversational proficiency with emphasis on dialogues including a wide range of vocabulary necessary for general conversation. Dialogues and oral practice are correlated with grammar covered in the three credit FREN 101 course. Students must concurrently enroll in FRE*101. (Updated Nov. 2014)

FRE*102, Elementary French II (3 credits)

Continued development of speaking, listening, and writing skills as well as fundamentals of grammar. Students must concurrently enroll in FRE*106. *Prerequisite: FRE*101 or permission of the instructor.* (Updated Nov. 2014) *(FRE*102 & FRE*106 fulfill a "D" course requirement for students who enrolled in a degree program prior to the Fall 2016 semester.)*

FRE*106, Elementary Conversational French II (1 Credit)

Development of conversational proficiency with emphasis on dialogues including a wide range of vocabulary necessary for general conversation. Dialogues and oral practice are correlated with grammar covered in the three-credit FRE*102 course. Students work with a media program at home for further intensive practice in speaking and listening. Students must concurrently enroll in FRE*102. *Prerequisite: FRE*105.* (Updated Nov. 2014)

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. Students must concurrently enroll in FRE*205. *Prerequisite: FRE*102 or permission of the instructor.* (Updated Nov. 2014) *(FRE*201 & FRE*205 fulfill a "D" course requirement for students who enrolled in a degree program prior to the Fall 2016 semester.)*

FRE*205, Intermediate Conversational French I (1 Credit)

Further development of conversational proficiency with emphasis on dialogues and oral practice are correlated with grammar covered in the three credit FRE*201 course. Students work with a cassette media program at home for further intensive practice in speaking and listening. Students must concurrently enroll in FRE*201. *Prerequisite: FRE*106.* (Updated Nov. 2014)

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. Students must concurrently enroll in FRE*206. *Prerequisite: FRE*201.* (Updated Nov. 2014) *(FRE*202 & FRE*206 fulfill a "D" course requirement for students who enrolled in a degree program prior to the Fall 2016 semester.)*

FRE*206, Intermediate Conversational French II (1 Credit)

Continued development of conversational proficiency with emphasis on dialogues and oral practice, correlated with grammar covered in three credit FRE*202 course. Students work with a media program at home for further intensive practice in speaking and listening. Students must concurrently enroll in FRE*202. *Prerequisite: FRE*205.* (Updated Nov. 2014)

Freshman Seminar (FS)

School of Arts & Media, Humanities, and Social Sciences

FS100, Freshman Seminar (3 credits)

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. (Updated Nov. 2014)

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. (Updated Nov. 2014) *(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 or MAT*095 with a "C-" or better or taken concurrently.* (Updated Nov. 2014)

GLG*120, Dynamic Earth (4 credits/6 contact hours) *$$ Laboratory Course Fee*

Gen Ed Competencies: Critical Analysis & Logical Thinking, 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.* (Updated October 2014)

GLG*121, Introduction 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 or MAT*095 with a "C-" or better or taken concurrently.* (Updated Nov. 2014)

Health (HLT*, HPE*, MED*)

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.*(Updated October 2014)

HLT*160, Intro. to Public Health (3 credits)

Gen Ed Competencies: Continuing Learning/ Information Literacy, Critical Analysis & Logical Thinking, Ethical Dimensions, Oral Communication in English, 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.* (Updated October 2014)

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.* (Updated October 2014)

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* (Updated October 2014)

Health Information Management (HIM*)

School of Allied Health, Business, and STEM

HIM*102, Introduction to Healthcare Systems (3 credits)

Gen Ed Competency: Ethical Dimensions

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.* (Updated October 2014)

HIM*112 Medical Insurance and Reimbursement (3 credits)

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.* (Updated Nov. 2014)

HIM*156, Electronic Health Records (3 credits)

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.* (Updated Nov. 2014)

HIM*201, Health Information Management Principles (3 credits)

This course covers health information management and patient record practices. Students will learn of the requirements of managing HIM departments. Topics will include electronic data management, document and repository systems, retention and destruction of medical records, production and accuracy of patient information, analysis and reporting for decision-making and strategy development, and HIPAA regulations concerning medical records and the uses of medical record. ***Prerequisite:*** *HIM*102* (Updated October 2014)

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*. (Updated Nov. 2014)

HIM*205, Medical Coding 1 (3 credits)

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

This course covers ICD-10-CM and ICD-10-PCS medical code sets for diagnoses and is designed to help students meet the challenge of today's changing government regulations and healthcare reporting. Included in the course are in-depth coding content and practice in diagnosis coding, HCPCS (Healthcare Common Procedure Coding System) Level II coding, and a review of insurance and reimbursement topics. ***Prerequisites:*** *BIO*115 and MED*125*. (Course description updated February 2016)

HIM*206, Medical Coding 2 (3 credits)

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

This course covers CPT medical coding procedures and is designed to help students meet the challenge of today's changing government regulations and healthcare reporting. Included in the course is detailed information on health reform, ethical, legal, and compliance issues that relate to coding and reimbursement. ***Prerequisite:*** *HIM*205*. (Updated October 2014)

HIM*220, Supervision/Quality Management (3 credits)

Gen Ed Competency: Ethical Dimensions

This course covers topics of leadership and supervision, research methods, healthcare statistic, and healthcare 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 employee law will be explored, along with employee productivity and training needs. ***Prerequisite:*** *HIM*201*. (Course description updated February 2016)

HIM*256, Legal and Ethical Issues of HIM (3 credits)

Gen Ed Competency: Ethical Dimensions

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. ***Prerequisites:*** *HIM*102 and HIM*112*. (Updated Nov. 2014)

HIM*295, Health Information Management Internship (3 credits)

Gen Ed Competencies: Critical Analysis & Logical Thinking, Ethical Dimensions

This course will give students the opportunity to apply the concepts and skills acquired in the Health Information Management Program in an on-the-job experience. Students will concentrate their time developing knowledge of the HIM department and related tasks such as coding. One hundred and fifty hours of supervised work and participation in online assignments will be required. ***Prerequisites:*** *HIM*102, HIM*201, HIM*205, and HIM*206*. (Updated October 2014)

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. (Updated Nov. 2014) *(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.) (Updated Nov. 2014) *(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. (Updated Nov. 2014)

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. (Updated Nov. 2014) *(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. (Updated Nov. 2014) *(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. (Updated Nov. 2014) *(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.) (Updated Nov. 2014) *(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. (Updated Nov. 2014)

Honors (HON)

School of Arts & Media, Humanities, and Social Sciences

HON 101, Honors Seminar (3 credits)

Gen Ed Competencies: Continuing Learning/ Information Literacy, Critical Analysis & Logical Thinking, Ethical Dimensions, Social Phenomena

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*101H. This course is required for all first semester Honor students.* (Updated Nov. 2014)

HON 102, Honors Seminar II (1 credit)

Gen Ed Competencies: Continuing Learning/ Information Literacy, Critical Analysis & Logical Thinking, Ethical Dimensions, Social Phenomena

The Honors Seminar II builds on concepts introduced in Honors Seminar I and it is required that this course be repeated at least twice (up to a maximum of 3 times) before taking the Capstone Course (HON 202). HON 102 builds on Honors Seminar I and encourages the student to further engage academic material, practices, and procedures. Students will begin to explore a discipline, topic, or issue for a Capstone Project. Students will also learn the fundamentals of mentoring and collegiate collaboration as they work with faculty and peers. HON 102 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. Students are required to complete a Research Proposal and Plan in order to pass HON 102 and progress to HON 202. 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 HON 101 and ENG*101. This course is required for all Honors students for (at least) the two semesters prior to HON 202.* (Updated Nov. 2014)

HON 202, Honors Capstone Project (1 credit)

Gen Ed Competencies: Continuing Learning/ Information Literacy, Critical Analysis & Logical Thinking, Ethical Dimensions, Social Phenomena

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) the two semesters of HON 102.* (Updated Nov. 2014)

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. (Updated Nov. 2014)

HSE*101, Intro. to Human Services (3 cr.)

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. (Updated Nov. 2014) *(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)

Gen Ed Competency: Ethical Dimensions

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. (Updated Nov. 2014) *(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. (Updated Nov. 2014)

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. (Updated Nov. 2014)

HSE*202, Introduction to Counseling/ Interviewing (3 credits)

Gen Ed Competencies: Ethical Dimensions, 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.* (Updated Nov. 2014)

HSE*224, Social Problems of Youth (3 credits)

Gen Ed Competencies: Historical Knowlegde, 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.* (Updated Nov. 2014)

HSE*288, Developmental Practicum (3 credits)

Gen Ed Competency: Ethical Dimensions
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. (Updated Nov. 2014)

HSE*289, Psychiatric Practicum (3 credits)

Gen Ed Competency: Ethical Dimensions 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.* (Updated Nov. 2014)

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. Students must concurrently enroll in ITA*105. (Updated Nov. 2014) *(ITA*101 & ITA*105 fulfill a "D" course requirement for students who enrolled in a degree program prior to the Fall 2016 semester.)*

ITA*105, Elementary Conversational Italian I (1 Credit)

Development of conversational proficiency with emphasis on dialogues including a wide range of vocabulary necessary for general conversation. Dialogues and oral practice are correlated with grammar covered in the three-credit ITA*101 course. Students work with a media program at home for further intensive practice in speaking and listening. Students must concurrently enroll in ITA*101. (Updated Nov. 2014)

ITA*102, Elementary Italian II (3 credits)

Continued development of speaking, listening, and writing skills as well as fundamentals of grammar. Students must concurrently enroll in ITA*106. *Prerequisite: ITA*101 or permission of the instructor.* (Updated Nov. 2014) *(ITA*102 & ITA*106 fulfill a "D" course requirement for students who enrolled in a degree program prior to the Fall 2016 semester.)*

ITA*106, Elementary Conversational Italian II (1 Credit)

Development of conversational proficiency with emphasis on dialogues including a wide range of vocabulary necessary for general conversation. Dialogues and oral practice are correlated with grammar covered in the three-credit Italian 102 course. Students work with a media program at home for further intensive practice in speaking and listening. Students must concurrently enroll in ITA*102. *Prerequisite: ITA*105 or permission of the instructor.* (Updated Nov. 2014)

Mammography (MAM*)

School of Allied Health, Business, and STEM

MAM*201, Principles of Mammography (4 cr.)

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)* (New course, Fall 2015)

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)* (New course, Fall 2015)

Manufacturing (CAD*, MFG*, QUA*)

School of Allied Health, Business, and STEM

***$$ Laboratory Course Fee*:** **Many laboratory-based courses require a separate fee added at the time of registration in order to cover the cost of supplies and materials used by students.**

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. (Updated Nov. 2014)

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.* (Updated for Fall 2016)

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.* (Updated for Fall 2016)

MFG*105, Manufacturing Math II (3 cr.)

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.* (Updated Nov. 2014)

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.* (Updated Nov. 2014)

MFG*123, Measurement for Manufacturing (X 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. 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. (New course, January 2016)

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.* (Updated Nov. 2014)

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.* (Updated for Fall 2016)

MFG*156, Manufacturing Machinery CNC I (2 Credits/4 contact hours) *$$ Laboratory Course Fee*

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.* (Updated Nov. 2014)

MFG*171, Introduction to Lean Manufacturing (3 credits)

The purpose of this course is to provide the student with the fundamental knowledge of current continuous process improvement methodologies in use today within competitive manufacturing environments. This introductory course will expose the student to the basic concepts of Lean Manufacturing theory and the various tools and techniques involved with a lean implementation. This course will be presented following the lean-six sigma process methodology of DMAIC (Define, Measure, Analyze, Improve, Control) to ensure that at the completion of the course, the student will be competent to participate effectively as a team member in lean implementation projects. *Prerequisite: Eligible for either ENG*063/ENG*101ALP or higher or ENG*096 taken concurrently. (Updated Nov. 2014)*

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.* (Updated for Fall 2016)

MFG*203, Precision Machining Lab (1 Credit)

This course supplements the Precision Machining course by providing the lab time necessary to reinforce classroom lessons.S tudents 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 wit a grade of C- or better.*

MFG*258, CNC Operations (3 credits/4 contact hours) *$$ Laboratory Course Fee*

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.* (New Course, Spring 2016) **This course replaces MFG*256 Manufacturing Machinery II. 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. *(Updated Nov. 2014)*

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. (Updated Nov. 2014)

Intensive-Level Courses (No Graduation Credit)

MAT*085, Pre-Algebra & Elementary Algebra Foundations (6 Credits)

This Intensive-Level developmental course does not meet graduation requirements. 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. (Updated Nov. 2014)

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 with "D or D+" OR Math placement.* (Updated Nov. 2014)

Embedded-Level Courses (Graduation Credit with Required Non-Credit Support)

MAT*137E, Intermediate Algebra with Embedded Review (3 credits/4 contact hours) $$

Laboratory 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 or MAT*095 with a grade of "C-" or better*

(Updated Nov. 2014)

College-Level Courses (Graduation Credit ONLY for Career-Oriented Programs)

MAT*104, Quantitative Reasoning (3 cr.)

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 or MAT*095 with C or better* **OR** *Eligible either for ENG*101E or ENG*101 and Math placement.* (Updated October 2014)

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 and either MAT*085 or MAT*095 with "C" or better OR eligible for ENG*101E or ENG*101 and Math placement.* (Updated Nov. 2014)

College-Level Courses (Graduation Credit for ALL Programs)

MAT*141, Number Systems (3 credits)

Ged 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.* (Updated Nov. 2014)

MAT*146, Math for the Liberal Arts (3 cr.)

Ged 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.* (Updated Nov. 2014)

MAT*158, Functions, Graphs, and Matrices (3 credits)

Gen Ed Competency: Quantitative Reasoning

New course, Spring 2017 – 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.* (New course, approved for Spring 2017)

MAT*168, Elementary Statistics and Probability I (4 credits)

Gen Ed Competencies: Quantitative Reasoning, Scientific Reasoning

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. ***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*101and Math placement.* (Updated Nov. 2014)

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.* (Updated Nov. 2014)

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.* (Updated 2014)

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.* (Updated Nov. 2014)

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.* (Updated Nov. 2014)

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.* (Updated Nov. 2014)

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.* Updated Nov. 2014)

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.* (Updated Nov. 2014)

Music (MUS*)

School of Arts & Media, Humanities, and Social Sciences

MUS*101, Music History and Appreciation I (3 credits)

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. (Updated Nov. 2014)

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. (Updated Nov. 2014) *(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. (Updated Nov. 2014)

MUS*117, Electronic Music (3 credits)

Gen Ed Competency: Aesthetic Dimensions, Historical Knowledge

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. (Updated Nov. 2014)

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. (Updated Nov. 2014)

MUS*138, Rock and Roll History and Appreciation (3 credits)

Gen Ed Competency: 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.* (Updated May 2016) *(Fulfills a "D" course requirement for students who enrolled in a degree program prior to the Fall 2016 semester.)*

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. (Updated October 2014)

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. (Updated Nov. 2014)

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.* (Updated Nov. 2014)

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.* (Updated Nov. 2014) *(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.* (Updated Nov. 2014)

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.* (Updated Nov. 2014)

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.* (Updated Nov. 2014)

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.* (Updated Nov. 2014)

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.* (Updated Nov. 2014)

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. (Updated Nov. 2014)

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.* (Updated Nov. 2014)

ODD*121, Contact Lenses II (4 credits)

Continuation of Contact Lenses 1, 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.* (Updated Nov. 2014)

ODD*122, Contact Lenses III (4 credits/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.* (Updated Nov. 2014)

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. (Updated Nov. 2014)

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. (Updated Nov. 2014)

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.* (New course, June 2014)

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.* (New course, June 2014)

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.* (New course, June 2014)

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.* (New course, June 2014)

Philosophy (PHL*)

School of Arts & Media, Humanities, and Social Sciences

PHL*101, Introduction to Philosophy (3 credits)

Gen Ed Competencies: Critical Analysis & Logical Thinking, Ethical Dimensions

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.* (Updated Nov. 2014) *(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 Competencies: Critical Analysis & Logical Thinking, Ethical Dimensions

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.* (Updated Nov. 2014) *(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 Competencies: Critical Analysis & Logical Thinking, Ethical Dimensions

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.* (Updated Nov. 2014)

PHL*145, Sustainable Living (3 credits)

Gen Ed Competencies: Critical Analysis & Logical Thinking, Ethical Dimensions

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 Competencies: Critical Analysis & Logical Thinking, Ethical Dimensions

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.* (Updated Nov. 2014) *(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 Competencies: Critical Analysis & Logical Thinking, Ethical Dimensions

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* (Updated Nov. 2014) *(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

***$$ Laboratory 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) *$$ Laboratory 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.* (Updated October 2014)

PHY*121, General Physics I (4 credits/6 contact hours) *$$ Laboratory 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.*(Updated October 2014)

PHY*122, General Physics II (4 credits/6 contact hours) *$$ Laboratory 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.* (Updated October 2014)

PHY*221, Calculus-Based Physics I (4 credits/6 contact hours) *$$ Laboratory 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.* (Updated October 2014)

PHY*222, Calculus-Based Physics II (4 credits/6 contact hours) *$$ Laboratory 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.* (Updated October 2014).

Political Science (POL*)

School of Arts & Media, Humanities, and Social Sciences

POL* 102, Introduction 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.* (Updated Nov. 2014) *(Fulfills an "L" course requirement for students who enrolled in a degree program prior to the Fall 2016 semester.) (Fulfills a "D" course requirement for students who enrolled in a degree program prior to the Fall 2016 semester.)*

POL* 103, Introduction 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. (Updated Nov. 2014) *(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. (Updated Nov. 2014)

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. (Updated Nov. 2014)

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. (New course, December 2014)

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. (Updated Nov. 2014)
For more information about MxCC's Legislative Internship Program, click here.

Psychology (PSY*)

School of Arts & Media, Humanities, and Social Sciences

PSY*103, Introduction to Holistic Wellness (3 credits)

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

This course will explore 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 health and wellness while preventing one's risk for illness. Students will learn how to become active participants in their journey toward wellness by studying and experiencing alternative, preventive, and stress reducing techniques. Modalities to be explored are the mind/body connection, relaxation, nutrition, exercise, and spirituality. (Updated Nov. 2014)

PSY*111, General Psychology I (3 credits)

Gen Ed Competencies: Ethical Dimensions, Oral Communication in English, Scientific Reasoning

Major principles and theories of psychology including perception, learning, the biological basis of behavior, motivation and emotion. This course is suitable for all students and is the prerequisite for all upper level psychology courses. It is also required for transfer into many four-year programs. *Prerequisite: Eligible for either ENG*101E or ENG 101.* (Updated Nov. 2014) *(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 Competencies: Continuing Learning/ Information Literacy, Ethical Dimensions, Oral Communication in English, 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.* (Updated Nov. 2014) *(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 and Adolescent Development (3 credits)

Gen Ed Competencies: Continuing Learning/ Information Literacy, Historical Knowledge, Oral Communication in English, Scientific Knowledge & Understanding, 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.* (Updated Nov. 2014)

PSY*208, Psychology of Adult Development and Aging (3 credits)

Gen Ed Competency: Scientific Knowledge & Understanding

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* . (Updated Nov. 2014) *(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: Continuing Learning/ Information Literacy, Ethical Dimensions, Oral Communication in English

This course is designed to introduce students to social behavior from a social-psychological perspective. Emphasis is on social and cultural factors and their consequences for self-development, small group behavior, self-image, attitude acquisition and change, leadership, conformity and prejudice. ***Prerequisite:*** *SOC*101 or PSY*111.* Updated January 2016) *(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.*(Updated Nov. 2014)

PSY*245, Abnormal Psychology (3 credits)

Gen Ed Competencies: Scientific Knowledge & Understanding, 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. (Updated Nov. 2014) *(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. (Updated Nov. 2014)

PSY*251, Behavior Disorders of Children and Youth (3 credits)

Gen Ed Competency: Scientific Knowledge & Understanding

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.* (Updated Nov. 2014) *(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. *Prerequisites: PSY*111.* (Updated Nov. 2014)

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. (Updated Nov. 2014)

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 or*

*MAT*095 with a "C-" or better or taken concurrently.* (Updated Nov. 2014)

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.* (Updated Nov. 2014)

RAD*109, Methods of Patient Care I (1 Cr.)

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.* (Updated Nov. 2014)

RAD*171, Radiographic Clinical Practicum I (2 Credits)

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.* (Updated Nov. 2014)

RAD*172, Radiographic Clinical Practicum II (2 Credits)

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.* (Updated Nov. 2014)

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.* (Updated Nov. 2014)

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.* (Updated Nov. 2014)

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.* (Updated Nov. 2014)

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. (Updated Nov. 2014)*

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.* (Updated Nov. 2014)

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.* (Updated Nov. 2014*)*

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.* (Updated Nov. 2014)

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.* (Updated Nov. 2014)

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.* (Updated Nov. 2014)

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.* (Updated Nov. 2014)

Science (SCI*)

School of Allied Health, Business, and STEM

***$$ Laboratory 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)

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.* (Updated October 2014)

SCI*285, Forensic Science with Laboratory (4 credits/6 contact hours) *$$ Laboratory 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.* (New course, effective Fall 2016) **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.* (Updated Nov. 2014) *(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.* (Updated Nov. 2014)

SOC*114, Sociology of Aging (3 credits)

Gen Ed Competency: Scientific Knowledge & Understanding

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.* (Updated Nov. 2014)

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.* (Updated Nov. 2014)

SOC*120, Group Dynamics (3 credits)

Gen Ed Competencies: Ethical Dimensions, Oral Communication in English, Scientific Knowledge & Understanding, 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.* (Updated Nov. 2014)

SOC*160, Introduction to Public Health (3 credits)

Gen Ed Competencies: Continuing Learning/ Information Literacy, Critical Analysis & Logical Thinking, Ethical Dimensions, Oral Communication in English, 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.* (Updated October 2014)

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.* (Updated Nov. 2014)

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.* (Updated Nov. 2014) *(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.* (Updated Nov. 2014) *(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.* (Updated Nov. 2014) *(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.* (Updated Nov. 2014)

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.* (Updated Nov. 2014)

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.* (Prerequisite updated October 2015, to add ENG*101-ALP)

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.* (Updated Nov. 2014) *(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*168 taken concurrently.* (Updated Nov. 2014)

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.*(Updated Nov. 2014) *(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*111, Elementary Spanish I (4 credits)

*Formerly SPA*101 (3 credits) and SPA*105 (1 credit).* This course presents the essentials of Modern Standard Spanish. It consists of vocabulary and grammatical structures that will enable students to read, write, and interact in Spanish using simple phrases and common expressions, while also highlighting the diverse cultures of Spanish-speaking peoples. This course also will feature an additional one-credit hour of instruction designed to develop students' basic conversational skills, with particular emphasis on dialogue. In such dialogues, students will utilize a wide range of vocabulary necessary for general conversation. (New course, December 2014) *(Fulfills a "D" course requirement for students who enrolled in a degree program prior to the Fall 2016 semester.)*

SPA*112, Elementary Spanish II (4 credits)

*Formerly SPA*102 (3 credits) and SPA*106 (1 credit).* This course is the continuation of Elementary Spanish I (SPA*111 or SPA*101 & 105), presenting the essentials of Modern Standard Spanish along with more advanced materials. It consists of grammatical structures and vocabulary that will enable students to read, write, and interact in Spanish using higher-level phrases and expressions, while also highlighting the diverse cultures of Spanish-speaking peoples. This course also will feature an additional one-credit hour of instruction designed to develop students' enhanced conversational skills, with particular emphasis on dialogue. In such dialogue, students will utilize a wide range of

vocabulary necessary for general conversation. ***Prerequisite:*** *SPA*111 or SPA*101 with SPA*105.* (New course, December 2014) *(Fulfills a "D" course requirement for students who enrolled in a degree program prior to the Fall 2016 semester.)*

SPA*117, Spanish for Careers (4 credits)

Development of speaking and listening ability for understanding and communication in daily situations, with emphasis on oral comprehension, speaking and pronunciation, and the development of a utilitarian vocabulary. This course is particularly useful for Social Workers, Teachers, Law Enforcement Officers, Medical Personnel, and Business and Finance Personnel. Prerequisite: *SPA 101 or one year of High School Spanish, or permission of the instructor. (Updated Nov. 2014)*

SPA*211, Intermediate Spanish I (4 credits)

*Formerly SPA*201 (3 credits) and SPA*205 (1 credit).* SPA*211 is a third semester of Spanish language. This course covers at the intermediate level Spanish grammar with continued emphasis on the development of conversational fluency and writing proficiency. Compositions will be added to this course with an introduction to Spanish literature as well. This course will also have an additional hour of instruction designed to develop the conversational skills of students with particular emphasis on dialogues including a wide range of vocabulary necessary for general conversation. ***Prerequisite:*** *SPA* 112 **or** SPA*102 with SPA*106.* (New course, December 2014) *(Fulfills a "D" course requirement for students who enrolled in a degree program prior to the Fall 2016 semester.)*

SPA*212, Intermediate Spanish II (4 credits)

*Formerly SPA*202 (3 credits) and SPA*206 (1 credit).* SPA*212 is a fourth semester of Spanish language. This course covers, at the intermediate level, Spanish grammar with continued emphasis on the development of conversational fluency and writing proficiency. Compositions will be added to this course with an introduction to Spanish literature as well. This course will also have an additional hour of instruction designed to develop the intermediate-level vocabulary and conversational skills of students, with particular emphasis on dialogue. ***Prerequisite:*** *SPA*211 **or** SPA*202 with SPA*206.* (New course, December 2014) *(Fulfills a "D" course requirement for students who enrolled in a degree program prior to the Fall 2016 semester.)*

SPA*217, Intermediate Career Spanish I (4 credits)

Specialized, filmed dialogue situations, taped materials, vocabulary building and aural-oral understanding. This course is particularly useful for Social Workers, Teachers, Law Enforcement Officers, Medical Personnel, and Business and Finance Personnel. *Prerequisite: SPA* 101 and SPA* 102 or two years of High School Spanish, or permission of the instructor.* (Updated Nov. 2014)

SPA*218, Intermediate Career Spanish II (4 credits)

Selected dialogues from career situations, role playing, and development of cross-cultural understanding and communication skills. This course is particularly useful for Social Workers, Teachers, Law Enforcement Officers, Medical Personnel, and Business and Finance Personnel. *Prerequisite: SPA* 217 or permission of the instructor.* (Updated Nov. 2014)

Therapeutic Recreation (RLS*)

School of Allied Health, Business, and STEM

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. (Updated Nov. 2014)

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. (New course, November 2014)

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: Either RLS*121, PSY*111, or permission of instructor.* (Updated Nov. 2014)

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.* (Updated Nov. 2014)

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. (Updated Nov. 2014)

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. (Updated Nov. 2014)

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.* (Updated Nov. 2014)

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, Introduction to 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.* (Updated Nov. 2014)

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.* (Updated Nov. 2014)

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.* (Updated Nov. 2014) *(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.* (Updated December 2014)

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.* (Updated Nov. 2014)

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.* (Updated December 2014)

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.* (Updated December 2014)

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.* (Updated Nov. 2014)

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.* (Updated December 2014)

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.* (Updated December 2014)

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.* (Updated Nov. 2014)

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.* (New course, Fall 2012. Relisted from "BIO" to "VET," effective Fall 2016.)

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.* (Updated Nov. 2014)

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.* (Updated Fall 2016)

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. (New course, approved December 2015)

VET*285, Veterinary Technology Externship (2 credits)

*This course has been replaced by the two-semester sequence of VET*280 and VET*286*. 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 comprehensive checklist of activities reflecting these objectives. Students and site supervisors will be provided with an externship manual that includes checklists. The externship will offer a supervised experience under the direction of a licensed veterinarian or certified technician through placement at an off-site veterinary hospital, private practice, laboratory facility or other appropriate site. Students will refine skills learned in previous and concurrent veterinary technology courses. A minimum of 240 hours of participation in a position relating to the veterinary technology field in a facility approved by the Veterinary Technology Program Coordinator is required. *Prerequisites: Completion of courses in semesters 1 and 2 of the program sequence AND permission of the Program Coordinator.* (Updated Nov. 2014)

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.* (New course, approved December 2015)